

# **Coastal and marine stewardship in Western Australia: The case for a virtue ethic**



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I declare that this dissertation is my own account of my research and contains as its main content work which has not previously been submitted for a degree at any tertiary education institution

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## **Abstract**

On an island continent, Australians proclaim themselves to be “girt by sea” in their national anthem. Most of the country’s abundant oceans and coastal lands are common property, vested in one of three levels of government. National coastal and oceans policies have invoked community and industry stewardship of these assets yet the nature of this stewardship remains largely unspecified and at risk of remaining symbolic rather than substantive. This is despite there being long history of oceans stewardship which has led to the construction of oceans and coastal areas as particular kinds of commons in the Australian context.

This project uses an interdisciplinary approach to understand the historical basis for the current perceptions of these commons and the policies in place for their governance and management. A genealogical approach is used to explore how stewardship concepts emerged in environmental ethics, and what value can be gained from giving greater weight to ethical approaches in stewardship of the coast and sea.

The thesis is presented in three parts. Part One presents a historical basis for adopting stewardship roles in relation to marine systems. The historical social construction of oceans and coastal areas as commons focused on rights of access, leading to the current challenges for the health of marine and coastal ecosystems. The nature and scale of human impacts on global ocean systems is linked to the diagnosis that the world has entered the era of the Anthropocene. Key responses to the challenges are critically examined against the narrative of stewardship regimes. The core of Part One is an analysis of marine and coastal policies in Australia, focusing on their implementation in Western Australia during the period 1992-2012. Australia’s Coastcare program is identified as a useful model for substantive stewardship policies.

Part Two presents an argument that the concept of stewardship has ethical richness, when framed as an expression of civic virtue and ecological citizenship. A genealogical approach is used to trace the emergence of stewardship into environmental ethics. It has an important role as a pragmatic ethic, linking to existing institutional arrangements, and able to be used in daily life due to its nature as virtue ethics. The importance of this virtue ethic in relation to civic virtue leads to an examination of the different

citizenships that Australians, for example, have by virtue of their situation in a particular place on earth.

In the third and final part, examples of coastal stewardship in Western Australia are presented as cases in which links between stewardship practices, ethics and citizen engagement in the public sphere contribute to the common good and sustainability of the commons.

The dissertation concludes by suggesting how the civic virtue of stewardship can be more effectively and widely adopted. It points to the roles of government, the corporate sector, local communities and civic education. It responds to recent calls to rethink human responsibility for coasts and seas, and to debate the role of marine citizenship.

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I am deeply indebted to my supervisor and mentor Dr Ian Barns, who stuck with me on this journey beyond the call of duty, into retirement. His intellectual depth, thoughtful approach and calm humour were an antidote to my disjointed enthusiasm and distractibility. Supervisor Dr Brad Pettitt has also been a long standing friend, encourager and then a critical support at the pointy end of finalising the project. I extend my heartfelt and grateful thanks to you both. Thank you also Dr Laura Stocker for supporting my decision to enrol in the postgraduate research program and for supervision into appointment at another university.

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## ***Dedication***

This work could well be dedicated to the memory of my late Father, who loved the beach and passed away without seeing the project completed, and to my Mother, who is able to share the excitement of its completion, and who inspired my passion for reading and learning.

But really this work, and the hopes that rest on the thesis advanced in it, is dedicated to our grandchildren. No doubt the world in which they will live will bear even more scars from human hands, but I pray that in their lifetime, stewardship will be universally acknowledged as a human virtue.





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## List of Abbreviations

CAG	Community Action Grants (within the Caring for our Country program)
CALM	Conservation and Land Management (Western Australian Government Department, 2006-2013)
CAP	Coastal Action Plan
COAG	Conference of Australian Governments
CZI	Coastal Zone Inquiry
CZM	Coastal Zone Management
EEZ	Exclusive Economic Zone
EPBC	Environmental Protection and Biodiversity Conservation (Act 1999)
ESD	Ecologically Sustainable Development
GBRMP	Great Barrier Reef Marine Park
ICM	<i>usually refers to</i> Integrated Catchment Management, but may also be used of Integrated Coastal Management
ICZM	Integrated Coastal Zone Management
IPCC	Inter-government Panel on Climate Change
LAL	Landcare Australia Limited
lwm	low water mark
MoU	Memorandum of Understanding
MPA	Marine Protected Area
NGO	Non-Government Organisation
NHT	Natural Heritage Trust
nmi	nautical miles
NRM	Natural Resources Management
NRSMPA	National Representative System of Marine Protected Areas
RAC	Resource Assessment Commission
UNCED	United Nations Conference on Ecologically Sustainable Development
UNCLOS	United Nations Conference on Law of the Sea
UNEP	United Nations Environment Programme
UNLOSC	United Nations Law of the Sea Convention
WAPC	Western Australian Planning Commission

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**Figure 1-1 Map of Western Australia**

Source: [http://ian.macky.net/pat/map/au/wa/wa\\_blu4.gif](http://ian.macky.net/pat/map/au/wa/wa_blu4.gif)

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## Chapter 1 Introduction

### ***1.1 In love with the coast***

Australians are mainly a coastal people. In spite of inhabiting a continent whose surface covers 7,692 million square kilometres (DFAT, 2009), around 81% of Australians live within 50 km of the coast<sup>1</sup>. One indicator of the value they place on the coast is seen in the price for real estate, which is inversely proportional to distance from the coast. In Sydney, “distance from the coast is a better indicator of value than distance from the CBD”-a common benchmark for property values. “As you move away from the coast the value of the property decreases more quickly than at the equivalent distance from the CBD<sup>2</sup>” (Liebke, 1999). In spite of paying higher prices for land near the coast, 91% of all West Australians live within 50 km of the coast (ABS, 2004)<sup>3</sup>, indeed that is exactly why the prices are higher. However this valorising of the coast has costs beyond property prices. Even before considering the natural environment, there are conflicting interests over the built environment. High demand for coastal real estate drives conversion of other land uses to residential and leisure related uses.

Sometimes, the changes in coastal land use cause conflicts between different stakeholders. For example, traditional transport activities associated with port facilities may become hedged in by leisure and entertainment-based businesses, whose clientele use harbours and port environments as backdrops or settings for their activities. Conflicts between the sectors of this local economy arise over safety issues, noise and emissions arising from stationary facilities or the transport network. In a broad brush picture, the conflict between the economic importance of an emerging leisure culture and the needs of a “working port” is seen in traditional port cities like Fremantle in Western Australia, where changing technology freed up portside land and port infrastructure for the emerging leisure economy, yet growing landside traffic associated with the new shipping technology has generated conflict with residential and conservation land uses throughout the city. Conflicts arise not only between contending

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<sup>1</sup> The proportion of coastal dwellers has been within a few percent of this 2011 figure (Hugo, Feist, & Tan, 2013) for the past few censuses. See for example ABS (2004).

<sup>2</sup> Central Business District

<sup>3</sup> Data from 2001. In 1991 a text book for Senior High School Geography put it very graphically: “70% of Australia’s coastline is uninhabited[ y]et over 25% of Australians live on the coastal strip and 75%...within 40km of the shore” (Dale, 1991, p. 1).

stakeholders, but also extend to the natural environment. The impact of these activities on coastal environmental ecological systems and values is also an issue.

## **1.2 Pressures on coastal and marine areas**

The main impacts on Australia's coasts and oceans over the last decade and more have been briefly stated as "nutrients, sediments, pollution from agriculture and industry; sewage discharges; urban sprawl of cities; colonisation by invasive species; and the use of coastal land for tourism and industry" (Ward & Butler, 2006).

The spread of urban settlement along the coast has become the major threat to ecosystem integrity (Bennett, 2010). At the broader scale, urban "strip development" along the coastline removes existing ecosystems and introduces new substances and organisms into environments where they may have impact beyond the footprint of the settlement. At the very narrow scale of beaches in urban areas, the sheer numbers of people crossing fragile dune systems or walking on reefs impact can be destructive by their very presence. In addition, the roads, parking areas, walkways and ablution facilities that are required to serve the beach users result in modification of the landscape that is sometimes contested on environmental as well as aesthetic grounds. In both of these instances, damage to the integrity of the coastal ecosystems occurs but may not be noticed until it becomes very difficult or impossible to reverse.

These same impacts are also seen in some remote locations of high tourism value. The problems of remote coastal locations are especially exacerbated by the large numbers of people<sup>4</sup> who travel to them for recreation. Not only do many people visit remote beaches, sometimes camping there for several days, but "management" of the more remote locations, such as Ningaloo (near Exmouth), Bremer Bay, Cape LeGrande (east of Esperance) or Eighty Mile Beach (near Broome)<sup>5</sup>, is complicated by the remoteness from any managing authority and the absence or small size of any resident populations. Many of these locations have beaches and dune systems which are very sensitive to human impact, such as high susceptibility to erosion or to changes in water quality. Their visitors use motorised vehicles and boats which themselves have potential for high impact depending on how they are used. Although some of these places, like Coral Bay, now have such high visitor numbers that service infrastructure can be installed or

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<sup>4</sup> For example 188,000 people are estimated to visit the Ningaloo region each year (Hopkins & Wood, 2006, p. 3) even though Coral Bay is 1,131 km and Exmouth 1,260 km from Perth.

<sup>5</sup> See also the map of protected areas Fig.4-7



staff can be deployed in the key tourist nodes, there are many locations along the 20,780km of coastline in Western Australia where visitors have minimal supervision and there is minimal infrastructure to direct or control activity. In these extremely sensitive situations the ongoing sustainability of the sites depends on the personal behaviour of the people visiting them. If visitors refrain from activities which cause or trigger damage to the ecosystem, then these uses can be sustained and ecosystem integrity maintained.

Off-shore, in even more remote locations, natural resource extraction and harvesting of marine life also compete for priority with biodiversity conservation objectives. In these contexts the activities are mainly corporate in nature, rather than purely personal, but the common thread observable here is the lack of opportunity for direct monitoring and supervision from wider society. In fact, nearly all of Australia's fisheries are fully exploited (Ward & Butler 2006, unpaginated, tables 1,2) although few are considered to be unsustainably fished (Flood *et al*, 2014, p.12). Australia's colder, southern seas, like the land, have a high degree of endemism: "Figures up to 90% have been mentioned" say Butler, Rees, Beasley and Bax (2010, p. 10), although they themselves refuse to commit to any such estimate, simply because so little is known about the biota. In addition to the issues of biodiversity conservation, tensions between the major stakeholders, such as commercial and recreational fishers, become public from time to time.

Yet fishing, and harvesting of marine organisms more generally, is only one threat to ocean ecosystem integrity. Others include marine debris, persistent organic pollutants, eutrophication and sediments from runoff (State of the Environment 2011 Committee, 2011). All of these threats arise from the coast, which is one of the motivations to examine oceans and coasts together in this dissertation.

The other change agent impacting on the coasts and seas of Australia and around the world is global warming and the climate changes that it induces (Kenchington, Stocker, & Wood, 2012). Aside from its causing sea-levels to rise and increased erosion through storm action, increased ocean temperatures from global warming and decreased pH from the higher concentrations of atmospheric carbon dioxide will have increasing impact on marine life and ocean current systems (Campbell, 2013). So while its local effects relate mostly to impact on human settlements and life, raising issues of adaptation (Harvey, Clarke, Pelton, & Mumford, 2012), the global effect of

anthropogenic greenhouse gas emissions will be changes that can be imagined to some extent, but cannot be predicted (Campbell, 2013). So great is the impact of climate change on the oceans and marine processes, as well as the land, that this time period, commencing with the industrial revolution, has been described as the Anthropocene (Steffen, Grinevald, Crutzen, & McNeill, 2011; Zalasiewicz, Williams, Haywood, & Ellis, 2011). The world and its geological processes is now being influenced by human activity.

Coasts and near-shore marine environments all over the world are under pressure from human activity. Over 41% of the world's population lives within 100 km of the coast and the world's coastal population will increase by 34% by 2025 (Duxbury & Dickinson, 2007, p. 319). As in Australia, coasts around the world offer many opportunities for livelihoods and pleasant habitation, recreation and aesthetic purposes. Collier (2007) considers lack of access to a coast to be one of four "development traps" inhibiting prospects of economic development for the world's poorest countries. Primarily this is due to the role played by ports in allowing cost-effective trade between nations and regions. However in many parts of the world coastal zones have also been very important for marginalised people as well as the wealthy. Poor or marginalised people have been able to take advantage of the open access nature of most marine or coastal resources, especially fisheries (Béné 2004, p.68) which has existed until recent times. The combination of all these activities means that many of the human impacts on the coast result from pursuit of livelihoods.

The coastal fishery makes a significant contribution to informal economic activity. *The Ecologist* (1993, p. 7) claimed over half of the fish eaten in the world are caught from inshore marine commons. Where local institutions to manage the fishery have been disrupted or do not exist, exploitation and destruction can result. Examples are seen in reefs of the Coral Triangle<sup>6</sup> or the conversion of coastal mangroves to aquaculture systems. These informal activities are beyond, or sometimes deliberately circumventing, regulatory instruments which might foster sustainability. When subject to these kinds of exploitation activities, a natural resource is described by economists as offering "open access" to any users. Open access constitutes one form of common property, one lacking institutions for sustainable management of the commons. There are also other

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<sup>6</sup> The Coral Triangle is the 5.7 million square kilometres of seas, roughly triangular in shape which encompasses the waters of Indonesia, the Philippines, Malaysia, Papua New Guinea, Solomon Islands and Timor Leste. It is highly diverse and rich in marine life (ARC Centre of Excellence for Coral Reef Studies, 2008).

situations where poaching, or illegal, unregulated and unreported fishing<sup>7</sup> creates a form of *de jure* open access, because any existing institutions are unable to be applied or enforced due to weak governance or some other difficulty intrinsically related to the nature of the resource and its location.

### **1.3 Common property, wicked problem**

The catalogue of problems besetting the world's oceans has been attributed to their freedom from the rule of law and/or the lack of property rights over their resources (Fuchs, 2003, p. 51; Haward & Vince, 2008, pp. 9,10). To explain these problems, it is customary to appeal to the argument made famous by Garret Hardin: the tragedy of the commons (Hardin, 1968). Governance, regulation, and allocation of tradeable property rights are proposed as means to reverse the tragic cycle of degradation. While Hardin's terminology has been shown to be inaccurate because he used open access resources as typical of "the commons", the lack of proprietary rights over particular resources has become accepted as the core problem for the oceans and marine resources. As Chapter 2 demonstrates, the oceans and indeed territorial waters have long been socially constructed as commons, but not entirely in the sense used by Hardin.

A more nuanced understanding of common property has emerged in which it is seen to have a strategic role as a governance system, within which appropriate rules and allocation processes have the potential to reduce conflict between contenders for coastal and marine resource use, not just to be a source of problems. The term "common property" describes the claims to a stream of benefit(s) obtained jointly by a group or collective of people of some kind from asset(s) or resources (Bromley, 1992). Since the property rights are held collectively, one party does not have any independent rights to consume or destroy the property, thereby infringing the rights of other rights holders. Common property rights may be recognised and enforced by traditional societies, governments or international treaties (Fuchs, 2003, p. 49). All of these apply in some place or another to marine and coastal resources. One of the problems with rights held in common by a large number of stakeholders, as in the case of oceans or coastal reserves, is that the enforceability of user rights is dependent on the capacity of particular institutions to constrain human impact, and these are often quite limited in relation to environmental commons. Of course the worst case occurs where "no

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<sup>7</sup> For example IUU fishing for Patagonian toothfish was often in the Australian news media between 2000 and 2006. In some years as much as 73% of all landings were illegal, but a minimum of 30% of Patagonian toothfish landings were illegal, unregulated or unreported (Bricknell, 2010, p. 78).

property rights have been recognised”, so that access to the resource is open to any and every one (Bromley, 1992, p. 4), ending in the tragedy of resource degradation.

These same very broad and generous property rights pertaining to aspects of coastal lands, and the goods and services for which coasts and near-shore marine areas are most highly valued, also contribute to the threats to their sustainability. Both the rich<sup>8</sup> and powerful as well as the poor but resourceful ends of society (and many others in between) pursue their short term personal interest with the resources of the coasts, often at the expense of more sustainable and wider benefit for society as a whole. The extent which they can do so is determined by the institutions which govern use of the common property. Coastal and near-shore marine areas have, in many instances, relatively few institutions controlling access, whether by default or by public policy choices.

Consequently the parties responsible for their management face a massive challenge in maintaining broad community access to the coast and marine resources while ensuring their sustainability<sup>9</sup> in the face of a whole range of underlying drivers of immediate consumption, from poverty at one extreme to affluence at the opposite extreme.

In addition to institutions which govern common property or allocate and maintain private property rights, another important instrument of governance which has been developed to resolve conflict between parties contesting spaces, or access to fixed environmental resources, is land and natural resource use planning. Planning and the subsequent approval of activities which conform to the plans have been used to mediate perceived conflict between human uses of resources and to reduce the negative impact of human activity on desirable qualities of ecosystems, environment or particular resources. Setting aside areas as conservation reserves or protected areas is one element of natural resource planning.

All of these instruments have been used in some way for protection of environmental integrity. Novel forms of property rights have been created to allow the use of “market-based instruments” for environmental protection, and the approach has become the most favoured, particularly where neo-liberal economic principles dominate public policy

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<sup>8</sup> In contrast to those places where poverty and the need for livelihoods have such large impact on the coast, the pressures on the Australian coasts are exacerbated by the affluence of the community, particularly as it is expressed in rapid coastal urbanisation and recreational impacts on fragile ecosystems or populations of organisms.

<sup>9</sup> In fact, the coasts and near-shore marine environments demonstrate clearly what Lele (1991) calls a major weakness of mainstream “sustainable development” ideas, that alleviating poverty or “development” reduces environmental impact.

discourse. However as demonstrated by use of legislative instruments like the Environmental Protection Acts in many legal jurisdictions, societies have a range of social institutions by which human behaviour can be constrained or managed in the interests of (*inter alia*) environmental protection or sustainability. Some of these institutions may rely solely on legal instruments, but others that are socially and culturally embedded, such as mores, traditions and even religious beliefs and practices.

The challenge of managing the many pressures on coastal systems, with many instruments from which to choose, is complex and well qualifies as a *wicked problem* (Nie, 2003). There are often very diverse and possibly even conflicting opinions about the goal of policy and management: what the ideal coast or “this particular patch” of coast represents or should look like. This in turn is the consequence of different cultural models through which the coast is imagined. Stocker and Kennedy (2009) describe how the cultural model within which stakeholders operate involves (*inter alia*) the way they value the coast, their impacts, the extent and nature of their conflict with others. This leads in turn to competing values and interests among all the stakeholders engaged with the coast and frequent disagreement on what constitute problems, threats or opportunities. The same elements of the environment or seascape can variously be designated as assets, resources or economic goods or even a sacred space. In spite of such noble values, oceans and some parts of the coast are also used as receptacles for anthropogenic waste!

Within this complexity, any governance or management process which treats coastal system as commons rather than allowing “open access”<sup>10</sup> to its resources will be more likely to be a step toward sustainability because it recognises stakeholders. The notion of stewardship is one way of describing the task of managing commons<sup>11</sup> for it also recognises a range of stakeholders, some who may not be actively engaged in the process of management, nor present at this time. This notion has a long history (as Chapter 2 describes) and is shown in this dissertation to be an important policy idea for responding to the needs and ensuring sustainability of commons.

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<sup>10</sup> The distinction between common resources which are open to use by any party (open access) and those which the community of users manage is important. The former is most vulnerable to degradation because modelling suggests it is in no-one’s interest to reduce consumption for the sake of sustaining the resource.

<sup>11</sup> This does not detract from the work of the “new institutional economists” exemplified by the late Elinor Ostrom and her colleagues who documented and drew lessons from the many endogenous institutions (non-government and outside of the market) by which communities have governed Common Pool Resources (Ostrom, 1990). Rather it frames those institutions as means of exercising stewardship.

#### **1.4 Stewardship and commons**

Stewardship can be defined most simply as the management of property on behalf of another, usually by a servant or employee of that person. The Concise Oxford English Dictionary (on-line) also includes “*responsibility for the sustainable management and use of a particular resource or place*” and describes a steward as: “a person who looks after the passengers on a ship or aircraft”. The wide-spread use of the metaphor “Spaceship Earth” to describe our planet (e.g. Boulding, 1966) gives a special resonance to this modern image of a steward. However, the relationships between the various stakeholders and coastal or marine environments ought not to be narrowly conceived as proprietorial, as might be inferred from the first definition quoted above. Dryzek (2005, p. 18) includes the spaceship and a mediaeval grazing common in his list of key metaphors observable in environmental discourse. The image of *the steward* may also be considered metaphorical in that it carries with it many strands of historical practices, contemporary institutions and associated ethical values. The question then is to whether stewardship is simply used in policy as a rhetorical device, or does it actually influence human behaviour and thus the state of the environment?

Stewardship is expressed in a variety of ways: from local environmental stewardship groups, to corporate environmental responsibility programs and government policies. Many local community actions to maintain or repair public environments are termed stewardship (Carr, 2002; Lerner, 1993). Stewardship has been framed as public funded programs to enhance and protect the public goods and services provided by environmental assets or systems which by law are privately owned: forest stewardship (Jones & Finley, 1993), landscape stewardship (Morris, 2004). The long evolution of the ideas of stewardship of global oceans is described in Chapters 2 and 3. At a higher, global level, the task of mitigating the dangers posed by anthropogenic global warming has been described as one of climate stewardship (Brown, 1997). In all these cases, the objects of stewardship are not property of any person, but common property or common pool resources and the life-sustaining systems of which they are a part.

#### **1.5 Stewardship in coastal and oceans policy**

Australia’s *Coastcare* program which was enunciated in the Commonwealth Coastal Policy (1995) and operated from 1995 to 2001 used the language of stewardship: one of its four stated objectives being “*to engender in local communities, including local industries a sense of stewardship for coastal and marine areas*” (Commonwealth of Australia, 1995, p. 26). The subjects of this policy objective (local communities and

industries) are encouraged to develop their “sense of stewardship” for the coastal commons, for that is how coastal and marine areas are largely constituted in Australian property tenure arrangements. A number of possible meanings and associations with the word stewardship immediately come to mind. Foremost is the apparent association of Coastcare with Landcare, from which in fact it did draw inspiration, and the promotion of the land stewardship ethic by Brian Roberts, one of the early advocates for Landcare. There are also rather well-known marine and forest *Stewardship Councils*. So what is meant by stewardship when it is used in relation to Coastcare and where does it sit in relation to broader policy discourse?

Just three years after release of the Coastal Policy, *Australia's Oceans Policy* (1998) declared a commitment to stewardship in at least three areas, viz. conservation of marine biological diversity (Commonwealth of Australia, 1998c p. 9), fisheries resources (p. 10), and marine heritage values (p. 25). In each of these three cases the object of stewardship can be considered an element of the commons or a common property resource. In the case of fisheries, the object of stewardship is actually the resource which the industry extracts, whereas the other two may be considered to be more definitely public goods. So in this policy, whose stewardship is indicated? What are the roles of some key stakeholder groups such as governments, communities and those industries which operate in the stewardship domains mentioned?

The Oceans Policy document, quoting Brown and Spink (1997), describes stewardship in its glossary as “long-term care of a given resource for the benefit of oneself and others, including the resource itself” (Commonwealth of Australia, 1998c p. 47). In a collection of discussion papers on the implementation of Australia's Oceans Policy, Wescott (2001, p. 171) draws attention to the repeated but “undeveloped” references to stewardship in the policy. His concern is mainly the policy's stance in relation to community participation, which is claimed to be a “key to promoting and instituting a duty of care for the marine environment” (Commonwealth of Australia, 1998a, p. 30). Two of the Oceans Policy discussion papers (Brown & Spink, 1997; Claridge & Claridge, 1997) suggest collaborative management and stewardship were key elements the community wished to see in the Oceans Policy. However, neither the policy, nor its first test of implementation in the south-eastern Australia Regional Marine Plan showed how the community, especially indigenous groups, can be involved in the policy, planning and management process (Wescott, 2001, p. 174).

In another context, Worrell and Appleby (2000, p. 265) also aired similar concerns about official use of the term stewardship. They noted that stewardship, with a long tradition in applied ethics, has become increasingly used in relation to a variety of environmental management practices, but is seldom defined or related to the ongoing ethical discourse. So what is the philosophical basis of stewardship ethics? Can the use of stewardship in policies and programs be enriched to strengthen the kind of behaviour changes that are needed to address the environmental challenges facing coastal and marine environments? These are important questions, because lack of clarity makes evaluation of the policies and programs difficult and because, from the period when the Oceans Policy was released, there was already increasing criticism of the ethical and voluntarist emphasis in the National Landcare Program which preceded it.

A brief exegesis of stewardship in the Oceans Policy's *Issues Paper* on "socio-cultural considerations" confuses ethics and *mores* or social norms or consensus, but distinguishes the "philosophy" of stewardship from "a land ethic" (Claridge & Claridge, 1997, p. 13). While stewardship is understood in different ways, it certainly does meet the authors' criteria for an ethic in that it "comprises two aspects; attitude and action" (Claridge & Claridge, 1997, p. 13).

### **1.6 Rich but contested notions of environmental stewardship**

The use of the term stewardship in these two Australian policies may only be a kind of public relations language used to encourage voluntary community participation in the nation's coastal and marine commons. The *Oceans Policy* hints at ethical or normative values by its links to "duty of care", but lacks clear statements of whence that duty comes and on whom it is incumbent. In fact, stewardship is a powerful and important idea and this dissertation argues for the idea of a deep or "thick" stewardship which, developed as a pragmatic ethical principle, can act as leaven in the whole governance "loaf".

Canada shares a similar settler history and federal government structure with Australia. Its *Oceans Strategy* refers to the stewardship responsibility of the federal government (p.7) and citizens (p.16). Stewardship is the over-arching ethical principle for environmental policies.

(Government of Canada, 2002)



At its highest level of authority, the claims of a national government to sovereignty over the marine estate, expressed as “oceans stewardship” represent what Steinberg (2001) described as regimes of power. This will be explored in some detail in Chapter 2. In essence, it refers to the way that sovereign powers, from the Roman Empire to modern nation-states, negotiated their conflicting claims to power over the oceans and marine estate with settlements that served the economic goals of the dominant party, while also allowing a range of property and access regimes to co-exist. In fact, stewardship can be seen as a power or management regime which allocates control over resources or space for which the “stewards” lack sovereign rights. This is clearly the case where the object of the stewardship is common property or space. Steinberg (2001) argues that, for ocean space used by European traders, the dominant maritime power adopted a stewardship responsibility or was acceded that role by other users of the space.

This way of framing stewardship need not be restricted to geopolitics, but is applicable to the way society relates to the environment. Users in common of a space or resource may collectively adopt stewardship roles. Stewardship is useful in relation to sustainability because “...stewardship can build on the concept of sustainability by encouraging a broader view of who and what should benefit from environmental management activity...[and] be developed in a manner relevant to citizens in general as well as resource managers and owners” (Worrell & Appleby, 2000, p. 275).

When ideas of stewardship are used in this way, they open up the questions of what is to be done and to what ends. Asking “who and what *should* benefit?” from all these activities that have been called stewardship turns the conversation from politics into an ethical discussion, for which the activities described above constitute ethical praxis. How then might a stewardship ethic be considered as something other than political compromise (Steinberg, 2001) or public environmental housekeeping activities within the community?

Barry (2002, p. 136) suggests that ecological stewardship constitutes a “powerful political-ethical idea that [could] form the basis of the transition to a more sustainable society”. O’Riordan (1998, p. 103) pointed out that to make that transition from our current unsustainable state of the world to a society and economy that is reconciled with “the life support limits of the planet in a way that enables the most vulnerable peoples to survive with dignity” requires a “steady shift in confidence from economic necessity, through stewardship, to empowerment”. He describes stewardship as “recognising that

conditions of further vulnerability should be avoided, if necessary by the application of the precautionary principle, and policies towards the planet tak[ing] into account a duty of care for people who might otherwise create their own vulnerability out of desperation” (O’Riordan, 1998, p. 107).

O’Riordan and Barry demonstrate a similar understanding of the need for a transition from much of humanity’s current ecologically unsustainable actions to sustainability. Sustainability after all, is also an ethical issue. “The principle of cross-generational equity<sup>12</sup> is at the heart of the idea of sustainability” (United Nations Development Program, 2007). Stewardship could in fact be argued to be the ethical principle which, informing human uses of the environment, would take us toward sustainability.

To act on this idea means this generation takes responsibility for the impact of its actions on the next generation. Cuello Nieto (1997, p. 44) observed “the common assumption implicit in all the actions and changes needed for achieving sustainable development in its holistic meaning is responsibility”. However the responsibility indicated here is both broad based (across the current generation) and collective. So what is the relation of this broad base of people responsible for the sustainability of the environment and economy (to use the language of the Manitoba Roundtable) to those institutions which lay claim to authority or control over the “national estate”? Clearly there is some degree of representation by which the interests of the broad base are represented in the formation and operation of the institutions. Policy makers act on behalf of the wider community, yet there also need to be mechanisms for participation of as broad a base as possible in the determination of the institutions. The question to be asked of these policy makers is how can humans be empowered rather than coerced to act responsibly in the context of limits within the earth systems and with respect for other species, fellow citizens in the commonwealth of life (Brown, 2001) or land-community (Leopold, 1949). Gardner (1993, p. 16) points out that sustainable development must come from both the institutions at the top of society and from the individuals and small local groups at the grass roots level.

Some of these issues around empowerment, ownership and agency have been addressed in management literature, which explores how stewardship increases personal agency of employees (for example Block, 1993). This has similarities with the issues at the core of

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<sup>12</sup> However, simplifying or reducing sustainability to cross-generational equity is, in the language of optics, the lowest level of resolution. Before even getting to the generational boundary, there are considerations of distributional justice and the natural rights of the non-human to address.

participatory democracy and deep citizenship (Clarke, 1996). So how can the idea of stewardship provide an ethical framework for human efforts to live sustainably, especially within the coastal zone?

### ***1.7 Could stewardship ethics make a greater contribution to marine and coastal policy?***

The introduction to Australia's oceans and the coastal policies claimed that stewardship makes an appearance but does not have a strong role. The national Coastcare program (1995-2002) was a key element in the stewardship objective of the coastal policy. However it ran for only six years, which invites obvious questions about the policymakers' commitment to, and understanding of stewardship. Subsequent Australian governments have launched a product stewardship framework (2004) and a national Environmental Stewardship Program (2007), each of which frame stewardship more narrowly. So what is meant by stewardship in Australian environmental policy discourse?

Most frequently it seems to be used descriptively. Almost any activity or program to ameliorate impact or protect the environment becomes described as stewardship. Carr (2002) described activities of local environmental groups around Australia as environmental stewardship. In this usage, stewardship activities are differentiated from research and policies as practical activities which bring about change on the ground.

This leads to another feature of the way stewardship is used in policy discourse. It is typically used in relation to voluntary activities. For example Australia's national Coastcare program sought to encourage "a sense of stewardship for coastal and marine areas"; to provide some incentives by way of resources; and to enable community members and corporate entities to participate in activities of coastal management that are largely framed in voluntary terms (Commonwealth of Australia, 1995, p. 26). Product stewardship programs are also characterised by voluntary compliance, although this use also highlights the element of responsibility over the products of manufacturers.

In recognition of the limited capacity of key stakeholders to voluntarily exercise this kind of environmental stewardship, contractual forms of stewardship have emerged in more recent policy. The Countryside Stewardship Program of the United Kingdom provides financial incentives for landowners to restore "natural" habitats on their land and forego cultivation for agriculture. It is a partial compensation for lost income. Australia's national Environmental Stewardship Program (2007) operates in a similar

way. This is an even more limited concept than the general voluntary environmental activities described above because it reduces stewardship to providing a service for a fee. It is called stewardship because it is an environmental service.

In contrast to these manifestations of stewardship as a market-based instrument, Australia's product stewardship programs seek to use social pressure and incentives within industry sectors to encourage firms to voluntarily take responsibility for their products (such as motor oil) beyond that part of the product life cycle which is of financial benefit to them. While there is an ethical or responsibility concept underpinning product stewardship, this use of the term reduces it to a very narrow concept.

It is interesting to compare these uses of a stewardship idea because, as a whole, they point to an over-arching ethical principle which then becomes expressed in particular actions across a number of policy areas. This over-arching principle centres on taking responsibility for human impact and ensuring that negative impact on the commons or the common good is mitigated or reversed. It not only takes the interests of future generations of humans to heart, as implied by the UNDP statement about the heart of sustainability (above), it also respects the inherent rights of non-human species and integrity of ecosystems and natural places. So it can be said to give due regard to the rights of other generations and other species. However as explained by Barry (2002), stewardship is an ethical principle focused on guiding humans, enabling us to reduce our harmful impact on our environment, and to that extent it is anthropocentric. The responsibility to act rests with humans and with the current generation (at all times).

This has been articulated in Canada, where the Province of Manitoba's Round Table on Environment and Economy, stated that "Stewardship requires the recognition that we are caretakers of the environment and economy for the benefit of present and future generations of Manitobans" (Malley, 1994, p. 75). In addition to a very broad claim to stewardship of both material (environment) and abstract concepts (economy), this principle points to the multiple, but collective identity of the stewards. The Round Tables, constituted by provincial governments, were comprised of stakeholders drawn widely from within Canadian society, from government to industry, academia and civil society organisations (Colgan, 1997). Clearly the stewardship concept revealed here is a thicker, more organic one than the force-field concept described by Steinberg (2001).

The difference is most clearly marked by the use of the term “taking care” and the diversity of the stakeholders.

Environmental non-government organisations (ENGOS) in Canada are widely engaged in a variety of activities including “education, monitoring, advocacy, restoration, conservation and preservation”, considered acts of local stewardship (Lerner, 1994, p. 93). Like the UK, Canada also encourages stewardship of “natural heritage” on private land, and “community responsibility for stewardship of land and water resources”, exemplified by its Natural Heritage Stewardship Program (Hilts, 1994, p. 112).

In Australia, environmental stewardship encouraged by the Coastcare and Landcare programs, product stewardship schemes and government contracts for environmental stewardship services were all advocated to the community by government. The resulting voluntary adoption of practices ensuring ecosystem integrity and landscape or environmental stewardship contracts focus on stewardship of public goods on privately owned land. Product stewardship seeks to engender manufacturer responsibility for the fate of materials that they have introduced into the supply chain. Another type of stewardship, of renewable natural resources, operates through cooperation between civil society and industry, as shown in the Marine Stewardship Council of Australia. It uses market mechanisms and the power of informed customer demand to foster sustainable management of natural resources. All of these forms of stewardship policy aim to change personal or corporate behaviour and encourage adoption of attitudes of stewardship in order for stewardship to become normalised. While a stewardship attitude is not a sufficient condition for adoption of sustainable environmental management practices, the pre-existing openness to stewardship ideas was a factor in the popular appeal of Landcare in rural Australia (Claridge and Claridge, 1997, p. 19).

Stewardship praxis may provide a link between the public realm of policy and the private realm of personal behaviour. The word stewardship has been used to describe activities and behaviours as well as an ethical principle. The breadth covered by the use of this term may actually be a strength of the stewardship concept: that it links attitude and action – described as two aspects of an ethic (Claridge & Claridge, 1997, p. 13). The suggestion offered in this dissertation (particularly in Chapters 6 and 7) is that the concept of ethical virtue provides an appropriate conceptual framework to describe stewardship ethics in a clear, practical and intellectually rigorous manner.

### **1.8 *The aim of this research and approach taken***

This research arose from observation of the tentative nature of stewardship notions expressed in Australia's two policies relating to marine and coastal commons. This use stands in contrast to the frequent use of the language of stewardship in North America. The research focusses on Western Australia, firstly because the challenges outlined in the introduction to this chapter were personally experienced here by the author in the course of administering the Coastcare program in Western Australia. Secondly, the large extent of coastline and far smaller areas of concentrated human settlement on West Australian coasts provide a clear example of the need to limit or eliminate human harm without recourse high levels of management by government. These challenges are not only found here, but around Australia, so the research is applicable to the country as a whole. At another level, this research also speaks to the challenge of the Anthropocene: how to sustain coastal and marine areas and indeed, the earth on which we live and its life-sustaining systems?

The aim is to develop a stronger notion of stewardship and show how it should be central to Western Australian coastal and marine policy. To support this claim, stewardship is placed in the context of its historical evolution through delineation of its philosophical genealogy. The central claim of this dissertation is that stewardship should be seen in the context of civic virtue. This is explored in a number of case examples where this notion of stewardship is expressed in practice. Finally the argument is made that not only is the civic stewardship presented here possible, but it is also essential to ensure the ongoing management of coasts and marine resources and vulnerable commons more generally.

A trans-disciplinary approach was taken to this research, which is located within the tradition of the social sciences. Key environmental issues were examined through literature research. A genealogical approach (Evans, 2008) was used to examine the ideas that have contributed to the different ways the word stewardship is used in relation to human interaction with the environment. Government policies and programs were assessed through published literature and on-line data sources. Data pertaining to grants made from the Western Australian Coastcare and Coastwest programs were kindly provided by the Department of Planning. A number of community members engaged in coastal stewardship and government officers were interviewed. The information they provided allowed the development of case studies presented in Chapter Eight. The case studies emerged from the discussions at coastal conferences and the initial interviews as

expressions of civic virtues operating in effective community engagement supported by government.

All interviews were conducted after obtaining approval from the Murdoch University Ethics Committee (Approval Number 2005/15) and used the approved interview schedules, which are shown in the appendices. Twenty one people were interviewed between 2005 and 2011 and all agreed to the interview being recorded. Their responses were rendered anonymous, and where included in the text of the dissertation, have been coded by the category of informant and a serial number assigned for each respondent in each category.

### ***1.9 Navigating this dissertation***

The argument presented in this dissertation is developed in three parts. The first, comprising four chapters, introduces the key issues in marine and coastal sustainability. Chapter 2 establishes the broad basis on which oceans and many coastal areas are considered to be commons. It traces development of these ideas in the community of the western hemisphere and their adoption of stewardship approaches to governance, culminating in the twentieth century affirmation that some parts of the world's oceans are the common heritage of humanity. On the other hand large areas became recognised as the territorial waters of individual nation states. The stewardship regimes evolved as a means to regulate the ambitions of competing maritime powers and create a space for global commerce and trade with as little friction as possible through. These geopolitical stewardship regimes led to the emergence of modern international law.

While the oceans inspire awe and mystery, they are simultaneously plundered for their resources and get dumped on to the limit and beyond of their capacity to assimilate human garbage. Part of the reason is that competing cultural models inform these diverse human actions (Stocker & Kennedy, 2009). On the land, human habitation has consolidated on the coasts, there ecosystems have been modified and their capacity exceeded in many places. In response, international efforts to constrain human impacts on the high seas and coasts of the world have gone beyond regulation to more comprehensive management systems. Chapter 3 describes how managerial stewardship developed in response to the pressures on oceans and coastal ecosystems, through the adoption of principles of ecosystems based marine management and Integrated Coastal Zone Management.

Chapter 4 gives an overview of marine and coastal policy development in Australia. It introduces the way the Australian Government and its state partners have used stewardship concepts. Then Chapter 5 focuses on Western Australia, with its implementation of national programs and the emergence its own state programs and policy relating to the particular context of Western Australia. This examination is focussed on the period from 1995 to 2012. The threats or pressures on Australian coasts and near-coastal waters (in particular) arise from diverse causes and are unable to be met solely by better planning or regulations. An ethical framework provided by environmental stewardship can provide a basis on which personal actions of Australian citizens are connected to stewardship expressed publicly in policy and planning regimes.

The second part of this dissertation turns to the key ideas: ethics and citizenship. In Chapter 6, a genealogical approach is used to examine the rich traditions from which environmental stewardship ethics has developed. Its origins are traced mainly from Christian theology and practices through to different contemporary expressions of stewardship.

Citizenship forms a conceptual matrix within which individual actors, commercial or corporate activities in the market and policies of the state are connected as argued in Chapter 7. A case is made for stronger expression of the civic virtues, and stewardship is identified as a civic virtue, contributing to what Lerner (1994) calls an “environmental vanguard” of people engaged in local action to protect and care for coastal environments, and also to act in the public or political arena as a constituency for environmental interests (Lerner, 1994, p. 95). Further, it suggests that the unity of intention and practice in Aristotelian virtue ethics offers a useful means of enabling the full range of citizen actors to adopt practices which are contextually appropriate and effective for the broad goal of sustainability.

Chapter 8 focuses on coastal stewardship and the role of local community organisations. Building understanding and engaging citizens in stewardship of the coast and its waters and are key steps to a broader commitment to sustaining the oceans (Vincent, 2011). Some examples of coastal stewardship reflecting the argument of Part 2 are presented. They show how civic virtues can be fostered by providing support for stewardship activities. Civil society actors sometimes experience tensions as they negotiate their stewardship roles as activists influencing decision makers on one hand, and as



volunteers assisting the managers of public coastal commons on the other. The cases presented also show how local government can enable and assist citizens take up and persisting with their stewardship roles.

The final chapter (9) presents the main thesis, that government policies which call for stewardship action by sections of the community need to actually create the conditions for that to develop and be assessed on the degree to which it takes place. Programs should not take a purely instrumental view of stewardship and their effectiveness ought not to be evaluated solely in terms of improvement or increase in physical capital. There is a social capacity development function and a need to develop ethical capital, which receives less attention in current policy. This requires an enabling state rather than a state contracting out services.

Vidas (2011) suggested that the challenge of staying within the boundaries of the earth's safe operating space (Rockström et al., 2009) require new ways to institutionalise within humanity responsibility for the sea. McKinley and Fletcher (2010) called for debate about the role of increased sense of marine citizenship to achieve this. The thesis presented here makes a case for focusing on stewardship as an expression of civic virtue which is grounded in ecological citizenship, as a means to engage citizens in practice and in framing new, urgently needed policies which will meet the challenge of the Anthropocene

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## **PART ONE: The Issues**

Part One shows how stewardship, associated with common property, had by 1996 found expression in a high level, but poorly defined concept in Australian Coastal and Oceans policy statements. It subsequently became less visible, as government policies shifted focus from community mobilisation and engagement in coastal and marine NRM towards strategic investment in specific environmental outcomes. However, the common property or public asset nature of the Australian coast and marine waters continues to invite consideration of how stewardship and stewardship ethics can play a role in sustaining coasts and marine ecosystems.



## Chapter 2 Constituting marine and coastal commons

The oceans have traditionally provided a source of inspiration and myth, constituting a virtually unbounded domain that, from time immemorial, has nurtured fantasy, superstition and fear as well as curiosity, hopes and aspirations. The vastness has suggested an abundance of resources that exceeds human capacity for use and abuse. Unlike the land, where periods of scarcity have not been uncommon, the oceans have promised wealth and rewards that seem inexhaustible. (Independent World Commission on the Oceans, 1998, p. 25)

### 2.1 Introduction

The introduction to this dissertation touched on the concepts of sovereignty and stewardship that make coasts and oceans such special and interesting cases in environmental policy-making, governance and management. There are competing goals of maintaining free access to the ocean spaces and resources, while at the same time securing the right to exploit resources found there.

Oceans and seas occupy the spaces between large units of the realm that has been traditionally claimed as property or territory -the land, with its distinguishing features enabling boundaries to be easily demarcated and recognised. Spaces and places on the oceans are different. For most people, some kind of instrumentation is required to enable us to determine our position in the seascape and for demarcation of boundaries. Even the “sea-lanes” used by shipping are essentially ideas, defined by instruments of navigation rather than any physical infrastructure like that which defines road-ways on land. This feature of marine and coastal space was recognised in terms of political economy by the emergence of a form of oceans stewardship which enabled competing trading entities to coexist in a shared common space. Alternative views, such as those of maritime minority communities (for example Australian Aboriginal sea people) with long association with sea and coastal places, have struggled to maintain or justify their claims to discrete and clearly identifiable sea country<sup>13</sup>.

The notion of a marine commons, which was initially framed around free movement, was extended by the recognition that natural resources, including the fish and mammals, found in the seas and oceans off-shore, were also considered common property or common pool resources and not the property of any nation or entity. In near-shore

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<sup>13</sup> (Sandberg, 2003) describes the resurgence of claims to local community marine and near-shore commons in Scandinavia, prompted by a rapidly expanding aquaculture industry based on floating pens housing marine fish species.

waters, where boundaries were more readily identified, regularly utilised and defended by shore-based populations, a variety of property-rights institutions emerged which allowed the orderly extraction and exchange of a great variety of natural resources. Thus, two systems developed.

This chapter and the next will show how some of these property rights are still situated within an overarching notion of stewardship. To set the scene, this chapter demonstrates how these arrangements for stewardship of commons developed from their beginnings in the political economy of the *Pax Romana* to their encapsulation in the UN Law of the Sea Convention (LOSC).

The remainder of the dissertation presents some of the challenges for marine and coastal sustainability posed by that status of commons, and explores the role of stewardship concepts in uniting ethics, personal praxis and public policy as ways to address those challenges.

## **2.2 Oceans and sustainability**

The introduction to the Jewish and Christian scriptures declares that in the very beginning of all things, “earth was a soup of nothingness, a bottomless emptiness, an inky blackness. God's Spirit brooded like a bird above the watery abyss” Genesis 1:1 (The Message paraphrase - Peterson, 2002). Evolutionary biologists suggest that early life forms developed in and later emerged from the waters of the earth. These primordial notions about the sea also find expression in poetry and mythologies around the sea. Kellert (2003, p. 2) argues that these origins are the source of lasting “dependence on the marine world”. Among other things, human societies have been impressed by the productivity of the seas and oceans and their own capacity to devise increasingly clever apparatus to extract ever increasing amounts of food and other resources from the oceans. “The oceans were regarded as infinitely vast. The ocean’s living resources were considered unlimited” (Sitarz, 1994, p. 144). Paradoxically (we now realise) the marine realm also seemed capable of absorbing seemingly endless quantities of waste, effluent and other by-products of human activity.

...throughout all of history until now, the thought of humans causing permanent and widespread damage to the oceans was simply unimaginable. We were too small, too few, too weak in comparison with maritime vastness and force. (Roach, 2000, p. 79)

However, over time, human impact on the oceans has steadily increased, until it now threatens to overwhelm the capacity of oceans to maintain their ecological integrity. Not

only is there impact in estuaries, near-shore waters, and enclosed seas, but human-induced changes impact the oceans at a global scale (Tyrrell, 2011). The massive shift in scale of human impact on the biosphere and even on biogeochemical systems has led the community of researchers into global change to classify this historical epoch as the *Anthropocene* (Steffen et al., 2011; Zalasiewicz et al., 2011).

The underlying drivers behind the threats to the oceans and the possible responses to them are all interconnected with societies' perceptions of the oceans as commons, and to unresolved questions about their stewardship. Steinberg's (2001) historical overview of ocean stewardship provides a cogent explanation of how very early conceptions of free space and the stewardship role of maritime powers contributed to our modern understanding of how oceans may be governed in order to preserve their accessibility.

In spite of covering about 70% of the earth's surface, oceans (and seas) have remained uninhabited (although not without impact) by human societies. They have also "resisted" colonisation, in the sense of remaining outside the territory of nations and empires. However, it would be a mistake to regard the oceans as constituting a space completely outside governance regimes, even in the ancient past. As marine activities became increasingly important to ancient societies, forms of governance developed to extend prevailing regimes of power over marine activities. Steinberg (2001) described these arrangements as stewardship, and identified three main stewardship regimes, each of which had a distinctive conception of common space in oceans and coastal areas. Those stewardship regimes (Roman, Grotian and Seldenian) which emerged through the projection of power by empires, and later in time nation-states, have their fruit in current governance arrangements at international level and within countries, and form an important foundation for the discussion of stewardship in this dissertation. For that reason this chapter presents Steinberg's thesis in some detail, enabling the reader to see how subsequent chapters build on it.

There is an important contradiction here, which is taken up in Section 2.4. When an analysis of historical governance arrangements is informed only by examining the powers of contending empires or nations shifting and finding new balances over time, it ignores the many families or clans whose relationships with marine and coastal spaces and resources were never primarily ordered by the empires and nations-states, but rather by traditional narratives and institutions. Claims of right based on these different traditions of governance have been in quiet conflict with empires and states for

generations, but in Australia (as in other countries built on colonial foundations) have recently found voice in national and international courts of justice, as indigenous peoples seek legitimacy for “native title”. Sharp (2002) makes convincing claims that coastal waters at least may have been regarded as territory. She does this on the basis of remnants of such jurisdictions which survived into the era of the modern nation state. Her particular interest is in the Australian aboriginal claims to clan estates which extend over the seas in Australian waters. The widely accepted notion “no one person or group can own marine space: [that] rights to coastal seas and foreshore are conferred on all citizens equally by the state” was an idea carried around the world through the expansion of the European empires in the seventeenth century, gradually eliminating those older local systems of sea governance and management (1996). Steinberg’s (2001) historical overview describes how modern ideas of ocean space were constructed through successive eras of European capitalism and the development of their ideas of marine stewardship.

### **2.3 Oceans as a force field: Roman legacy**

Many of the philosophical and legal bases for oceans governance have their origins in a lively discourse<sup>14</sup> which occurred in Europe during the fifteenth century CE. However, the story begins well before the Current Era. From the strategic Phoenician colony of Rhodes, emerged a sea law which contributed eventually to “the foundations of the modern maritime jurisprudence” (Anand, 1983, p. 11). The Rhodian sea law was primarily concerned with protecting trading vessels from piracy and setting out protocols for fair dealing in trade and conduct of voyages. It appears not to have constituted any form of “sovereignty” or property rights regime but rather formed an umbrella of limited governance to ensure fair dealing among seafaring people. It is perhaps this provision of governance that distinguishes Rhodian sea law from the power exerted by Phoenicians and what might be termed other *thalassocracies* of the early period of Mediterranean history.

The Phoenicians (1550-300 BCE) and other *thalassocracies* in the Mediterranean established prosperous city-states supported by strong trading fleets, but unlike Rhodes, did not provide any form of security for other seafarers. Rhodes was incorporated into

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<sup>14</sup> It has also been hard to construct a coherent historical narrative at this point. The reason is well expressed by Steinberg (2001, p. 11ff) who brings the different constructions of this history together very clearly: histories of “human-marine interactions” take one of three perspectives- “ocean as resource provider, the ocean as transport surface, and the ocean as battleground or ‘force-field’.” Each of these perspectives has its own historical trajectory.



the Persian Empire between 379 – 88 BCE but when Alexander the Great defeated the Persians in 332, it was restored as an independent city again. Eventually it formed an alliance with the Ptolemies in Alexandria, thereby becoming the gateway for all trade between Europe and Asia (Anand, 1983, p. 12). Considering this role, it was in the economic interests of Rhodes to control piracy, so it acquired the role of “protectress and refuge of merchant shipping” (Anand, 1983, p. 11 quoting the Roman historian Strabo). The Roman legal system took up this same principle and developed a legal framework by which it exercised a form of stewardship over sea space.

The Romans called the Mediterranean Sea *Our Sea (Mare Nostrum)*, but even Roman use of *their Sea* as an efficient route for transport was limited to “line of sight” sailing around its coasts (Horden & Purcell, 2000, p. 11). So while the Mediterranean Sea was seen as “a legitimate arena for the exercise of Roman power”, it was considered by Roman law to be “outside the Roman state” (Steinberg, 1999, p. 259) even as Rome exercised hegemony over the whole region. This exercise of the Roman “doctrine of imperium” is considered by Steinberg (1999) and others to be a form of stewardship of the sea on behalf of ‘civilization’<sup>15</sup>. The Mediterranean Sea was not itself a territory of the Roman “state” subject to *dominium*, but considered to be within its sphere of influence, in which *jus gentium* or Roman common law was applied to all (Steinberg, 2001, p. 65). However as Steinberg points out, *jus gentium* still primarily served the interests of the hegemonic power, in this case Rome. Nonetheless, he argues that in this period “the peoples of the Mediterranean constructed the sea as a non-possessible space, but one in which, and across which, state power could legitimately be asserted in the interest of stewarding its bounty” (Steinberg, 2001, p. 61). Subsequently this construction became a norm for marine stewardship which “served as a foundation for modern ocean-space constructions through the present” (Steinberg, 2001, p. 41). The “bounty” of the sea, which emerges as both contestable and in need of stewardship in any reading of Steinberg, is primarily that of free and safe passage by the relatively cheap means of shipping<sup>16</sup>. This analysis posits the oceans as a force field, across which opposing forces ebb and flow finding equilibrium from time to time and for the period of Roman ascendancy; its force dominated the field.

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<sup>15</sup> Parentheses mine. There is no recognition for those peoples who were outside or resisted Roman rule: their claims to stewardship were disallowed and the Roman armies enforced the *imperium* over them (e.g. Gaul and the Iceni). However as Steinberg points out, Roman control was primarily focussed on enabling supplies and troops to be transported by sea.

<sup>16</sup> See for example Steinberg (2001, p. 112).

## 2.4 *The ocean as free space?*

Meanwhile to the east of Africa, Indian, Arab and Chinese societies were developing maritime trade arrangements earlier than the Third century BCE. It is possible that the Indian empire of Chandragupta Maurya had not only regulations for seafaring and port activities, but possibly also regulations for fisheries and pearling grounds, suggesting some kind of territorial relationship of the kingdom to the marine waters adjacent to it (Anand, 1983, p. 12). Around that time and into the first millennium, maritime trade from the Arab lands to India and across the Indian Ocean to S.E Asia and China flourished, as powerful kingdoms suppressed piracy and encouraged free commerce by “Persian, Arabs, Indians and Ceylonese, Chinese and peoples of south-east Asian states in peace” (Anand, 1983, p. 20). From the *Pax Romana* in the time of Augustus (ca.44 BCE-14 CE), to the Chinese expeditions of Chang Ho between 1405 and 1432, major powers played an important role in suppressing piracy in the Indian Ocean and encouraging less powerful maritime kingdoms to eradicate piracy from their coastal cities (Anand, 1983, pp. 14-24). In spite of this “police action”, the Indian Ocean became the model of the freedom of the seas because there was “flourishing maritime trade and freedom of navigation without any hindrance for all ships in the Indian Ocean” (Anand, 1983, p. 15). Steinberg described the “Indian Ocean model” of the sea “as a vast, formless non-territory existing solely as a space of distance between places” upon which the ship is the “only territory to be governed”. Thus “the sea could not be conceived of as a space for exercising imperial domination” (Steinberg, 2001, pp. 52, 53), meeting a minimal requirement to be considered an “international” commons.

What is not clear from Anand (1983) or Steinberg (2001) is the extent to which coastal populations, particularly in archipelagic communities<sup>17</sup>, considered their territory to extend into the Indian or other oceans. Steinberg argues backwards from the example of contemporary Micronesia to show that some societies (in this case in the Pacific) clearly have considered sea spaces to be their territory and “a set of discrete places” which can be managed, traversed and controlled in the same way they organise terrestrial territory (Steinberg, 2001, p. 60). The faint record of these regimes that has come to light inspired Sharp’s research (Sharp, 1998), since these relationships with sea country resemble the ways sea space is perceived by Australian aborigines and stand in contrast

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<sup>17</sup> Questions of the older history of archipelagic communities are particularly intriguing in light of Steinberg’s (2001) account of contemporary Micronesia and the recognition of Indonesia as an archipelagic state in which dominion is exercised over the waters between the many islands which comprise the land area of Indonesia.

to the cultural construct adopted by the British colonizing power and perpetuated by the modern nation state of Australia.

## **2.5 *European mercantilism and stewardship***

Maritime history has little to say about later developments of the Roman Empire's "stewardship project" until the rise of European maritime powers in the fifteenth century. The open seas of the world known to the "emperiums of Europe" (Sharp, 2002, p. 153) were considered by them as a kind of global commons, no doubt due initially to technological constraints on any access other than transit, and to the difficulty in demarcating locations and installing people or structures to control access. However, as was the case for ancient Rome, it was also in their interests to construct them in this way (Steinberg, 2001). In the fifteenth century, Europeans, especially from Spain and Portugal developed their capacity to sail further and further into the open seas. These technologies enabled merchant capitalists to build trading links with producers of goods and commodities which had previously come through Indian and Arab intermediaries. The application of what was later to be described as "mercantilism" by Adam Smith (Encyclopedia Britannica Inc, 2006) emphasised the benefit of maximising trade and building wealth through controlling trade. This doctrine underpinned the state-backed trading companies which had monopoly powers over trade with the Americas, India and south-east Asia.

Spain and Portugal increasingly came into conflict with each other in their efforts to obtain control of trade with India and the East Indies (modern Indonesia). Their vision for sea spaces was akin to that of Roman Empire: free trade, but in this case, under the control and in the interests of their own state-sanctioned trading corporations. In 1492 Pope Alexander VI (as a vestige of the global world order of the Roman Empire) allocated separate hemispheres to the rival Portuguese and Spanish fleets as an antidote to the escalating conflict between these two naval powers (Steinberg, 1999).

Steinberg (1999) argues that Alexander's Bull<sup>18</sup> and the subsequent Treaty of Tordesillas in 1494 were stewardship regimes based on the Roman model. Rather than being allocated a portion of sea territory, Portugal and Spain were granted "a degree of authority in their respective zones of ocean space...as a legitimate arena for Spain and Portugal to implement the social power that they are entitled to exercise based on their

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<sup>18</sup> A Bull was a public letter (or letter patent) issued by a monarch. It particularly refers to a papal edict or mandate (OED, 1993).

possession of land space” (Steinberg, 1999, p. 257). By means of the treaty, these two major maritime powers, together with the other sea-going nations, constituted a community of stewards which agreed on how stewardship of the seas was to be exercised, rather than allocating or assuming dominion over the seas. The prize they sought was control over passage rather than control over marine resources.

This treaty overrode the more open regime of cooperation that had existed in the Indian Ocean. Moreover, the stewardship regime of the Treaty of Tordesillas was not in the interests of the smaller but rising mercantile maritime states like the Netherlands and Britain, who found themselves effectively excluded from both the Atlantic and the Indian Oceans. When the navy of the Protestant Queen Elizabeth of England defeated the Spanish Armada in 1588, not only was the hegemony of the southern European powers dented, but an opposing intellectual and political discourse was given air to breathe. The ensuing debate among international jurists became known as the “battle of the books” (Steinberg, 2001, p. 89).

## **2.6 17<sup>th</sup> Century “battle of the books”**

In a challenge to the Portuguese and Spanish hegemony, Dutch political and trade interests were defended through Grotius’ *Mare Liberum* (1633)<sup>19</sup> which articulated the sanctity of common use of open seas and also “privately held seas” (Steinberg, 2001, p. 94). Steinberg points out that Grotius did not use natural law to exclude the idea of states making claims to seas, but he argued that access to and transit across the surface of the sea should be guaranteed to all, and it is the responsibility of “the community of states to collectively steward the seas ensuring these rights” (Steinberg, 2001, p. 95).

A rather similar position was argued by Seraphim de Freitas in 1625, who responded that the “rights of *imperium*” demonstrated in the “monopolar Roman construction of... stewardship” should be allocated among “competent sovereigns” of which, those of Spain and Portugal were clearly exemplars. Like Grotius, he argued those sovereigns do not have possession or dominion, but “usufruct rights.... over specific long-distance routes that were the life-blood of mercantilist political economy” (Steinberg, 2001, p. 96)<sup>20</sup>.

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<sup>19</sup>Butler (1990, p. 209) dates this document from 1609

<sup>20</sup> Against Grotius, he argued that sovereign nations had not accepted the concept of freedom of the seas. He used teleological argument that since the Pope had a right to nominate his agents to spread Christianity and civilisation, by extension he had a right to nominate who could do that by trade with the countries to the east of Europe (Gordon, 2009).

In contrast to these arguments, John Selden, an English jurist, claimed in *The right and dominion of the sea*, first published in 1633, that rulers may exercise sovereignty over their territorial waters (Selden, 1652)<sup>21</sup>. Steinberg suggests that even Selden does not fundamentally challenge the notion of freedom of the “*deep sea*” even though he defended claims by England over very extensive territorial waters. Furthermore, Selden allowed that within those territorial waters, the Crown or state must allow passage of sea vessels as a duty to humanity (Steinberg, 2001, p. 97). Thus Sharp (2002, p. 154) describes Selden’s argument for *mare clausum* as the other leg on which the modern doctrine of the seas grew: exercise of sovereignty over the waters near the shore and the freedom of the open seas.

All three jurists may be said to have adapted the Roman notion of stewardship of the Mediterranean to the wider marine world which was then opening up to the mercantile states and the increasing plurality of sovereigns contesting ocean space (Steinberg, 2001, p. 97). In spite of the general conclusion to this debate, that dominion cannot be exercised over open seas and vessels ought to have right of passage even arguably over territorial waters, the ensuing centuries saw mercantilist powers, old and new, pursue the kind of strategy described by de Freitas. At the same time, the coastal states with lesser naval power created coastal territory within the reach of shore-based cannon (Butler, 1990, p. 216). The mercantile states used their control over ports to bring the circulation of goods within their control through means such as excise duties and taxes. The British empire came to be the most extensive empire in the eighteen and nineteenth centuries, but even it was simply “the dominant constituent member’ of the community of states who provided stewardship for the ocean along lines proposed by Hugo Grotius in 1608 (Steinberg, 1999, p. 260).

One legacy from British common law arising from this period is the right for all citizens to fish from the sea, transposed from Roman law by the jurist Henry Bracton in the twelfth century (Appleby, 2007). This right is recognised in all countries who have adopted the Common Law tradition, such as Australia. Sharp puts a compelling case that in fact the emergence of open access fisheries through this common right to fish occurred during the period of transformation of land ownership in the British Isles in the seventeenth and eighteenth centuries. Land commons were enclosed and privatised, whereas commons in the intertidal zone or at sea were deemed to be freely accessible to

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<sup>21</sup> In May 1609 James I of England declared that England controlled access to coastal fisheries of England Scotland and Ireland. It was these claims to a significant area of sea that Selden defended.

all (Sharp, 2002, pp. 164,165). This of course had radical implications for the imposition of the claims of the British crown on Australian coastal and marine areas during the period of colonisation. On the one hand the British crown failed to recognise the sovereignty of Australia's indigenous inhabitants but took possession of the land and instituted regimes of property rights through application of the Torrens titles. On the other hand, failing to recognise aboriginal stewardship of sea estates, the colonial governments sanctioned open access to fisheries on the coasts and seas, over-riding indigenous stewardship protocols. Many of those protocols have now been lost with loss of language and disruption to those practices in much of southern Australia.

Public debate erupted in the United Kingdom over the extent and possible limitations of that "right to fish" in the heated public discussion of marine and coastal access legislation in the United Kingdom which finally became law in 2009. A key point of contention was the aim of the Bills to "reflect international trends towards greater management and stewardship of the seas" (eg. Scottish Parliamentary Corporate Body, 2009)<sup>22</sup> including setting up institutions to manage fisheries (Appleby, 2007, 2008). Although the British Crown has sovereignty over coastal waters, the doctrine of "the right to fish" meant those waters were effectively a commons, without effective stewardship institutions to ensure the sustainability of the fisheries.

## ***2.7 From frictionless space (freedom of movement) to common resources***

Perceptions of the ocean changed through the experience of the rise of industrial capitalism between 1760 and 1970 (Steinberg, 2001, p. 110). Oceans became increasingly imagined as being outside of civilisation/society, even while the technology of industrialisation generated both capacity and the need for extraction of ocean resources. There are two aspects of this "other"-ness, one of them aesthetic. The imagination of the sea as "other" is encapsulated in the way the neo-romanticists depicted it as an expression of the sublime. As is discussed in Chapter 6, the sublimation of nature in general was a form of reaction against industrialisation and over-confidence in deterministic rationality. However, the regime of open seas also suited Britain as the dominant naval power in the world. Indeed industrial Britain

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<sup>22</sup> The Marine and Coastal Access Act (2009) came into force on 12 November 2009  
The Marine (Scotland Act) came into force on 10 March 2010.

became the champion of Grotius and his doctrine (Anand, 1983, p. 76)<sup>23</sup>. Its early leadership in industrial technology and dominant role in trade enabled it to take the greatest advantage of oceans as open sea-lanes. This political construction of ocean space is the second aspect of this collective imagination of the ocean as outside civilisation. Constructing the ocean as a commons in this way precluded governance mediated by sovereignty, but the idea of the powerful offering stewardship had a moral plausibility, while also justifying the power regime of Britain as the dominant naval power. As the power of the British navy dissipated with the dispersal of the territorial claims of the Empire among newly independent states from World War II, key elements of the commons regime were preserved.

The stewardship arrangements which emerged for the deep seas (or ocean spaces) can be described as a form of Grotian stewardship exercised by the community of nations to coordinate its use, and in particular, to pre-empt any “extension of state territoriality” (Steinberg, 2001, p. 113). While at least tacitly accepting the oceans as commons, from 1840 in particular, coastal states increasingly extended their jurisdiction over near coastal waters in the manner that had been defended by Selden. This resulted in the general acceptance of the boundary of three nautical miles (the range of a cannon ball on the basis of the “principle of protection” (Anand, 1983, p. 138)). However, even coastal lands other than ports were generally sparsely inhabited until around 1840, so coastal waters were only loosely claimed until the latter part of the nineteenth century (Steinberg, 2001, p. 137). Then the massive development of technology in the twentieth century, spurred by the exigencies of two “World Wars” and its application to fishing and mineral resource extraction led to a reshaping of the concept of stewardship, with the state responsible for territorial waters and the international community developing formal institutions to exercise stewardship over ocean spaces (Steinberg, 2001, pp. 138-139). These historical developments not only left their mark in the governance institutions at a global level, but as is shown in Chapter 4, shaped the way Australian coastal and marine governance developed.

As maritime technologies improved and fishing industries expanded, states began to claim economic rights over greater areas of their adjacent waters, especially over fisheries. In the 1950s (and again in the 1970s) confrontations between the United Kingdom and Iceland over access to the cod fishery in North Atlantic waters claimed by

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<sup>23</sup> See Vidas’ (2011) discussion of the role this played in facilitating the outpouring of innovation and human activity in the industrial revolution, thereby ushering in the Anthropocene.

Iceland as its territorial water were famously labelled the “Cod Wars” in the media, not only as a word play, but also because of its potential implications in the “cold war” between US/NATO and the USSR (National Archives (UK), n.d.).

With the discovery of minerals, oil and gas on and under the seabed and the commercial development of their extraction in the twentieth century, states began to lay claim to these resources also (Steinberg, 1999, p. 261). In addition to the importance of claims to exclusive economic control over the sea and its bed, from around 1970 international treaties began to be negotiated with the aim of limiting harmful impact of human activity on the oceans (Anton, 2002, p. 18).

The need to regulate human impact on the world’s seas and to provide a supra-national mechanism to oversee access to its multiple resources was addressed by the *United Nations Convention on the Law of the Sea* (1982) which came into force in 1994 (Herriman, Tsamenyi, Ramli, & Bateman, 1997). In addition to legal arrangements for the high or open seas, it provides coastal states with a mechanism to exercise sovereignty over Exclusive Economic Zones (EEZ) extending up to 200 nautical miles from the baseline (Anton, 2002, p. 24). The normal baseline is “the low-water line along the coast as marked on large-scale charts officially recognised by the coastal State” (UNCLOS Part II, Section 2, Article 5<sup>24</sup>)

## **2.8 The United Nations Law of the Sea Convention**

The United Nations Convention on Law of the Sea (LOSC) “is one of the most complex treaties in the history of international relations. It purports to devise a comprehensive legal framework for the conduct and regulation of all marine sector activities [and] ...settlement of disputes” (Herriman et al., 1997, p. 62). It “specifies each nation’s rights and responsibilities and the general objectives and principles that should guide ocean use” (Anton, 2002, p. 22). Thus within this framework sit the existing and any future international conventions and treaties, as well as the policies and regulatory frameworks of individual nations. It arose in response to increasing numbers of coastal states unilaterally declaring EEZs and the possibility of a complex array of laws regulating passage, trade and resource extraction from the oceans as a consequence of those declarations (Zacharias, 2014, p. 61).

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<sup>24</sup> Text of the UNCLOS agreement accessed 22 Oct 2014 from <http://www.un.org/depts/los/convention-agreements/texts/unclos/part2.htm>



Following three conferences, the LOSC was adopted by the UN in 1982. Its essence is expressed in three principles: extra-territorial parts of the sea are the “common heritage of humanity”; states have territorial jurisdiction over geographically defined zones adjacent to their shores; that jurisdiction is exercised with an obligation to steward the seas on behalf of other states. So in light of the foregoing discussion, the rules of access to demersal marine life on the open seas and natural resources on the ocean floor beyond the EEZs may be considered to be framed within a Grotian form of weak stewardship. The capacity of highly industrialised nations to access marine resources in the “open seas” is maximised by this form of stewardship.

The territorial sea (including waters, air and seabed) of a state extend up to 12 nmi from a common baseline defined by the LOSC, which is normally the waterline at the lowest astronomical tide (Gullett & Rose, 2011, p. 26). Territorial sea is subject to a “Seldenian form of stewardship” (Steinberg, 2001, p. 138), as the state must allow normal navigational activities through it and access to ports. Similarly, the EEZs are also subject to a Seldenian stewardship, for right of passage must be respected and the marine life and natural resources on the continental shelf come under the jurisdiction of coastal states (Zacharias, 2014, p. 282). However, the LOSC also requires that States conserve and manage living resources in their EEZ (Zacharias, 2014, p. 282). Those who are unable to fully utilise the fisheries in a sustainable manner should enable others to take advantage of the resource (United Nations, 1985; Article 62:1,2), so there is an element of stewardship on behalf of humanity in this modern Seldenian stewardship.

The Independent World Commission on the Oceans (IWCO) suggested that (explicitly) embedding the concept of trusteeship or stewardship in future initiatives to enhance the LOSC would be an appropriate way to safeguard the shared commons of the “high seas” (Independent World Commission on the Oceans, 1998, p. 45). The stewardship found in its proposal is more deliberate than that of Grotius and of the LOSC in its current form. The IWCO argued that the common law concept has been applied in a trail through history, from Roman law (as has been demonstrated above), to Islamic law (*waqf*) through to “American jurisprudence since 1892...confer[ing] on governments a permanent duty to manage natural resources for the benefit of all” (Independent World Commission on the Oceans, 1998, p. 45). However, in the United States of America, the legal doctrine of public trust was applied to navigable waters in the intertidal zone rather than having general applicability to natural resources in all places (Ruhl & Salzman, 2006). The IWCO also suggests that the model of trusteeship found in the UN

Trusteeship Council could be adapted to provide an active mechanism for exercising trusteeship (Independent World Commission on the Oceans, 1998, p. 46): grounded in the doctrine of public trust, but implemented through a trusteeship set up along the lines of other UN trusteeships. A major impetus for trusteeship as proposed by the IWCO is to provide a means to ensure peace and security can be promoted and enforced on the oceans, which are currently “free” of regulation and law<sup>25</sup>.

Arvid Pardo, former Ambassador of Malta to the UN, was a consistent advocate of trusteeship, arguing that while Grotius’ freedom of the seas opens them to access for everyone, the acceptance of the seas as a “common heritage of mankind” (*sic*) requires a truly international management authority. The goal of these arrangements would be “to fulfil our responsibilities as stewards for the creatures and resources of the seas” so ensuring their viability for future generations (Van Dyke, 1993, p. 19). The best that the LOSC has been able to produce to date is the International Seabed Authority, which has been given responsibility for regulating mining on the seabed of the area designated as a “common heritage of mankind” (Shackelford, 2009). The efforts to impose a stewardship function on countries that have actually developed the technology necessary for mining at such depths has been less than successful.

In spite of the development of this range of stewardship institutions observable within the political economy of the oceans and coastal areas, the sustainability of the ocean systems is under threat at many levels, as the following chapter shows. The stewardship arrangements that have developed to this point need to go beyond ensuring access to marine space and resources and address the unintended consequences of human activity as well. They need to shift focus from the relatively narrow focus on governance to the larger questions of sustainability.

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<sup>25</sup> This was proposed when Malta held the Presidency of the 45<sup>th</sup> Session of the General Assembly in 1990. See an excerpt from de Marco & Bartolo (1997) online at <<http://www3.itu.int/MISSIONS/Malta/maltainun.htm>>.

On the UN’s Common Heritage of Mankind – see the Barbados Small Island documents

In his 1997 report on reforming the United Nations, the Secretary-General endorsed a proposal put forth by the Government of Malta in 1990 that the Trusteeship Council be mandated to coordinate international protection of the common heritage of mankind, including the oceans and seas, the atmosphere, and outer space.

<<http://www.scienceblog.com/community/older/archives/L/1999/A/un990516.html>> Accessed 25 Jan 2007

## 2.9 *Stewardship and the new challenges of sustainability*

International perspectives on the oceans have undergone a major shift since the second episode of Cod Wars in the 1970s. In the late eighties the Northwest Atlantic Cod fishery collapsed altogether, resulting in a Canadian government moratorium. By 2003, 29% of all fisheries being fished in the world were considered to have collapsed, (i.e. declined by more than 90%) (Worm et al., 2006). The boundless capacity attributed to the oceans has been found not only to be much more limited, but also to have been exceeded by human capacity to extract, damage and destroy.

Paradoxically, whatever the LOSC may have done to ease geopolitical tensions over national claims to access and sovereignty of marine space, Pauly and Alder (2005, p. 505) argue that it has exacerbated overfishing. This happened as governments of industrial nations invested directly or encouraged investment in fishing over capacity on the one hand and on the other, developing nations without fishing capacity were required by the LOSC to make their fisheries available to the fishing fleets of industrialised nations, with little long-term return<sup>26</sup>. The combination of the initial lack of fishing capacity and the limited revenues from fisheries meant the governments of the right-holding nations were unable to develop capacity to assess, monitor and manage their fisheries resources.

In addition to their value as environmental resources in their own right, the world's fisheries are also indicators of the health of the oceans and the ecosystem services provided by oceans. This highlights one of the most serious limitations of the two stewardship regimes which expressed in the LOSC. The “freedom of the seas” concept at its heart is inadequate to control or manage human impact on the world's marine ecosystems<sup>27</sup> (Floit, 1993, p. 310). The other challenge is that the stewardship responsibility placed on coastal states for the waters in their EEZ and the sea floor on their continental shelf territory is not being fulfilled. There is a need for clearer mechanisms to demonstrate responsibility of all parties to ensure the sustainability of those ecosystems and their inhabitants. They need in turn to be supported by means to

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<sup>26</sup> While the LOSC obliged those countries with EEZs to manage those fisheries sustainably (Zacharias, 2014, p. 282), these countries had no capacity to manage or to monitor their fisheries.

<sup>27</sup> The key problem with “Grotian stewardship” in this context is its mercantilist goal of “frictionless, invisible space” in which there is no conflict between parties moving goods and finance across the ocean space. However when stewardship of nature for its own sake enters the picture, the possibility of stewardship *causing* conflict can arise (Steinberg, 2001, p. 209). A contemporary example is the conflict between the “Sea Shepherd Conservation Society” and the Japanese whaling fleet in Antarctic waters.

develop the capacity of those nations to fulfil that responsibility. In raising the performance criteria for governments, the question of governance is drawn into the circle of consideration. All of the conventions and treaties relating to the environment are built on assumptions of capacity of governments to act in the public interest, and by implication, to some extent the mandate from their citizens to do so.

The other serious limitation of the LOSC is that like all international conventions, it is only binding on parties who become signatories and ratify it. As of 2014, there were still 16 coastal states with membership in the United Nations who had not signed, including one of the world's most industrialised maritime powers, the United States of America. Another very significant outsider is industrialised maritime nation Taiwan, which is not recognised as a state nor admitted to membership by the United Nations. Taiwan is not a signatory to the LOSC, but as Chinese Taipei, is a party to some of the fisheries treaties developed under the convention (Churchill, 2015, p.32-33).

## ***2.10 Conclusion: Beyond “rights”, in search of sustainability***

This chapter has outlined the historical conceptualisation of the world's ocean space as an international commons. This occurred in spite of increasing exercise of sovereignty over land through acceptance of a series of regimes that Steinberg (2001) characterised as stewardship regimes. The Law of the Sea Convention and the concept of the deep ocean floor as the “common heritage of humanity” developed as negotiated responses to questions of power (or its application in control) and access. The Convention embodies both of what Steinberg (2001) described as Grotian and Seldenian forms of stewardship. Grotian stewardship is expressed in the doctrine of the open seas and the common heritage of humanity. Seldenian stewardship is seen the territorial jurisdiction of coastal states over their Exclusive Economic Zones and their area of continental shelf. However, as the closing section of this chapter suggests, this conception of stewardship as regimes of power has not been able to ensure the sustainability of renewable resource harvesting, such as that of fisheries, nor the sustainability of the marine ecosystems. For those questions it is necessary to go beyond questions of rights of nations or even humanity as a large collective, to consider the necessary conditions for sustainability, the management regimes that would ensure sustainability and the ethical framework in which they can operate.

A stronger or thick stewardship, grounded in ethical relationships between people living now, with other living beings and with future generations is a necessary and effective

response to the challenge. It is also pragmatic, as the stewardship framework whose historical development has been described in this chapter, is already embedded in institutions of the international community and nation states. The next chapter examines how this framing of international stewardship relates to the pressures on marine and coastal environments in this era of the Anthropocene, when humanity is impacting the Earth System (Vidas, 2011) to the extent that we need to become active stewards of our own life-support system (Steffen, Persson, Deutsch, *et al.*, 2011, p.739)



### **Chapter 3 Global Coasts and Oceans: Commons in trouble**

The previous chapter showed how international recognition of the oceans as a global commons was a strategic construct serving the interests of powerful maritime trading entities, in particular the powerful mercantile nations of the seventeenth century. It was not simply a matter of “natural law” as Hugo Grotius suggested. Steinberg (2001) argued that the status of open seas as commons and more limited access to coastal territorial waters was established and maintained through stewardship regimes of governance. He characterised a collective international form of stewardship for those seas beyond territorial limits as Grotian and stewardship by nation states over waters within territorial limits as Seldenian, after the main advocates of these positions in the 17<sup>th</sup> Century. These notions of stewardship persisted, to eventually be reflected in the Law of the Sea Convention (LOSC), which came into force in 1994 (Shotton, 2005).

The primary objective of these stewardship regimes was to manage conflict between nations over rights principally of passage, but also access to the economically valuable resources of the oceans. However, as intimated at the end of Chapter 2, the LOSC with its focus on access and rights to exploitation has proven inadequate to prevent tragic (Hardin, 1968) loss of biodiversity and ecosystem integrity in these global commons. Indeed, as mentioned, it is one of the factors which contributed to degradation of fisheries.

In response to evidence that existing exploitation of renewable marine resources is unsustainable, the international community has progressively developed what Steinberg (2001, p. 177) calls a “post-modern doctrine of marine stewardship”. In this stewardship doctrine, territorial appropriation continues to be limited<sup>28</sup> by international convention and a variety of actors, not all of them nation states, are engaged in a range of formal mechanisms for stewardship of marine resources. These mechanisms were developed not only as a means of negating competing claims to territorial power (as before), but also to collectively manage the finite resources of the ocean and safeguard its functions as part of the global life support system.

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<sup>28</sup> He describes three developments in the social construction of “ocean space” in the context of post-modern capitalism: i. annihilation of ocean-space; ii. territorialisation; iii. stewardship (Steinberg, 2001, pp. 164-176).

It is now widely recognized by the international community that marine environments, have been heavily exploited for their biotic products and have absorbed large amounts of harmful substances. These pressures are driven by escalating human populations, coupled with our expanding technological capacity<sup>29</sup>. As a result, oceans and coasts have entered states in which key quality indicators warn of trouble and failing ecosystem processes (e.g. Page & Johnston, 2008). The scale and intensity of human activity, combined with emergent problems such as global warming seems to be leading to irreversible change characterised as a transition from the Holocene into the *Anthropocene* (Tyrrell, 2011). In this context, stewardship needs to address more than those historical problems of access and passage of shipping. It must ensure the integrity of the marine and coastal systems, both in the present and also for future generations of living beings by attending to sustainability in the widest meaning of that term (Committee on International Capacity-Building for the Protection and Sustainable Use of Oceans and Coasts, 2008, p. 2). This global overview of the state of the marine commons, some of the underlying pressures on it and the world's stewardship responses, sets the scene for the following chapter, which describes the development of stewardship arrangements in Australia.

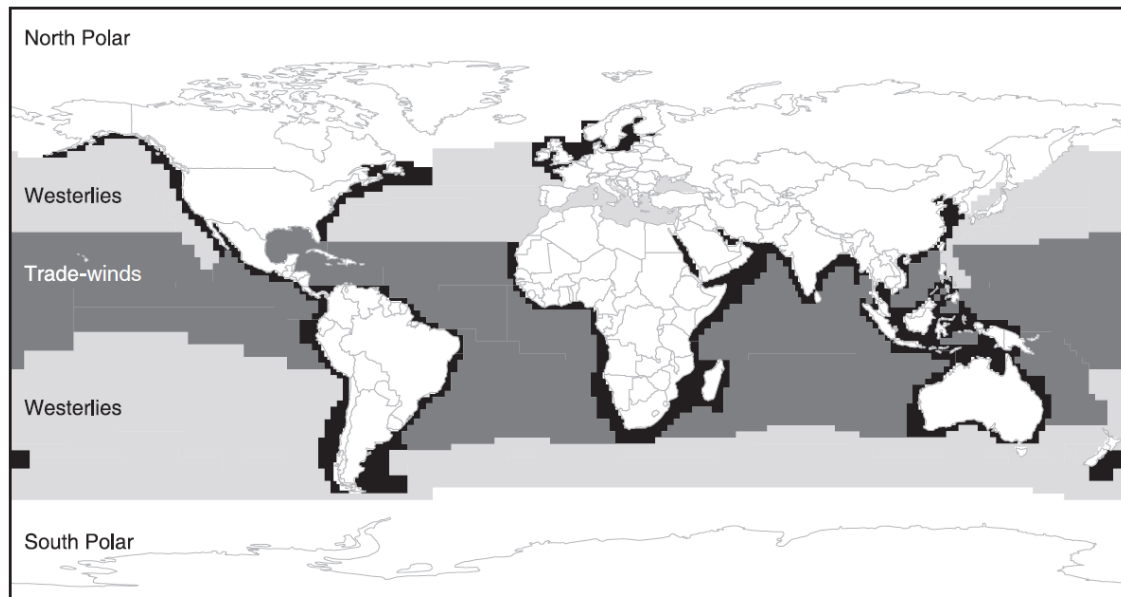
### **3.1 The world's oceans**

Oceans characterise the earth, the blue planet. They cover 70.8% of its surface (Pauly & Alder, 2005, p. 479). Unlike the land, where flows of material and energy are relatively limited, the oceans' circulation systems, powered by differentials in heat energy and salt concentrations, transfer energy, minerals and life forms between and around ocean basins (McNeil, 2008, p. 29). The four primary divisions within the world's ocean upper level (pelagic) ecosystems are the polar, westerlies, trade winds and coastal boundary zone (Longhurst, Sathyendranath, Platt, & Caverhill, 1995), which are broadly recognised as biomes (Pauly & Alder, 2005, p. 479. See also Fig. 3-1 below).

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<sup>29</sup> Recall Ehrlich & Holden's (1972) formula  $I=PAT$  (human Impact on the environment is a product of Population, Affluence and the capacity of Technology).





**Figure 3-1: The earth's four pelagic marine biomes**

Source: Pauly & Alder (2005) p.480, Fig. 18.1

From *Millennium Ecosystem Assessment: Current State and Trends*, by the MEA. Copyright© 2005 Millennium Ecosystem Assessment. Reproduced by permission of Island Press, Washington, D.C.

The coastal boundary biome, (shown as black borders around the continents in Fig. 3-1) which extends from the coastline to the edge of continental shelves<sup>30</sup>, is the most productive of the four biomes. It provides 90% of world fish harvest (Pauly & Alder, 2005, p. 479). The other elements of coastal ecosystems are coastal lands and areas where fresh and salt water mix, thus straddling marine and terrestrial environments (Agardy & Alder, 2005, p. 515). The significance and interconnectedness of the coastal boundary biome and coastal lands provides the rationale for treating coasts and oceans together in this dissertation.

The sustainability of the combined coastal boundary zone biome and terrestrial coastal zones, these most productive ecosystems on earth, is threatened by human activity (Agardy & Alder, 2005, p. 517). This is because “human uses of oceans and coasts (such as fishing and other resource extractions, coastal development, and tourism) are imbedded in [these] ecosystems and interact with natural processes to influence the complex dynamics of ecosystems” (Committee on International Capacity-Building for the Protection and Sustainable Use of Oceans and Coasts, 2008, p. 22). This ubiquitous

<sup>30</sup> Not everyone uses the same markers of the different zones or biomes. E.g. (McNeil, 2008, p. 38) places the outer boundary at a depth of 200m, yet includes the continental shelf as one of the component ecosystems.

human presence means oceans and need to be sustained with human activity present. With the exception of some special untouched environments, the challenge facing humanity today is not how to preserve coasts and oceans in a state without human contact, but, how to manage our interactions to minimise damage and sustain those ecosystems. For this to be effective, indicators of sustainability are important. However tracking the health of oceans is rather complex.

### **3.1.1 The state of oceans today**

Reporting on the state of large-scale environments was endorsed by the OECD (Gabrielsen & Bosch, 2003) which resolved in 1991 that all member states should use a Pressure-State-Response (PSR) model already adopted by Canada in the 1970s (Rapport & Friend, 1979). The United Nations Environment Program produced the first Global State of the Environment Report (*Global Environment Outlook-GEO*) in 1997. Its findings are organized by geographic region, so do not have any specific focus on coast or oceans but made a summary assessment that use of renewable resources including coastal areas and fisheries is unsustainable because it exceeds the capacity to regenerate (UNEP, 1997). The second report, *GEO-2000*, declared an emergency for marine fisheries, many of which were found to be “grossly over-exploited and their recovery will be slow” (UNEP, 1999, p15). Over half of coral reefs were already considered to be beyond saving (UNEP, 1999, Exec. Summary). Subsequent editions of GEO continued to provide general information about global trends (e.g. changes over the last 20 years in GEO-4, (Arthurton, Barker, Rast, & Huber, 2007)) without focussing on the increments of change since the previous edition. Consequently they do not indicate changes against important benchmarks.

A number of specialised assessments of the state of oceans and coasts have been released in the second millennium. The Millennium Ecosystem Assessment (MEA) was a project initiated by the United Nations in 2001. Its objective was to assess human impact on the world’s ecosystems and what would be required for their conservation and sustainable use. The MEA report published in 2005 includes assessments of biodiversity (Mace, Masundire, & Baillie, 2005) marine fisheries (Pauly & Alder, 2005) and coastal systems (Agardy & Alder, 2005). It found that approximately 60% of the

ecosystem services assessed, including capture fisheries, were being used unsustainably<sup>31</sup>.

Ten years after the United Nations launched the *Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (GPA)*, it published a review of the implementation of the plan and the state of the marine environment in relation to nine relevant parameters (UNEP/GPA, 2006). As implied by the title of the GPA, the *State of the Marine Environment* report is focussed on actions to reduce pollution arising from land and does not consider impacts of extractive activities like fishing.

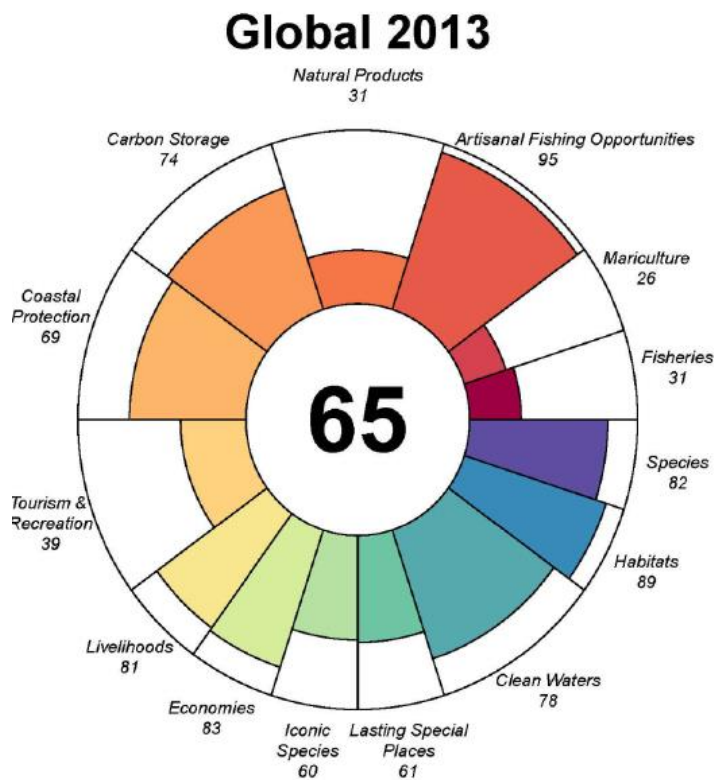
In response to the mass of evidence of serious impacts on ecosystem services, the policy agenda has shifted to include aspirations to base natural resource management on the needs and functioning of ecosystems, as will be shown later in this document. To evaluate effectiveness of these kinds of policies, the Ocean Health Index<sup>32</sup> was jointly founded by Conservation International, National Geographic and the New England Aquarium in the USA, with the support of donor funds. A number of marine scientists collaborated to develop a “standardised, quantitative, transparent and scalable measure” to “track and communicate ocean ecosystem status” (Halpern et al., 2012). The second assessment was published in 2013 and the summary is shown in Figure 3-1.

The Global Health Index tracks the ten indicators against “goals” which encapsulate the optimal long-term “sustainable flow of benefits to people”. Hence the scores are expressed as percentages against each goal. Mariculture, fisheries, natural products, tourism and recreation are shown in Fig. 3-2 as furthest from their goal of a sustainable flow of benefits (Halpern et al., 2012). This indicates global rates of extraction from fisheries and other natural products are not sustainable in the long term.

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<sup>31</sup> From the MEA “Current State and Trends” web page  
<<http://www.millenniumassessment.org/en/Condition.html>> accessed 14 Sept 2014.

<sup>32</sup> This web-based tool is found at <http://www.oceanhealthindex.org/> accessed 14 Sept 2014.



**Figure 3-2 Global Ocean Health Index for 2013**

from Ocean Health Index (2013).

The overall score of 65 assigned for the global Ocean Health Index in 2013 is the average of each of the goal scores shown around the perimeter of the circle. The score for each goal is in turn a weighted average from all 221 EEZs in the world.

The International Programme on the State of the Ocean (IPSO) is another international collaborative program of marine scientists, which is based at Somerville College, Oxford University. In cooperation with the International Union of Conservation Networks (IUCN), IPSO hosts workshops using holistic approaches to understand the stressors from humans and practical ways to reduce degradation of marine ecosystems (Rogers & Laffoley, 2013, p. 491). Its findings from workshops convened in 2011 and 2012 were published in the *Marine Pollution Bulletin* in 2013 (Rogers & Laffoley, 2013). They indicate the “ever increasing pressures” that the growing population of the world exerts on marine ecosystems and resources. Those same resources are already diminished by unsustainable extraction. The IPSO concludes that “human interactions with the ocean must change” to reduce the human footprint on marine ecosystems (Rogers & Laffoley, 2013, p. 493).

An additional major assessment of the world's oceans is underway at the time of finalising this dissertation. Following the (Rio+20) World Summit on Sustainable Development in Johannesburg in 2002<sup>33</sup>, the United Nations commenced a “*Regular Process for Global Reporting and Assessment of the State of the Marine Environment, including Socioeconomic Aspects*”. Its first report is due for publication in late 2014. Its reporting will consist of detailed analysis of existing assessments in manner more similar to IPSO than to the numerical indicators of the Ocean Health Index<sup>34</sup>. It applies the Drivers-Pressures-State-Impacts-Response (DPSIR) model to ecosystem services in a manner similar to the MEA, and also to habitats like the GEO reporting system. It is structured around systems analysis of how driving forces of economic and social change exert pressures on the environment, causing changes in ecosystems. Suggested responses that may be made in adaptation or to counteract these changes will also be presented with analysis.

Pressures the world's oceans can be summarised as just a few main ones. Antunes and Santos (1999, p. 217) described three main pressures on the oceans as emissions, resource extraction and “occupation of areas”. Fifteen years later, the International Program on the State of the Ocean (IPSO) suggested a similar list: overexploitation of biotic resources, effects of climate change and pollution. Global climate change is a noticeable entrant under the spotlight. Rogers & Laffoley (2013) suggest that while the triple-pronged effects of climate change: “ocean warming, acidification and hypoxia/anoxia” contributed to historical extinction events, the addition of anthropogenic pollution and unsustainable exploitation of resources creates a new scenario, with historically unique stressors on the ocean systems. This unique combination creates urgency for “the rapid adoption of a holistic approach to sustainable management of all activities that impinge on marine ecosystems” (Rogers & Laffoley, 2013, p. 493).

The following sections present brief overviews of these three pressures, together with the additional compound pressure of coastal degradation and a summary of the international or global responses which attempt to respond to alleviate the pressures or mitigate their impacts.

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<sup>33</sup> < <http://www.worldoceanassessment.org> > accessed 20 Sept 2014

<sup>34</sup> UN World Oceans Assessment: Resources, accessed 20 Sept 2014 from <[http://www.worldoceanassessment.org/?page\\_id=8](http://www.worldoceanassessment.org/?page_id=8)>.

### **3.1.2 Consuming renewable resources beyond sustainable yields**

Despite the promise that living populations might provide sustainable yields of food, these assessments of the world's oceans found that "global fisheries are in crisis", evidenced through symptoms like 87% of global fish stocks in 2012 overexploited and depleted, having risen from 77% in 2006 (Gjerde, Currie, Wowk, & Sack, 2013, p. 1). Not only fish but other life forms valuable to humanity are also under pressures that the LOSC stewardship regime has failed to check. The LOSC, which guarantees freedom of fishing, even to landlocked nations, may even have exacerbated their plight (Zacharias, 2014, p. 193).

The United Nations Convention on the Law of the Sea (1982) recognised the authority of a nation to manage the fisheries within its expanded exclusive economic zones (EEZ). There are also fish populations mainly found outside of the EEZs, in the form of two global commons: migratory fish which straddle boundaries of EEZs, and fish stocks found mainly in the high seas. Many of these fish stocks are the object of treaties which enable international cooperation in managing conflict and overfishing in particular regions. Some have been in place since 1923<sup>35</sup>, and have been accommodated within the LOSC framework. Many of the treaties provide for Regional Fisheries Management Organisations (RFMO) whose members are stakeholders in a particular fishery. Zacharias (2014, p. 194) lists 22 RFMOs which were established between 1923 and 2012.

The RFMO secretariats make decisions about management of the fishery, but member states have to agree to enforce the decisions in their EEZs and their industries<sup>36</sup>. The member states all have a direct economic stake in the fishery, so short term interests of the politically effective players in their industry triumph over ecological sustainability goals (Gjerde et al., 2013, p. 541). Another major vulnerability of the RFMO system arises from the increasing globalisation of modern fishing, trading and illegal activities in the industry. Member states of RFMOs can only prosecute their own citizens or vessels registered in their jurisdiction for illegal activities on the high seas. So ships registered with flags of convenience escape prosecution.

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<sup>35</sup> The Pacific Halibut Commission was established in 1923 (Zacharias, 2014).

<sup>36</sup> Australia is a member of the Commission for the Conservation of Southern Bluefin Tuna (CCSBT), Indian Ocean Tuna Commission (IOTC), Western and Central Pacific Fisheries Commission (WCPFC), South Pacific Regional Fisheries Management Organisation (SPRFMO) and the Southern Indian Ocean Fisheries Agreement (SIOFA). Source –Australian Government Department of Agriculture and Fisheries <<http://www.daff.gov.au/fisheries/international>>

On the other hand, as noted above, the LOSC required coastal nations with no industrial fishing capacity to open their fisheries to fishing fleets from other nations. These and fisheries of less powerful nations were also subject to exploitation by nations who were not signatories to the LOSC, such as Taiwan and even the United States of America. This allowed the impoverishment or destruction of local artisanal fisheries and the under-pricing of the rights given to foreign fishers (Pauly & Alder, 2005).

In nations where the state assumed a stronger stewardship responsibility for its fisheries, bio-economic modelling has been used to assist them quantify and capture of resource rent from the fisheries. Models of the impact of human effort to capture fish and its impact on stocks and economic return have been progressively developed since the early 1900s (Zacharias, 2014, p. 179). Since coining the term “sustainable harvest” in the 1940s, biologists and economists have collectively developed regulatory and instruments aimed at managing fisheries sustainably (Anderson, 1976; Scott Gordon, 1954). Yet in spite of increased knowledge and proliferation of management systems, fishing yields from large marine ecosystems have declined since 1996 (Zacharias, 2014, p. 175).

Modelling and management aimed at maximum sustainable economic yield have failed to deliver on their promise, partly because the real systems they model are not easily reduced to a manageable number of control variables. Natural variations in species abundance can be very large and manifest very rapidly, outweighing the impact of managing fishing effort in some cases (Beamish & Neville, 2006, p. 242). In addition to the depletion of stocks of target fish species, fishing activity has damaging impact on other species of fish, other marine organisms, birds and mammals, which become by-catch in the nets and lines of fishers. Habitat destruction by bottom fishing is another concern. Even where the UN General Assembly has passed resolutions to address these problems, individual nations or even RFMOs fail to regulate or enforce the regulations (Gjerde et al., 2013, p. 546). The UN Convention on Biological Diversity signed in June 1992 provides international recognition of the need to safeguard species irrespective of their immediate economic value.

An alternative approach, which aims to reverse the destruction of habitat and biodiversity, is ecosystem-based fisheries management, formulated in the Jakarta Mandate of 1995 (Zacharias, 2014, pp. 186-190). It addresses the dangers arising from fisheries management focussed only on one or two target species (as in the majority of

RFMOs). Pitcher and Cheung (2013, p. 9) go even further and suggest fisheries management ought to be reoriented not only to ecosystem-based management, but also “community-based management [which favours] small-scale fisheries”. To achieve this would require not only restructuring the economic and regulatory arrangements, but also greater effort to “foster the realisation of moral obligations” (Pitcher & Cheung, 2013, p. 9) that is stewardship obligations.

The key principle currently underpinning policies for scientific fisheries management is that of “enclosing the commons” (Babcock, 2007, p. 37). To do this, fishing quotas and licences convert the legal-economic status of fish from common property to private property. Where these policies are implemented in relation to long-standing fisheries traditions, there are social and political ramifications. Usually there is a reduction in the number of independent business entities in a fishery, as seen in New Zealand (McClintock, Baines, & Taylor, 2000). The political backlash from fisher stakeholders may result in total quota volumes exceeding the sustainable yield as seen in the European Union (Cullinan, 2011, p.68). Artisanal fishers are often excluded, unless they can effectively voice their concerns. Following the New Zealand government’s introduction of a Quota Management System (QMS) based on annual Total Allowable Catch and Individual Transferable Quota rights in 1986, Maori succeeded in ensuring that their customary fishing and food gathering practices continued to be recognised outside, or alongside the QMS (Sharp, 2008, p. 306). However, where two stewardship regimes operate simultaneously, as in this example, it is possible that fisheries catch will exceed the sustainable limit.

However, the failure of governments to actually enforce agreed targets and limit fishing capacity has far more significant for fish stocks and sustainability than the shortcomings of models and management prescriptions. Countries have regulations which they fail to enforce (Pitcher & Cheung, 2013). The next level of failure is the extent of illegal, unreported and unregulated (IUU) fishing (Gjerde et al., 2013). As a consequence of all these factors, current trends suggest we could see “the global collapse of all taxa currently fished by the end of the mid-21<sup>st</sup> century” (Worm et al., 2006).

An alternative approach to stewardship focussed on managing fishers is to focus on the consumers. One such program is the operation of the Marine Stewardship Council, established through an alliance between Unilever and the World-Wide Fund for Nature (WWF) (Steinberg, 2001, p. 196). It is part of a global strategy to change both the



economic drivers and introduce moral values into the market. The key partner in this arrangement is the consumer who discriminates in favour of the certified products in the market place. Whereas once such a consumer might have been considered an activist, persistent campaigning has brought recognition for choosing MSC-certified produce as “virtuous” behaviour. Yet what if consumer demand in aggregate exceeds the capacity of fisheries to produce fish which meet the criteria for certification? There are larger issues relating to the size of human populations and the scale of overall human consumption and not just the subject of stewardship of fisheries. There is a strange paradox on show when popular media promote increased consumption of fish and at the same time present some of the data shown here about the imminent decline of the world’s capture fisheries.

### **3.1.3 The ocean as global sink**

It is not only what is taken out of the seas that is a problem, but what is being dumped into them is also a problem. Human societies have long used rivers as waste disposal systems to efficiently remove waste from its source and dispose it “out of sight” in marine waters. From personal bathing and washing all over the world, to dry season dumping of municipal refuse in the river flood plains in Bangladesh, the export of waste downstream to the sea continues. In addition to this incipient movement of waste into the sea, industrialised countries have dumped waste materials out at sea, as this once seemed to provide a safe way to remove hazardous waste from human settlements. Pollution of the ocean can be considered as either soluble or suspended contaminants or solid litter.

Human society has largely assumed that marine environments have an enormous capacity to receive harmful materials. However, the problems associate with radioactive waste drew led to the banning of dumping at sea. Even low level nuclear waste was dumped at sea from 1946 until stopped by moratorium in 1983. The *London Dumping Convention*<sup>37</sup> of 1972 specified hazardous materials which signatory countries could not dump, and others that could only be dumped with appropriate controls. It entered into force in 1975. Dumping of radioactive waste was finally banned in 1993 (Ringius, 2001, p. 5). The *Protocol to the London Convention* which come into force in 2006 (Zacharias, 2014, p. 155) prohibits all dumping, with some exceptions for circumstances in which there are no alternatives (Van Dyke, 2000, pp. 7-8). The *London Protocol*

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<sup>37</sup> The Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter administered by the International Maritime Organisation

embodies the precautionary principle, putting the onus of proof on polluters (including to conduct assessments) and requiring them bear the costs of impact of their activities (Zacharias, 2014, p. 155).

Dumping is one example of point sources of marine pollution. Others include losses from shipping and industrial outlets where dyes and heavy metals and other wastes originate. However, most marine pollutants come from non-point sources, such as river discharges, flood runoff and seepages, and some from the atmosphere. Of these, nutrient enrichment of marine waters occurs in the greatest volume and has the greatest impact on marine ecosystems (IPSO, nd).

Flows of nutrients into the sea are a natural part of matter and energy cycles, and contribute to some of the richest marine ecosystems, but when fertiliser or “fixed” nitrogen accumulates it can trigger algal blooms, in which algae respond to enriched nitrogen levels by cycling rapidly through growth and decay of large amounts of biomass. Their decomposition uses up any available oxygen in the water. Depletion of oxygen becomes worse when decomposing algal material descends to depths at which the water is already naturally depleted (Tyrrell, 2011, p. 901). The resultant anoxic waters cause much of the other marine life to die, resulting in “dead zones” (Bollmann et al., 2010, p. 80; Lavelle, Dugdale, & Scholes, 2005, p. 346).

One of the reasons for the current levels of nitrogen entering marine waters being at historical high levels is the manufacture of fertiliser from atmospheric nitrogen and widespread cultivation of legumes. Both of these contribute to enriched runoff and via human consumption of food crops, to sewage discharge. One of the boundary conditions for maintaining a “safe operating space” for human life on earth, suggested by Steffen et al. (2011, p. 861), is 35 million tonnes of N<sub>2</sub> removed from the atmosphere for human use per year. This has already been far exceeded by the current level of 121 million tonnes per year.

The effect of nitrogen in fertilizer enriched waters is compounded by the presence of phosphorus. Steffen et al (2011, p. 861) suggest that the quantity of phosphorous flowing into the oceans is another parameter by which the boundary to a safe operating space can be measured. Currently 8.5-9.5 million tonnes of phosphorus enter the oceans each year, which is just under their suggested boundary of approximately 11 tonnes per annum. Human sewage is a significant source of soluble phosphorous and biologically active nitrogen. The highest levels of marine contamination by sewage are found off the

coasts of West Africa and in the Indo-Pacific, where 80-89% of sewage discharge is untreated (UNEP/GPA, 2006, p. 4). This contributes to microbial contamination in addition to the eutrophication mentioned.

Another form of non-point, soluble or suspended pollutant is organic chemicals. They are found at far lower concentrations than nutrients. Some of these undergo photo-synthetic reactions in the sea to produce new compounds. In spite of recent bans on their use or ocean dumping, some harmful chemicals remain in the oceans as persistent organic pollutants (POPs), the legacy of past practices. Some POPs which are harmful to animals can accumulate in tissues. They become concentrated (by bioaccumulation) higher up the food chain in bodies of predator fish, birds or mammals (UNEP/GPA, 2006, p. 6). Other new chemicals that are not yet regulated and whose effects on marine ecosystems are unknown, are also finding their way into the sea (Hutchinson, Lyons, Thain, & Law, 2013). It is also possible that other POPs may enter marine ecosystems through breakdown of plastic marine debris, although evidence of these pathways and the quantities involved are not yet clear (STAP, 2011, p. 10). So while the UNEP is optimistic that POPs are generally under control through the regulatory system (UNEP/GPA, 2006), Hutchinson et al. (2013) warn that new chemicals constantly enter the oceans to form a cocktail with legacy compounds.

Marine debris features in the public image of marine pollution, appearing in photographs of marine animals strangled by plastic debris, tales of the large mass of plastic floating in the South Pacific subtropical gyre, or truckloads of debris removed by volunteers on beach clean-up days. However, the majority of litter in the ocean is on the seabed (UNEP/GPA, 2006, p. 26). Marine debris may come from shipping and ocean-based activity, but the majority comes from land-based sources. Tsunamis and major floods carry debris to the sea, but poor waste management on land is the main cause of waste entering the ocean.

Plastic is the main component of marine debris (STAP, 2011, p. 6). Marine litter has increased, despite efforts to control it. The United Nations Global Programme of Action for protection of the marine environment from land-based activities (GPA) notes that the problem has cultural roots, and the challenge is to find the keys to people adopting responsible behaviour (UNEP/GPA, 2006, p. 28). The Scientific and Technical Advisory Panel of the Global Environment Facility of the UN notes that the issue of marine debris is complex. A key problem is the “disconnect which often exists between

responses aimed at addressing the causes of marine debris and efforts addressing the impacts” (STAP, 2011, p. 26).

From this brief overview it is apparent that the world’s coastal zones are the source of marine pollutants and the best options for reducing pollution of the seas also lie there. That is one reason for examining coastal and marine stewardship together. The priorities for dealing with the most critical pollutants are to manage municipal wastewater, reduce the amount of nutrients released into the marine environment, reduce production and use of disposable but long lasting objects and also to improve waste management practices (STAP, 2011). Most of these challenges need to be tackled by nation states in whose jurisdiction the sources are located. However pollution is also a product of the global economy. The Grotian stewardship regime that enabled world trade and “frictionless flow of goods” across the seas has been unable to protect those seas from the wastes generated by the very production and consumption practices which drive that trade.

#### **3.1.4 The oceans and global warming**

Any discussion of global environmental issues has become dominated by the issue of climate change due to anthropogenic global warming since the publication of the Stern review in 2006 (Stern, 2007) and the release of the Fourth Assessment Report of the IPCC in 2007 (IPCC, 2007). The increased concentration of atmospheric CO<sub>2</sub> from ever increasing conversion of fossil fuels to CO<sub>2</sub>, exacerbated by increased emission of other greenhouse forcing agents (e.g. methane), is predicted to have greater impact on oceans and coasts than any of the other pressures discussed here (Rogers & Laffoley, 2013). At the same time, global climate change exacerbates those other pressures, such as unsustainable fishing and damage to coral reefs.

An excellent systemic explanation of the changes in the ocean that result from increased atmospheric CO<sub>2</sub> is found in Tyrrell (2011). Increased temperatures result in expansion of the water and rising sea levels (amplified by melting polar ice) and changes to circulation of water. Acidification of the oceans results from an increase in the amount of the atmospheric CO<sub>2</sub> dissolving in the water. The decrease in pH is likely to shift the historical equilibrium for dissolution of calcium carbonate, reducing the growth and health of marine calcifiers from diatoms and coralline algae to crustaceans (Doney, Fabry, Feely, & Kleypas, 2009; Tyrrell, 2011, p. 895). A corollary condition has also been observed: decreasing oxygen content of oceans due to the inverse relationship

between solubility of oxygen and temperature. The loss of oxygen occurs in high latitudes of the open ocean, unlike coastal hypoxia induced by eutrophication (Bijma, Pörtner, Yesson, & Rogers, 2013, p. 499). Bijma et al. (2013, p. 502) call these three effects “the deadly trio” for the roles they played in mass extinctions at the end of the Permian, Triassic and probably the Devonian epochs.

Increased ocean temperatures change the physical properties of the ocean and impact on its ecosystems. As with terrestrial ecosystems, the effect on primary productivity of the ocean depends on its previous temperature range and other features of that hydrological system (Bijma et al., 2013). However it is already noticeable that algae, plankton, fish and species of benthic organisms have extended their range from lower to higher latitudes, where waters are cooler (Bijma et al., 2013, p. 496). This has implications for the integrity and functioning of the receiving ecosystem, as the migrants are a form of introduced species in their new location.

Coral reefs are found in both cool waters and the warm waters of the tropics. Both types of coral reef are biodiversity hotspots (Nellemann, Hain, & Alder, 2008, p. 22). The pressures that most coral reefs now experience encapsulate how the “deadly trio” interact with other human pressures to make the fate of coral reefs quite uncertain. Coral reefs are mined for building materials, blasted by fishers using explosives, smothered by sediments from erosion, polluted by industry, urban sewage and nutrient-rich runoff, all activities which exceed corals’ capacity to renew themselves. The three effects of climate change further reduce the resilience of coral reefs to survive or recover from these direct human impacts. High sea water temperatures cause coral bleaching, especially under conditions of high levels of solar radiation. The decreased pH reduces the rate at which calcifying reef organisms can grow, and if low enough can even lead to dissolution (Ateweberhan et al., 2013). However in colder waters at higher latitudes, some increasing temperature may increase the rate of calcification. Even though soft corals do not lay down reef material, they also appear to be susceptible to bleaching and ocean warming (Ateweberhan et al., 2013). Hughes et al (2003) argue that since corals survived transitions between geological epochs in the past, some may survive the Anthropocene. However the salient point in all concerns about these changes is not the loss of corals *per se*, but that these changes presage the loss of the world in which humans have flourished (Steffen et al., 2011, p. 862).

The threats posed by anthropogenic climate change are widely used as a justification for new models and instruments of governance, some of which are couched more in the language of “responsibility” (Vidas, 2011) but some describe new forms of stewardship. By virtue of the atmosphere being a commons, Opschoor (2008, p. 1196) argues for a “strong climate stewardship” which includes large scale mitigation in spite of some scientific uncertainty. Ateweberhan et al. (2013) point out that international negotiations have not managed to secure any likelihood that greenhouse gas emissions will be kept within the limits<sup>38</sup> required for sustaining the regular functioning of coral reefs.

### **3.2 Collective Responses to Global Issues**

Some of the significant international strategies to address degradation of oceans, such as Regional Fisheries Management Organisations, have already been mentioned. There are others which also bring together stakeholders in common problems which have their sources and possible solutions in those stakeholders’ own jurisdictions. Zacharias (2014, pp. 150-171) summarises the United Nations Conferences from 1972 in Stockholm, to the Earth Summit of 2002 in Johannesburg, and those conventions or programs most significant for ocean and coastal stewardship.

Since the Brundtland Commission in 1987 (Brundtland & World Commission on Environment and Development, 1987) sustainable development has been a globally agreed agenda<sup>39</sup>. The collective actions from that agenda include conventions, protocols and programmes through which governments of nations comprising the UN membership accept obligations to change activities within their territorial jurisdiction and their relationships. To sustain marine ecosystems, two key elements need to be present: sustainable use and conservation of living resources (Herriman et al., 1997, p. 71). *Agenda 21* commits coastal states to “integrated management” (Sect.17.5) (United Nations Conference on Environment and Development, 1992) and the 2002 World Summit on Sustainable Development produced a commitment to establish a global network of representative marine protected areas by 2012<sup>40</sup> (Zacharias, 2014, p. 154). Australia became the first nation to develop an integrated plan to protect and manage its oceans (Foster, Haward, & Coffen-Smout, 2005). However, as the next chapter shows,

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<sup>38</sup> maintaining an atmosphere with a maximum of 350 ppm CO<sub>2</sub> equivalent

<sup>39</sup>This agreement occurred within the context of ongoing contestation of the concept, e.g. Davison (2000) or Osoria, Lobato & Castillo (2005).

<sup>40</sup> They also called for a report on the state of the marine environment to be delivered by 2004 (Zacharias, 2014, p. 154)

translating that broad conceptual plan into regional management plans has not been easy.

As indicated in the introduction to oceans (Section 3.1), the coastal boundary zone is the biome most threatened by human activity. As the location of a significant proportion of the world's population, coastal zones are most heavily impacted, in spite of also being the most intensively managed end of the marine continuum. Since coasts are all under jurisdiction of nation-states, unlike the high seas, the nature of global stewardship is different there also.

### ***3.3 The coastal zone –getting to the source of problems***

The coastal zone is the place where the sea meets the land, where the ocean currents and waves release their kinetic energy in constructive or destructive processes on a constantly changing shore. These changes may be almost imperceptible on hard rocky coasts in contrast to the dramatic changes observed on soft erodible shores. This boundary between sea and land is also modified through human activity such as land “reclamation” or canal and harbour construction, or most dramatically of all in the construction of vast polders such as those in the Netherlands. Closely linked to the changeable nature of the coastal zone, jurisdiction over the coast and human activities on the coast is also highly heterogeneous, sometimes conflicting and sometimes contested. The boundaries delimiting the extent of the coastal zone to its inland side is often defined in relation to a particular policy focus or management issue rather than a universally agreed definition (Kay & Alder, 2005, p. 4). Conflicts emerge when different jurisdictions apply different definitions and management or governance regimes over the same space.

One thing that is not contested is the value placed on the coast and access to it, with 41% of people living at or near the coast.(Martinez et al., 2007, p. 265) The resources of the marine and coastal area and its common property status in particular, have provided livelihoods for many, particularly the poor. In more recent times the amenity values of coastal zones have been highly valued, so in post-industrial nations rich and middle-class people like to live near the coast. Even though these scenarios look different, they share a common net effect of human pressure on the coastal and near shore environment.

Through most of human history, coastal settlements arose from through use of coastal resources as a basis for livelihoods: e.g. fishing, boat related services, ports and markets

(May, 2001, p. 39) with consequences that will be discussed further. Although the Romans established recreational resorts on the Italian coast for the citizens of Rome (May, 2001, p. 41) the amenity value of the coast did not receive significant attention again until the eighteenth century, when sea-bathing emerged as a health practice among the British gentry<sup>41</sup> prompting the development of seaside health resorts (Thornton, 2001, p. 60). By the time railway networks developed which were able to provide mass travel, the industrial revolution had also produced an urban population which appreciated the amenity more than the direct resource values of the seaside<sup>42</sup>. Members of the working classes and an emerging middle class soon joined royalty and the gentry in coastal cures and recreation. The transformation of spas and small villages into holiday destinations stimulated urbanisation of these destinations (May, 2001, p. 42).

The social history of these developments is particularly pertinent to many coastal issues in Australia to be discussed in the next chapter. Australia's population-related pressures have their origins in this emergence of the high amenity value of the seaside in the culture of the UK (England in particular), which also developed across the industrialised world, as emerging middle classes acquired the ability to live in locations desirable for their socio-cultural characteristics and possibly some distance from their place of economic work. In the twenty-first century these issues have become global issues.

Of course all through this more recent history, economic activity has continued to expand in the coastal zones: ports, industrial facilities, resource extraction and storage together with release of wastes into catchments if not directly to the receiving marine waters.

### **3.3.1 Pressures on coastal areas**

Coastal ecosystems are threatened from the impact of human activity mainly because of their value to humans described above. However, only 28% of the world's coastline has been altered from its natural condition (Martinez et al., 2007, p. 257)

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<sup>41</sup> May (2001, p. 42) attributes "the modern attraction of the beach as a place of recreation, relaxation and healthy living" to Dr Wittie in Scarborough, England in 1667. Walton (1997, p. 37) argues that sea-bathing spread from the UK to Europe and the development of southern European Coastal resorts developed from this.

<sup>42</sup> What really enabled the working classes to utilize the railways for seaside recreation was the institution by Sir John Lubbock in 1871 of the long weekend or the Bank Holiday, a time in which working and clerical classes in industrial London and other cities were able to accumulate a little savings for recreation (Walvin, 1978, p. 60).



The impact of mining depletable (or non-renewable) resources is more intense on the coast, partly due to their greater accessibility. The destruction of both habitat and landform by mining activity competes with the needs for ecosystem maintenance, but sometimes competes with other human uses of the coastal environment. Mining activities may also release leachates, spillage and eroded sediments into adjacent marine waters, with impacts discussed above. In a similar way, conversion of coastal areas to other landforms or uses has had enormous impact. The most highly publicised is the conversion of coastal wetlands and mangroves to mariculture ponds. Yet the destruction of coastal habitat and landform for human settlement, port and marina infrastructure is also significant (UNEP/GPA, 2006, p. 28).

In the coastal zone, renewable resources have been used in an unsustainable manner for as many uses as human ingenuity can muster: for construction materials, food, clothing, cosmetic and ceremonial purposes or merely for entertainment. Overexploitation of renewable resources has not only compromised the sustainability of particular species, but also decreased or degraded habitats (Agardy & Alder, 2005, p. 539).

Waste is generated from human activities right in the coastal zone and also transported there from the surrounding catchments through hydrological flux into the coastal zone. “Nearly 80% of the pollutant load reaching the oceans comes from terrestrial sources” (Agardy & Alder, 2005, p. 517) through water flows carrying “fertilizer, sewage and other [synthetic] nutrients” as well as poisons and toxins (Agardy & Alder, 2005, p. 534).

There are also additional pressures whose origins are right on the coast. At a local scale, modifications of coastal and estuarine systems have changed coastal processes leading to changes in erosion and accretion patterns, although the impact of these human activities is less dramatic compared to natural coastal processes. At a global scale, conversion of wetlands to make way for coastal development is the greatest cause of coastal habitat loss (Agardy & Alder, 2005, p. 533), both directly and through interference with hydrology and drainage. Dams reduce sediment loads to estuaries and coasts and change the nutrient levels of adjacent waters.

Just as has been shown in relation to the world’s oceans, the need for institutions of coastal management arises from two types of problems: the impacts of coast users and their upstream communities on coastal environments, and the impacts of users of the coastal zone on each other (Cicin-Sain & Knecht, 1998, p. 18).

### **3.3.2 Response: The emergence of institutions for governance and management of coasts**

The earliest institutions for management of coasts, like many institutions in society, were probably forms of governance to maintain the security and wealth of local rulers. However from ancient times, port cities of the Greek, Roman and Chinese civilisations, with their engineered infrastructure, and those that followed, have required some form of management to ensure their construction and ongoing maintenance (Kay & Alder, 1999, p. 10). The construction and maintenance of the city of Venice is a clear example of a form of coastal management much earlier than is indicated by Cicin-Saen and Knecht (1998) who describe the history of coastal management commencing from the 1960s in four stages (shown in Table 1). It indicates that until recent times, management tended to focus on particular issues, such as maintaining navigable waters or ports, or fishing and not on preserving the integrity of the environment itself (Kay & Alder, 1999, p. 11). A combination of awareness that many coastal and marine ecosystems were susceptible to collapse and the international agenda of economic development played a role in the adoption of coastal management in the 1960s and particularly of Integrated Coastal Zone Management (Nichols, 1999).

**Table 3.1 Vallega's "Stage-based model of coastal area management".**

<b>Stage</b>	<b>Objective</b>	<b>Scope of management</b>	<b>Geographical coverage</b>
1960s: rise	Use management addressing single environmental issue	Sea-ports or recreational uses	Shoreline
1970s: implementation	Use management and environmental protection	Few cases, e.g. Ports, manufacturing plants, fishing	Shoreline  coastal zones delimited by arbitrary criteria  coastal zone delimited by administrative criteria
1980s: maturity	Use management and environmental protection	Multiple-use management	Various alternative extents characterised by the proclivity to move seaward to extend management to zone of national jurisdiction
1990s: international primacy	Integrated Coastal Area Management (ICAM)	Comprehensive use management, management of coastal ecosystem	Zone extending landward to various criteria  Seaward to outer limit of widest national jurisdictional zone

This table, published by Vallega (1996), is reproduced here from Cicin-Saen & Knecht (1998, p. 32). A similar schema of developing phases is found in Kay and Alder (1999, p. 13).

The rise of coastal management indicated in the first row of Table 1 is in part a reflection of land use planning approaches of the 1960s, which spatially separated uses to minimise conflict (mainly between users). The approaches which arose were sectoral and focussed on single or a limited number of issues. In the 1970s, partly in response to a more general awareness of the science of ecology and the interconnectedness of

environmental systems, the need to take an integrated approach to all stakeholders and the upstream and downstream sides of the coastal zone led to the emergence of Integrated Coastal (Zone) Management<sup>43</sup>.

The United States Congress enacted its *Coastal Zone Management Act (CZMA)* in 1972. The passage of this Act was helped partly by the widespread public shock caused by a massive oil spill from a platform six miles off the Santa Barbara coast in January 1969 (Kalen, 2006). The Stratton Report to the US Congress in 1969 had previously coined the term “coastal zone” and recommended creation of “an ocean agency with a coastal management programme” to rectify the problem of diffusion of responsibility for marine and coastal issues within the federal government system (Kildow, 1997, p. 235). In actual fact, the implementation of the CZMA ran headlong into opposition from the powerful champions of private property and individual rights. It was one of the earliest instruments which challenged the notion of unlimited private property rights over land in the United States (Kildow, 1997, p. 236). One reason it had to do so, was the rapid post-war expansion of private waterfront developments which had reduced public ownership of the shoreline for recreational purposes in the lower 48 States to about 7% by 1962 (Kildow, 1997, p. 234).

In the same year the US Congress passed the CZMA, the voters of California enabled the establishment of the California Coastal Commission which was made permanent in the State of California Coastal Conservation Act of 1976 and exemplifies the move from the development to the maturity stage of Table 1. Its powers were exercised through its capacity to issue development permits with conditions, but its scope extends 3nmi out to sea. In some ways the California Coastal Commission exemplifies what later became Integrated Coastal Zone Management (ICZM). It was initiated through community referendum rather than through the legislature, it works in partnership with local government and its scope is a range of uses of water and land within the coastal zone. Cicin-Saen & Knecht (1998, p. 33) comment that state programs in the United States focused mostly on shore land use. However these initiatives certainly pointed the way for ICZM.

At an international level, concerns over climate change and the creation of the Intergovernmental Panel on Climate Change (IPCC), together with high level meetings

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<sup>43</sup> On the land side of the coasts Integrated Catchment Management (ICM) also emerged in as a response to these issues in within river catchments or watersheds.

in preparation for the UNCED conference in Rio de Janeiro (June 1992), resulted in the Integrated Coastal Management (ICM) concept becoming a part of Agenda 21 (Chapter 17). As a consequence ICM was adopted by nations adopting Agenda 21. ICM seeks to integrate several dimensions relating to coastal issues: sectors, levels of government, spatial, disciplines and international or trans-boundary issues (Cicin-Sain & Knecht, 1998, p. 45).

The major functions of integrated coastal management described by Cicin-Sain & Knecht (1998, p. 47) are: spatial planning, promotion of economic development, stewardship of resources, conflict resolution, protection of public safety, proprietorship of public submerged lands and waters. They describe “stewardship of resources” as:

- Conduct of environmental assessments
- Conduct of relative risk assessment
- Establish and enforce environmental standards
- Protect and improve coastal water quality
- Establish and manage coastal and marine protected areas
- Protect marine biodiversity
- Conserve and restore coastal and marine environments (Cicin-Sain & Knecht, 1998, p. 47)

An international survey of ICM experience found that environmental assessments and establishment of coastal and marine protected areas were most commonly listed stewardship activities (Cicin-Sain & Knecht, 1998, p. 50).

In 1993 a World Coast Conference endorsed ICZM as "the most appropriate process to address current and long-term coastal management issues" (Haward, 1996, p. 88). In principle, such an integrated approach offers scope for stewardship of the coastal zone to be more deliberately addressed. It has the possibility of keeping the best interests of the coast itself in mind, and recognises the need to fit human activity into that space. Australia has endorsed the integrated approach to coastal zone management but there is quite a literature discussing the difficulties of realising it within the federated

governance institutions in the Commonwealth of Australia. Some of these issues will be explored in the following chapter.

ICZM has been criticised because of its underpinning support of economic development and as the imposition of state-centred management regimes at the cost of local community based Common Pool Resource (CPR) institutions (Nichols, 1999, p. 389). The latter usually operate at a local or community level and are integrated into social values and ethics. Their strength lies in the way that community members can identify with and “own” them. The weakness of local community based institutions is their relative incapacity to regulate outsiders. On the other hand, state-based institutions may be perceived as forms of *governmentalism* and resisted through tacit consent at local level, or subverted by corrupt stakeholders serving their own interests. However, since one of the key elements of ICZM is to engage stakeholders and resolve conflict, it offers in principle a place for local community interests to sit alongside the commercial and economic interests.

### **3.4 Conclusion**

This overview has presented a global synopsis of the pressures threatening the integrity and sustainability of the world’s coasts and oceans. The historical trajectory of policies and management of the oceans and coasts can be interpreted as a transition away from local, community based institutions for allocation (if not management) of resources as has been well argued by Sharp (2002). Local institutions for allocation of rights to use were displaced by the rising maritime powers in Europe and their trading empires (which became colonial empires) in the rest of the world. In the modernist project the “high seas” were socially constructed as global open access, common property, but the near-shore waters and the intertidal zone became the territory of the adjacent land-based authority/power. In this territory another form of open access regime developed: the right of all citizens to use access and use. On land, private property rights in the classical liberal tradition typified by Locke and Adam Smith dominated the capitalist political economies.

By the 1970s it had become evident that these twin systems were unable to ensure that the natural wealth of the coasts and oceans would be preserved for coming decades, let alone coming generations. New approaches which brought governance and management to the oceans, and institutions which mediated the freedoms of open citizen access to territorial waters (and freehold property rights on land) are also developing. The key

elements of the new institutions are integration of ecological, economic and socio-cultural interests, sustainability and a preference for planning-based approaches. These are expressed through ecosystems based marine planning, development of international fisheries management bodies and through commitment to Integrated Coastal Zone Management and planning. It is possible to view these developments as the introduction of elements of stewardship into the way nations and communities relate to the marine and coastal realm. However, is stewardship a strong enough concept to meet the challenges of open and mobile societies interconnected through the “global economy”? Chapter 4 examines how these developments unfolded in Australia, followed in Chapter 5, by the story of Western Australia: a large state within a federated national governance structure. Together, these two chapters examine the relationships across the scales from local to national, as well as examine particular policies and their implementation on the ground and water.





## Chapter 4 Coastal and Marine Policies and Management in Australia

### 4.1 Introduction

With a strong European heritage shaping the formation of the Australian nation-state, the way Australians imagine coasts and seas closely follows the developments described in Chapter 2. In particular, the ideas of the commons and stewardship were carried over to the southern continent. British colonisation of Australia in 1788 did not recognise indigenous sovereignty or stewardship regimes, but considered the land to be *terra nullius* and therefore open to acquisition as territory of the English Crown. Similarly, in assigning to marine waters the status of commons, the colonisers applied to the deep seas and near-shore waters of the colonies, the same stewardship doctrines that applied in the British Isles. From their origins as an apparatus of British administrative policy, the assorted colonies on the southern continent developed their own sense of identity and united to form the nation of Australia, its main wealth based on extractive use of natural resources. The powers of the governments in Australia's three-tier structure in relation to marine and some coastal issues are still being asserted and tested to this day. New concepts of environmental and resource stewardship have been invoked in public policy over the last thirty years and continue to be contested and refined.

After a brief discussion of the historical background, this chapter presents a national overview of the layers of policy and legal jurisdictions which apply to the coasts and oceans in Australia. These provide institutional frameworks within which the State of Western Australia is situated and which is the focus of the following chapter. Due to limitations of space, this dissertation does not compare the policies, governance and planning arrangements for each state. This chapter examines the overarching national stewardship arrangements that have particular impact on the coasts and waters around Western Australia. There are now many excellent sources of comparative analysis of all the states, such as Harvey and Caton (2003 Ch4), Harvey, Clarke, Pelton and Mumford (2012) and others. The interrelationships between national and state jurisdictions in Natural Resource Management policy in Australia is dynamic and, among other things, forms a part of the ongoing refining and re-invention of the Federation of states and territories. For the most part, the concept of stewardship was implicit rather than named as such, however for a brief period stewardship came to the fore in environmental and

natural resource management policy and that ignited interest in the research presented here.

Australia's most recent coastal and marine policies were produced under governments of differing political persuasions, but as a whole, constitute responses to increasing pressures within Australia and developments offshore<sup>44</sup>. The United Nations LOSC enabled Australia to claim control over the third largest EEZ in the world (Vince, 2003, p. 69) and resulted in development of Australia's Oceans Policy as a measure to ensure effective jurisdiction over the EEZ. While the influence of this and other international treaties is more easily seen in Australia's Oceans Policy, three main national policies: *Australia's Oceans Policy*, *The Commonwealth Coastal Policy* and the *National Cooperative Approach to Integrated Coastal Zone Management*, all resulted from attempts to address increasing pressures on coastal and marine environments in the context of increasing global attention to integration, sustainability and ecosystems approaches.

The competing interests vying for environmental goods and services from the coast have been addressed largely through spatial land use planning. International recognition of the inadequacies of sectoral approaches to planning and natural resource management in zones of increasingly intensive competition and conflict led to widespread adoption of Integrated Coastal Zone Management (ICZM) as the means to bring the different stakeholders together. Australia also committed to ICZM and more generally to the principle of natural resource management based on some form of ecological region (bioregions or catchments for example). However, integrated marine planning involving all sectors became too difficult for the Commonwealth Government (Vince, 2013, p. 326).

The boundaries and interactions of formal jurisdictions within the tiers of Australian governments has been ongoing issues. Another is role of local communities, government instrumentalities and other structures like business and civil society groups in policy formation and implementation. Within Australian political discourse, the philosophical approaches of Labor, which incline to a more engaged government and those of conservative coalitions, which advocate minimising the role of government have always contested for expression in policy. Yet, at the same time, a tendency for government policy to favour community participation and market-based instruments has

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<sup>44</sup> Vince (Vince, 2004) describes it as a "leisurely and orthodox" approach to policy making.

cut across the political divide (Dovers, 2013). This chapter examines how the history of coastal and marine policies and programs is situated in relation to conceptions of citizenship and stewardship.

## **4.2 *Australia's colonial legacy for coastal and marine policy***

The succession of coastal and marine policies (and indeed all governance) in Australia has its origins in permanent European settlement from 1788. For a long time after settlement any prior approaches to natural resource management were largely ignored, or not even recognised by the colonisers. Overseas visitors were, for a long time, content simply to trade with Australian Aborigines (Worsley, 1955). The Makassarese and Bajau (from what is now Indonesia) had extensive trade in Trepang<sup>45</sup> and contributed to the vocabulary of Yolngu and other language groups in Northern Australia. Europeans also engaged in trade with the Bugis and Makassarese but, as has been discussed in Chapter 2, by the 18<sup>th</sup> century their goals turned from trade in goods to monopoly and control of the territory from whence they came. Some of the vessels travelling from Europe via the “Roaring Forties” were shipwrecked or made landfall on the western coast of Australia. Some of these visitors may have received hospitality from aboriginal people such as the Nyungar in the south-west of Australia (Collard & Palmer, 2008).

The obsession of the European mercantilist powers with trade monopoly led to the allocation of separate spheres of operation to Spain and Portugal through mediation of the Pope. James Cook's claim on the Pacific coast of Australia for the British crown was made within what was believed to be the Spanish sphere of stewardship in the Atlantic Ocean. The line of demarcation between Spanish and Portuguese realms was determined in general principle through a treaty in 1529 which adopted the 152 degree meridian (The Saragossa Line) as the supposed anti-meridian of the Tordesillas line in the Atlantic (Marchant, 2008, p. 108). Actually the anti-meridian is 135 degrees, (Marchant, 2008, p. 112). The point of this discussion is that this line became the western border of the British colony of New South Wales (Rothwell, 2012), with the corollary that it later formed the eastern border of the largest State, Western Australia. In this historical process, Australia has become a site where competing notions of territory and stewardship struggle for legitimacy, a struggle which continues in the courts today.

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<sup>45</sup> Marine echinoderms also known as *bêche-de-mer*

#### 4.2.1 Aboriginal stewardship arrangements

The European settlers arriving on the coasts of Australia from 1788 onwards not only brought with them the imperial notion of *res publica* – the right of all citizens to use marine resources under the jurisdiction of the state (Sharp, 1996), but they also arrived on the foundation of the legal fiction of *terra nullius* – the idea that there was no existing legal claim over the lands and seas of Australia prior to the claim made by the British Crown<sup>46</sup>.

However, there were pre-existing arrangements within indigenous coastal communities, which have only received proper recognition since the Mabo decision of the Australian High Court in 1992. The Native Title Tribunal recognized enduring claims of the Yolngu people over the intertidal zone of Blue Mud Bay in July 2008. Indigenous relationships with land and sea were not only inconvenient to the colonising settlers, but operated in a way that made them difficult for the newcomers to comprehend. Sharp (2002, p. 46) summarised this well:

...in the eye of the coloniser, the marine domain was...unknowable space. The freedom to fish, enshrined in the English common law, brought saltwater industries....in the belief that the territorial waters were open to everyone.

The colonisers initially framed wider sea territory as *mare liberum*. Then as governance of the colonies developed, the doctrine of *mare clausum* was applied to waters adjacent to the coast just as it had been in Britain.

Sharp (2002) points out that coastal aboriginal people, particularly in the north of Australia, recognise sea territory, know the names of sea places and have transmitted the stories associated with those places through the generations. Particular clans inherit the rights and responsibilities of care for land and sea estates (Smyth, 1997). These have been well expressed by the West Australian Bibbulman in their use of the term *carers of everything* (Nannup, 2003). In another example, “northern coastal marine space is a series of common property areas owned by identifiable indigenous groups” with their own membership and common property regimes which express their reciprocal relationships with the marine “resources” (Sharp, 1996). Aboriginal understanding of this inheritance integrates spiritual, biophysical and cultural aspects and values of the

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<sup>46</sup> The limits of citizenship concepts are implicated in the position taken by the settlers. They did not recognise indigenous people as citizens of a polity. In fact, although they became British subjects once the British Crown declared sovereignty over the land, they were not accorded full citizen rights, but regarded more as objects (of “protection” and control by State governments) than subjects.

land and sea country. Just as “song lines” link place, plants and animals, seasons, spirit and cultural performance for indigenous people on land, Saltwater People follow the tracks and markers at sea in ways that have mostly been incomprehensible to migrant settlers. These navigation practices appear to have also been common in Micronesia (Steinberg, 2001).

Not only were the ownership arrangements different to those which had been familiar to the European settlers, but the stewardship relationships themselves were also different. In the words of contemporary Nyungar Wayne Neville, “looking after our country and being with country is part of our heritage”. The well-being or sustainability of sea country is ensured by the continuation of traditional practices at designated sites (Neil McKenzie, Roebuck Bay Working Group)<sup>47</sup>. In this worldview, people are essential to the well-being and health of (land and sea) country. Smyth (1997, p. 4) summarises indigenous stewardship of the marine environment as:

- ceremonies to nurture the well-being of places species and habitats
- restricting entry and resource use
- seasonal control of exploitation
- controls based on resource condition
- controls through totemic relationships

In many parts of Northern Australia coastal aboriginal groups have maintained these relationships with their sea country throughout colonisation and the development of the Australian nation to its current state. However they have done this in the face of competing and opposing property entitlements developed by the colonisers and in the face of active efforts to displace the cultural basis for those relationships<sup>48</sup>. For example, in 1907 the newly constituted Australian government closed down the indigenous trepang trade as a consequence of its White Australia Policy (Worsley, 1955, p. 5).

#### **4.2.2 Emergence of the Australian nation and coastal and marine governance**

The process of colonial settlement which disrupted and threatened to extinguish the existing indigenous stewardship regimes took place over more than a century. The

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<sup>47</sup> Neville & McKenzie were panel speakers at the 2008 Coastal Conference, Denmark, Western Australia

<sup>48</sup> James (2007, p. 179) argues that even the concessions of Australia’s recognition of Native Title “is empty procedure” because the modern (and now incumbent) legal relations expressed in property rights remain superior to “native title” rights. This is particularly disadvantageous to a people who have been dislocated by the nation state.

details of marine governance arrangements for the emerging federated nation-state were not really resolved until 1979. In contrast to formation of the United States of America, Australia's colonial origins lay not in private initiative, but in British government policy, which had the twin purposes of establishing a penal colony and enabling British citizens to establish mercantile capitalism in this apparently vacant continent. The initial need to provide subsistence resources and work for the convicts was the integrating glue keeping these two policies together. Dismissing indigenous claims to the land, colonial governors granted land to colonists and surveyors generated lots and title deeds for them (Kay & Lester, 1997, p. 270) creating private property out of the public estate. An interesting legacy of this process, possibly from the public trust doctrine of common law, is the retention of coastal reserves 30 to 60 m in width from the high water mark which were not alienated as private property<sup>49</sup>. To these commons were added large areas of coastal lands which, over time, state governments gazetted as state parks, mainly for recreation (Kay & Lester, 1997, p. 270).

The boundaries of the Australian colonies themselves were all land-based and determined by a series of letters patent and the colonial Governors as needs arose until the passage of the *Colonial Boundaries Act 1895* (Cumbræ-Stewart, 1934). In Britain, the *Territorial Waters Jurisdiction Act* of 1878, had declared territorial waters to a distance of one marine league<sup>50</sup> (3nmi) from the low water mark although Lauterpacht disputes whether it was applicable to the territories of Queen Victoria's dominions or only to the British coast (Lauterpacht, 1978, p. 84). There was sufficient international recognition of sovereign territory extending 3nmi seaward from the low water mark by 1900 (Anand, 1983, p. 140) for it to become incorporated into the new federation of the Australian colonies.

When the six independent British colonies formed an independent, federated nation in 1901, the only powers transferred to the new Commonwealth of Australia were international affairs, trade and taxation: roughly equivalent to those previously reserved by the British parliament in relation to the colonies. The states and territories had jurisdiction over terrestrial environments within their borders and over their marine waters (that is, to 3nmi from the low water mark). The new nation had over 36,000 km

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<sup>49</sup> Strictly speaking public trust included beaches to the high water mark and the riparian strip along navigable streams, which were excluded from grants made by the English Crown (Kay & Lester, 1997, p. 270)

<sup>50</sup> This distance is often equated to that covered by a cannon shot from the shore (Anand, 1983, pp. 138-139)

of coastline. Over 100 years later most of this coastline still remains in the public estate (Wescott, 2009).

#### 4.2.3 Whose waters and coasts? Settling federal jurisdictions

The “coordinate form of federalism” which emerged in the new Australian nation (Herr & Haward, 2001) limited Commonwealth powers in marine matters to regulation of fisheries in Australian waters beyond the limits of state territorial waters, which extended “3 nautical miles from the low water mark” (Saunders, 1997; Vince, 2003, p. 9)<sup>51</sup>. Thus any laws which existed or were passed over the ensuing fifty years relating to land-use controls, lawful activities, and natural resources management within the coastal zone above the low water mark fell within the jurisdiction of the states. However in more recent years, international developments and the Commonwealth’s entry into international treaties, participation in conventions, together with changing technologies and institutions in Australia has affected the relations between the tiers of government and how they each relate to coastal and marine issues.

The Commonwealth’s *Fisheries Act* of 1952 brought the Commonwealth and States into conflict. In 1967 the States and the Commonwealth reached agreement on offshore cooperation, however the path to an offshore constitutional settlement was not easy and an attempt by the Commonwealth control over offshore resources in 1970 was rejected (Brazil, 2001). Commonwealth interest in offshore oil and petroleum mining was spurred by oil and gas strikes in Bass Strait in the 1970s (Herr & Haward, 2001, p. 3). The Whitlam Labor Government claimed Commonwealth jurisdiction from the Low Water Mark in its *Seas and submerged lands Act (1973)*, overturning a pre-existing assumption by the States that the Commonwealth jurisdiction commenced 3nmi beyond the Low Water Mark<sup>52</sup>. The High Court found in favour of Whitlam’s new Act in 1975 after judicial review (Herr & Haward, 2001).

A Premiers’ Conference<sup>53</sup> in 1979 settled a number of remaining conflicts in the Offshore Constitutional Settlement (Attorney-General’s Department, 1980). This

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<sup>51</sup> The Australian Constitution Section 51(x).

<sup>52</sup> Kay and Lester (1997, pp. 272-273) demonstrate that concerns over damage to the Great Barrier Reef from commercial activities fuelled some of the environmental pressures brought to bear on political parties in the 1972 federal election. The Whitlam government’s claim to jurisdiction over territorial seas was as much as anything strategy to gain control over the Great Barrier Reef. Hence the constitutional settlement devolved territorial waters to the States, the Great Barrier Reef Marine Park became an exception to that arrangement through its own Act.

<sup>53</sup> Peak meeting between the Prime Minister of Australia and State Premiers.

settlement provided a link between the international legal framework emerging from the International Law of the Sea Conventions and the jurisdictions of state and local governments. Legislation passed or amended by Commonwealth (eight Acts in 1980) and State parliaments put the settlement into effect (Brazil, 2001, p. 2). The *Coastal Waters (State Powers) Act 1980* vested in the States rights of ownership over the sea floor within state territorial waters. In 1982 mirror *Petroleum (submerged lands) Acts* enacted by state and commonwealth parliaments formalised the settlement. In 1994 Australia declared a 200 nautical mile Exclusive Economic Zone significantly expanding the area under the direct responsibility of the Commonwealth (Zann, 1995), although most human activity takes place within the jurisdictions of the states.

Within this federal framework there have been further developments in governance, policies and programs responding to the international developments described in the previous chapter and others in response to developments within Australia. In particular, Australia's participation in international treaties and agreements potentially increases the Commonwealth role in areas that were previously considered the domain of the states. Similarly the Commonwealth's revenue powers have been used to fund initiatives such as the Natural Heritage Trust, which expanded the Commonwealth's role in natural resources management within the jurisdictions of the States. The introduction and formalisation of natural resource management regions is of particular interest and has on occasion been projected as the shape of a radical new government structure in which bioregions might replace state and local governments (Alexandra & Riddington, 2007). The Council of Australian Governments (COAG) is the peak forum in which Commonwealth and states negotiate their roles and responsibilities. The present roles of the three tiers of Australia government are summarised in Table 4-1.



**Table 4.1 Division of marine and coastal responsibilities between levels of Australian governments.**

<b>Commonwealth</b>	<ul style="list-style-type: none"> <li>• responsible for Australia's Exclusive Economic Zone beyond the three nautical miles territorial waters boundary</li> <li>• has powers to administer the <i>Environment Protection and Biodiversity Conservation Act 1999</i></li> <li>• can initiate programmes through tied grants</li> </ul>
<b>States and Territories</b>	<ul style="list-style-type: none"> <li>• responsible for natural resource management</li> <li>• responsible for managing conflicting interests in and uses of natural resources through planning powers</li> </ul>
<b>Local Governments</b>	<ul style="list-style-type: none"> <li>• exercise planning and development controls delegated to them by the states</li> <li>• directly manage infrastructure (including drainage and waste treatment)</li> <li>• directly responsible for the day-to-day housekeeping of the coastal zone</li> </ul>

Source: Harvey & Caton (2003, p. 229)

This governance structure is the current overarching framework within which particular policies and programs implement, delegate or foster coastal and marine stewardship. The next section briefly surveys pressures on the marine and coastal environment in Australia before outlining the policy responses to those pressures.

### **4.3 Growing pressures on the marine and coastal environment of Australia**

In the very early days of Australia's colonial settlement, the primary concerns of settlers were safe anchorage and potable water supply. Consequently the early settlements, most of which continue to be the major population centres, are located around estuaries and large enclosed bays (eg. Sydney). As a result of Australia's small population and very large coastline, coastal and marine issues did not assume great importance until the late

20th century. Even in 2011, when the last *State of the Environment Report* was published, Australia's five marine ecosystems were assessed as being in good (south-east) or very good (all others) health (State of the Environment 2011 Committee, 2011, p. 404). However, reflecting global trends described in the previous chapter, Australia's increasing population and the increased technological capacity available to both individuals and business have escalated human impacts on its marine and coastal environments, particularly on coastal systems. The *Report* highlights three main issues driving changes in condition: "climate change, population growth and economic growth" (State of the Environment 2011 Committee, 2011). It particularly focused on the environmental risks to the coasts arising from climate change, which has come to dominate the environmental policy discourse in Australia (Dovers, 2013, p. 122). The increased population and technology contribute to increasing capacity to extract natural resources and increased release of waste in the coastal zone.

#### **Runoff and discharge from land-based activities**

The very old and relatively infertile soils on most of the Australian continent do not naturally produce significant amounts of nutrient run-off into the surrounding coastal seas. In fact most of the South Australian and Western Australian coastlines do not receive any run-off from catchments (Harvey & Caton, 2003, p. 144). As a consequence the seas around the greater (especially the southern) part of Australia have very low nutrient levels. The ecosystems within Australian waters are adapted to low nutrient levels, mainly through corresponding low levels of biological productivity. For that reason they are vulnerable to disturbance. The consequences of this are twofold: in the first place Australia's fisheries are not very productive so there is a *prima face* case for careful management. Secondly, human activity which increases nutrient flows into the coastal waters very quickly results in eutrophication which can overwhelm the maintenance functions of the ecosystems. There are two main types of run-off: urban and industrial run-off and waste discharges; and non-point, rural run-off.

Stormwater and treated sewage from towns and cities "discharges...nutrients, pathogens, heavy metals, sediments, industrial waste and rubbish" into coastal waters and estuaries (Harvey & Caton, 2003, p. 128). Until recently the capacity of these waters to receive and assimilate these discharges was given little attention. However efforts over the last 10 years have improved the quality of waters discharging from major cities like Brisbane and Hobart (State of the Environment 2011 Committee, 2011).

Another consequence of the low fertility Australian soils is that relatively high levels of fertiliser are applied onto lighter soils having low capacity for nutrient and water retention. This results in phosphates and to a lesser degree nitrates being released into the receiving coastal waters, particularly from river catchments. The Peel-Harvey Estuary in Western Australia became a classic example of this kind of problem in the late 1980s. In the period since the completion of the Dawesville channel in 1994, eutrophication from agricultural leaching decreased, but with rapid urbanisation of the fringe of the estuary leaching from septic systems has continued a load of phosphate and nitrates into the system. The Swan-Canning river system in the heart of Perth is also degrading due to eutrophication arising from sewerage management practices and leaching fertilizer from gardens. On the other side of the continent, and nearby some of Australia's better soils, the Great Barrier Reef is vulnerable to nutrients, pesticides and sediments from agriculture on the adjacent mainland (Ward & Butler, 2006).

It is difficult to track the long term trend of human impact on coastal water quality because cyclical changes in weather patterns, like the drought from 2000 to 2010 in southern Australia, impact the system. While acidification increased in the lower reaches of South Australia's Coorong, sheet water erosion, sediment and dissolved matter runoff via rivers into the sea were reduced in part at least, by reduced rainfall in that decade of drought (State of the Environment 2011 Committee, 2011, p. 854).

#### **4.3.1 Fisheries**

The 2006 *State of the Environment Report* noted that 23% of Commonwealth-managed fish species were already overfished. It, and subsequent reports, also noted that while commercial fisheries are overseen by state or Commonwealth authorities there is "no systematic collection of recreational fishing data" and very little systematic management of recreational fisheries (Ward & Butler, 2006). This highlights the way that fisheries policy and management recognises three forms of fishing in Australia: indigenous traditional, commercial and recreational fishing. Commercial fisheries are regulated in Australian jurisdictions to achieve conservation and socio-economic objectives, so for a long time, data relating to catch and the economics of commercial fishery have been collected. However, due to the dispersed nature of indigenous and recreational fisheries, statistical data from them can only be collected through special surveys. The only national survey to date estimated that, in the twelve months to May 2000, more than 27,000 tonnes of finfish and 3,000 tonnes of non-fish marine species were harvested by recreational fishers (Henry & Lyle, 2003). To put this in context by

comparison with the fishing industry, the total wild-fishery catch by commercial fishers in the same data collection period, 1999-2000, was 221,400 tonnes (ABARE, 2001, p. 1). This makes the recreational catch about 12% of the total by weight.

The latest data available from ABARE at the time of finalising this work are for the 2011-12 reporting year. A total 157,505 tonnes were caught from the wild, (ABARE, 2013, p. 21), which is far less than the catch reported 13 years earlier. This reduction reflects both reduction in fishing effort as a result of regulation by state and commonwealth management authorities, and the depleted status of some fisheries. In 2011 the major populations of marine species in Australian waters had declined to the point that they were assessed as being in overall poor condition on the eastern seaboard, that is the east and south-east marine regions (State of the Environment 2011 Committee, 2011). At the same time populations in other regions were assessed as being in good or very good condition overall.

#### **4.3.2 Marine and coastal mining, oil and gas: pollution hazards**

The imperatives of exploration and exploitation of marine oil and gas deposits were catalytic in the development of a national approach to oceans governance in Australia, with a focus on allocation of the benefits from exploitation. However the risk of pollution from these activities and in particular from accidents has become a major concern, both in remote regions where response times are long and in proximate locations where impacts will be experienced very quickly by coastal communities. Responding to accidents is complicated as most drilling occurs in areas where severe storms or extreme ocean conditions can occur (Ward & Butler, 2006).

These issues were highlighted in 2009 with an explosion on the West Atlas drilling rig 250 km off the Kimberley coast releasing oil and gas into the Timor Sea for 74 days. Considering recovery of oil in that remote location unlikely, dispersant was sprayed onto the spill for a considerable period as the oil continued to spill. The toxic oil and dispersant mix was concentrated in the biologically sensitive parts of the water column, yet the surface did not show many signs of a spill (State of the Environment 2011 Committee, 2011, p. 424). The matter is still subject to ongoing litigation in Indonesia.

Australia's 2011 State of the Environment Report noted that the rapidly expanding oil and gas industry in north-western Australia lacks regional and strategic environmental assessments.

Coastal mining has gross impacts on the local environment and potential for impact at a distance. Land impacted by sand mining and extraction of mineral sands might possibly be rehabilitated. Ocean bed mining is not yet practiced within Australian waters.

#### **4.3.3 Shipping and pollution**

Although shipping around Australia is not as intensive as in the nearby Straits of Malacca, the periodic high profile emergency such as a sinking or running aground highlights the environmental consequences of such an event<sup>54</sup>. This has become an increasing problem in the Great Barrier Marine Park off the Queensland coast. As coal exports from Queensland have escalated in response to massive demand from China, new port facilities and ever increasing numbers of ships travel in the vicinity. Similar increases in shipping activity have taken place in the Northern Territory and the north-west of Western Australia. Expansion of port facilities with impacts from dredging and other construction activities also impact the local marine environment (State of the Environment 2011 Committee, 2011, p. 425).

The large carriers taking mineral ores, gas and coal from Australia are stabilised by ballast water on their voyage to Australia. Ships discharge 150 to 200 million tons of ballast water in Australian waters each year with the consequence that already, somewhere between 250 and 500 exotic marine species have become established in Australian waters (Ward & Butler, 2006).

#### **4.3.4 Coastal development**

Whereas clearing for agriculture brought wide-scale change to the arable lands of what are now Australia's grain-belts, coastal strip development has more recently become a major threat to temperate coastal ecosystems and those tropical ecosystems systems near new population centres. The nature of these pressures will be discussed in some detail in relation to Western Australia, however they are similar across the nation and have prompted calls for a national response. Although the Australian population has always been centralised around the main port cities, Australians are increasingly living or moving to coastal locations. This process is variously been called the “suburbanisation of coastal Australia” (Smith & Doherty, 2006), sea-change (Dryden, 2004) and “amenity migration” (Gurran, Blakely, & Squires, 2007). The direct impacts include clearing of native vegetation degrading coastal ecosystems and high impact

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<sup>54</sup> The Sanko Harvest, carrying fertiliser sank off Esperance in 1991 causing oil to wash onto over 100km of coast (Zann, 1995, p. 48) in addition to the release of fertiliser into the sea.

modification of coastal and estuarine processes (Ward & Butler, 2006). There are also indirect impacts through recreational activities within the wider footprint of these coastal settlements.

In addition to these impacts on coastal ecosystems, the physical and social infrastructure of these same coastal settlements have been unable to cope with this “big shift” of people (Salt, 2003) to the coast. Prompted by coastal local government councils, a national Seachange Task Force was constituted in 2004 to support councils in areas of high population growth and help address some of the cross jurisdictional issues of coastal planning and management (Berwick, 2006).

#### **4.3.5 Climate change**

Global warming and its associated rise in sea level will affect Australia in similar ways to other countries. The south-west and south-eastern waters are warming fastest (0.7°C since 1910-1929) with sea level rises of 7.4 mm per annum on the south-west coast down to 2 mm per annum on the coasts of south-east Queensland (State of the Environment 2011 Committee, 2011, p. 853 see fig. 11.1). These raised sea levels may result in inundation (periodic or permanent) of areas currently above the high tide line and increased coastal storm damage. The consequences of these for coastal environments include degradation of coastal ecosystems, shoreline erosion and groundwater salinisation (Harvey & Clarke, 2007; Stocker, Kenchington, Kennedy, & Steven, 2012, p. 7).

Increasing acidity of oceans associated with global warming has potential to damage coral reef formation and maintenance, and increased temperatures of the oceans have many implications for Australia’s oceans. Increasing sea temperatures have potential to compound the impact of marine pests. The strengthened southern flow of the East Australian Current has already changed the distribution of marine species of south-east Australia.

The unique nature of the Great Barrier Reef Marine Park deserves special mention. There has been significant coral bleaching attributed to a warmer sea surface and growth of some Porites corals reduced by 10% possibly due to reducing pH and thermal stress (Poloczanska, Hobday, & Richardson, 2009). Yet on Australia’s west coast, the Ningaloo Reef has so far been spared significant coral bleaching events because in summer winds drive the cooler waters of the Ningaloo Current northwards, keeping

waters of the reef relatively cooler and thus far ameliorating warming trends in the Leeuwin Current (Brinkman, 2011).

Australian settlements on the coast have a relatively short history in global terms, so the general public and the policy community are still coming to terms with the consequences of increasing mobility of the coast landforms due to rising sea levels and increased intensity of coastal processes<sup>55</sup>.

#### **4.4 Responding to pressures: Coastal**

The rising pressures on Australia's marine and coastal environments became increasingly visible in the 1970s at a time of rising environmental consciousness and political activism in Australia, as in much of the industrialised world. The issues that mobilised community action varied from state to state. In Queensland efforts to preserve the Great Barrier Reef from mining mobilised people like celebrated poet Judith Wright, who was also an advocate for coastal conservation more generally. Sand mining on Frazer Island developed into a major political issue. In New South Wales, surf-riders and activists led a campaign to improve water quality on Sydney beaches by changing sewerage management infrastructure.

As a consequence of rising community concern over the decades of the 1970s and 80s, and a paralysis in regard to implementation of each inquiry's recommendations, there were eventually 29 national enquiries and 34 enquiries by state governments relating to the coast by 1993 (Harvey & Caton, 2003).

Thom (2004) singled out four reports presented to the Commonwealth Government as particularly significant:

- *Coastal Land Report No.5* from the Australian Advisory Committee on the Environment, (1975)
- *Management of the Australian Coastal Zone*, Report of the House of Representatives Standing Committee on Environment and Conservation (HORSCEC) (1980)
- *The Injured Coastline*, Report of the House of Representatives Standing Committee on Environment, Recreation and the Arts (1991)

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<sup>55</sup> Compare to British experience of retreating coasts and more recent research into ways of dealing with changing coasts in Milligan, O'Riordan, & Watkinson (2006)

- *Coastal Zone Inquiry*, Resource Assessment Commission (RAC) (1993)

*The Injured Coastline* report documented very clearly examples of "coastal pollution, inappropriate development, loss of coastal habitat and destruction of coastal ecosystems" (Thom & Harvey, 2000, p. 280), fragmented decision-making and "endemic conflict among competing interest groups" (Crawford, 1992). It recommended a national coastal management strategy be developed through cooperation of the Commonwealth with state and territory governments (Haward, 1996, p. 93). Wescott (2009, p. 503) notes that this report created expectations of reform. However, even before the report was released, Prime Minister Hawke announced in his major environmental statement *Our country our future* that "coastal zone issues" would be referred to the newly created, Resource Assessment Commission (RAC) (Haward, 1996; Hawke, 1989, p. 95).

The RAC inquiry was significant for a number of reasons. It was a very comprehensive and wide-ranging process involving public consultation and research and documentation. Its 69 recommendations touched all levels of government and it is particularly noted for its recommendations for a national approach to coastal resource management (Harvey & Caton, 2003, p. 210). However Wescott (2009) observed that the inquiry did not bring about the major change in direction for coastal planning and management that many expected<sup>56</sup>. Australia's coastal policy scholars lament the lack of a national institutional framework to ensure implementation of Integrated Coastal (Zone) Management in Australia (Thom, 2004; Thom & Harvey, 2000; Wescott, 2009). The RAC inquiry was "at pains" to distinguish between national and Commonwealth approaches to coastal zone management. It describes the former as "a cooperative partnership, with the roles and responsibilities of each of the partners are agreed, defined and respected in the interests of the Nation as a whole" (Resource Assessment Commission (RAC), 1993 Sec 5.2). It described four key components of a National Coastal Action Program as:

- nationally agreed management objectives

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<sup>56</sup> The Resource Assessment Commission was established by the Hawke government to examine resource conflict issues by taking both conservation and development into account in order to optimise benefits for conservation, economy and equity (Hamilton, 2003): an early appearance of what later came to be seen as the three-legged stool of sustainability. In the process of assembling all the data that this implies, the commission demonstrated that there is no easy technical solution to the serious matters examined. This is one of the reasons for the large numbers of recommendations in its reports. At the same time the RAC attempted to conduct rational assessments outside of the main political process so its capacity to influence policy was limited (Hamilton, 2003).



- arrangements to manage the plan
- community participation
- innovative mechanisms for coastal management (Haward, 1996, p. 95)

These components had the potential to address two persistent criticisms of Australia's coastal and marine policy and management: lack of coordination between Commonwealth, states and territories; and "lack of effective community participation in coastal management" (Haward, 2003, p. 10). During the 1990s there were significant developments in marine and coastal policies in Australia, not all of them solely as a result of the RAC inquiry. Thom and Harvey (2000) described four triggers for reform of coastal (and oceans, one might add) management in Australia within the context of the environmental pressures already mentioned. Those triggers were a) global environmental change; b) the emergence of sustainable development and c) integrated resource management as more coherent and rational responses to these changes; and d) emergence of community-based movements which demand participation in policies development and programs.

These triggers were not only connected to coastal and oceans management, but had already significantly changed natural resource management policy. The National Landcare Program launched in 1992, strongly grounded on principles of community-based movements and participation, reflected a major policy view of the time (see Box 4-1 and Fig 4-3) and influenced the direction taken by reforms of coastal policy.

One significant expression of the community-based movements described as the fourth policy trigger emerged on the north coast of NSW. The Soil Conservation Service (SCS) of NSW and other agencies had laboured for many years to control coastal erosion and sand drift, particularly in places where coastal engineering works had altered coastal processes. A key problem identified by the SCS was maintaining conservation works and preventing vandalism. In January 1985, Mr Ted Sorby, one of its officers, prompted the SCS to engage the community, which enthusiastically responded and helped develop a plan for the Hat Head area. This resulted in the Hat Head Community Dune CARE Group forming (Sorby, quoted in Sharp & Blackadder, 2008, p. 11). Their particular focus, which became a hallmark of the NSW dunecare groups, was on eradication of invasive exotic plant species such as bitou bush, as the

example in Box 4-1 also demonstrates. This experiment inspired three more groups<sup>57</sup> to form on the north coast of NSW that same year. Their collective experience provided a pilot for the state's *Dune CARE*<sup>58</sup> program (White, 1997, p. 281) which was launched in September 1988 (Campbell, 1991). The number of Dune CARE groups expanded to 20 by May 1990 and 41 by June 1991. The SCS developed comprehensive guidelines for dune rehabilitation and foreshore management, and provided grants to assist dune care groups.

**Box 4-1: Ballina Lighthouse Beach Community Dune Care Group**

The Ballina Lighthouse Beach Community Dune CARE group has published a record of its formation, which gives access to one of the very early efforts in this significant movement in NSW. Ruth Readford was a bush regenerator concerned about “invasion of bitou and other exotic species” on the dunes which had been created by construction of breakwaters on the Richmond River mouth. She commenced worked alone in 1990, with approval from the local government. Gradual involvement of others led to a public meeting in May 1991, supported by the SCS and resulting in the Dune Care Group forming. Bitou removal and regeneration of indigenous flora remained a key part of the group's work (Readford, 2000).

According to Campbell (1991, p. 4) the success of the Dunecare program led the SCS to take the community group concept into the agricultural and pastoral lands of NSW, although the clear success of the Landcare program across the border in Victoria was no doubt also an influence. Landcare and became a national program in 1992 (Box4-2) and the “care”, became the key expression for stewardship of nature, rather than stewardship itself.

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<sup>57</sup> Diamond Beach, Diggers Head and Scotts Head (Sharp & Blackadder, 2008, p. 11)

<sup>58</sup> CARE = Community Actively Repairing the Environment as Edward Sorby reminded Huskisson Beach volunteers, overall winners of the 2012 Clean Beaches Award from Keep Australia Beautiful in NSW, via a web page comment. <http://knswb.org.au/2013-clean-beaches-launch-events/> (accessed 2 Feb 2014).

#### Box 4-2: Landcare and stewardship

The decades of the 1980s and 90s were very busy for Natural Resource Management policy-making in Australia. A major collaborative study from 1975 to 1977 justified Commonwealth engagement in soil conservation, which had been a responsibility of states and territories (Department of Environment, 1978b). The study in turn led to the National Soil Conservation Program (NSCP) in 1983 and the Soil Conservation (*Financial Assistance*) Act 1985, which enabled the Commonwealth to assist states develop their responses to land degradation in productive areas (Hannam, 2003). One of the “five major goals” of the NSCP was “that the community adopt a land conservation ethic” (Commonwealth of Australia Dept. of Primary Industries and Energy, 1992). The National Soil Conservation Strategy (Australian Soil Conservation Council, 1989) also stated that one priority national action is to “conduct promotional campaigns to further awareness and adoption of a land conservation ethic”.

The Soil and Water Conservation Association of Australia (SAWCA) published a “stocktake of land conservation in Australia” as part of the celebrations the bicentenary of European settlement in 1988. Its conclusion stated that land “management must be equated with stewardship. The philosophy of stewardship means that present land users...as *trustees* and not end-users, have no right to reduce the utility of the land for either present or future generations” (Roberts, 1989, p. 26)

The SAWCA argued that stewardship was not just incumbent on land owners or managers, but “on every thinking Australian” who should adopt “an ethic of responsibility (Roberts, 1989, p. 26).

The term *stewardship* was not often used in (later) Australian landcare rhetoric but, as shown here and in many other examples which could be presented, “landcare ethic” is very similar to stewardship in general meaning and in the way it was used in the landcare movement and policies.

Building on results of cooperation between the National Farmers’ Federation and the Australian Conservation Foundation in a 1988 Ministerial Task Force, Prime Minister R.J. Hawke’s wide reaching *Statement on the Environment* in July 1989 stated *inter alia* that over and above the use value of plants and animals to humans, “we, as their custodians, have a responsibility to preserve them”, “a moral obligation” (Hawke, 1989, p. 3). The *Statement* announced a Decade of Landcare which included the expansion of the NSCP. Landcare Australia Limited was created in 1989 by the Commonwealth Government “with the mission of developing a landcare ethic amongst all Australians” (Landcare Australia Limited, 2004).

By 1992 the political pronouncements of the Decade of Landcare were being formalized through a strategic framework: the *National Overview* (DAFF, 1995). At the same time a national Strategy for Ecologically Sustainable Development was released, bringing the language of sustainability into the reframing of the NSCP as the National Landcare Program.

Community stewardship groups who adopted stewardship responsibilities for coastal areas became a problem for administrators of the National Soil Conservation Program. They applied for funding under the community grants component, but because the NSCP was focussed on agricultural and pastoral lands (Department of Environment, 1978a; Resource Assessment Commission (RAC), 1993 sec.9.24) their activities were generally not considered eligible. The coastal groups organised or facilitated through the NSW “Dune care” programme (Blackadder, nd, p. 1) were well organised and vocal about their claim on national funds to reverse land degradation. The Coastal Coordinating Committee in Western Australia also supported the idea of assisting community groups on the coast and the Victorian Government told the RAC Inquiry it was considering a Coastcare program (Resource Assessment Commission (RAC), 1993 sec.9.26). The South Australian Metropolitan Coastal Councils’ Committee informed the Inquiry it already had a “Coastcare” program, but its focus was on monitoring and reporting damage or danger, as reflected in the watching eye<sup>59</sup> in the logo shown in Figure 4-1, rather than rehabilitation and management such as seen in Dunecare groups.



**Figure 4-1 “Coastcare” logo registered as a trademark by Metropolitan Coastal Councils’ Committee of South Australia in 1994.**

Reproduced from [http://pericles.ipaustralia.gov.au/tmimages/cgi-bin/oracle\\_get\\_tm\\_images.pl?642726](http://pericles.ipaustralia.gov.au/tmimages/cgi-bin/oracle_get_tm_images.pl?642726). The trademark application lapsed in 1995.

#### **4.4.1 National Strategy for Ecologically Sustainable Development**

Sustainable development was another important trigger for reform of coastal and marine policy because of its increasing importance on the international agenda, and because of its perceived benefit to domestic politics in Australia. During the period in which international NGOs and the United Nations were progressing towards a World Conference on Environment and Development (UNCED) in Rio de Janeiro, 1992, the

<sup>59</sup> See it at [http://pericles.ipaustralia.gov.au/tmimages/cgi-bin/oracle\\_get\\_tm\\_images.pl?642726](http://pericles.ipaustralia.gov.au/tmimages/cgi-bin/oracle_get_tm_images.pl?642726)

Hawke Labor Government (1983-1992) courted the green vote and also election preferences from the Australian Greens (Howes, 2000, p. 71). As foreshadowed in Prime Minister Hawke's statement *Our country, our future* (Hawke, 1989, p. 4) the Government was moving (along with the international community in this period between the Brundtland Commission Report and the Rio UNCED) towards the adoption of the rhetoric of *Ecologically Sustainable Development* (ESD) as a strategic policy tool to enable it to promote economic development and environmental initiatives simultaneously (Howes, 2000)<sup>60</sup>. For 18 months leading to the end of 1992, working groups at state and national levels developed a *National Strategy for Ecologically Sustainable Development* (Commonwealth of Australia, 1992). The final version was published six months after the UNCED held in Rio de Janeiro in June 1992. In some ways, the subsequent development of natural resource management policy in Australia can be seen as a struggle between the desirability of specific measures with electoral (and sectoral) advantage, such as the interventions described in Hawke (1989), versus a comprehensive, rational and strategic framework such as the *Strategy for ESD* purports to be. The fact that coasts *per se* are not an element of policy focus in the ESD agenda, which was based on sectors of the economy, is an example of ongoing issue that occupies the community engaged in Australia's coastal policy discourse: the need for clear and distinct policies with legislative backing that focus on the coast (Thom, 2004; Wescott, 2006).

Since the RAC inquiry was already in progress when the National Strategy for ESD was released, the section on coastal management (which it treats as an inter-sectoral issue) basically foreshadows the need to respond to the inquiry report. The Strategy did address fisheries ecosystems as a sectoral issue, including objective 2.1: *to ensure that fisheries management agencies work within a framework of resource stewardship* (Commonwealth of Australia, 1992, p. 26). Stewardship in this objective is mainly framed as planning and managing fishing effort, containing pollution and the development of a National Representative System of Marine Protected Areas. The only published report on implementation of the National Strategy for ESD (in 1996), enumerates an eclectic list of policies, actions and reports which range from standardization of regulations for inland fisheries through to supporting the London

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<sup>60</sup> Howes (2000, p. 71) comments: "...the Commonwealth government shifted to a new phase of intervention in the 1990s and attempted to construct new policy goals by adapting this [sustainable development] discourse to Australia's domestic situation."

Convention on Prevention of Marine Pollution (Intergovernmental Committee on Ecologically Sustainable Development, 1996, pp. 15-22).

Howes' (2000) historical analysis of ESD in Australia suggests the formal ESD process had faded away by the time that report was published, because the Keating Labor government no longer needed to court the "green" vote. The National ESD process was initiated by Prime Minister Bob Hawke in 1989, as part of his strategy to continue courting green political support while also reassuring industry that his Labor government would not heavily intervene in their sector. The ascendancy of Paul Keating to Labor leadership in 1991 saw the government allow the process to run out of steam (Haward, 1996, p. 28). However, from that time, the language of sustainability was increasingly embedded in Australian policy, even without the apparatus of ESD strategies and monitoring.

Even though the formal ESD process ran its course, its principles have been integrated by some states into their coastal policies and planning legislation and regulations (Harvey & Caton, 2003, p. 234ff). Harvey and Caton highlight the following issues in coastal management to which the principles of ESD are highly applicable:

1. intergenerational equity: use of coastal resources by present generations is achieved while protecting the interests of future generations through, for example:
  - maintaining and enhancing natural capital (e.g. pristine coasts, clean beaches, unpolluted coastal waterways)
  - avoiding over-exploitation of coastal resources
  - minimising waste in coastal environments
2. protection of coastal biodiversity and ecosystem integrity
3. ensure net community benefits from coastal proposals that are implemented
4. social equity, for example through public participation in the decision making process on coastal development
5. reflect full environmental costs of proposals in decisions on coastal resource use
6. precaution in dealing with environmental risk and irreversibility in the coastal environment (e.g. sea-level rise, coastal erosion, and coastal vulnerability). (Harvey & Caton, 2003, p. 252)

Even without the language of stewardship appearing in the ESD discourse, a notion of stewardship is intrinsic to sustainability as a national policy ideal. To believe that sustainability is achievable and a worthy objective of public policy requires a belief that

human agency can contribute to sustaining the environment or environmental quality as a first point of departure. Of course, it also requires a belief that the actions described in the strategy can contribute to or maintain some qualities which are described as social and economic in nature. The exercise of agency for the purpose of sustainability is thus closely aligned to the concept of stewardship.

#### **4.4.2 Commonwealth Coastal Policy**

Even though the ESD process did not really engage with the efforts to reform coastal policy in Australia, the process of reform continued. In spite of the strong argument put by the RAC Coastal Zone Inquiry that there should be a national approach, the Commonwealth Government released a Commonwealth Coastal Policy in 1995 (Commonwealth of Australia, 1995), three years after a draft was first circulated (Kay & Lester, 1997, p. 280). Although Kay and Lester (1997, p. 280) remark that state representatives were cynical of Commonwealth intentions, the policy does contain some of the recommendations of the RAC inquiry, such as a commitments to "area-based strategic approach[es] to natural resource management" and establishing "a Coastal Integrated Local Area Planning Program" (Commonwealth of Australia, 1995, p. 45). This represented the strongest commitment to ICM in Australia to that date. However, land use planning and development approvals fall within the jurisdiction of the states, with some delegation to local government, which leaves the Commonwealth Government without any "direct constitutional power in coastal management" (James, 2000). This means the implementation of integrated local area planning is dependent on the voluntary cooperation of the states and territories.

It was also criticised for framing as new "initiatives" in the policy many measures which were already in place at the time. For example, it proposed forming a Commonwealth Coastal Coordinating Committee by renaming the existing Coastal Interdepartmental Coordinating Committee (Commonwealth of Australia, 1995, p. 64) and expanding its role. In spite of these criticisms, James (2000, p. 151) notes the importance of the Coastal Policy in framing coastal management in the overall context of ESD. It gave "explicit recognition of state and local government responsibilities", and in so doing opened the way for the Commonwealth to allocate its resources to coasts and ramp up initiatives for community participation in coastal management. To this extent the Coastal Policy played a role in development of coastal stewardship which was somewhat similar to the role of the NSCP and National Landcare Program in bringing

commonwealth resources to NRM more generally (Box 4-2). The key initiatives of the Coastal Policy were put into operation through the Coastal Action Plan.

#### **4.4.3 Commonwealth Coastal Action Plan**

A Coastal Action Plan (CAP) was incorporated within the Commonwealth Coastal Policy and a government commitment to spend \$53 million over four years was announced in the budget on May 1995 (Kay & Lester, 1997). In April, Siewert (1995) had urged the government to announce its plans, noting that it had already been discussed among State and Commonwealth governments over the previous 12 months. Coastcare, which has been described as a ‘flagship element of the CAP’ (Haward, 1996, p. 32), was the most significant initiative in the four areas on which the National Coastal Action Program focused. They were:

- community participation
- "integrated solutions" to particular management issues
- increasing the capacity and knowledge of coastal managers
- developing links with regional neighbours (Commonwealth of Australia, 1995, p. 24)

Although the Coastal Action Plan was a commonwealth initiative, it was an expression of the kind of national programme advocated by the two main preceding enquiries. In particular, those inquiries had called for integration within the layers of government and coherence across the States and Territories of Australia. The CAP was implemented as “the Coasts and Clean Seas Initiative” through memoranda of understanding (MoU) signed by representatives of Commonwealth, State and local<sup>61</sup> governments and all parties committed to significant contributions of both cash and kind (Kay & Lester, 1997, pp. 280-281). However Kay and Lester claim that the CAP did not facilitate an integrated or even consistent national approach to coastal management. Although Victoria and Western Australia aligned their state administrative systems to the national approach, other States ensured the MoUs made provision for diverging or even conflicting state coastal management objectives or principles (Kay & Lester, 1997, p. 282) to minimise the changes they were required to make. In spite of this, Clarke (2006, p. 311) claims that the Coastcare component was indeed “a viable model of integrated coastal management”, particularly because it brought about the formal engagement of

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<sup>61</sup> Local Governments were represented by their peak bodies, the State Local Government Associations as signatory on the MoU.



the three tiers of government with the community in coastal management. In fact she considers its adaptation to the “idiosyncratic set of coastal management legislative and administrations” across Australia was a success. Her verdict differs to this extent because, whereas Kay and Lester have a strong focus on governance, an overall reading of Clarke's *corpus* reveals her strong focus on participation as an important criterion for government coastal programs.

Coastcare was not the only element of stewardship in the Coast and Clean Seas initiative, which also included:

- Clean Seas Program
- Coastal Monitoring
- Marine Species Protection
- Introduced Marine Pests and Ballast Water Mitigation Programs
- Marine Waste Reception Facilities Program
- Coastal and Marine Planning
- Fisheries Action Plan
- Capacity Building
- Oceans Policy Development

Some of these programs assisted local governments to improve infrastructure and systems for reducing waste-water from coastal cities and towns or shipping, in order to reduce coastal degradation. By accepting responsibility to minimise the impact of waste material in these ways, the responsible authorities exercised a stewardship function. The planning, species protection and marine pest mitigation programs could also be understood as stewardship actions. These are actions which accept responsibility for their impact on future generations and future states of the environment.

Although the partnership arrangements with States and Local Governments were mediated by the tripartite Coasts and Clean Seas MoU, the “Coasts and Clean Seas Initiative” (as the vehicle to implement the CAP became known), after one round of

grants (1995/96), was bundled into the Natural Heritage Trust (NHT)<sup>62</sup> when that was established (Environment Australia -Marine Group, 1999, p. 4) through passage of the *Natural Heritage Trust of Australia Act 1977*. A major part of the Trust's budget of \$1.25 million for five years was realised from the partial privatisation of Telstra, which was until then an Australian Government-owned telecommunications corporation. An additional sale of shares brought the total to commitment to \$1.499 billion (Hassall & Associates Pty Ltd, 2005, p. 4), of which \$300 million must remain in the Trust in perpetuity.

The incorporation of the CAP into the NHT can be seen with hindsight to be problematic for the stewardship objectives of Coastcare. The NHT was established to "maintain and replenish Australia's environmental infrastructure" and the sale of the public asset Telstra, over which the government exercised stewardship, was justified as capital investment in the environment (Hassall & Associates Pty Ltd, 2005, p. 1). The NHT objectives of strategic capital investment, achieving agreed outcomes in environmental protection and management and sustainable agriculture, (see footnote 62) suggest their achievement will be measured by return on investment indicated by changes in the environment. The roles of community organisation, the building of capacity and social capital can only be considered instrumental to those NHT objectives. Yet in terms of strengthening stewardship, they might be considered as intrinsically desirable outcomes. Although five initiatives were initially identified in the NHT Act, over the five year life of the NHT, another 16 programs were added, bringing the total to 21. The initial five programs were:

1. The National Vegetation Initiative
2. The Murray-Darling 2001 Project
3. National land and Water Resources Audit

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<sup>62</sup> "The objectives of the NHT were to:

- provide a framework for strategic capital investment to stimulate additional investment in the natural environment;
- achieve complementary environment protection, natural resource management and sustainable agriculture outcomes consistent with agreed national strategies;
- provide a framework for cooperative partnerships between communities, industry and all levels of government

(Hassall & Associates Pty Ltd, 2005, p. 3).

#### 4. National Reserves Systems

##### 5. Coasts and Clean Seas Initiative (Hassall & Associates Pty Ltd, 2005, p. 3).

The Coasts and Clean Seas initiative, carried over from the CAP, specifically addressed the issues of sustainability of Coastal and Marine areas. As has already been mentioned, Coastcare specifically addressed stewardship, so is examined here in some detail.

#### **4.4.4 Commonwealth Coastcare Program 1995-2002**

As the primary strategy by which the CAP sought to involve the community in coastal management (Commonwealth of Australia 1995 p. iv; Stocker & Moore 1999), the Coastcare program was "a key element in Australia's approach to integrated coastal management" (Clarke, 2002a, p. 1). It had "international significance because it was a unique example of a program that formally linked three tiers of government and the community toward a common purpose" (Clarke, 2006).

The stated objectives of the Coastcare program were:

To engender in local communities, including local industries, a sense of stewardship for coastal and marine areas;

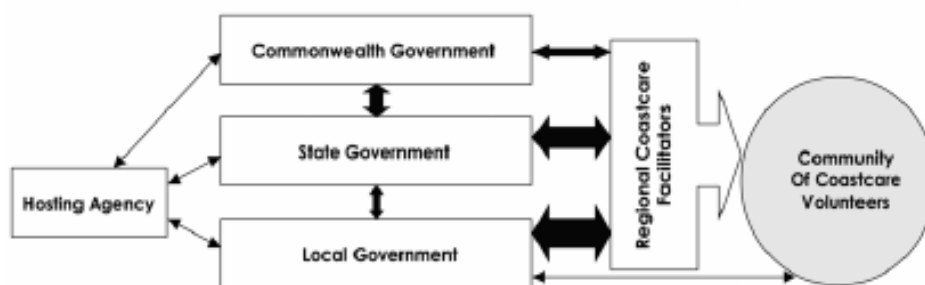
To provide opportunities and resources for residents, volunteers, business and interest groups to participate in coastal management;

To support community identification of natural and cultural heritage resources; and

To facilitate interaction between the community and bodies with responsibility for managing coastal areas (Commonwealth of Australia, 1995, p. 26).

It could be said that the first objective, engendering a sense of stewardship, is the key objective of this program. The other three are really supportive the first: enabling communities to develop stewardship practices and implement them. However, as one of ultimately 21 initiatives of the NHT, the administrative and political focus was always on the outcomes achieved on the ground, rather than the extent to which stewardship, or responsibility for the coast, became embedded in coastal communities and users of the coast (Clarke, 2006, pp. 314-315). While stewardship can rationally be evaluated by the outcomes of stewardship actions, the language of this key objective is "a sense of stewardship", which indicates the objective is to engender an ethic of stewardship, that is, integrating stewardship into the way citizens make sense of the world and how to live.

The Coastcare program funded a national network of regional Coastal Facilitators. A portion of the total funds required for the facilitators was contributed by the State and local governments. In some states, the private sector also contributed sponsorship in cash or kind. Although it was sometimes difficult to maintain effective sponsorship deals over long periods, one of the visions of Coastcare was to build partnership or “buy in” from local stakeholders through local government and business sponsorship of community groups, and the facilitators were a key part of that. Clarke (2004) comments “the facilitators were the oil within the Coastcare framework”, attracting local government support and community engagement in coast-care groups, and developing the capacity of coastal managers and group members. They also “played a powerful mediating role between local coastal land managers and community groups” (Clarke, 2004). This is graphically highlighted in Fig.4.2 below, in which the thickness of the arrows indicates the strength of the relationships. The Coastal Facilitators in turn received support from a State Coordinator funded by the State Government and the whole program was supported by three staff in the Commonwealth Government’s national Coastcare office (Clarke, 2006).



**Figure 4-2: Relationships between Coastcare partners.**

From Clarke (2004 unpaginated)

It is clear from Figure 4-2 that, to the extent this graphic represents reality, the original links between community volunteers and local government were thin. Local governments probably considered themselves to be the primary stewards of their own coastal reserves and unallocated crown land whose management was vested in them. The Mid-Term evaluation of the CCS program noted that “previously polarised groups have developed cooperative relationships and mutual understanding through Coastcare projects, aided by the work of Coastcare facilitators” (Environment Australia -Marine Group, 1999, p. 14). Qualitative data obtained from interviews with key respondents is reported in Chapters 8 and 9 and throws some light on whether the direct relationships

between local government and community volunteers strengthened and “thickened” as a result of the two phases of the NHT.

The NHT final evaluation report notes that local government “was widely involved in [Coastcare] projects” but its involvement the other initiatives of NHT “was limited” (Hassall & Associates Pty Ltd, 2005, p. vi). It would be safe to conjecture that a major reason would be that Coastcare activities mainly involved lands managed by local government councils. In addition to stimulating partnerships between coastal resource management agencies and the local community, the Coastcare program promoted a collaborative approach to coastal management among the three tiers of government, negotiated through memoranda of understanding (see for e.g. State of Western Australia, 2003b). Clarke (2006) considers the cooperation engendered by the Coasts and Clean Seas MoU was important for integration and support of the broader agenda of Integrated Coastal Management (ICM), especially in light of the long history of overlapping jurisdictions and lack of coordination in Australian coastal management and policy which have exacerbated pressures on coastal and marine ecosystems.

Coastcare funds were also used by Environment Australia at the national level to develop educational and promotional materials and programs (Clarke, 2004). Some of this work was contracted out to Landcare Australia Limited (LAL), the company established by the Australian Government to market and generate corporate sponsorship for Landcare (Environment Australia -Marine Group, 1999). In its early days under NHT, the support obtained through LAL primarily consisted of promotional campaigns<sup>63</sup>; sponsorship of events, such as Coastcare Week; and contributions in kind (e.g. trailers with tools for field work, promotion posters in bus shelters etc.) from sponsors.

From the beginnings of Coastcare in 1995 and then through NHT, the Commonwealth and State governments together provided Coastcare grants to community groups (see Fig. 4-2). The grants were disbursed directly to groups and to local government or state agencies who worked with groups on projects on coastal lands and waters for which they are the resource managers. Over the five years of NHT (1997-2002) a total of 2,172 Coastcare projects (Hassall & Associates Pty Ltd, 2005, p. 28) received total funding of AU\$23.7 million (Clarke, 2006, p. 314). From 1995 to 2000 (the period for

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<sup>63</sup> For many years Pat Rafter, an Australian tennis star who won the US Open Tennis Championships in 1997 and 1998 was contracted by LAL to be a major celebrity providing a personal face to Coastcare (Clarke, 2006).

which this analysis is available), 71% of projects funded through Coastcare were classified as on-ground works, 12% were for education and training, 9% for community involvement in planning and 8% of projects had a monitoring focus (Harvey & Caton, 2003, p. 245). The focus of the Coastcare program was to provide funding for community groups, particularly local environmental groups (which received 38% of funds between 1997 and 1999), and citizen and service clubs, such as Rotary (who received 16% of funding over the same period) (Environment Australia -Marine Group, 1999). Businesses and industry received 2% of Coastcare funding, as did educational institutions (schools and universities) (Environment Australia -Marine Group, 1999).

The final evaluation of NHT reported a total of 829 Coastcare projects had total on-ground outputs of 145 km of fencing and 90 km of pathways constructed, more than 450,000 plants established, 570 hectares of land weeded (Hassall & Associates Pty Ltd, 2005, p. v).

As these data hint, and Clarke (2006, p. 231) points out, there was no attempt to formulate indicators which might be used to evaluate achievement of the stewardship objective. Instead, the NHT was increasingly under pressure to demonstrate how the public funds it used were contributing to or improving the quality of natural assets. Clarke has drawn attention to the fact that the outcomes described in the CCS MoU were “never addressed”, with a consequence that there has been no evaluation of community development or stewardship in spite of their high priority in the objectives of the program (2006, p. 321). For example, to evaluate changes in community attitudes, the best that consultants Resource Policy and Management Pty Ltd could produce was the frequency with which project titles included the key words “education, capacity building, increased understanding, awareness raising or other concepts allied with attitude change” (Hassall & Associates Pty Ltd, 2005, p. 28). They “challenged the idea that changed attitudes lead to changed practices” (Hassall & Associates Pty Ltd, 2005, p. 28) but failed to consider the corollary option that perhaps engagement in new activities and learning new practices in coastal management may contribute to changed attitude and be part of a virtuous circle of stewardship. Clarke’s own research also indicated that the community and government was more aware and placed greater importance on coastal management and coastal processes due to the impact of the Coastcare program (Clarke, 2002a; Hassall & Associates Pty Ltd, 2005, p. 34).

Clarke (2008, p. 902) suggested that the many community groups which continued to operate “under a Coastcare banner” beyond the term of the national Coastcare program constituted evidence that the Coastcare program did in fact contribute to a stewardship ethic<sup>64</sup>. Since coastcare groups tend only to meet when actually working on a coastal project, ongoing participation is reasonable indicator of the members’ involvement in practices to sustain or restore coastal assets. These activities took place on the commons and involved people learning about coastal processes and skills which most probably had no part in the way they obtain their livelihoods.

This engagement stands in contrast to the Landcare movement, in which group processes were used to mobilise, inform and motivate rural landowners and managers to change the natural resource management practices involved in their livelihood and long term capital investment. An effective form of discourse in Landcare had been that of leaving the resource in better shape for the next generation of farmer and graziers. It constitutes stewardship of property as much as the common good.

One criticism of the NHT as a whole, which mainly arises from the high profile Landcare occupied in it, was that investment in awareness, motivation and knowledge would be incapable of countering the global economic conditions which determine the business planning and hence the practices of agricultural and pastoral enterprises. The other criticism, which had been building well before the final evaluation of the initial phase of the NHT (hereafter referred to as NHT1), was that many NHT funded projects were small and lacked strategic cohesion linking them to any larger strategic outcomes. The first-mentioned criticism led to a recasting of stewardship in the model of an Environmental Stewardship Program described later. The criticism around strategic planning had more immediate impact. Clarke has consistently called for a thorough evaluation of the important lessons that the Coastcare program, judged on its own merits, could contribute to ongoing policy development around the complex coastal challenges in Australia. Yet by 2000, Commonwealth interest in the coasts as a discrete object for Natural Resource Management (NRM) policy was already fading and elements of the program gradually disappeared, and with them, any incentive for evaluation of Coastcare.

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<sup>64</sup>It is important to acknowledge that many groups already operated under various names like “dunecare” prior to the creation of the national Coastcare programme.

The lack of a larger strategy, showing how each action linked into a greater whole, was a very important issue, because the big ideas driving government policy formation had changed in the period from the initiation of the Decade of Landcare in 1990 to the end of NHT1 in June 2002. See Box 4.2 below. These pressures resulted in the NHT1 model being displaced by the National Action Plan for Salinity and the new version, NHT2 was conceived as a means to deliver “strategic investment” through purposely delineated NRM Regions (Natural Resource Management Ministerial Council, 2002) in order to achieve specified outcomes. This is consistent with the prevailing philosophy of results-based management. Negotiating and delivering programs was sometimes difficult when parties in government at the State and Commonwealth levels were ideologically opposed. However, the increasing focus on “regional delivery” in the model being developed for extension of the NHT spelled the end of the tripartite agreements pioneered by the Coast and Clean Seas Program. Similarly the language of investment became dominant over that of community participation and stewardship.

The failure to evaluate Coastcare in terms of its own objectives was further compounded by a general tendency of the NRM policy discourse to see NRM largely, if not solely in terms of agricultural and pastoral resources. For example Morrison et al (2010, p. 522) assume NRM policy to be limited to “managing ... the land, water, marine and biodiversity impacts *of the agricultural industry*” (my italics). This model fails to address other key pressures driving coastal and marine degradation and the fact that those environments are more than a sink for offsite impacts of agriculture. The impacts of the direct uses of the coasts and impacts of human settlements on coastal ecosystems fall outside the model.



**Box: 4-2 Context: changing philosophy of government.**

In contrast to the interventionist approach of the Hawke labour government which used environmental issues to garner political support from around 1987 (Howes, 2000), by 2003 the political climate had become quite different. Governments in Australia were reluctant to invest directly and increasingly tended to put responsibility onto the community. Where investment was considered justified governments prefer arrangements which are arguably based on market principles, such as competitive bids by potential providers of services which government purchases on behalf of the community or even the environment. As Brown (2007) so strikingly puts it, governments now “prefer to steer rather than row”. Action on the ground is devolved to an evolving network of interest and community groups, third sector organisations and commercial contractors, while government line agencies trim their budgets and in the process, trim off their capacity to work on the ground. The arrangements developed for the NHT extension reflected these changes in philosophy.

**4.4.5 Natural Heritage Trust Extension (NHT2) 2003-2007**

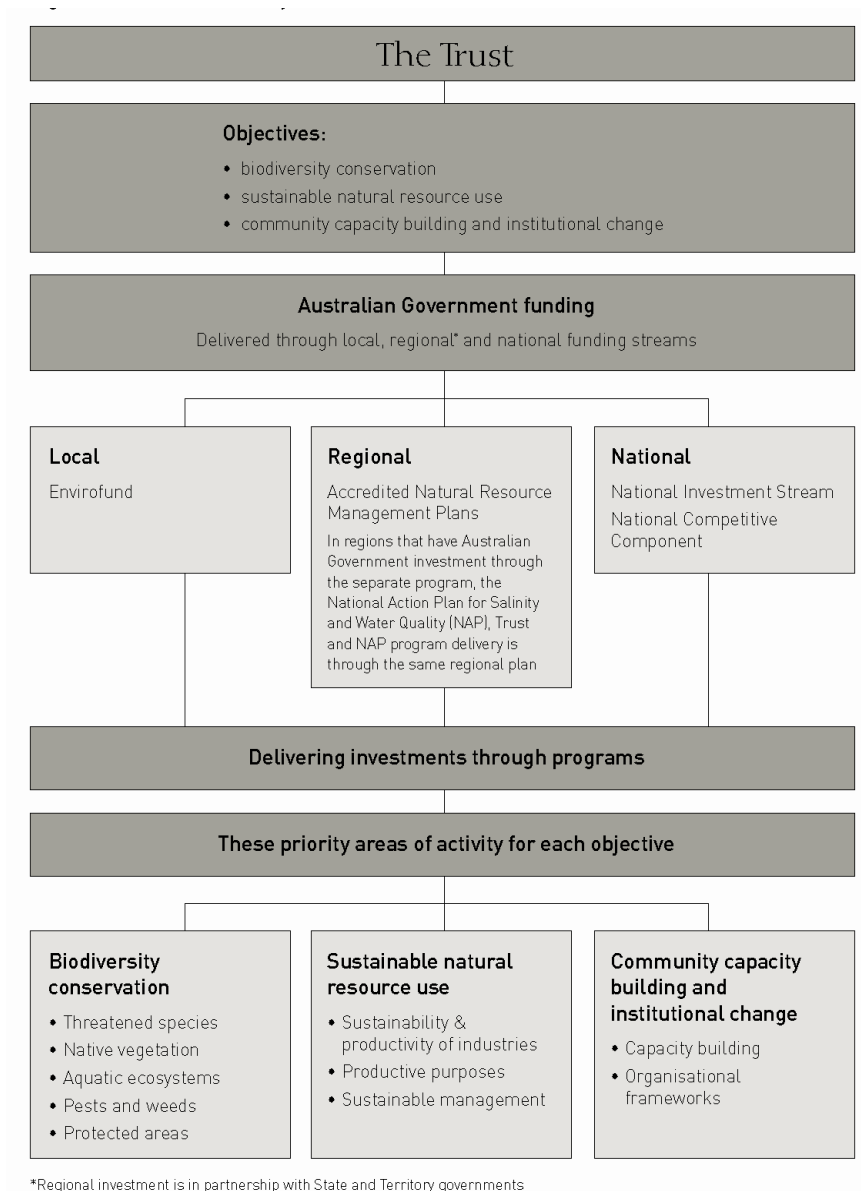
The Commonwealth and States negotiated to extend the NHT with significant modifications. The key change was to reduce the many programs which had been bundled into the NHT and whose allocation of grants was based mainly on competitive bidding, to a “strategic integrated investment in natural resource management outcomes, focussing on regional delivery” (Commonwealth of Australia, 2004, p. 6). The business model of the NHT2 framework was based on the Commonwealth investing in the “resource condition outcomes” it determined to be national priorities. The diagram used to express the relationship of the NHT objectives, its “delivery streams” and how they relate to the long standing priority areas of activity is shown in Fig. 4-2 below. Even with the rhetoric of “regional delivery” it is clear from Fig.4-2 that funds were also delivered through national and local “investment streams” (Commonwealth of Australia, 2004) for biodiversity conservation, sustainable resource use and community capacity building and institutional change.

What is striking in the context of this project is that in making the shift from a model of community mobilisation and engagement, the language of stewardship and care disappeared from the Natural Heritage Trust. The purpose of the Trust is to “invest in natural resource outcomes”, but the outcomes sought by the NHT2 are not shown in the annual reports. The desired resource condition outcomes for which the NHT2 aims were

described in appendices to the NHT Extension Framework paper as the outcomes of four specific funding programs: Landcare, Rivercare, Bushcare and Coastcare (Natural Resource Management Ministerial Council, 2002). So, while NHT2 still delivered those four funding programs (reduced from 23 under NHT1 to 4 under NHT2), each with its own goals and outcome statements, their packaging the programs into the NHT2 delivery mechanism removed any program branding and the language of “cares”<sup>65</sup>. As a consequence, in calls for proposals, the public was not presented with any information or activity identifiable as a Coastcare program (Heller & Pedersen, 2004) and the language changed from terms like “coastcare” to “coastal and marine” (C&M) issues within NRM. Yet, when it came to reporting, the Annual Reports show a dissection of the total grants paid out into the four programs: Landcare, Rivercare, Bushcare and Coastcare. The published lists of projects funded do not provide any information which indicates how these totals are derived. The process is opaque to readers outside the NRM management.

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<sup>65</sup> These changes are spelled out in the (transition) Annual Report for 2002-03



**Figure 4-3: Diagram of the NHT2 delivery framework**

Source: Fig. 1 from NHT Annual Report 2005-06 (Commonwealth of Australia, 2007) p. 12 ©

Commonwealth of Australia 2006. Used with permission.

The NHT2 framework was built around contractual relationships “with states, territories and regions” (Commonwealth of Australia, 2004, p. 7). The regions (designated “NRM Regions”) were defined mainly around major river catchments or similar broad scale landscape systems. In the early planning phase in 2001, some State agencies, such as Western Australia’s Ministry for Planning, argued that coastal zones could constitute a region in themselves for NRM purposes<sup>66</sup>, but this was not able to prevail over

<sup>66</sup> The Final Evaluation of NHT1 also stated that some issues, “for example coastal issues, may be more appropriately dealt with as a single issue rather than integrated into the regional approach, and there

arguments for catchment based regions. The difficulty of fitting coastal lands and state waters into the dominant, catchment-based definition of NRM regions was already recognised in the Extension Framework proposal, which stated the principle that “*relevant* regions incorporate coasts and adjacent waters” (Natural Resource Management Ministerial Council, 2002 italics added), since particular catchments are inherently defined by the point of discharge of their waters, ultimately into the sea.

Across Australia, 56 NRM Regions were formed as the basis for the NHT2 framework, and for each Region, NRM bodies were identified or established as the NHT2 investment manager. The initial task of these new regional NRM bodies was to oversee NRM planning, develop priorities for action in their regions, and on that basis propose investment strategies which were accredited if they met the Commonwealth’s criteria for investment through NHT2. Each investment strategy included commitment of funds and other resources by State governments and other stakeholders (SMEC Australia Pty Ltd, 2006, p. 12).

Bilateral agreements between the Commonwealth and the States (and Territories) replaced the tripartite MoUs which had undergirded the former Coasts and Clean Seas Program and provided the legal mechanism for transfer of funds from the Commonwealth. The Bilateral Agreements whose attachments included “objectives for coastal outcomes” specified in the Coastcare Program description (Natural Resource Management Ministerial Council, 2002, pp. 11,12; SMEC Australia Pty Ltd, 2006, p. 12), but the level of investment directed to them depended on the extent to which they figured in the Regional Investment Strategy.

At the time of its inception, the new arrangements generated concerns about their place in the Australian federal system of governance and possible Commonwealth intentions to bypass State Governments. In particular, not only were the NRM regions physically on a scale somewhere between local and State governments, the initial appointment of community members to their administering bodies without any democratic process was supervised by lead state government agencies and joint community-agency bodies set up under the NHT1. The Bilateral Agreement with the State of Western Australia specifically addressed this issue, describing the need for an evolutionary development of competent and legitimate Regional NRM Groups (Commonwealth of Australia, 2002, p.

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should be scope for funding to be allocated to some smaller-scale local projects that address a community’s immediate needs” (Hassall & Associates Pty Ltd, 2005, p. ix).

65). By December 2006 the NHT2 arrangements encompassed a range of different kinds of NRM bodies across the Australian states. In NSW and Victoria this role was given to Catchment Management Authorities set up by Statute. In Western Australia<sup>67</sup>, South Australia, Queensland and Tasmania the bodies were non-statutory, and thus without legal responsibilities (Pannell et al., 2007).

For many coast-care groups these new arrangements, signalling significant change in policy direction, must have come as a disappointment. The rhetoric of community empowerment for participation which had led to the innovative policies of Landcare and Coastcare had suddenly been replaced by a market-based approach couched in the language of corporate finance, which owed no loyalty to community institutions. Considerable effort had been required to develop group capacity, attract volunteer support and carry out works along the coast in partnership with local government. The combination of support from Regional Coastal Facilitators and grants for small projects had enabled groups to "go on working for many years" (Clarke, 2002b, p. 22) even after a grant had been exhausted. The NHT2 offered "strategic investments" which could include funding for Marine and Coastal Facilitators. The Coastcare community grants program, which had been tightly linked to the State agency responsible for coastal management, was replaced by a generic NRM funding program administered from Canberra.

Through its national funding stream, NHT2 provided some resources to encourage integration of state and national policy outcomes in the Regional Integrated NRM plans through appointment of four Australian Government Facilitators (AGFs) in each State. Those designated "AGF-Coastcare" were responsible for Coastal, Estuarine and Marine matters in particular. These AGFs also played a role in facilitating bids submitted through the additional national mechanisms for NHT2 investment. "Competitive and multi-regional elements and targeted program areas" could include activities which aimed at coastal, estuarine and marine outcomes (SMEC Australia Pty Ltd, 2006, pp. 9,12). The regional Coastcare Facilitator positions which previously had been co-funded by the CCS Coastcare program continued to be funded for a 12-month period of transition from NHT1 to NHT2 to the end of July 2003. Thereafter some became

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<sup>67</sup> Paradoxically, during the major expansion of community landcare groups in the early 1990s, the West Australian Department of Agriculture preferred to use the Statutory *Land Conservation Districts* as the key institution for community participation and organisation. Pannell et.al. (2007, p. 5) observed that WA did "not have a single piece of legislation covering NRM" and in late 2012, still awaited the release of a State Natural Resource Management Plan.

incorporated into the Regional NRM strategies and were funded through regional investments (Commonwealth of Australia, 2004, p. 11).

The local investment stream was delivered through the Commonwealth Government's Envirofund. It stood outside State/Commonwealth Bilateral Agreements and the regional agreements, being managed directly by the Commonwealth. Called the Envirofund for community grants (Clarke, 2006, p. 311), it provided a mechanism for community groups to obtain grants for small projects which addressed any of the Coastcare, Landcare, Rivercare or Bushcare objectives in a single, integrated delivery process (Allen et al. 2003, State Government of Western Australian 2003a). In spite of its inclusion in the NHT2 Framework, and continued operation throughout the period of NHT2 to June 2008<sup>68</sup>, the 2005 evaluation report states that Envirofund was only intended to be a temporary or "transition program to bridge the gap between NHT1 and the new regional investment model" (Centre for International Economics, 2005, p. 17). As such, one of its key objectives was to facilitate community groups move towards engagement with the broader regional NRM program (Centre for International Economics, 2005, p. 19).

Envirofund continued to operate beyond its planned expiration in June 2005, to the end of the NHT2 in June 2007. It processed community grant applications through themed "rounds", two of which (Rounds 4 in 2003-04, and 10 in 2007-08) nominated a preference for activities in coastal or marine areas. The numbers and proportion of grants from the Coastcare program are shown in Table 4-1 compiled from several sources. The tenth round, in 2008 effectively took place outside the NHT2 life-span, but is included in NHT2 reports because it used unspent NHT2 funds.

Small grants approved through a process of "competitive call" like this have attracted the most criticism for being ineffective, due to their "scattergun approach" and not connecting to strategic issues at the larger scale (HC Coombs Policy Forum, 2011, p. 6). However the Envirofund final evaluation report noted they are "one of the few sources of funds to maintain community groups. Without [Envirofund], many of these groups would have lost enthusiasm and disbanded" (Centre for International Economics, 2005, p. 38) in the period following NHT1, which had placed more emphasis on mobilising and empowering community groups.

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<sup>68</sup> No doubt this is the reason that the Final Evaluation Report was published in December 2005 (Centre for International Economics, 2005) and was able to evaluate only 6 of the 10 rounds

**Table 4-2 Envirofund grants classified as “Coastcare”**

Data for rounds 1-6 obtained from the “final” evaluation report (Centre for International Economics, 2005, p. 21). Data for rounds 7-8 from annual reports of the Natural Heritage Trust, and rounds 9-10, obtained by courtesy of Dr Beverley Clarke, University of Adelaide.

Year	Theme (where specified)	Round	No. Coastcare projects	Total No. Envirofund Projects	\$m from Coastcare	Total \$m Envirofund
2002-03		1	205	1,302	2.8	20.0
	drought & fire	2	2	538	0.04	10.1
2003-04		3	67	745	0.83	11.1
	coastal, wetlands, rangelands	4*	73	646	1.0	8.3
2004-05		5	46	684	0.59	8.5
		6	69	710	1.2	11.4
2005-06	drought	7	1	1,145	0.04	19.12
2006-07		8	81	1,126	1.58	19.32
2007-08		9 <sup>#</sup>	74	944	1.55	19.93
2007-08	coastal	10* <sup>#</sup>	164	164	3.95	3.95
<b>TOTALS</b>		<b>10</b>	<b>782</b>	<b>8,004</b>	<b>13.56</b>	<b>131.72</b>

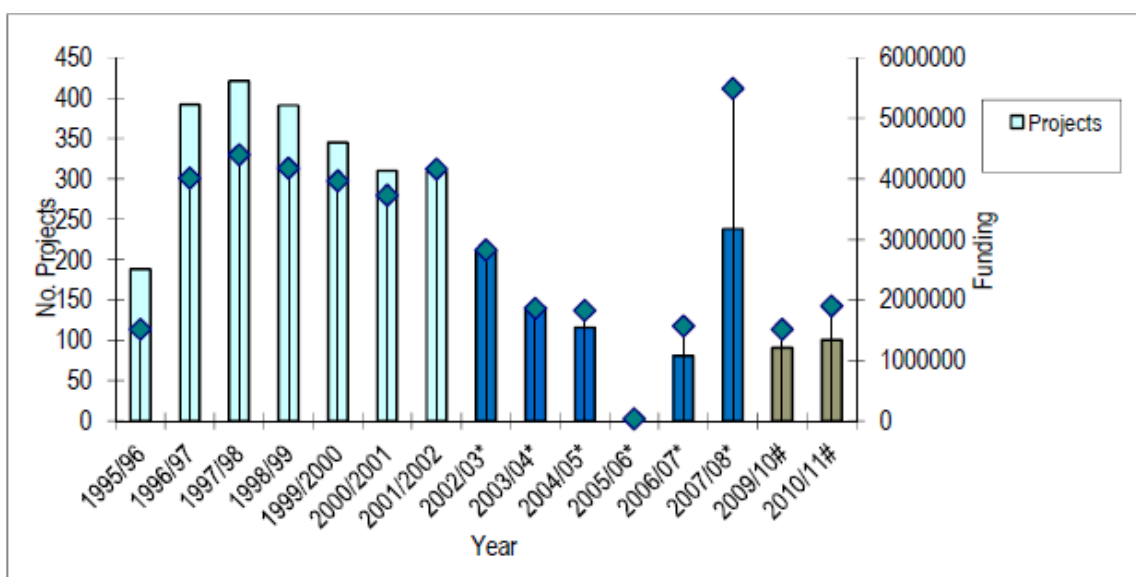
# These rows show project approvals which may be less than disbursements due to proponents not accepting an offer

\* Indicates rounds for which activities in coastal and marine areas were preferred by Envirofund and noted as such in the call for applications.

As Table 4.2 shows, the number of projects funded and total funds paid out from the "Coastcare" program do not correlate with the “theme” nominated for each Envirofund

round. The highest allocation of Coastcare funds to projects occurred in the first year (2002-03), possibly due to the support of the Coastcare Regional Facilitator network, for which funding was extended into the period of planning and writing grant applications. However, even that amount of \$2.8 million is only about 60% of the average amount which had been disbursed through Coastcare each year of the NHT1 (see Clarke, 2006, p. 317). The final round in 2007-08 took place after the expiry of NHT2, was designated as Community Coastcare rather than Envirofund (see Section 4.4.6) and was accompanied by a high level of publicity associated with a federal election and change of government. Even then, only about 10% of total funds went to Coastcare in this period. Clarke (2011, p. 8) collated data over a longer time frame and suggested the declining numbers of community projects were an indicator of declining “coastal community engagement” over three changes of the “delivery model” (Fig. 4-2).

It will be noted that the total values of small grants funded from the Coastcare program shown in Fig. 4-4 for the NHT2 years (light blue) exceed the amounts shown in Table 4-2. The former includes some small grants which were made available to community groups for coastal stewardship projects through the Regional Investment stream.



**Figure 4-4: Trends in Coastcare projects and small grants funding 1995-2011**

This graph reproduced from: Clarke (2011, p. 9). Fund delivery by Coastcare in CAP and NHT1 for 1995/96 to 2001/02, \*NHT2 and #Caring for our Country.



The report for the “final” evaluation of Envirofund, published in 2005<sup>69</sup>, highlights the features of community stewardship of the coast which distinguish these activities from other projects which were also funded by Envirofund.

Over 90% of Coastcare projects involve work on public lands whereas a majority of those funded by the other “cares” were on private land. Almost a corollary of that, most Coastcare projects impact on, and their success is dependent upon, the cooperation of other members of the public who are not part of the project implementing group. Facilitators were not so active with coastal groups in some states. Coastal environments require knowledge and skills that are not simply transferable from experience in riparian or other inland rehabilitation and management projects.

(Centre for International Economics, 2005, pp. 75-77)

One of the lessons from the evaluation of Envirofund is that community stewardship of coastal environments needs to be supported in a way that takes account of the common property of the coast, which is marginal or peripheral to the economic life and basic survival needs of most individuals of society. This is in contrast to river catchments or groundwater catchments in which people live and from which resources essential for life are directly used.

A second consequence of this “commons” nature of coastal lands, is that infrastructure to inform (signage) or control impact of the wider community’s recreational activities (access-ways) may well be a valid project output even though the funding guidelines for Envirofund precluded them as “amenity” construction (Centre for International Economics, 2005, p. xv). The community groups who receive Envirofund grants from the “Coastcare program” often aimed at both rehabilitating some coastal reserve and also changing some behaviours of the wider community. This contrasts with Landcare groups, which are a form of “user group” seeking ways for the members to be better stewards of their own property as well as contribute to a wider, and collective, catchment goal. A national marine and coastal facilitator commented that “the priorities for the NHT2 were not coastal”. Some applications for grants were submitted by coast-care groups, but “didn’t fit the guidelines”, because of that lack of coastal and marine focus within the priorities for approving grants.

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<sup>69</sup> It was initially intended for expiry at the end of June 2005 (Centre for International Economics, 2005, p. 17).

The regional investment framework of the NHT2 also generally failed to integrate coastal, estuarine and marine priorities in the face of strong interest in the catchment focus of the NRM bodies. The exceptions were found where there were champions for integration of coastal issues into the regional investment strategy (SMEC Australia Pty Ltd, 2006, p. 2). In addition to concerns about investment, The SMEC Australia evaluation also found that most regions “reported a strong decline in the number of participants in coast-care groups and the number of groups actively engaged in coastal activities since the introduction of the regional framework” (SMEC Australia Pty Ltd, 2006, p. 7). This it attributed to the way NRM was framed within NHT2 and regional investment and the way it failed to recognise the specific requirements for mobilising support and carrying out volunteer community work on the public lands of the coastal reserves. The fact that councils were left out of the formal partnerships is an added stumbling block for community participation in stewardship activities.

In another example of this failure, the fishing and seafood industries had little engagement because of both the terrestrial focus of the program and also their operation outside regional boundaries (Keogh, Chant, & Frazer, 2006, p. 36). Where marine and coastal issues were included in investment plans, they often were not given a high enough priority to actually receive funding (Keogh et al., 2006, p. 58). Another factor compounding the disconnect between the regional NRM strategies and coastal, estuarine and marine issues is that growth and development of coastal settlements and urban centres and the planning and infrastructure investment by state and local governments all remain outside the NRM regional planning process (SMEC Australia Pty Ltd, 2006, pp. 27,28).

In 2006 the Australian governments had agreed on a framework for the third five-year phase of the NHT (DAFF & DEWR, n.d.; Wensing, 2008). It was to include the Envirofund to help communities improve and replant land and coasts. At the strategic level, one of its five key themes for investment decisions was to be “coastal and peri-urban areas” (DAFF & DEWR, n.d.). However the federal election in November 2007 brought a change of government and (as is often the case) a new brand for Commonwealth engagement in NRM. The NHT2 concluded in June 2008 and was repackaged by the incoming Labor Government as the *Caring for Our Country* program.

#### **4.4.6 Community Coastcare Program (2008 Remix)**

In May 2008, the recently elected Rudd Labor Government announced a new "Community Coastcare" program, administered directly from Canberra as a part of the new Caring for our Country. This arose out of a pre-election campaign commitment (announced under the catchy title of "Caring for Our Coasts") to "establish a \$100 million five-year, Community Coastal Care Program... from unallocated Natural Heritage Trust Phase Two funds" (Garrett & George, 2007). In fact, the evaluation of coastal, estuarine and marine outcomes of NHT2 (SMEC Australia Pty Ltd, 2006) reported wide-based support for such a program as "necessary to increase the level of community participation in coastal conservations into the future (SMEC Australia Pty Ltd, 2006, p. 8). The brief emergence of a "transitional" community coastcare grants program in 2008 demonstrates on the one hand, the attraction of support for stewardship groups at several levels, and yet how difficult it is for governments to sustain ongoing support within the dominant NRM paradigm, on the other.

The new Community Coastcare program was one of the transitional arrangements set up while the new government restructured elements of the NHT2 into its new "Caring for our Country" program. Community Coastcare (2008) was a competitive grants program administered directly by the Commonwealth, offering small grants to community groups. Only when grant applications closed in June 2008 did the Australian Government begin to recruit assessors to participate in "grants review panels". It is hard not to compare this unfavourably to the elaborate system of state-based assessment, monitoring and support in the original Community Coastcare program, for which regional advice was provided to very well-convened State Assessment Panels. In 2008-09 \$22.1 million was disbursed to 439 projects in the Coastcare component of Caring for our Country (Commonwealth of Australia, 2009b).

That Community Coastcare Program seems to have been solely designed as a political tactic in the 2007 Labor election campaign (in spite of support on policy grounds from the SMEC evaluation), as it disappeared from Caring for Our Country after 2009-10 (Clarke, 2011, p. 6). In fact under the regional delivery model of NHT2, Coastcare, already merged into the Envirofund, survived only as a "theme" of Envirofund until 2007 because of the demand from groups on the ground during the transition to the theoretically superior model of "strategic regional investment" (Centre for International Economics, 2005).

Caring for Our Country seems to have been a case of policy formation by “muddling through”. It cannot really be called adaptive management because it did not demonstrate learning from the past (as consistently lamented by Clarke, 2011 etc.) but an ill-informed attempted to move away from programs supporting local community stewardship which had seemed to have an enduring hold on policy through public demand for them. One of the serious weaknesses of the transitions to new programs and those administered directly by the Commonwealth is their lack of data storage about projects and support for parties using it to inform new initiatives and even policy itself (National Facilitator, pers. com.).

#### **4.4.7 Caring for Our Country (2008-2013)**

As a policy initiative within Caring for our Country, the 2008 Community Coastcare program should be seen as an anomaly that arose from uncoordinated election commitments by the Labor Party. The new *Caring for Our Country* program commenced on 1 July 2008, with five-year outcomes, which were described in the language of investment and management. This approach could hardly be further from the language of community engagement and participation which characterised the initial Landcare and Coastcare programs (Morrison et al., 2010).

Caring for our Country was created by bundling together the NHT, the National Action Plan for Salinity and the Environmental Stewardship Program (Cockfield, 2010). Like the NHT2, it has three main “delivery mechanisms”:

- Base-level funding provided to regional NRM organisations
- An annual competitive open call for medium and large scale projects addressing national targets
- A competitive small grants program called Community Action Grants

(Australian Government Land and Coasts Caring for our Country Review Team, 2012, p. 11)

Within this overall architecture of *Caring for our Country*, the priorities for funding are determined by Annual Business Plans which commenced with 2009-10. In that initial plan, the Program’s objective was “increasing coastal community engagement” with a target “to engage at least 500 community organisations in coastal rehabilitation, restoration and conservation projects over the next two years” (Commonwealth of Australia, 2008, p. 74). This is somewhat of a paradox since in that same year, Landcare

Australia Ltd stated that there were already “2,000 Coastcare groups around the country” (Landcare Australia Limited, 2009, p. 12).

While the relationship of these major shifts in national NRM policy to changes in government at the commonwealth level have been well documented (Clarke, 2011; HC Coombs Policy Forum, 2011; Robins & Kanowski, 2011), in particular the move by government from its role as provider of services to that of purchaser, it is also clear that the changes were driven by resource economists together with the Department of the Attorney General. They moved policy from its former basis in social movement theory and principles of participatory development (Australian National Audit Office, 2008; HC Coombs Policy Forum, 2011, p. 5) towards stricter accountability and tighter linkages between investment and outcomes (Morrison et al., 2010, p. 524). This was in part a response to concerns over the effectiveness of the major investments by the Commonwealth Government through the National Action Plan (NAP) for salinity and water quality (e.g. Pannell & Roberts, 2010)

Coastal stewardship activities could be (and were) funded through any of the three “delivery mechanisms” of the Caring for Our Country Program. One of its six “national priority areas” was “coastal environments and critical aquatic habitats”. Unlike the Coast and Clean Seas initiative which was designed more around the mechanism or process to bring resources to the local level, Caring for Our Country was clearly focused on achieving outcomes determined by the Commonwealth Government, and the specific activities it believes would achieve them. So within this priority area, funding was directed at:

- Protecting Ramsar Wetlands
- Protecting critical aquatic habitats
- Improving coastal hotspots (places nominated in the business plan)
- Increasing coastal community engagement
- Rescuing (*sic*) the Great Barrier Reef

Part of the base level funding available to regional NRM organisations included provision for environmental outcomes in coastal and marine environments. This

covered Coastal and Marine Facilitators and specific projects which could be included in the business plans of the regional NRM body.

Unlike some of the direct stewardship activities of coast-care groups, some effective stewardship operated at a distance. For example, sediments and nutrients discharged from agricultural lands into the lagoon of the Great Barrier Reef were reduced by 4% through the Reef Rescue program working with pastoralists and farmers in the catchment (Australian Government Land and Coasts Caring for our Country Review Team, 2012, p. 63). As one of Australia's iconic environmental systems, the health of the Great Barrier Reef remains a major priority for Caring for our Country.

Herein lies the key tension within the NHT and Caring for our Country models of national investment in marine and coastal stewardship program, or NRM more generally. As a program of the Commonwealth Government, it has access to financial resources and can influence particular issues right across the country at the same time. On the other hand the real hot-spots for coastal and marine sustainability are within the jurisdiction of the states, whether on land or in the state's territorial waters. The Great Barrier Reef is a large complex system within Commonwealth jurisdiction and so the whole integrated NRM program is shaped by characteristic of this, with a few other limited issues<sup>70</sup>.

Small grants for community groups have already been discussed in relation to the 2008 Community Coastcare program, but coast-care groups, along with other community groups, continued to be invited to apply for competitive Community Action Grants (\$5,000 to \$20,000). Just as attempts to fashion NHT2 more closely on a business investment model had to yield to community pressure and keep the small grants program of Envirofund going, so too the design for Caring for our Country package was modified to incorporate a Community Action Grants (CAG) program (Vidot, 2012) which looked similar to Envirofund under another name<sup>71</sup>. The internal administration of these grants by the Commonwealth Government categorised expenditure on some of

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<sup>70</sup> West Australians consider that water management or catchment management elements of commonwealth policy have shown similar bias towards issues of the Murray-Darling basin, which is by far the largest river system in Australia.

<sup>71</sup> This was announced in the 2011-12 budget (Australian Government Land and Coasts Caring for our Country Review Team, 2012, p. 11).

these grants as “Community Coastcare” with \$10.083 million spent in 2009-10 and \$17.971 million in 2010-11 but this category disappeared in 2011-12<sup>72</sup>.

The annual competitive open calls during the first three years of Caring for Our Country, also addressed a stated objective of “increasing coastal community engagement”. The Business Plans called “for proposals between \$20,000 and \$50,000 from individual community groups for on-ground coastal and marine rehabilitation, restoration and preventative conservation actions around the Australian coastline” (Commonwealth of Australia, 2010, p. 64). The mid-term review of Caring for our Country reports that 570 projects which address this objective had been funded to June 2010. It reports that 2,350 community groups of various kinds were involved in protecting, restoring and conserving coastal and critical aquatic habitats (Australian Government Land and Coasts Caring for our Country Review Team, 2012, p. 67), so it is not possible to isolate activities in coastal and marine habitats from those in other aquatic habitats.

Even within the open call component of the business plan, coastal stewardship may be strengthened by the right kind of proposal. In the 2010-11 the Western Australian Planning Commission (WAPC) obtained \$1.5 million to expand its Coastwest grants program to levels similar to that of the original Coastwest/Coastcare program in which the Commonwealth and the State each contributed half of the funds to the pool. The Victorian government also used State and Commonwealth funds to provide “Coastcare Victoria” grants for community groups. In South Australia regional local government associations and in Tasmania, regional coastcare associations received funds through the open call process, which they in turn allocated to local community stewardship groups. So in some ways, this recreated a smaller version of the former Coastcare grants programme, with Regional NRM bodies still working on strategic investment strategies, State governments providing small grants programs and the commonwealth directly providing slightly larger grants, all to community stewardship groups through some form of competitive bidding process.

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<sup>72</sup> See Business Plan for 2010-11 (Commonwealth of Australia, 2009a, p. 56). In the 2011-12 Business Plan, Coastcare is no longer mentioned although it still calls “for proposals between \$20 000 and \$50 000 from individual community groups for on-ground coastal and marine rehabilitation, restoration and preventative conservation actions around the Australian coastline” (Commonwealth of Australia, 2010, p. 64).

In the 2012 Review of Caring for our Country (Australian Government Land and Coasts Caring for our Country Review Team, 2012), key indicators of progress against coastal and marine objectives included:

- Reductions of deleterious runoff and leachate into the Great Barrier Reef Marine Park (GBMP) and lakes in NSW and Victoria
- Inclusion of the Ningaloo Reef in the national and world heritage lists and production of management plans
- 570 projects involving more than 2,350 community groups to “protect, restore and conserve coastal and critical aquatic habitats” (Australian Government Land and Coasts Caring for our Country Review Team, 2012, p. 69)

The review reads mainly as a descriptive document with only muted evaluation of the success or problems in relation to coastal, estuarine and marine stewardship outside the high priority GBRMP areas. Morrison et al (2010) commented after the first round of the funding that the key problems with Caring for our Country consist of its “opaque project-based funding decisions” and a lack of integration with local government (Morrison et al., 2010, pp. 534,535). Clearly local government is a key player in coastal management as already demonstrated in this chapter. Even with the apparent centralisation of funding decisions, more strategic engagement by State and regional coastal bodies in the different funding streams opened up a number of ways for community coastal stewards to obtain funds for projects that interested and were of priority to them. One issue for the next evaluation to consider will be whether this entails undue bureaucracy on the part of community groups.

#### **4.4.8 Landcare Australia Limited sponsorship and promotion**

Landcare Australia Limited (LAL) was established under NHT1 to seek cash and in-kind sponsorship and promote Landcare and Coastcare. In keeping with its mission, it developed a small grants program with sponsor funding, which grew to the extent that in 2010-11 it disbursed \$3,057,366 to small projects across the Landcare/Coastcare<sup>73</sup> sector (Landcare Australia Limited, 2011a). At the end of NHT1 in 2002, LAL was left as the flag-bearer for Coastcare, custodian of the “Coastcare” brand. However the long-running partnership between Commonwealth environment agencies and LAL to support the “Coastcare movement” suffered from what appears to be the gradual evaporation of

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<sup>73</sup> LAL documents do not differentiate grants, but call them all “Landcare” grants.



Commonwealth government commitment to that movement. The last year in which LAL received funding from the Commonwealth government to promote Coastcare Week was 2008.

Until 2009 LAL annual reports continued to describe its Coastcare logo as symbolising “the commitment to develop a Coastcare ethic among all Australians that is action-oriented, involving the ecologically sustainable management of our coastal resources for the benefit of Australians today and in the future” (Landcare Australia Limited, 2009). However following a revamp (officially reported as “refresh”) in June 2010 the reference to Landcare and Coastcare ethic was dropped from subsequent annual reports (Landcare Australia Limited, 2010). In 2010 LAL was no longer contracted by the Commonwealth Government to run a national Coastcare Week campaign, although LAL’s Chief Executive Officer commented in the Annual Report that LAL was still negotiating to continue the annual campaign (Landcare Australia Limited, 2011a, p. 4). The national group survey in 2011 found that “77% of Coastcare respondents did not carry out additional activities as part of a ... Coastcare Week” in 2010 (Landcare Australia Limited, 2011b).

In early 2011 LAL commissioned a survey of coast-care groups to ascertain how LAL could assist them. While 50% of the 501 groups responding said they considered Coastcare Week relevant or very relevant to them, only 25% said they would participate in Coastcare Week if it were celebrated in 2011, the year of the survey (Landcare Australia Limited, 2011b). These results did not provide any change to the position of Landcare Australia Limited, that it was unable to find a time of year that was suitable for enough stakeholders to organise Coastcare Week<sup>74</sup>. There has not been another National Coastcare Week sponsored by LAL or any other organisation. Landcare Tasmania Inc.<sup>75</sup> and individual Coastcare entities in other states have continued to organise events for “Coastcare Week”.

It seemed as though the political offices and the senior officials in the national government agencies want to keep hold of “Landcare” and “Coastcare” because they know that they have a deep resonance with the community, in particular with rural and coastal communities respectively. Hence, even when relegated under “new” policy

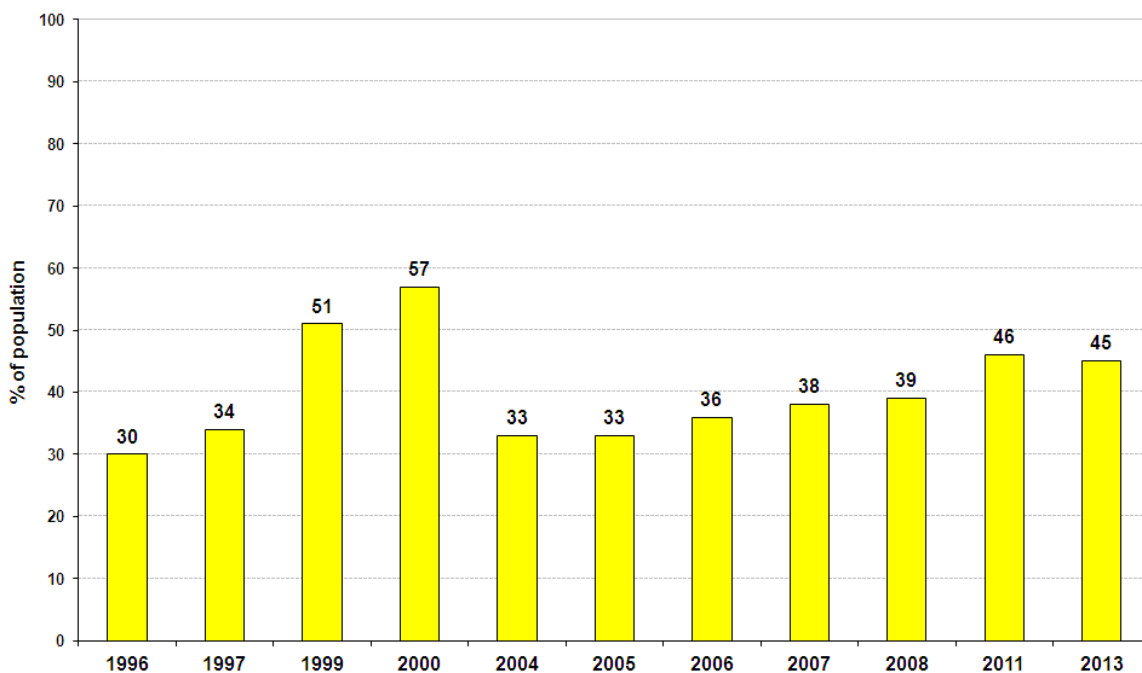
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<sup>74</sup> Communiqué from CEO (2010) [http://www.landcareonline.com.au/?page\\_id=3517](http://www.landcareonline.com.au/?page_id=3517)

<sup>75</sup> Landcare Australia Inc. is an incorporated Association in which those members who are “community care groups” have voting rights. See <http://www.landcaretas.org.au/>

formulations, and in spite of formally “selling” it to LAL, they keep hold of the “brand” for later use when it suits political interests.

In 2013 questions about awareness of Landcare and Coastcare were included in one of the routine “omnibus surveys” conducted by Roy Morgan Research. Only 45% of respondents reported having heard of Coastcare. The level of awareness was lowest (27%) in the 14-24 age group, but increased to 54% for 50 years and over (Roy Morgan Research, 2013, p. 2). In 2000, an all-time maximum of 57% had heard of Coastcare (Roy Morgan Research, 2013, p. 10) as shown in Figure 4-5.



**Figure 4-5 Level of general awareness of Coastcare in Australia, 1996-2013**

Source: Fig. 5 in Roy Morgan Research (2013, p. 10).

## ***4.5 The struggle for national marine policy***

### **4.5.1 Australia’s Oceans Policy (1988)**

Commonwealth waters are public assets. The family silver. Silver that moves, breathes, swims. If you’ve ever swum in a school of trevally or barracuda or anchovies, you’ll know what I mean; it’s like being Scrooge McDuck rolling around in the vault. These riches are entrusted to government by the people. That trust, gravity of the task, has come into sharp focus in recent years. And in the past decade, in a groundswell of public consciousness that I simply didn’t see coming, citizens have begun to expect a new level of accountability in marine stewardship.

Celebrated author, Tim Winton's (2012) address to Commonwealth Parliamentarians marking the proclamation of the national network of marine protected areas.

Ward and Butler (2006) hailed *Australia's Oceans Policy* (1998) as "the single most important policy instrument in Australian history". It warrants separate mention here because it mainly covers marine areas which are solely within the Commonwealth's jurisdiction and detoured around many of the institutional complexities that have beset the endeavour to develop a national coastal policy. The policy met Australia's obligations under the Law of the Sea Convention to demonstrate that it can effectively manage the resources within its Exclusive Economic Zone through application of the key principles of sustainable development: integrated, precautionary and anticipatory actions (Vince, 2008, pp. 1,2). Its purpose is to "ensure the care, understanding and wise use of our oceans".

Unlike coastal policy, it applies to an area which is under the sole jurisdiction of the Commonwealth Government: biological diversity, fisheries and heritage values within Australia's Exclusive Economic Zone but outside state waters. Although states responded favourably to a consultation paper in early 1997, the Commonwealth pressed on to finalise and release the policy in 1998<sup>76</sup>, the International Year of the Ocean (Vince, 2008, p. 4) leaving little time for consultation on the really difficult matters of disagreement. Harvey and Caton (2003, p. 211) note that the launch of the policy with the commitment of \$50 million to establish the process was "undertaken without the agreement of the States". Vince (2008, p. 5) comments that this process of policy development "reveals beginnings of the Commonwealth's centralist approach to policy implementation from the 'top-down'" and notes that not only were the states sidelined, but the delegation of developing some specific measures to sectoral interests meant the policy fails to really integrate all of the contending interests and jurisdictions. In the process a policy gap has been created, with no overall policy for marine waters under the jurisdiction of the states.

Australia's Oceans Policy specifically uses the language of stewardship, defined in its glossary (after Brown & Spink, 1997) as "long-term care of a given resource for the benefit of oneself and others, including the resource itself" (Commonwealth of Australia, 1998b, p. 47). The policy states that community participation "is a key to promoting and instituting a duty of care for the marine environment" (Commonwealth

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<sup>76</sup> In fact it was launched on 23 December, 1998

of Australia, 1998a, p. 30). While it might be argued that “duty of care” is a less assertive concept than stewardship, they both share normative value frames expressed as duty. The policy recognises the challenge of “improving community understanding of, and involvement in marine related issues” (Commonwealth of Australia, 1998b, p. 27). The government response to this challenge was to point to the Coastcare program, Coastcare facilitators and state its support for the Marine and Coastal Community Network (MCCN) (Commonwealth of Australia, 1998b, pp. 27-28), all of which ended with the conclusion of NHT1.

An appendix to the main policy outline contains eleven policy statements “intended... to provide the basis for reporting and performance assessment in implementation of” the Policy (Commonwealth of Australia, 1998a Vol 1). The *Specific sectoral measures* document declares a commitment to stewardship in at least three areas: conservation of marine biological diversity, stewardship of fisheries resources and marine heritage values (Commonwealth of Australia, 1998c). Yet how these stewardship practices will be developed was not articulated. In fact, the core strategy of the policy was to produce regional marine plans based on bioregions. These plans were to be instruments for integrating all sectors involved in the region, across jurisdictions within the boundaries of bioregions identified a working group.

Sixteen years after the launch of the policy, its most lasting legacy appeared to be a marine bioregional planning program. This process identifies bioregions (Ward & Butler, 2006) within Australia's national marine jurisdiction, i.e. outside the state/territory waters, and develops plans for two key outcomes: "identification of regional conservation priorities" and "identification of marine reserves to be included in *Australia's National Representative System of Marine Protected Areas*" (DEWHA, n.d.). However the revolutionary planning system that had been envisaged, facilitating integration across sectors and jurisdictions in order to sustain ecosystems, has come to nought. The closest realisation of this goal was the South East Regional Management Plan, which only managed to achieve limited integration across sectors and jurisdictions (Vince, 2013). Indeed integration was not only difficult to achieve, but failure to do so became an impediment to the planning process.

In 2005, the goal-posts were shifted and the Environmental Protection and Biodiversity Conservation (EPBC) Act became the basis for a less ambitious program to produce redesignated “Marine Bioregional Plans” (MBPs) (Vince, 2013). In the process the

planning process was aligned to a previous commitment to establish a National Representative System of MPAs, which is discussed below. Vince points out that, true to their mandate in the EPBC Act, MBPs “focus mainly on environment issues”, are no longer multi-jurisdiction. They focus only on the conservation management sector or even the portfolio of one government department (now the Department of Sustainability, Environment, Water, Population and Communities) (Vince, 2013). By 2012, four plans had already been completed: for the north, temperate east, north-west and south-west marine regions<sup>77</sup>, and that remains the status 2 years later.

The high profile given to Australia’s Oceans Policy by the Commonwealth Government in the late 1990s, together with enthusiasm for the marine and coastal issues generally began to fade over the years to 2005. Although there was advocacy for specific legislation for both coasts and marine management in Australia, this push was resisted. However a National Oceans Office was created as an independent executive agency in the Australian Public Service in 1999. In 2005 it became a part of the Marine Division of the Department of Environment and Heritage (Haward & Vince, 2008, p. 114), and as a result of further restructures, by 2010 found itself in the Department of Sustainability, Environment, Water, Population and Communities. The increasing breadth of responsibilities covered by the department in which it was located suggests a decreased profile for oceans policy in the national policy agenda. The planning program was implemented under the provisions of section 176 of the Environment Protection and Biodiversity Conservation Act (1999) (Haward & Vince, 2008, p. 115), rather than any legislation which would aim to integrate the various interests in Commonwealth waters such as described in the *Sectoral Measures* document (Commonwealth of Australia, 1998c). It almost seems that integrated, holistic stewardship of Australia’s oceans was an unrealistic goal.

#### **4.5.2 National Representative System of Marine Protected Areas Framework**

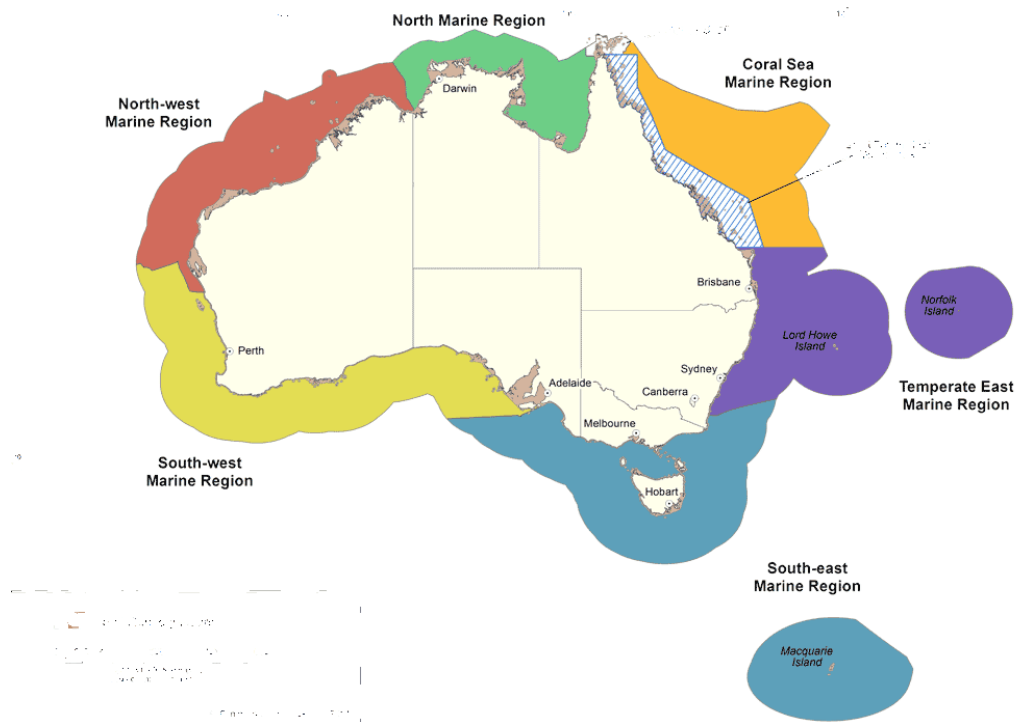
The Commonwealth government committed to establish a *National Representative System of Marine Protected Areas* (NRSMPA) in 1991<sup>78</sup>, releasing a strategic plan of action for the NRSMPA in 1999 (ANZECC TFMPA, 1999; Smyth, Prideauz, Davey, & Grady, 2003, p. 34) having already committed in the Oceans Policy to accelerate the

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<sup>77</sup> Information about marine bioregional planning is posted on dedicated web pages of the Department of Sustainability, Environment, Water, Population and Communities with the following URL-  
<http://www.environment.gov.au/coasts/marineplans/index.html>

<sup>78</sup> ANZECC TFMPA (1998, p. 3)

process and provide funding for MPAs in Commonwealth waters (Commonwealth of Australia, 1998c, p. 2). The system, based around six regions, requires protected zones in Commonwealth, State waters and where appropriate, even overlapping these jurisdiction boundaries.



**Figure 4-6 Australia's marine reserve planning regions**

Source: Commonwealth of Australia

<<http://www.environment.gov.au/coasts/marineplans/about.html>> © Commonwealth of Australia 2013

The implementation target of 2012 (DEWHA, n.d.) was met when Minister Burke proclaimed the reserves on 15 November 2012 (Milman, 2012). One of the most controversial aspects of MPAs which are included on the National Register is the flexibility of this system which allows for zones in which multiple uses may be allowed within MPAs. Conservation groups consider that areas designated as multiple zoning offer little protection for ecosystem integrity in the long term because in practice, uses outside the zone are often allowed within the boundaries (Smyth et al., 2003, p. 34). On the other hand fishers, both amateur and professional have protested the extent to which fish stocks or fishing grounds are “locked up” preventing fishing.<sup>79</sup>

<sup>79</sup> In the 2010 Federal Election campaign period protests against Greens policies on Marine Protected Areas were organised by amateur fishing club associations at Tweed Heads (The Tweed Echo, 19 Aug

In his address to Commonwealth Parliamentarians at Parliament House in May 2012, West Australian author Tim Winton expressed the sentiments of conservation organisations through the words quoted at the head of Section 4.5.1. Celebrating the proclamation of the MPAs, he described a relationship between citizens as political and moral agents and the state. The state acts in a collective sense for its citizens and yet is also accountable to the citizens for its stewardship of marine reserves and public assets more generally.

However it is not only fishers who have had issues with the NRSMPA. Conservation biologists consider it to have failed to protect high value and threatened species, opting instead to “protect” marginal marine estates (Campbell, 2013). The Australian Government’s “Chief Advisor on International Biodiversity and Sustainability” described its approach to the considerable challenge of protecting marine biodiversity when already there are some fisheries struggling with over-exploitation. “We are seeking to avoid areas highly valued by industry groups and recreational users while at the same time meeting conservation outcomes” (Petrachenko, 2012, p. 75).

Pressey (2013) claims that the large area covered by the new marine protected areas, so welcomed by the environmental NGOs, not only masks the government’s deliberate skirting of the issue of fish stocks of commercial or recreational significance, but

by giving a false impression of conservation progress, residual protected areas use[s] up societies’ tolerances of protection, progressively making future protected areas, especially those that might be effective in averting threats, more difficult to establish.  
(Pressey, 2013)

Pressey and Campbell are both arguing that, in spite of rhetoric about meeting scientific criteria for biodiversity protection outcomes, the jewels of the regional management plans, the marine protected areas, are not really protecting the most important marine assets.

Management plans for four of the six marine regions, south-west, north-west, north and temperate east were produced by the end of 2012. Planning for the South-east Region began first, but this intensely used and populous region, stretching from the south coast of New South Wales around to Kangaroo Island off South Australia, has proven to be a

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2010) and the Liberal leader Tony Abbott told commercial fishers in Mackay QLD and Narooma NSW that a coalition government would “wind back marine parks” (Muller, 2010).

challenge for stakeholders to agree on a plan. The management plan for the Coral Sea was also in development in 2013, but has yet to be completed.

Marine protected areas were an issue on the federal election of 2013. On 11 December 2013, the newly elected coalition government comprised of Liberal, National and some minor parties announced a review of the basis on which marine reserves were being created and that no new reserves would be announced in the interim.

#### **4.5.3 The National Cooperative Approach to Integrated Coastal Zone Management: Framework and Implementation Plan (2006)**

Coastal management in Australia is described by Harvey et al (2012, p. 95) as having developed through four phases:

1. Protection legislation in response to localised erosion (1970s)
2. Sustainable coastal management and ESD prompted by the Rio Earth Summit in 1992
3. Focus on Integrated Coastal Management (ICZM) (1994-2006)
4. A swing to attention on adaptation to global climate change following the publication of IPCC AR4 in 2004

At the national level Australia's strongest commitment to ICZM is expressed in the "Framework for a national cooperative approach to integrated coastal zone management" which the Natural Resource Management Ministerial Council<sup>80</sup> released in 2006 (Wescott, 2009). The framework affirms the importance of ICZM in its ability to "address both development and conservation needs within a geographically specific place - a single community, estuary or nation and within a specified timeframe" (Natural Resource Management Ministerial Council, 2006, p. 7).

More specifically in relation to Australia's federal governance structure, it states that:

Governments have a responsibility and interest in the coastal zone and recognise the importance of ICZM as a tool for managing challenges that are of national scale and scope. Governments are working cooperatively to ensure effective and complementary

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<sup>80</sup> The Natural Resources Management Ministerial Council (NRMMC) consists of the Commonwealth, State or Territory, and New Zealand government ministers responsible for natural resource management matters. The commonwealth Ministers responsible for Environment and Heritage and Agriculture, Fisheries and Forestry jointly chair the NRMMC.



arrangements within and across jurisdictions, and to better reflect the interests of coastal stakeholders including individuals, community groups Indigenous communities, business and industry. (Natural Resource Management Ministerial Council, 2006, p. 7)

Like the earlier coastal and oceans policies, the *Framework* directly applies stewardship language in two areas: industry's use of resources and community voluntary action. However, with reference to allocation and use of coastal resources, the language of the framework does open the possibility for a broader model of stewardship, stating that in the process of allocation and use of coastal resources, consideration should be given to "encouraging environmental stewardship by industry and community" (Natural Resource Management Ministerial Council, 2006, p. 19).

In relation to capacity building, one of the key areas of need identified by the RAC inquiry, the *Framework* purports to provide "support to, and recognition of, the contribution of community-based volunteer action" (Natural Resource Management Ministerial Council, 2006, p. 20). However, just how it does that, is not clear.

Wescott (2009, p. 506) comments that this "Framework" does address the nationally significant coastal issues in Australia but on the other hand he calls it "policy without implementation", lacking both funding<sup>81</sup> and legislation. In many ways the drivers of policy that led to the framework carried the "DNA" of stewardship broadly considered. The international treaties (an *international attentive public* – Vince (2003, p. 24)) relating to ESD and biodiversity conservation together with community concern (*the attentive public* – Vince (2003, p. 24)) for the coasts and marine environments in themselves can be seen as expressions of this stewardship. However the key drivers that might see the kind of integration advocated by Wescott become reality may actually be more focused on human interests. These are the pressing need to carefully manage the urbanisation of significant parts of the Australian coast (the sea change problem) and the need for policies and mechanisms to cope with the likely impact of climate change on coastal sediments and infrastructure (Wescott, 2009, pp. 507-508). Unfortunately, as Berwick (2006) observed, "the Framework does not extend to cooperative policy across agencies or jurisdictions making strategic planning for the coast" despite the overlapping and sometimes conflicting state and commonwealth jurisdictions in the coastal zone. This was also noted in relation to the regional delivery of funding for

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<sup>81</sup> SMEC (2006, p. 6) reports Regional NRM bodies were unconvinced the "cost neutral approach" to implementing plans supported under the Framework could achieve anything.

NRM by the evaluation of coastal, estuarine and marine elements of NHT2 (SMEC Australia Pty Ltd, 2006, p. 6).

To use a medical analogy, rather than a model of integrated, patient-centred care, the situation may be likened to multiple “band-aids<sup>82</sup>” applied in an overlapping fashion by different stakeholders claiming to have the cure for the coastal management “patient”. The difficulties of negotiating across the 3 tiers of government, and in particular the commonwealth and state layers, where there are often opposing political parties in power, seem to be major barriers to closer integration. A similar assessment regarding the failure of the MBPs to integrate all stakeholders has already been discussed. The situation is further complicated for coasts because the Commonwealth Government has no direct jurisdiction, but seems unwilling to take on a facilitator role.

Robins and Kanowski (2011) comment that the Australian Government has retreated from engagement with civil society, regional NRM bodies and the states and reverted to making its own decisions about how to invest in the national interest. The death knell for cooperation was rung in 2010 with the termination of the body which had responsibility to oversee implementation of the framework, the Intergovernmental Coastal Advisory Group (Clarke & Harvey, 2013).

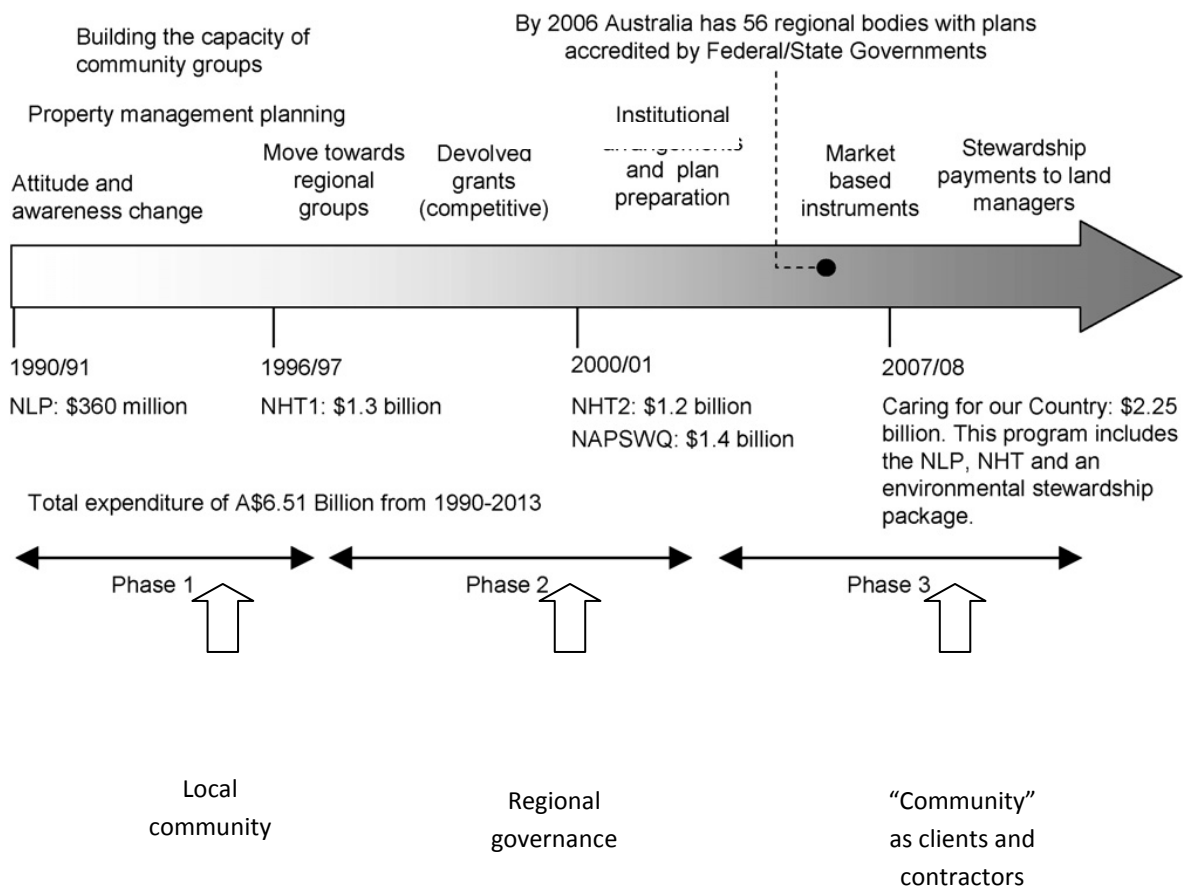
#### **4.5.4 National NRM and coastal stewardship**

Natural resource management or environmental management became an area of increased intervention or engagement by the Commonwealth Government from the late 1980s. This followed on the settlement of unresolved jurisdiction issues from the federation of Australia. The 1990s saw of new instruments for partnership with states or intervention by the Commonwealth. The diagram in Figure 4-7, adapted from (Hajkowicz, 2009, p. 472), shows three phases in the movement of policy foundations from a focus on community engagement and empowerment of the late 1980s to a focus on a strategic investment mechanism in the new millennium (HC Coombs Policy Forum, 2011, p. 7) and its most recent manifestation in contractual arrangements negotiated with particular land managers or service providers. This movement reflects larger trends in political philosophy and emergence of advocates for smaller government, based on claims that markets can do things more efficiently than government (Brown, 2007). However as the experience of reduced support to Coast-care groups has shown, some of the important issues fall outside the existing “markets”

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<sup>82</sup> sticky plaster bandages

and need “greater local-level governmental infrastructure” to support any investment to achieve any results (Brown, 2007, p. 2).



**Figure 4-7 The changing focus of Australian natural resource management programs**

Adapted with permission from Figure 1, p. 472 in Hajkowicz (2009) © Elsevier 2009.

From 2003 to 2008, under the NHT2 partnership arrangements “regions” were widely accepted as the right scale to “plan for and coordinate national investment in NRM” (HC Coombs Policy Forum, 2011, p. 7). Consequently NRM regions covered the country, management bodies formed and investment plans developed. All of this had an initial cost and also has ongoing maintenance costs which constitute a liability for these bodies, especially if the Commonwealth government changes its policy and reduces the scale of investment in some regions. The administrative apparatus cannot be sustained without the flow of Commonwealth NRM funds through it, particularly since it was not formally tied to local government.

Although there was some confusion over what is potentially a “fourth layer” interposed in the Australian governance framework by NRM regions, there was an element of citizen participation in the processes of development of regional strategies and allocation of resources by regional bodies that were relatively close to the community

they both represented and serviced. However, the public vocabulary of care, exemplified by Landcare and Coastcare, diminished in this second phase. Stewardship became subservient to investment. The Environmental Stewardship Program inaugurated in 2007 is an exemplar of this approach (Marsden Jacob Associates, 2010).

While the re-branding of the NRM partnership in 2008 as “Caring for our Country” revived the rhetorical language of “care”, the stronger role given to Commonwealth Government’s annual business plans and priorities in the program indicate a move further away from empowered local community stewardship, in favour of an investment model adopted from the financial sector. The Commonwealth’s investment in NRM was no longer determined by regional priorities expressed in their regional investment plans. To allow the Commonwealth to allocate funds according to “national priority areas” leaves space for the perception that political priorities assume greater weight. The process for determining priorities was not specified.

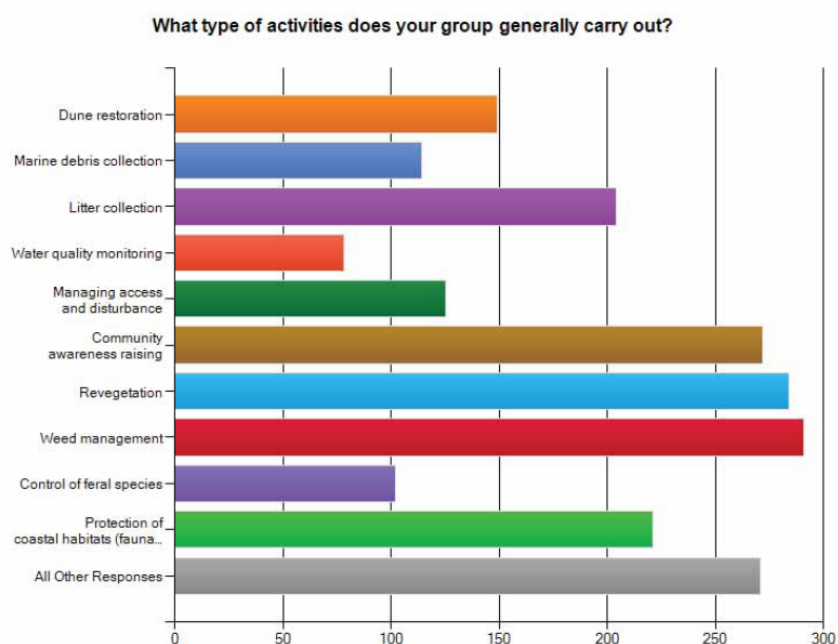
The Caring for Our Country program incorporated the *Environmental Stewardship Program* (DAFF & DEWR, 2007) in which stewardship is formulated as a service provided by an entity (private or public) to the State, who represents the public, and pays for the service provided.

The commonwealth agency administering the program determines the priority for investment. Not only does this program focus on agricultural and pastoral landscapes, but the contractual nature restricts the focus of stewardship to a commercial transaction. At the same time there has been very little public promotion or use of the language of stewardship in relation to environmental commons or natural resources. Stewardship of the marine and coastal commons is even further out of sight. Perhaps this program represents a final removal of stewardship from its roots in praxis of citizenship and it’s re-casting as a private commercial transaction.

Hajkowicz (2009) warned of the risk that social drivers for environmental stewardship can be crowded out by financial incentive systems, such as payment for environmental services. This dissertation does not confine stewardship to volunteering, *contra* Roach et al. (2006, p. 47), who suggested that “a key component of a stewardship definition is that the actions of environmental protection that people undertake must be *voluntary*” (italics theirs) and may also “refer to ... programs designed to encourage and facilitate such volunteerism”. The notion of ecological sustainable development or sustainability

in its holistic sense, is also one expression of stewardship. Integrated ecosystem based marine planning would have been a good example of its practice had it been realised.

In spite of the ongoing changes in arrangements which had once supported them, coast-care groups continued to work, supported by a range of mechanisms in the different states. In the 2011 group survey, the main activities that they reported were weed management, revegetation and raising community awareness as shown in Figure 4.8.



**Figure 4.8 Activities regularly undertaken by Coastcare groups in 2011.**

Source: Figure 1 Coastcare National Group Survey 2011 Report. p. 4 (Landcare Australia Limited, 2011b).

Notably missing from the list of activities is any mention of engagement in governance, such as participation in local government committees, making submissions and advocacy work. On the other hand the category “any other responses” is a very close fourth in frequency and may actually contain some of those civic actions.

In 2009 the House of Representatives Standing Committee on Climate Change, Water, Environment and the Arts held a national inquiry into “issues related to climate change and environmental pressures experienced by Australian coastal areas”. Its focus was on “mechanism to promote sustainable use of coastal resources” and mechanisms and arrangements to “promote sustainable coastal communities” (House of Representatives

Standing Committee on Climate Change, 2009, p. xii). Of its 47 recommendations, four include some actions specifically to protect coastal environments (recommendations 27, 28, 32, 33). Their main concern is to ensure that coastal habitat is not further diminished by the twin impacts of increasing population pressure and changes to the coastline arising from Climate Change. Recommendations 26 and 33 call for the Caring for our Country program to specifically include funding for projects that improve coastal land use planning and address loss of habitat and that coastal and marine priorities are integrated into regional NRM plans. The report contributes to Australia's measures for adapting to the impact of global climate change. However Australia's role in mitigating global warming through reducing emissions of greenhouse gases has become highly politicised.

#### **4.6 Conclusion**

When considered on a world scale, Australia's extensive ocean territory and coastal areas are relatively little impacted by human settlement and the level of industrialisation normally associated with the living standard of its citizens. This is in large part due to the low population inhabiting the largest island on the planet. Where the population is concentrated in the south-west corner and along the south-east seaboard, human settlement both directly and indirectly brings large-scale changes to the coastal environments and degrades near-shore and estuarine waters.

As a consequence of the relatively recent construction of a modern nation-state on the Australian continent, the constitutional and legal framework governing access to and use of its natural assets has only recently been settled. Along with settlement of disputes over jurisdiction, there has also been progress in redressing historical displacement of indigenous stewardship and rights to resources. Australia now faces the challenge of how to ensure not only robust property rights, but also sustainability of the environment and core social values, in other words the common good. In the last thirty years, natural resources management and coastal and marine governance and management in particular have received national attention.

The ethics of care and stewardship were promoted through the National Landcare program around 1990 and then embedded in the Natural Heritage Trust. Stewardship of coasts and oceans was also written into the Commonwealth Coastal Policy and Australia's Oceans Policy. Its clearest expression to date was seen in the Community Coastcare program of 1995-2002. The analysis of the three phases of Commonwealth

NRM funding to 2012 suggests that Commonwealth policies fail to take account of the need to maintain the capacity for stewardship. Since NRM policy is so strongly influenced by the needs of agricultural and pastoral lands in Australia, stewardship of coastal and marine commons has declined in prominence and support. The pre-eminence that the coastal zone achieved as a special case in planning and management has eroded, with commonwealth resources becoming increasingly focussed on iconic “hot-spots” such as the Great Barrier Reef. Unfortunately this overlooks the need for input to equip community members with the knowledge and skills required for stewardship of coastal public lands and marine ecosystems.

Since the release of Australia’s Oceans Policy, the commonwealth and state governments have steadily developed a representative system of marine protected areas to ensure some parts of each marine ecosystem are protected from irreparable damage. While this is an expression of stewardship initiated from the higher levels of government, the forms of community-based, local citizen stewardship that characterised Community Coastcare in the 1990s have not received the same levels of ongoing support from policy makers. Instead, just as neo-classical environmental economics advocates that markets should be used to deliver policy objectives, the notion of stewardship itself has undergone a transformation from a relationship to a financial contractual arrangement in the Environmental Stewardship Program.

This chapter has not discussed in any detail the administrative arrangements which are required to enable the three government jurisdictions described in Section 4.2.3 to develop and deliver the policies and programs which have been covered. This is well covered by a number of academics who are very actively engaged in trying to shape Australian Coastal policy. A most recent summary is provided by Clarke and Harvey (2013) who pinned their hopes on the Council of Australian Governments (COAG) and its committees. However as a late contribution to this document it should be noted that the Liberal coalition government elected to office in October 2013 reduced the number of Intergovernmental Councils to eight, none of which has any responsibility for environmental matters, let alone coastal and marine. The Abbot government stated its goal to reduce commonwealth duplication over matters of State responsibility:

The Commonwealth respects the States and Territories (the States) are sovereign in their own sphere. They should be able to get on with delivering on their responsibilities, with appropriate accountability and without unnecessary interference from the Commonwealth.

COAG agreed to work closely together on the Commonwealth White Papers on Taxation and Reform of the Federation and acknowledged the need to reduce duplication between governments. (Council of Australian Governments, 2013)

This indicates that the decline in leadership from the Commonwealth for broad-based stewardship is still under way. Rather than allowing coastal and marine issues to be portrayed as the interests of a particular (and minority) lobby group, can a widely supported stewardship narrative unite diverse political parties and competing levels of government? Perhaps a wide frame of stewardship could put the issue of coasts and marine ecosystems in the common interest and thus ensure their sustainability.



## **Chapter 5 Coastal and marine stewardship arrangements in Western Australia**

### ***5.1 Western Australia's coastal and marine environment***

...the paradox that Western Australians want the coast preserved whilst wanting access to and ownership of it.

Key finding 6.2.10 of the 2002 Coastal Planning and Management Review  
(Department for Planning and Infrastructure, 2002, p. 59)

The States and Territories of Australia have responsibility for environmental policy and management, however as Chapter 4 demonstrates, marine policy cuts across both State and commonwealth jurisdictions, and significant national environmental initiatives have been taken by the Commonwealth on the basis of Constitutional powers which touch on issues important to coasts and marine areas. West Australians are predominantly a coastal people with deep attachment to the coast. Their engagement in coastal and marine stewardship comes from the particular environmental, social and political contexts that have developed in the colonisation of the western third of the Australian continent, but also in response to the international and national drivers discussed in previous chapters.

The earliest impressions of the West Australian coast transmitted to us through historical documents come from the first outsiders who visited our shores and not from the indigenous inhabitants who lived on the continent for possibly 60,000 years before their arrival (Shorter, 1997). Western Australia's most celebrated coastal author notes, "Australia was "discovered" by Dutchmen who failed to hang a left, who waited a day too long to come about and ply north for Batavia" (Winton, 1993, p. 47). Spanish, Portuguese and Dutch seafarers who encountered the West Australian coast between 1567 and 1700 were unimpressed by what they saw. These Europeans found no reason to make or leave descriptions of what they experienced (White, 1981, p. 1).

The west coast was eventually colonised by the British from 1826<sup>83</sup>. The majority of West Australians continue to be migrants themselves or descended from migrants. Like those passing sailors from the Netherlands, the earliest migrants approached Australia from the sea, so the coast formed their first impressions of their new adopted country, although this became much less significant from the early 1970s, when most migrants

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<sup>83</sup> Settlement at King George Sound (now Albany)

arrived in Australia by airplane. However, even they landed in the coastal capital city of Perth, where the adiabatic effects of the sea draw people to settle close to the coast and the coast has become a favoured site for recreation. Seddon (2005) draws attention to the way Australian language refers to the iconic interior of the country as the “outback”, thereby conjuring an image of a people “looking out from the coastal fringe” (Seddon, 2005, p. 10).

Unlike some parts of Australia, the coast along the most densely populated areas of South Western Australia is separated from the inland by extensive transitions in landscape, vegetation and micro-climate. In extreme transition, such as that on the Swan coastal plain, the drier open woodland ecosystems of the inland (today’s wheat-belt) gives way to the forests of the High Rainfall Zone on the edge of the Darling Scarp. Then, between the scarp and the sea lies the Swan coastal plain with its xerophytic *Quongan* vegetation system growing on deep sands (in some places underlain by limestone). At the western margin of the *Quongan*, windswept coastal heaths cover coastal dune systems. Since the majority of West Australians live on the Swan coastal plain, it has shaped their identity. Winton (1993, p. 46) captures the West Australian coastal landscape well: “Our west coast is mostly a flat and barren affair, blasted by trade winds, vegetated with scrub and heath, drifting with dunes”.

This habitat of Western Australians on the Swan Coastal Plain contributed to their colloquial identity as *sandgroppers* (Brearley, 2006, p. 6). However, alongside affection for their own place in the sun, West Australians exhibit a degree of ambivalence toward the tough environment and its hardy, xerophytic vegetation. In spite of their love for long beaches facing the prevailing westerly winds, they find it hard to resist building engineered structures to protect their real estate from coastal processes. They construct marinas as artificial harbours and canal estates to enable them to live lifestyles constructed from visions drawn or dreamed of calmer coasts, such as those around the Mediterranean. This is further exacerbated by concentration of the population in a few major urban centres, 74% in metropolitan Perth itself<sup>84</sup>.

As urban dwellers, these coastal inhabitants spend most of their time in highly modified environments. The resulting cocoon effect of the “almost entirely artificial environment” in modern suburbia has at least two impacts on coastal sustainability. One

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<sup>84</sup> At 30 June 2010 the population of Western Australia was 2.296 million. The most recent data for Perth is 2009: 1.659 million, when WA had “nearly 2.25 million” (ABS, 2011)

consequence is compensatory behaviour in which people holiday and even acquire “weekenders” on the coast. This results in an increased area of coastal land covered by some form of human settlement. A few squatter settlements consisting of informal holiday “shacks” remain on Crown land, from which the Government of Western Australia has not been able to clear them, in spite of 15 years of official policy to remove them.

Another consequence of the predominantly urban settlement pattern is the population’s reduced experience of the constant changes in weather and seasons and a corresponding loss of ecological literacy. The proportion of Australian adults concerned about the environment declined from 82% in 2007-08 (ABS, 2009), to only 64% in 2011-12 (ABS, 2012). In Western Australia the ABS found 66.5% (down from 85.2%) of non-metropolitan Perth residents were concerned about the environment compared to 67.3% of Perth residents (down from 79.5% in 2007-8). Just under half (45.4% in Perth, 49% in the rest of state) of West Australians thought the condition of the environment was deteriorating. In contrast to their expression of “concern”, the Multi-Purpose Household Survey of 2011-12 found that only 9.4% of non-Perth residents in Western Australia had volunteered or become involved in environmental activities in the preceding 12 months. In the capital city, even fewer, 6.1% of adult residents, had volunteered (ABS, 2012). These levels of involvement were slightly less than the 2007-8 survey found.

The pressures on coastal and marine environments of Western Australia are similar to those in other States, but unlike the eastern seaboard which is far more densely populated, human settlement in Western Australia is concentrated on the south-west corner. Long stretches of the south-east and northern coastlines have negligible permanent human habitation and very little management input. The highest levels of human impact occur in particular “nodes”, while large areas of coast have very few resources available to manage impact of human activities (Clarke & Cutler, 2008, p. 2).

In 2007 the NRM Senior Officers Group of the Western Australian Government published tables listing the level of threat to marine fish species and habitats and “coastal and marine assets”. The assets assessed as having highest value and also high level threats (H) are shown in Table 5.1. This gives a good overview of the threats to integrity of marine and coastal assets which have developed as a result of the development of the modern economy in Western Australia. Outside of the major population centre, tourism impacts are frequently cited as high level threats.

**Table 5-1 Western Australia's highest value marine and coastal assets and their highest threats**

Source: State NRM Office (2007, p. 19). Only threats rated high (H) are shown here.

Location	Threat
Augusta-Margaret River	increased population density, tourism
Busselton	sea change population issues, storm surge and shore stabilisation, governance
Bunbury	governance, pollution of sheltered beaches, eutrophication of irrigation channels
Dandaragan	rapidly increasing urban population
Derby West Kimberley – Salt Water Country	illegal fishing and imported marine pests health risks, emerging tourism, pressure points including pearling, aqua, charter boats, fire and governance
Esperance	erosion, boat harbour dredging
Kalbarri	increased tourism, safety of marine access, feral animals
Perth North Central	pressure on environment from marine users, proximity of housing to beach and potential erosion risk (coastal vulnerability), parking problems, governance
Perth NW sector	rapidly increasing urban population, expansion of NW corridor and unmanaged urban sprawl, impacts of establishing supporting infrastructure (roads etc.), governance
Perth South Central	uncontrolled public access to beach, governance
Roebuck Bay	increasing tourism, traffic on the beach, poorly managed pastoral land use adjacent
Rowley Shoals	illegal fishing and imported marine pests, health risks
Shark Bay	increased uncontrolled tourism, commercial and recreational fishing, governance, feral animals, poorly managed pastoral land use adjacent
Waterbank (W. Kimberley)	fire, governance, storm surge and flooding, health risks
Wyndham East Kimberley – Salt Water Country	illegal fishing and imported marine pests health risks, increasing tourism, fire

The threats, or pressures which threaten the value of the assets shown in Table 5-1 are all anthropogenic, the consequence of human activity within that place. Climate change and rising sea levels have become dominant issues in coastal management discourse in Australia since publication of the Fourth Assessment Report (AR4) of the IPCC in 2007 (Harvey et al., 2012, pp. 90, 95). To the extent that global warming and rising sea levels threaten the integrity of coastal ecosystems, then the response required is one of mitigation of global warming. However, mitigation is a global challenge and one which requires engagement of those responsible for causing or allowing emissions of greenhouse gases. Understandably the main focus on climate change within the coastal and marine policy and management community in Australia has been in the area of adaptation. Its primary focus is how the nation's current and planned infrastructure might best avoid the direct impacts of rising sea levels on property and also more indirect impacts caused by changes in coastal processes associated with rising sea levels (Stocker, Kennedy, Kenchington, & Merrick, 2012, p. 37). As a consequence there are few published data on threats to natural coastal and marine assets from sea level rise and climate change *per se*.

## **5.2 Emergence of Western Australian coastal stewardship**

From Western Australia's pre-history right through to about 60 years ago, the coast was largely accepted as found by its inhabitants, as a setting for life, an set of resources, and it was utilised, enjoyed and modified. However the increasing intensity of interaction between human activities within the coastal zone has prompted Governments to attempt to develop inter-sectoral, coordinated and at best, integrated management institutions and mechanisms to protect and sustain it. These have developed in response to the local pressures, changing community perceptions and values and also national and international developments discussed in the preceding chapter.

### **5.2.1 The awakening conscience**

More than 35 years ago, McCaskill (1972, p. 70) pointed out that the ubiquitous ownership of motor cars in Australia, which commenced in the 1950s, diffused the impact of recreational activity from coastal towns serviced by rail (consider Victor Harbour in South Australia) to coastal areas within 240 km of major cities. Patrick Hesp commented specifically in relation to Western Australia that "since the 1950s... [most shires along the coast have had] to formalise ...access" because erosion and proliferation of new tracks over coastal sand hills was causing expanding erosion (Department of Conservation and Environment, 1984, p. 119).

The issues which really mobilised public actions to protect the coast in the late sixties and seventies were mining and the expansion of settlements, which emerged as threats to values of “natural beauty” and amenity (Barwick, 1971, p. 2). The objections to pegging out claims for mining leases covering coastal areas favoured for recreation is claimed by Rundle (1978, p. 182) to be one of the factors fuelling the formation of the Environmental Protection Agency (EPA). The expansion of agriculture in the 1950 and 1960s through technical innovation began to threaten coastal land which previously had not been considered arable. In the 1960s industry and mining also began to take off resulting in Western Australia’s population doubling between 1961 and 1976 (Rundle, 1978, p. 182). The Conservation Council of Western Australia, formed in 1967, presented a draft “Bill of Rights for Conservation” to the Western Australian Government in 1970 which included (inter alia):

Establish a Coastal Zone of at least 3 miles inshore and 10 miles off-shore from Geraldton to Esperance, free from further encroachment by industry, open cut mining, offshore dredging and oil drilling (Churchward, 1991, p. 34).

This took place in a decade in which exploration for oil and gas was taking off. Legislation allowing export of iron ore and expansion of mining for mineral sands was turning Western Australia into the mining economy that it remains to the present. Indeed, in 1980 the initial draft policy for coastal zones of Western Australia suggested that the most appropriate human activity on the coast is “appropriately regulated recreational, tourist and residential activities...[in] appropriately designated areas” (Dept of Conservation and Environment, 1980).

Kay et al (1997, p. 4) found that formal recognition of a need to “manage” the coastal zone in Western Australia dates from the Committee of Inquiry into the Mining Act, whose report was released in 1971. They suggest the key finding of the report was the

need to strike a balance between the material considerations of mining and the necessity to preserve that part of the environment on which the great majority of the State depend for their recreational and aesthetic enjoyment, and for their physical and mental relaxation...(Kay et al., 1997, p. 4)

The inquiry considered this balance could be met in part by declaring “all Crown land and reserves within the coastal strip” to be Class ‘A’ reserves (Donaldson, Eliot, & Kay, 1995, p. 7). Their classification as Class A reserves would require the assent of the West Australian Parliament for excision/alienation of any part of the reserve or any activity to

take place in the reserve which is not compatible with nature conservation. Thus the Report of the Committee of Inquiry into the Mining Act described what has remained to today a core issue in public discussion of coastal management: allocation of coastal land to competing uses through planning and land use controls.

The report was released just prior to the establishment of the Environment Protection Authority (EPA) in 1971. Although the high profile issues on which the EPA first cut its teeth were industrial development and mining, in 1972 it established the Conservation Through Reserves Committee (CTRC) “to review and update national parks and nature reserves in Western Australia” (Porter, 1986, p. 3). This committee’s mission was to make recommendations for “a comprehensive, representative system of nature reserves” in Western Australia. The recommendations of the Inquiry into the Mining Act with regard to coastal environments were able to be implemented by the CTRC (Donaldson et al., 1995, p. 7). However, it was not only representative ecosystems which lobby groups wanted safeguarded, but also landscapes of high amenity value and places for recreational and leisure activities (Ratcliffe, 1972, p. 12).

### **5.2.2 Coming to terms with coastal processes**

In addition to the impact of mining and activities associated with settlements, there was increasing public discussion on the interaction between natural coastal processes and human activities on the coast (Culver, 1972). Awareness of coastal processes and human engineering interventions moved onto the West Australian political agenda in the early 1970s, when erosion threatened houses and roads in Busselton, Mandurah, Floreat and Quinns Rocks (Donaldson et al., 1995, p. 7). The power of oceanographic currents and the scale of geomorphologic changes taking place on the Perth coast which is exposed to the weather systems coming ashore from the Indian Ocean had come into conflict with the perception of the coast as a static place on which houses and infrastructure could be built where ever people wanted to enjoy the views.

The earliest groynes in Western Australia were constructed to protect port and shipping facilities, Geraldton breakwater in the 1920s being the first (Smith, 1972). The development of foreshore protection works at Siesta Park in the Locke Estate at Vasse demonstrates how relatively low cost private works in 1956 escalated over the subsequent years into local government and eventually State Government works (Department for Planning and Infrastructure, 2004). Local community pressure for government to protect property and infrastructure meant that works to control erosion in

Busselton and Mandurah alone in 1971-1972 cost as much as the state environment budget (Sanders, 1991, p. 70). The prospect of expensive and ongoing engineering works to protect human settlement led to an Interdepartmental Committee on Sand Drift and Sea Erosion between 1972 and 1974 (Donaldson et al., 1995). Not surprisingly, the Committee's report recommended erosion be avoided in preference to ameliorative treatment (Kay et al., 1997, p. 6). Related to this, the report recommended that "beaches and foreshore lands should remain in public ownership" (Donaldson et al., 1995, p. 43).

Coastal planning and management became institutionalised in Western Australia with the transformation of the Committee into the Coastal Development Committee, with resources provided to it by the Town Planning Department from 1975. Its main function was to advise the key bodies (Town Planning Board or local authorities etc.) on plans for land use changes within the coastal area (in particular roughly within one kilometre of the coast) (Donaldson et al., 1995, p. 43). This alignment of coastal issues with planning issues and agencies resulted in the arrangements which persist to this day in which coastal issues other than conservation reserves are the responsibility of the planning agency.

The first statutory Environmental Planning Policy (EPP) for Western Australia drafted by the EPA in 1975 was another means to implement the recommendations of the Committee on Sand Drift and Sea Erosion that preventative approaches were to be preferred. Sanders (1991) observes that the issues described above and which fuelled discussion about the coast in the 1960s took place in the wider context of heightened international discussion about loss of coastal amenity and environmental assets and a rising awareness of the high value but also highly sensitive nature of coastal zones (and the need to consider them in their own right).

### **5.2.3 A coastal administration**

In 1985 a Coastal Management Council was proposed for the State Planning Commission, and although it was never established, an important change associated with the proposal was the relocation of coastal planning and management staff together with the Coastal Management Coordinating Committee from the Department of Conservation and Environment to the State Planning Commission where it eventually became a part of what has been since 1 July 2009, the Department of Planning. The "failure" of the Government to implement the recommendation to establish the Coastal Management Council may be seen as indicative of the ongoing debate over how the



three levels of Australian governments should be involved in coastal planning and management. On the one hand there is the push for a (State) statutory approach exemplified in the proposal for the Coastal Management Council, while on the other hand a more flexible, reactive, case-based approach to specific decisions for which local government should have discretion when approving land use changes has also been strongly supported. The main argument against statutory frameworks is that the legal system required fine definition and enforceability. Consequently what is legislated is often the “least common denominator or “lowest point of resistance”, whereas the complex and variable nature of coastal environments and processes arguably demands a case-based approach.

The institutional arrangements that prevailed in Western Australia resulted in a “networked” form of management (Kay et al., 1997, p. 11) in which all the government agencies were responsible for their own functional jurisdictions and local governments responsible for coastal reserves vested with them. For some of the rural local governments this meant they were responsible for “large tracts” of land but had a limited rate (or property tax) base from which to fund it. The Department of Conservation and Land Management (CALM, and then from July 2013, Department of Conservation and Environment) is responsible for that part of the coast vested in it as conservation (or CALM) estate. Within this matrix, there is a vertical chain of integration from local site planning and support for community stewards up through the increasingly strategic layers of planning to the Western Australian Planning Commission (WAPC), all of which are coordinated within the Department of Planning.

In 1995 the Donaldson review of coastal management in Western Australia (Kay et al., 1997, p. 13) had recommended *inter alia* the establishment of a Coastal Zone Management Council "to develop and implement a new coastal management strategy" and that funds for on-ground coastal management activities be increased. The report's recommendation regarding the council was considerably amended, resulting in a Coastal Zone Council which first met in 1996. In response to the latter recommendation, the West Australian government launched the Coastwest Grants Programme early in 1996, aligning its assessment process to conform to the MoU on Coastal action (Kay et al., 1997, p. 23).

In January 2001, the Coastal Zone Management Council released a draft *Coastal Zone Management Policy for Western Australia* for public comment following two years of

development (Western Australian Planning Commission, 2001). It contains a set of “whole-of-government” policy statements regarding coastal planning, management and protection and the role of the Coastal Zone Council in coordinating the implementation of the policies. Although released for a three-month period of public consultation and comment, a final version was never published.

A State election was held in February 2001 and the incumbent Liberal-National coalition was replaced with a Labor Government. In August 2001, the new Minister for Planning and Infrastructure announced the establishment of a Ministerial Taskforce to investigate “structural arrangements for coastal planning and management in Western Australia” (Department for Planning and Infrastructure, 2002, p. 5) in response to very lively debates about coastal planning and management in civil society, especially during the period of the election campaign<sup>85</sup>. The Taskforce released its report in June 2002 and the Western Australian Government released its response in April 2003 (State of Western Australia, 2003a).

The Taskforce report shows that 98% of Western Australia’s coastal foreshore is owned by the State government “on behalf of all Western Australians” (Department for Planning and Infrastructure, 2002, pp. 9,10). Thus the Government of Western Australia is, at the highest level, the steward of coastal foreshores. The report’s first-listed recommendations set the key parameters for planning and management as: community values as reflected through participatory processes and triple-bottom-line sustainability. It recommends pro-active, integrated planning to protect and enhance the values and sustainability in the midst of competing interests and it reinforced the need for community participation in planning and management, resourced by Coastwest and if possible, Coastcare funding.

In its response to the Task Force recommendations, the government committed to establish “a Coastal Planning and Coordination Council” (CPCC) “as a prescribed statutory committee of the WAPC” (State of Western Australia, 2003a, p. 24). In 2005, passage of the Western Australian *Planning and Development Act* established the CPCC (Harvey et al., 2012, p. 84). It had ten members drawn from senior officers of

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<sup>85</sup> As an indicator of the issues on the public agenda at this time see the compendium of papers presented at the “Lines in the sand” conference convened by the Environmental Defender’s Office in May 2002 (Boulter, 2002). While some of the hot controversies of the day like development proposals for Smiths Beach near Yallingup and Maude’s landing near Ningaloo have ended, legal cases (such as alleged perjury, for example) relating to parties involved in the disputes and WAPC hearings continued in the WA courts until 2012!

government agencies concerned with coastal issues, community, professional and local government representatives. Although *Better Coasts WA* suggested the Department of Fisheries would be represented by a senior officer, this is not the case. The government also committed the WAPC to finalise the Coastal Zone Management Policy to “provide the broad policy framework” within which the operation of planners, developers, managers and users will be constrained and detailed government agency plans and policies will be formulated and implemented (State of Western Australia, 2003a, p. 22), but as Harvey et al. (2012, p. 84) noted, this has still not been done. This has become a bit of a common theme in environmental policy making in Australia. There are grand visions of integration across sectors and levels of government to produce comprehensive plans rather than piece-meal conservation efforts, but they fail to be realised. Sometimes this is due to Australian suspicion of over-reaching and intrusive government, something that the conservative side of politics uses in the competition for electoral support.

### ***5.3 Support for local stewardship***

In Western Australia, the availability of grants for community aspects of the NSCP-Landcare from 1991 stimulated interest in accessing these funds to assist community-based restoration and conservation activities on the coast. Working within the West Australian institutional framework, in which the Commissioner for Soil Conservation may gazette a Land Conservation District (LCD), the Port Kennedy Land Conservation District Committee (LCDC) was one of the first “purely” coastal and the first urban Landcare organisation<sup>86</sup>. However the LCD system and the eligibility criteria for grants from the National Landcare Program in its first two years really did not admit coastal stewardship groups. As already noted, the Western Australian government introduced a Coastwest Grants programme in 1996 in response to the Donaldson review, just at the time when the introduction of the Commonwealth Government’s NHT opened up much wider eligibility criteria for the other NRM “Care” programs (including Coastcare). This encouraged other groups to form, and Coastwest/Coastcare provided a strong signal to interested groups that they could plan for significant work which might now be eligible for support grants.

To this day, as the Australian Government Department of Agriculture, Fisheries and Forests (DAFF) noted in 2012, there is no formal institution by which the identities and

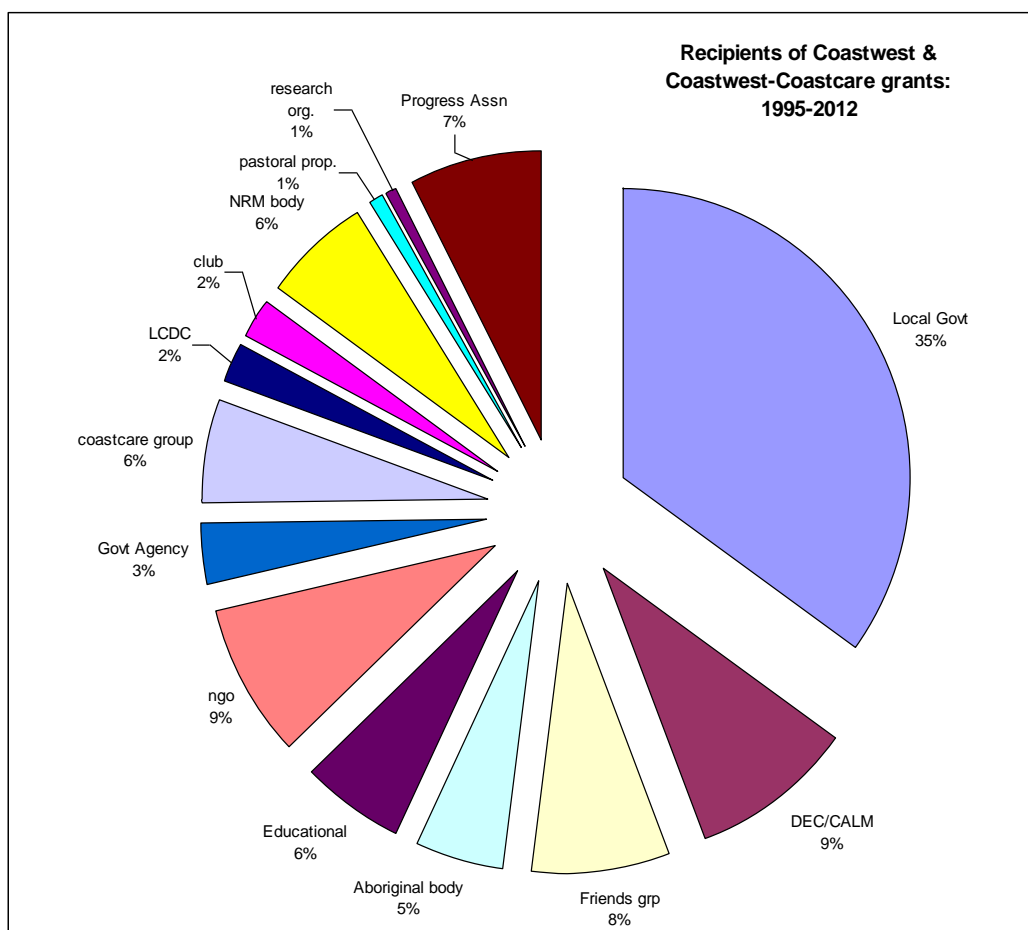
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<sup>86</sup> The second was the Yallingup Land Conservation District Committee which formed about 1992.

number of Coastcare and other Landcare groups can be known. DAFF estimates there are “about 500 urban, coastal, bush, streamside and Indigenous Landcare community-based groups in Western Australia” (DAFF, 2012). Analysis of the database of recipients of Coastwest grants from 1995 to 2012 indicates about 224 community or corporate entities (excluding government agencies, local councils and schools) have been recipients or partners in projects funded by Coastwest (includes also Coastwest/Coastcare).

Figure 5.1 provides a snapshot of the distribution of grants across different types of recipients. In the NHT1 phase, the guidelines for the national Coastcare Program precluded local governments. Councils worked around this by partnering with local community groups. The State Assessment Panel always recognised the importance of local government involvement, as most coastal lands suitable for community group projects were vested in local government. This is reflected in the greatest number of grants being administered by local governments shown in Figure 5.1.

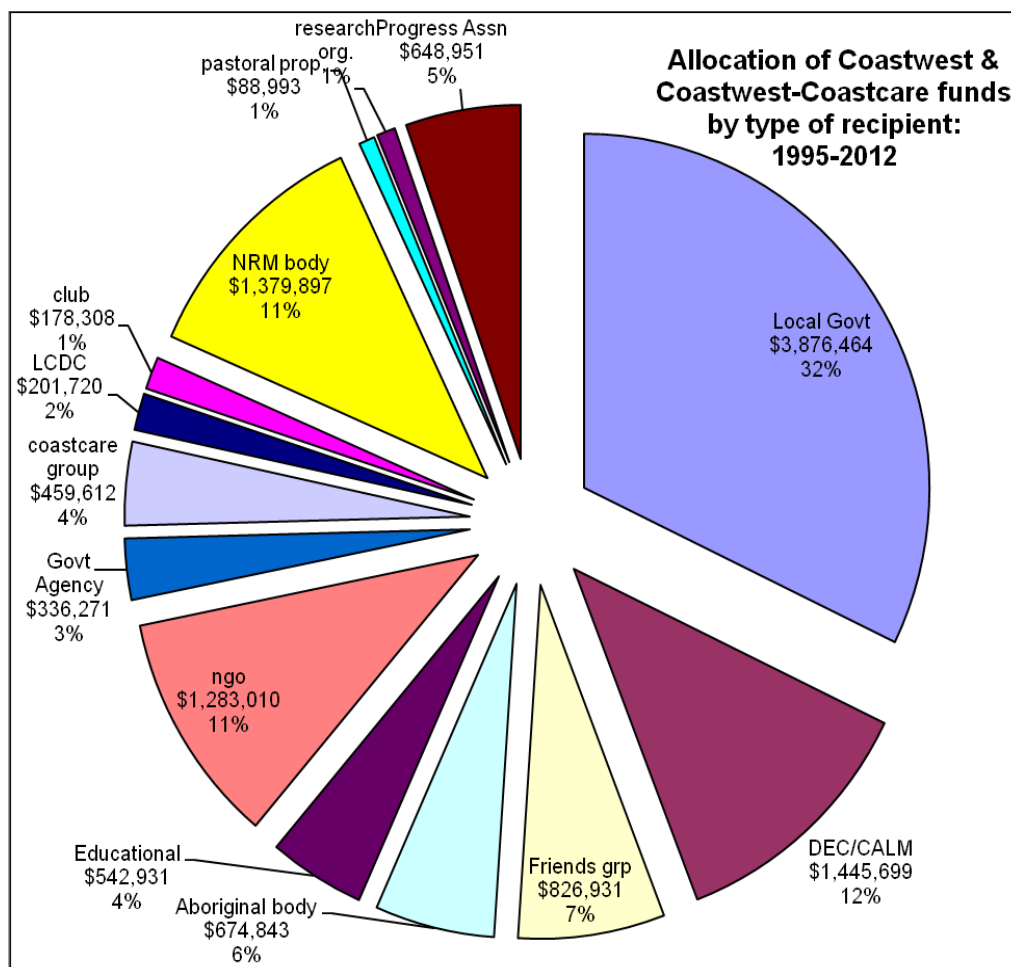
The Department of Conservation and Land Management (CALM), which was merged with the Department of the Environment to become the Department of Environment and Conservation in July 2006, received 9% of the total number of grants on a similar basis. It administered projects together with community groups that related to coastal estate which it managed. Comparison of Figures 5.1 and 5.2 indicates that projects managed by this agency tended to be larger than those managed by local government or coast-care groups. The other “government agency” category shown in Figure 5.1 refers mainly to the Department of Fisheries and the Waters and Rivers Commission, which received grants prior to 2007 for community-based projects.



**Figure 5-1 Whose projects were funded?**

Distribution of approved Coastwest/Coastcare (1995-2002) and new Coastwest (2003-12) projects according to classes of recipient organisations (classes assigned to the data source by the author)

This analysis of the grants provided by Coastwest over 11 years shows that community groups organised as “coastcare” groups have not been privileged by the Coastwest program. Groups using the name “Friends of...” some natural landscape feature and local community “progress” or residents’ associations received more funds. Even schools and regional colleges (comprising the bulk of “educational” organisations in Figures 5-1 and 2) received more grant funds for on-ground works than coast-care groups (see Table 5-1).



**Figure 5-2 Share of funds allocated from Coastwest/Coastcare (1995-2002) and new Coastwest (2003-12)**

Grant funds received by classes of recipient organisations (classes assigned to the data source by the author)

Comparison of Figures 5-1 and 5-2 shows that the more formal institutions, the Department of CALM turned Environment and Conservation and NGOs, tended to receive larger sized grants per project than local government, schools and the community organizations. This reflects the greater capacity of the former to be able to design and administer larger projects.

**Table 5.2 Dissection of project funds provided to each class of organization according to the main activity which characterized the project.**

In the initial years proponents nominated the “type of project” on their application form and this data is recorded in the database. For the period from 2005-2012 the type of project was determined by the author.

<i>Type of Project</i>	<i>Aboriginal org.</i>	<i>Dept of CALM/ DEC</i>	<i>club</i>	<i>Coastcare group</i>	<i>Educ. org.</i>	<i>friends group</i>	<i>Govt</i>	<i>LCDC</i>	<i>Local Progress Assoc</i>	<i>NGO</i>	<i>Pastoral</i>	<i>NRM body</i>	<i>Research org.</i>	<i>Local govt</i>
Education and Training	65,771	304,327	50,059	12,440	30,217	32,590	24,280	29,036	11,693	201,036		449,251	77,926	19,480
Monitoring		33,123	16,020		60,252	82,780	88,861	12,000	20,610	229,411		93,539	12,880	48,364
On-ground action	429,604	976,449	112,229	393,672	438,727	690,661	159,192	113,684	571,448	663,424	88,993	647,367		2,773,780
Planning	179,468	88,800		48,500	9,515	134,041	63,938	47,000	45,200	95,000		7,000		709,691
Research	40,000				4,220					40,000			12,950	
Support Grants												182,740		
Survey														10,000

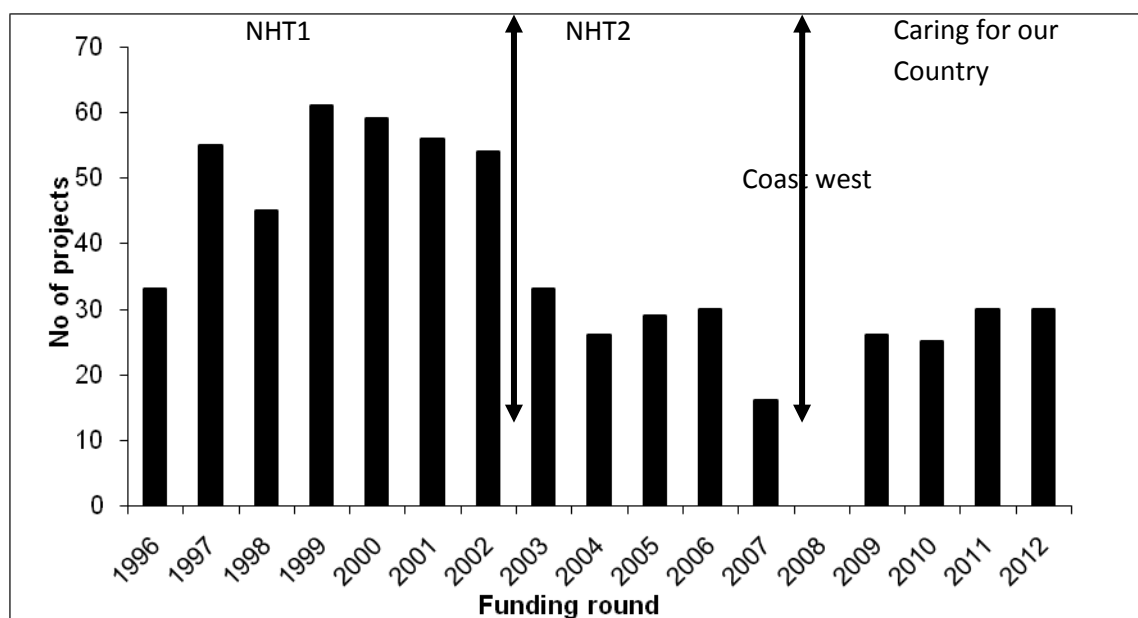
**Table 5-3 Total value of Coastwest/Coastcare and Coastwest grants**  
paid for each type of project from 1995 to 2012 in Western Australia

Type of project	Total amount funded	%
Education and Training	\$1,308,106	11.1%
Monitoring	\$697,840	5.9%
On-ground action	\$8,059,230	68.4%
Planning	\$1,428,153	12.1%
Research	\$97,170	0.8%
Support grants	\$182,740	1.6%
Survey	\$10,000	0.1%



The two tables presented here show that grants predominantly funded work “on the ground” (\$8.6m). This has been a consistent objective of the community grants programs through the period since 1995, irrespective of the arrangements providing the funds. The significance of this expenditure is magnified by the observation that the grants were to be used mainly for materials and sometimes for expert services. All labour contributed by the community organisations or schools involved in their projects was donated free of cost (see Sect. 5.3.1).

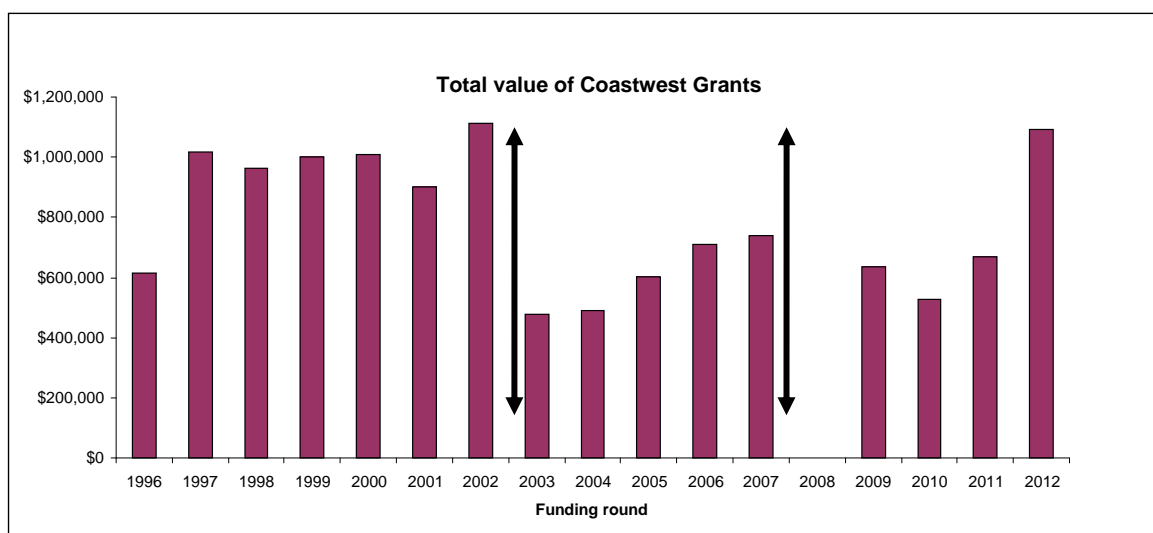
Throughout the three phases of the NHT, the Western Australian Government continued to deliver grants through the Coastwest program, but the larger Commonwealth program influenced the operation and the effectiveness of Coastwest. In the period to 1995-2012, 608 projects received funding worth \$12.8 million. Figure 5.3 shows how the number of projects funded built up during the period of NHT1 (1995-96 to 2002) and then declined sharply from 2003, despite the State Government committing more of its own funds to replace the Coastcare component which ceased in 2002. In 2008 the WA Coastwest program did not call for applications, because the newly elected Commonwealth Government had already announced its national Community Coastcare program (Fig.5-3, 5-4).



**Figure 5-3: Numbers of Coastwest/Coastcare and Coastwest projects funded each year from 1996 June 2012.**

Vertical arrow lines demarcate the three phases of Commonwealth NRM funding programs.

Figure 5-3 shows the total disbursements of Coastwest funds for community-based projects (includes local government) through Coastwest/Coastcare from 1995-96 to 2002 and the new Coastwest from 2003 to the first round of 2011-12. For simplicity, the year in which the funds are usually disbursed is used to designate the funding round (i.e. the year in which June, the end of the financial year, falls). Comparison with Figure 5-3 indicates that the not only did the number of projects funded decline markedly once the NHT1 ceased, but the total value of grants dropped by more than 50% initially, to recover a little over time. In the 2012 round, the West Australian government effectively reinstituted the 2012 level of funding as discussed in Section 5.3.3.



**Figure 5-4 Total funds disbursed through Coastwest/Coastcare and the “new” Coastwest programs from 1996-2012**

### 5.3.1 Coastwest/Coastcare under NHT1: 1995 – 2002

In 1996, by the time applications were being received for the first round of Coastwest grants, the Commonwealth and Western Australia had agreed to combine the Coastwest grant pool (\$350,000) with (almost) matching Coastcare funds (\$265,000) (Kay et al., 1997, p. 24). From 1997 to 2002 the two funds were combined and delivered as Coastwest/Coastcare. With the high profile of the National Coastcare Program and the availability of funding, community stewardship groups adopting the Coastcare identity tag soon formed along the coast. At this time Landcare had already developed rapidly in Western Australia and even in urban areas. The Landcare name and logo had high levels of public recognition. Coastwest was represented by the Western Australian

Government as its attempt to have “more effective community input” into coastal management (State Government of Western Australia 2003b).

Over the seven year life of the joint Coastwest/Coastcare program about \$6.62 million was delivered jointly by the Commonwealth and State within Western Australia. Most of this was disbursed to projects through a competitive bidding process. As a consequence of the requirement for community contributions to any project, it is estimated that these projects generated over \$13 million worth of additional direct or in-kind contribution from community groups and coastal managers (State Government of Western Australia 2003a). Project funds provided key resources which enabled community groups or schools to participate in coastal stewardship in ways that were more effective than they otherwise might have been. Participants found these activities were more enjoyable than individual actions of care for the coast because they were coordinated group activities.

The Regional Coastcare Facilitators were funded by Coastcare, and were crucial to the engagement the many different stakeholders represented in Fig. 5-1. Clarke’s (2004) assessment of Coastcare as a whole was also true of its implementation in Western Australia: regional Coastcare Facilitators were “integral to the success and effectiveness of the grants”, mediating between community groups and the three levels of government. They enabled the community groups to develop both technical and process-related skills.

### **5.3.2 Regional NRM (NHT2) and “new” Coastwest: 2003-2007**

The end of the first phase of the Natural Heritage Trust in 2002, and the termination of the community Coastcare program, has been described in the previous chapter (4). In Western Australia, the State Government made a commitment to maintain Coastwest funding beyond the life of the Coast and Clean Seas MOU (State of Western Australia, 2003a). However the support network for local government and community groups provided by the Regional Coastal Facilitator network was disrupted (Clarke & Cutler, 2008). The new Coastwest narrowed its focus to give more emphasis to implementation of existing coastal management plans through co-operative local government-community interactions (State Government of Western Australia 2003a). Its objectives were to:

- Contribute to the implementation of local and regional coastal plans and strategies;

- Assist in the identification, protection and/or maintenance of environmental values, aesthetic qualities, biodiversity and water quality in the coastal zone;
- Foster sustainable recreational and tourist use of the coast by assisting in the maintenance of the recreational amenity and provision of public access to the coast;
- Build capacity in Western Australian communities to increase their involvement in coastal zone management activities by supporting coastal zone research, education and training in Western Australia. (State of Western Australia, 2003b)

It is noteworthy that the Coastwest program did not invite the community to be involved in the stewardship or management of the coast in explicit terms. The language of its objectives clearly places the community at a more passive level of participation than the rhetoric of the original Commonwealth Coastcare program. It can be seen that the objectives are a mix of social and environmental, although notably there are no references to cultural, especially indigenous, values.

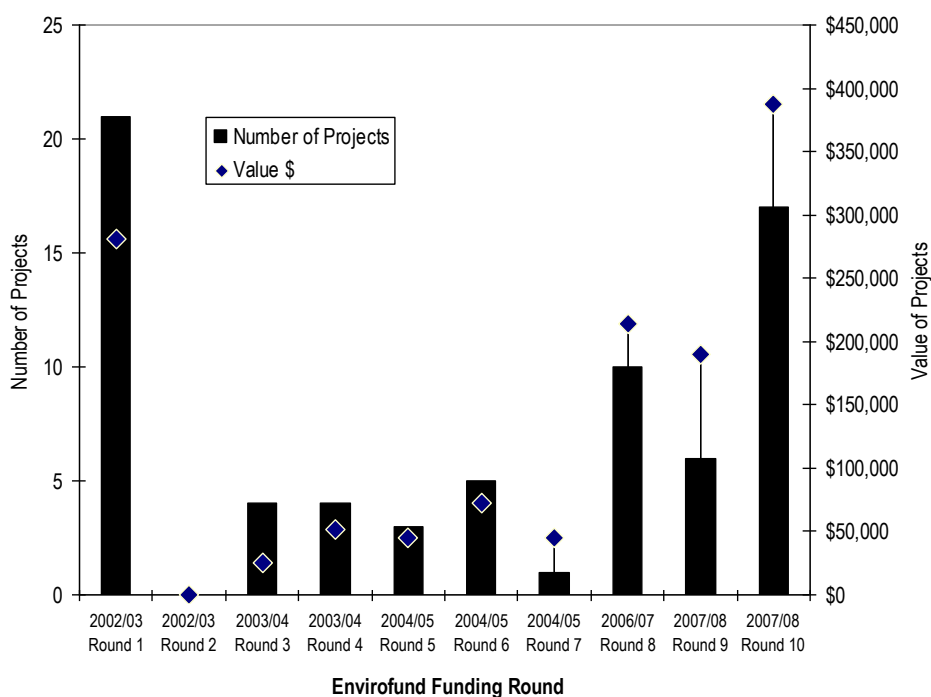
By 2003 just over \$500 000 annually was committed in principle to Coastwest (State Government of Western Australia 2003a). In 2006 the total pool was increased to \$750,000 in a new Coastwest program. This pool was divided into four components:

- Annual Coastwest grants to community groups, local government, state agency or Aboriginal land council (\$630,000)
- Regional Coastal Management Group Support Fund (\$40,000)
- Community Support Grants to increase the capacity of community groups (\$30,000)
- Flexibility (contingency) component (\$50,000)

However, this pool was never completely disbursed. As Figs. 5.2 and 5.3 indicate, not only did the numbers of projects fall markedly after the end of NHT1 in 2002, but remained low right through to 2007 and the funds disbursed never reached the total available for disbursement in the Coastwest program. This observed failure of the community to fully subscribe to the funds available prompted an evaluation of Coastwest in 2008. The evaluators found that community groups had been heavily dependent on assistance from the Regional Coastcare Facilitators, who in turn had been coordinated by the State Coastcare Coordinator (Clarke & Cutler, 2008) under the terms

of the Coasts and Clean Seas MoU. Fortunately for Western Australia, many of the Facilitator positions were retained in a new structure, because the Regional NRM groups wrote these Facilitator positions into their business plans. However, the link between the Coastwest grants program and Facilitators was broken (see Chapter 9). Coastwest, with its substantial purse of funds available for community groups and local governments which involved community groups was left with only an administrator and no technical staff or expertise in its ranks.

Not only were the Facilitators de-linked from Coastwest, but Envirofund also provided a totally separate source of small grants from the Commonwealth for community coastcare activities. Clarke and Cutler collated data on the project funding allocated to WA from Envirofund throughout NHT2.

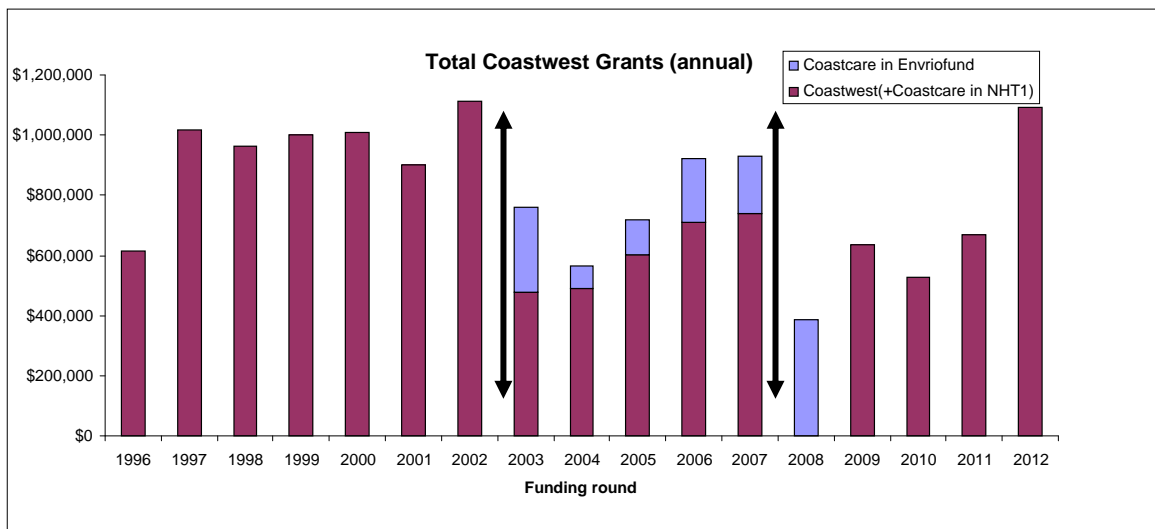


**Figure 5-5: Value and number of Envirofund project grants designated "coastcare" in WA, 2001-08.**

Source: Clarke & Cutler (2008, p. 8)

Even when these grants are added to the Coastwest grants in the NHT2 years, the total value of grants is less than that disbursed under the tripartite agreement of NHT1, as can be seen in Figure 5-5. Clarke and Cutler (2008, pp. 29-30) found that community groups were willing to take on more work using NRM grants, but had become confused by the separation and hence multiplication of programs under the separate identities of

Coastwest, Envirofund and Regional NRM organizations accessing Commonwealth NHT2 funds. As a result the Commonwealth Government was unable to spend all the funds allocated to Envirofund. Its unspent funds were carried into a special “Community Coastcare” round in 2008 and Envirofund was wound up on 30 June 2008.



**Figure 5-6: Community-based coastcare grants in Western Australia from both State and Commonwealth sources, 1996-June 2012.**

Envirofund rounds have been assigned to their appropriate Coastcare rounds for the NHT2 period (2003-2008) to provide a realistic comparison of NHT1 and NHT2 grants from State and Commonwealth.

### 5.3.3 Coastwest and *Caring for our Country*: 2008 and beyond

The 2008 “Coastcare” special Round 10 of Envirofund, and able to fund 17 projects in Western Australia, to the value of \$387,119, which was below the long term trend for Coastwest (Fig 5-5), but greater than the average amount received by Western Australia from Envirofund (Fig. 5-6). Coastwest funding rounds were resumed in 2009.

One of the institutional fruits of the strategic planning for regional investment in natural resources management initiated for the NHT2 was a West Australian Government grants programs, which commenced in 2009-10. WA State NRM grants are available for “strategic priority projects” and also for community groups and organisations. In 2010-11 one project to protect RAMSAR wetlands along 80 Mile Beach, and a further eight projects addressed issues in islands, coastal or estuarine environments were among the grants approved under this program (Government of Western Australia, 2011).

Another three projects of this nature were also approved in the 2011-12 funding round (Government of Western Australia, 2012).

Some of the projects funded by the Commonwealth Government through Caring for our Country since 2010-11 as “strategic priorities for NRM” have been marine (marine pests in ports) or coastal in their scope. In addition, in the 2010-11 funding round, the Department for Planning, the lead coastal agency in Western Australia and manager of Coastwest, successfully bid for \$1.5 million over two years under Caring for our Country’s “open call” for investment proposals. One million dollars of that was used to supplement the pool available through the Coastwest grants process, but most importantly \$400,000 was used to fund additional resources in the regional NRM organisations which support community coastcare organisations to plan, apply for grants and deliver the projected outcomes. The jump in funds disbursed in the first round in 2012 (Fig 5.5) shows how effective the assistance was in generating proposals which were deemed worth funding and perhaps the effect of pent-up demand caused by the decision not to call a round for 2008. The significance of community stewardship in sustain the West Australian coasts is explored in case studies in Chapter 8.

#### ***5.4 The state as steward: Coastal and marine reserves***

A significant component of West Australian responses to the increasing pressures on the environment has been to create sanctuaries where human impact is limited. In the early period of West Australian colonisation, the main driver was the need to provide public spaces in which people could enjoy the physical and spiritual benefits of recreation and contact with nature. As has been shown for the national level in Chapter 4, this core idea later developed into the strategy to create a system of representational conservation reserves with a suite of reserve categories which enable a range of uses to match social expectations for stewardship through a variety of uses of nature.

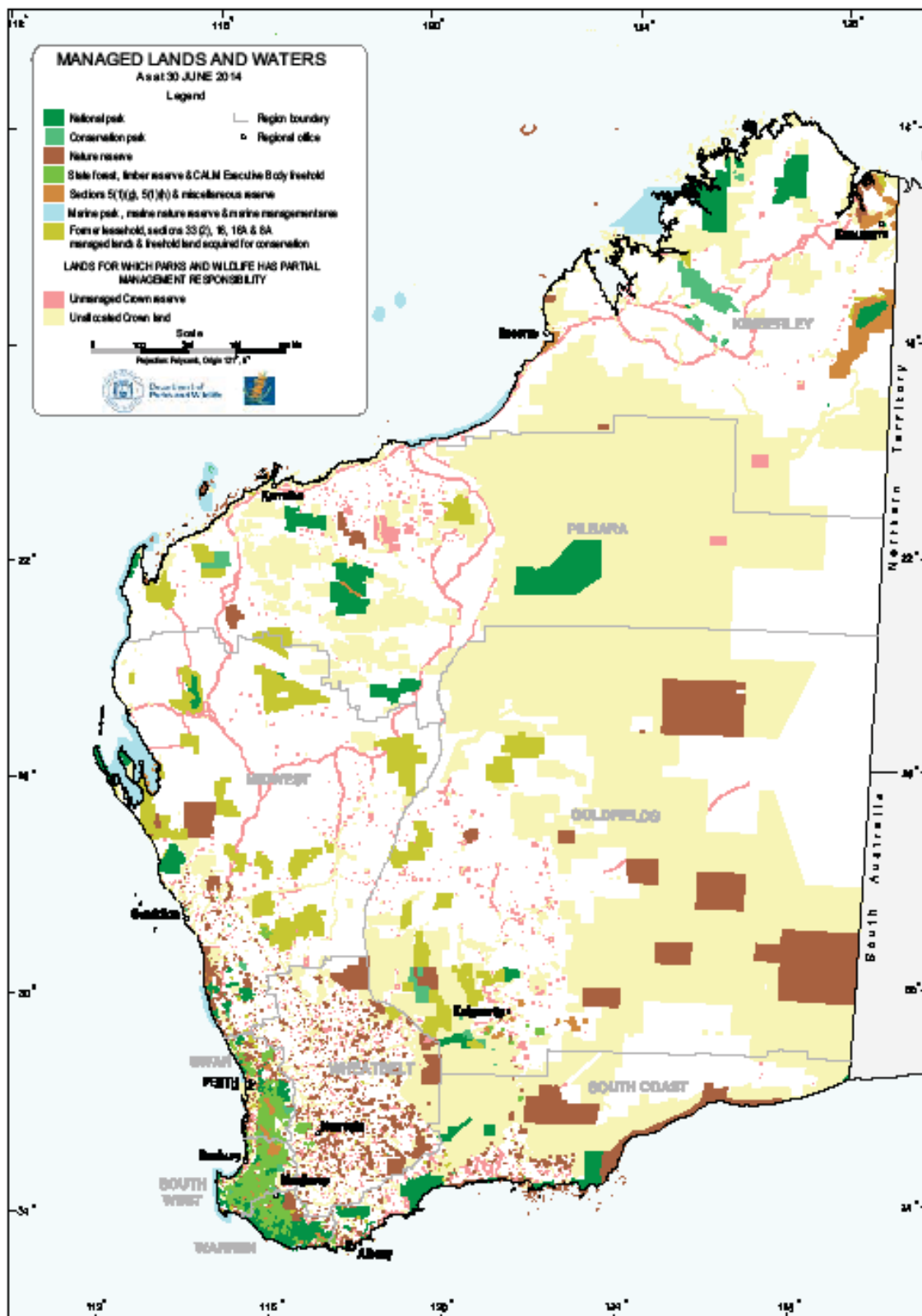


Figure 5-7: All lands and waters managed by the Department of Parks and Wildlife at 30 June, 2014.

From Department of Parks and Wildlife, (2014 p.57) with permission.



The first public park in Western Australia, Perth Park, later to be renamed King's Park, was proclaimed in 1872, the same year as Yellowstone National Park in the United States of America was proclaimed. However the first park protected for its nature conservation value was the present John Forrest National Park, declared in 1894 (Pouliquen-Young, 2002, p. 170). It was followed in 1905 by the Yanchep National Park (Carbon, 1991, p. 2) and in 1908 by Barrow Island Nature Reserve (Pouliquen-Young, 2002, p. 170). Barrow Island was the first reserve whose main purpose was scientific and conservation rather than recreational.

There are now 27,542,776 ha of public lands managed by the Department of Environment and Conservation (DEC), 5,668,065 ha in national parks. Key forms of public land tenure in the DEC estate include conservation parks, nature reserves, marine parks, marine nature reserves, and marine management areas. Many of these, together with reserves vested in local governments, are adjacent to the coast. Box 5-3 lists the national parks which abut the coast of Western Australia.

**Box 5-3: Coastal national parks in Western Australia**

Cape Arid	Cape Le Grande
Cape Range	D'Entrecasteaux
Dirk Hartog Island	Eucla
Fitzgerald River	François Peron
Frank Hann	Gull Rock
Leeuwin Naturaliste	Stokes
Torndirrup	Walpole – Nornalup
Waychinicup	West Cape Howe
William Bay	Yalgorup
Yanchep	

Around 1970, the Western Australian Branch of the Australian Marine Sciences Association, (Wilson, 1985, p. 11), recommended to the Conservation through Reserves Committee that marine reserves be included in the representative reserves for the state.

Wilson (1985, p. 12) argued that by 1985 “commercially exploitable fish stocks” had been managed for some years (with the implication that they had been managed in a sustainable manner)<sup>87</sup>. So he suggested that the creation of marine reserves in Western Australia would “provide opportunities for public recreation,...scientific research,...conservation of species and... preservation of environment for aesthetic purposes”, i.e. purposes other than maintaining commercial fisheries (Wilson, 1985, p. 12). Wilson’s plea for marine reserves came on top of the release of System 6 report from the EPA’s Conservation through Reserves Committee in 1983. That report recommended a marine reserve be created over the waters from Cape Peron to Port Kennedy, south of Perth (Department of Environment and Conservation, 2007, p. 1).

At that same time, the Commonwealth Government, through the Australian National Parks and Wildlife Service, had already recommended that a system of representative marine conservation reserves be established in appropriate biogeographical subdivisions from the tropical north, down the west coast to the temperate south (Wilson, 1985, p. 14). However, realisation of marine conservation reserves was a long time in coming, partly because of conflicting interests among stakeholders and because of a general community belief in the abundance of the sea (Wilson, 1985). Eventually, on 13 March 1987, Marmion Marine Park was declared the State's first marine park. Ningaloo Marine Park was declared in the next month (Department of Environment and Conservation, n.d.). By 2013 there were 12 Marine Parks, two marine management areas and one marine nature reserve vested in the Western Australian Marine Parks and Reserves Authority (MRPA) as shown below in Fig 5.7 with area shown in Table 5.4.

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<sup>87</sup> In the process he stated that Western Australians “do not rely on the resources of coastal waters for subsistence” overlooking the choices and traditions of indigenous people.



**Figure 5-8: Marine parks and reserves in Western Australia**

Source: Department of Parks and Wildlife, Western Australia (2013) with permission.

<http://www.dpaw.wa.gov.au/management/marine/marine-parks-and-reserves> accessed 27 Nov 2014.

**Table 5-4: Marine conservation estate in Western Australia**

Source (unless otherwise noted): Dept of Environment and Conservation (2010, p. 48)

<b>Name and Classification</b>	<b>Area (ha)</b>
Barrow Island Marine Park	4,169
Barrow Island Marine Management Area	116,616
Hamelin Pool Marine Nature Reserve	132,000
Jurien Bay Marine Park	82,376
Marmion Marine Park	9,500
Montebello Islands Marine Park	58,375
Muiron Islands Marine Management Area	26,769
Ningaloo Marine Park	263,313
Rowley Shoals Marine Park	87,807
Shark Bay Marine Park	748,735
Shoalwater Islands Marine Park	6,545
Swan Estuary Marine Park	346
Walpole & Nornalup Inlets Marine Park	1,446
Ngari Capes Marine Park <sup>88</sup>	123,790
Lalang-garram/Camden Sound Marine Park <sup>89</sup>	680,000
Eighty Mile Beach Marine Park <sup>90</sup>	210,000
Total Area (ha)	1,537,997

The large Lalang-garram Marine Park in Camden Sound, in the Kimberley region north-east of Broome, Eighty Mile Beach and Ngari Capes Marine Parks were the latest to be announced by the Government of Western Australian in 2013. In addition to these state

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<sup>88</sup> Department of Environment and Conservation (2013)

<sup>89</sup> PEW Environmental Initiatives (2013)

<sup>90</sup> Statement by the Environment Minister, Bill Marmion (Marmion, 2013)

reserves, Ashmore Reef, Cartier Island Marine Reserve, Ningaloo Marine Park, Mermaid Reef Marine National Nature Reserve (to the northwest) and the Great Australian Bight Marine Park are Commonwealth Marine Protected Areas beyond Western Australia waters.

The whole issue of a state managed conservation estate raises passionate discussion in Western Australia. From 2010 to 2012, a national campaign coordinated from Western Australia under the banner “save our marine life” brought together many of Australia’s leading environmental non-government organisations in support of the creation of the Ngari Capes marine protected area off south-west of Western Australia (Fig 5-8). These organisations and people in wider society consider that state managed conservation estates are the best way to protect biodiversity or landscape values of marine and coastal areas from industrial activities like mining, settlement, or land clearing and also from depletion and extinction through unsustainable fishing practices. The public conflict over these issues often sees popular environmental politics unite with scientific spokespeople on the one hand, while on the other side there are commercial fishing interests and recreational fishers who may otherwise be mutually antagonistic and not always united but stand together on this issue.

### ***5.5 Land use planning: state-directed stewardship***

A unique feature of the institutional arrangements for coastal stewardship in Western Australia is the location of the Coastcare program and its support for community stewardship within the planning agency<sup>91</sup> rather than a reasonable alternative in the Department of Environment and Conservation. On one hand, most Western Australians live relatively close to the coast, but on the other hand, the vast length of the coastline means that most of it is distant from human settlement. New human settlement and infrastructure development is a threat to integrity of coastal ecosystems, but unlike the situation in the more populous states of Victoria and New South Wales, it is concentrated in limited locations on the West Australian coast. Industrial development is the main issue in parts of the Pilbara Region and a few port cities, whereas urban sprawl is an extensive issue in the south-west. All of these developments take place within a framework of spatial planning which regulates what kind of activities can take place. There are also systems of environmental, health and safety regulations which

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<sup>91</sup> Initially it was called the Ministry for Planning. In July 2001 it was merged with the Department of Transport to form the Department for Planning and Infrastructure. In 2009 a Department of Planning was formed by once again splitting planning and transport/infrastructure functions.

constrain individual actions. Land use planning and environmental regulation constitute a broad framework of state-directed or state-imposed environmental stewardship.

Given the high degree of urbanisation in Western Australia, pressures on the coastal environments of the greater Perth metropolitan region are intense and increasing as its population increases to an expected 3.5 million people by 2013 (Western Australian Planning Commission & Western Australia Department of Planning, 2010). In 2005 the WAPC initiated an ambitious process to develop “a regional strategy for the Perth metropolitan coastline” (Western Australian Planning Commission & Western Australia Department for Planning and Infrastructure, 2005) based on extensive community engagement through a process of participatory democracy known as Twenty-First Century Dialogue (Carson & Hartz-Karp, 2005, p. 132). A draft Strategy was released for public comment in December 2008 (Western Australian Planning Commission & Western Australia Department for Planning and Infrastructure, 2008), and amendments to that document were endorsed by the WAPC in January 2010 (Western Australian Planning Commission, nd), although the amended Strategy had still not been released to the public by December 2014. In August 2010 the WAPC released *Directions 2031 and beyond: metropolitan planning beyond the horizon* which claims to be a new “spatial framework and strategic plan” for the Perth metropolitan region (Western Australian Planning Commission & Western Australia Department of Planning, 2010). Since this has been endorsed as the overall strategic plan for the metropolitan region, the WAPC web site advises that the Coastal Planning Strategy will be integrated into that strategic plan (Western Australian Planning Commission, nd). The most significant developments out of these planning iterations following the Dialogue with the City process in 2003 was a turn away from strip development and the adoption of the principle of focussed activity nodes linked by efficient transport networks. This offers one way to maintain public access to the amenity values of the coast, while keeping low impact on other parts of the coast to maintain biodiversity and ecosystem functions.

A revision of the *State Coastal Planning Policy* (Statement of Planning Policy No. 2.6) was gazetted by the Parliament of Western Australia on 30 July, 2013. The *Policy* aims to ensure that areas identified by housing, recreation, and other activities are capable of sustainable use for those purposes. It also aims to provide "for public coastal foreshore reserves and access to them on the coast: and protect, conserve and enhance coastal values" (Western Australian Planning Commission, 2013, p. 4).

The policy discourages or controls “continuous linear urban development along the coast” as one means of reducing the impact of urban sprawl on coastal ecosystems. This provides a broad, “big picture” stewardship framework within which residents and community groups may feel reassured that their stewardship of a local area has enduring value and won’t be swept away by bulldozers hired by developers. It makes a strong statement of support for “public ownership of the coast”. This policy commits to community participation in coastal planning and to “support and guide the activities” of voluntary coast care groups. This kind of distributed stewardship, exercised by the state at a larger scale and by local communities in situ, but with feedback through providing ways for citizen involvement in shaping plans and policies, is an example of what Chapter 7 describes as active citizenship or strong stewardship.

Coastal Planning in Western Australia has several layers. At the highest level are regional strategic plans, prepared with community consultation by the Department of Planning. Regional strategic plans identify key planning issues, “long term opportunities and a range of actions required to realise them” (Department for Planning and Infrastructure, 2002, p. 11). They are a key tool to avert the “death from a thousand cuts” which describes the cumulative impacts of disparate decisions taken without reference to each other or consideration of their overall impact. Structure planning locates infrastructure and land uses in a manner which ensures consistency with the region’s strategic plan, so this level of planning brings to light particular issues for coastal management. Local governments then prepare coastal management plans at the scale necessary to ensure that key elements, like nodes of human activity, or biodiversity reserves, are planned and managed and that adequate allowance has been made for coastal processes over the long term (Department for Planning and Infrastructure, 2002, pp. 15,16). The Western Australian government has provided support for local governments through its Coastal Planning Program for coastal management plans, and Coastwest funding has been provided for some projects in which community groups and local governments have cooperated to develop foreshore and site plans together with a community support for their implementation.

There is one area of concern in Western Australia. That is a perceived disjuncture between these layers of planning institutions and the strategy formation done by regional NRM bodies. Regional NRM strategies were first developed for the NHT2, from which investment plans for Caring for Our Country were derived. A senior coastal planner commented that any community-based group, even a regional NRM

organisation should not be doing strategic planning. That is the responsibility of State Government's lead agencies for the key issue being addressed and local government, even though community participation in the process is essential. This reflects a view that natural resource management in Western Australia is institutionally framed around agricultural interests and priorities. Within the NRM regions and down at the catchment level, coastal matters are considered by planners to be peripheral, both economically and also in the catchment or watershed approach to setting priorities.

### ***5.6 Marine stewardship and fisheries***

The place of fisheries and fishing activities in relation to marine biodiversity in Western Australia provides an interesting window into the economics and social values that are operating in relation to stewardship of marine biodiversity. The official terminology surrounding fisheries in Western Australia is not that of stewardship, but that of management. The West Australian government is "committed to the implementation of an integrated management system for the sustainable management of Western Australia's fisheries" (Department of Fisheries, 2009, p. 1). The commercial fisheries sector in Western Australia is now highly industrialised and, as the result of historical development of legislation culminating in the Fish Resources Management Act (1994), is closely monitored and regulated. This management is underpinned by scientific data collection and modelling of fish population dynamics, together with economic modelling and principles derived from natural resource economics. One of the means to achieve this, yet also a consequence of the process, is a high level of organisation among commercial fishers and their close relationship with the Department of Fisheries. Tradable licences or fishing quotas are the tools by which a market mechanism is used to allocate limited fish resources among the competing fishers. However many of the same fish species for which commercial fishing effort is carefully managed are also subject to a significant level of fishing effort from recreational fishers, about which there is less data and less management..

A historical overview of the role of recreational fishing in management of fisheries in Western Australia has been well described by Christensen (2009) on whose work this section relies. Already by the late 1880s there was some concern over declining catch by professional fishers in Western Australia, which resulted in the passing of the *Fishery Act* (1889), restricting use of nets by commercial fishers. Nevertheless the fishing industry expanded throughout the 1890s as transport and refrigeration improved. In 1896 the West Australian Angling Club and Fish Protection Society was formed in



Perth. This society together with the Piscatorial Society not only promoted the pastime of angling but also provided a political lobby group capable of contesting access to fish with commercial fishers (Christensen, 2009, pp. 3-4). In the period to World War II recreational fishers (anglers) enjoyed political success due to three main factors: Many state politicians were keen anglers and advocates for their sport; the hospitality industry and the angling fraternity joined forces to prosecute economic arguments for restricting commercial (netting) activities in favour of angling; recreational fishers and natural historians claimed to have the limited science available on their side.

Christensen (2009, p. 29ff) notes that this whole discourse about fisheries changed following the establishment of the Commonwealth Scientific and Industrial Research (CSIR) fisheries research station in Perth, as part of government investment in commercial fisheries. The new institutionalised research increased understanding of ecology, which was applied to development of offshore fisheries. The high moral ground previously claimed by recreational anglers was undercut by data showing their own impact on fish stocks. They also faced declining social and political power.

In the period to the 1960s, commercial fishing expanded in Western Australia, but unlike the pre-war period, it was offshore rather than estuarine fishing. In the 1960s, limits placed on the number of licences, results of the role of government as manager of the state's natural resources, opened up possibility of twin goals of sustainability of the resource, and also economic viability of the industry. By 1990 the government felt the need for a policy on recreational fishing, in recognition of its pressure on fish stocks. The public politics of fisheries thus became a three cornered affair with commercial fisheries, recreational fishers and conservation groups seeking to influence policies. The current policy of integrated fisheries management is the government response to these pressures. It is an approach in which extensive monitoring, research, development and enforcement of regulations they use to balance the relationship between fishers and their prey within an overall market-based framework.

The West Australian Angling and Fish Protection Society of the 1890s claimed to be protector of fish stocks to ensure viability of a fishing activity which they claimed had higher moral value than commercial fishing. Today conservation groups claim the moral high ground of ensuring the sustainability of stocks and also marine biodiversity. Recreational fishers, through their clubs and their peak body Recfish-West, contest

claims and policies which restrict recreational fishing activity, whether they arise from commercial fishing or conservation interests.

The discourse of management used by the West Australian fishing sector has many of the same assumptions as that of stewardship: namely that the resource has to be managed and the “office” or role of manager is legitimate. The Government of Western Australia is the self-appointed manager of the wild fish resources of Western Australia for “the benefit of present and future generations” (Department of Fisheries, 2009, p. 1). This could be understood as an expression of stewardship ideas, but the only reference to stewardship in documents associated with the integrated fisheries management policy is found in the *Strategy for Managing the Recreational Catch of the Demersal Scale Fish in the West Coast Bioregion* which states that “community stewardship” can be improved by ensuring all rules are enforced (Department of Fisheries, 2008, p. 19). This use of the term stewardship is far more limiting than the scope that has been briefly hinted at in this chapter. However in Australian official policies stewardship is often limited in concept as a voluntary activity not related to the larger policy formation and institutions, neither to the formal economy.

## **5.7 Conclusion**

At the scale of a particular fishery or a (local) ecological region, human efforts to obtain the goods and services they desire from coastal and marine environments while also maintaining system integrity are mainly expressed in the language of “management” in Western Australia. This is illustrated by Integrated Fisheries Management in Western Australia or the national ICMZ framework. Harvey and Caton (2003, p. 195) comment that coastal management is “the management of human activities and sustainable use of Australia's coastal resources”. Thus coastal management is less like management of a business enterprise, and more about learning to live within the sustainability parameters of coastal ecosystems. A Branch Head with the Department of Conservation and Environment advised a seminar on coastal planning and management in 1984 that:

The painful transition stage seems to have been reached in Western Australia where a free for all robber economy has to be replaced by a more forward thinking husbanding of resources. In this the better human qualities of consideration, cooperation and stewardship have to prevail if all of us are to obtain a sufficiency for living by using resources in a sustainable manner (Tinley, 1984).

This need for systematic and collective stewardship of marine and coastal natural resources of Western Australia became a hot-button issue from the mid-1990s, as it did in other parts of the country. With most of Western Australia's coastline consisting of commons under public ownership, government has played a strong role in coastal and marine stewardship. It uses planning controls to pursue multiple goals relating to social, economic and environmental sustainability of the coastal zone and the state as a whole. In more recent times, community participation has become a significant element of the processes used by government in realising those goals. This participation needs to go beyond the simple role of giving the electoral mandate to the government, to include participation (or stakeholder representation) in the planning process to ensure plans have meaning in implementation and there have been some good examples of this to date. On the other hand, local community citizens have enormous capacity to contribute knowledge, skills, energy and some resources to practical stewardship activities which ensure the integrity of coast-scapes or coastal and marine ecosystems. For now at least, the virtuous circle linking them is recognised by some policy makers. A senior State Government officer described it as:

Identify what the community is passionate about and facilitate them to work in the area and on the issues that they are passionate about. ...Your community stewards are...interested in improving their local environment on the coast or building better facilities so they can engage with it more. (G2)

However some of these people become passionate about the larger policy issues providing the government with the support, direction and correction on its policies, as reflected by this observation:

If we had no sense of stewardship for the coast in the State, there'd be no interest politically, there'd be no government program that delivers anything towards protecting, enhancing, making the most of our coast. It would just get overrun by developer proposals.

The Government of Western Australia has continued to fund community stewardship groups through its Coastwest funding through three major changes in Commonwealth support for coastal and marine stewardship. The Coastwest/Coastcare program 1995-2002 was an example of how governments at all levels can enable and encourage local stewardship of place through civil society. In 2012 the State agency responsible for coastal management and planning was still able to maintain State funding and obtain matching Commonwealth resources for community grants. This combined with

Commonwealth funding for regional coastal and marine facilitators in regional NRM plans meant Western Australia has been able continue financial support to communities, so their role in stewardship can be recognised and to some extent harnessed. However the State agency simply administers the Coastwest grants scheme. It offers no technical or organisational capacity building.

Yet the ABS data cited at the beginning of this chapter shows that only a small minority (12.1%) of West Australians are engaged in volunteering in environmental activities and the pressures for development of urban settlement on the coast continues unabated. There is still a gap in the level of engagement in the practice of stewardship which is necessary to sustain coasts and marine environments.

This discussion has been framed in terms of stewardship as an organising principle, yet it is noticeable that, other than in the key commonwealth coastal (1995) and oceans (1998) policies, the term stewardship is absent from much of the material quoted in these two chapters. At the very best, if the community has adopted a stewardship ethic, it has done so without being able to name it as that. What is it about the word “stewardship” that drives people away from its use, other than in those very high-level statements of policy? It has become reduced to symbolic use for community volunteer activity. The following chapters unpack the additional value contained in the notion of stewardship which is signalled in the application of that term to engagement of Australians with the coastal and marine commons, but which has not been tapped into.

## **PART TWO: Stewardship and Citizenship**

This section examines what meanings stewardship may take in its application to environmental ethics. Working from MacIntyre's (1984) assertion that ethics must be based on a collective narrative which has developed over time, this section takes a genealogical approach to the unfolding of the western tradition of environmental stewardship. The rich narrative informing stewardship ethics which emerges from this examination then informs an examination of the relationship of the individual in society, and in particular the role of civic virtues and the contribution stewardship ethics may make to a strong citizenship in which the civic virtues encompass the coastal and marine environment which society signals is so important to it.



## Chapter 6 The stewardship story: a genealogy of stewardship ethics

### 6.1 Introduction

The first part of this dissertation used Steinberg's (2001) characterisation of governance regimes for oceans and near-shore waters as regimes of stewardship to show how the idea of oceans, and to a lesser degree, near-shore waters and coasts, as common or public goods regime became dominant in international relations and Australian policy. The common property nature of the "open seas" and also many of the ecosystems goods and services provided by marine and coastal environments have become subject to ever increasing anthropogenic pressures requiring governance which might generally be described as stewardship regimes, and in some cases are specifically described as stewardship. Australia's Oceans Policy and Commonwealth coastal policy specifically invoke stewardship, but those policies have steadily eroded and the meaning of stewardship in coastal and oceans management with them (Chapters 4 & 5). This and the following chapter argue that stewardship ideas have an important role in ensuring sustainability of commons and public environmental goods and services. Supplementing Steinberg's use of territorial political economy as an explanation of how stewardship regimes emerged, this work argues that reframing stewardship as a virtue ethic gives it greater purchase in public policy. This is because of the way virtue ethics connect personal and public realms, especially when grounded in the concept of strong citizenship.

Although Chapter 5 was organised around the concept of stewardship, the very programs which ought to have encouraged stewardship of oceans and coasts were found not to emphasise the concept. This is surprising given the capacity of this concept to bring together the interests of concerned citizens, the state and industry in relation to sustainability.

Rodin (2000, p. 27) suggests that, although the term is at best, vaguely understood in society, few terms carry the richness of *steward*.

*Caretaker* fails to capture the responsibility...*Manager* seems inadequate to capture the responsibility<sup>92</sup>...*Custodian* is too passive...*Agent* is too self-serving...*Ambassador* is too political...*Warden* is too administrative and loses the sense of the personal.  
*Guardian* is too closely tied solely to parental responsibilities.

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<sup>92</sup> and connotes a more limited degree of personal investment by the actor.

The richness he cites developed through the long history of use of this word and the stories and values which have accumulated over time. Worrell and Appleby (2000, p. 265) suggest that when the term stewardship is used in an ethical sense, it is basically a metaphor. The richness of a metaphor arises from the diversity of its uses over time, and is encountered in the retelling of the history of its use. As well as richness, a metaphor also has a degree of ambiguity.

In spite of its richness, its application to a wide range of practices for environmental sustainability (Lerner, 1993) and an extensive bibliography in environmental ethics, stewardship is contested within the field of environmental ethics (Palmer, 1992). Stewardship ethics attracts suspicion from the “deep ecology” movement (Barry, 1999, p. 12) which uses ontological and rationalist arguments to position *ecocentric ethics* as the “high moral ground” in fora such as the journal *Environmental Ethics*. However Barry (2002) argues that the state of the world today requires humanity to adopt “an ethic of use” as a means to reduce our detrimental impact on the earth’s natural systems, and stewardship fits this bill.

MacIntyre (1984) argued that ethics ought not to be an exercise of comparing decisions on the basis of abstract generalisations, but should be an expression of the individual self, seen within one’s social context, including its narrative traditions. Others have drawn attention to the importance of the “social imaginary”, which is the rich complex of common understanding that enables social life to function (Clarke, 1996; Taylor, 2002). This chapter examines the traditions of the environmental stewardship ethic in an approach resembling genealogical research, identifying the divergent narratives which contribute to the richness of this ethical concept.

Anderson (1997) suggests the Judeo-Christian tradition was influential in the development of the concept of ecological stewardship. In a culturally and religiously diverse world, there are many pragmatic and rational grounds on which to adopt the stewardship ethic, but the narrative founded on Judeo-Christian traditions has played a key role in making the concept useful and powerful. They are examined here before considering how it may relate to other narratives.

## **6.2 Stewardship: practice or ethic?**

The concept of stewardship has many uses with moral overtones: from the way that corporate officers and public officials acquit their public responsibilities, to performance of governments, or voluntary environmental activities. *Environmental*



stewardship has also become a ubiquitous term, especially in North America. At a workshop on environmental stewardship in Canada, Beavis (1994, p. 3) claimed that “stewardship” had effectively become the unofficial (and sometimes official) environmental ethic of governments at all levels, of policymakers, of planners, and of some grassroots environmental organizations.

In the United States of America, government institutions, the corporate sector and public institutions like universities demonstrate their citizenship credentials through their environmental stewardship programs. However, on the basis of a world-wide internet literature survey, Saner and Wilson (2003) noted that “there is remarkably little consistency in the use to the term”. Stewardship is used to justify government regulation and natural resource management, while on the other hand it may be used to represent voluntary initiatives, often as alternatives to government regulatory controls. Worrell and Appleby (2000, pp. 263-265) show how stewardship has emerged in recent discourses of resource management and ethics, particularly in the US. They point out that

“Links between the modern management-oriented usage of stewardship and the recently modernized ethical concept appear to be relatively weak. Thus few if any of the practical references draw on the ethical tradition of stewardship and similarly most of the ethical material stops short of exploring practical aspects of the concept” (Worrell & Appleby, 2000, p. 265).

In one of the few studies which report on public perceptions of stewardship, Burger (2002) found that the activities her respondents most closely associated with stewardship were “wise use of natural resources/ plants and animals, preservation of natural resources/ plants and animals, hazardous waste site clean-up, and protecting ecosystem health” (Burger, 2002, p. 635). She found that US Government agencies tended to use some terms like stewardship in more narrow ways than is commonly understood in the wider community. For example, the Department of the Environment focussed on cleaning up contaminated lands in government jurisdiction, but the public considered the stewardship mandate to also mean that the clean-up activity itself should not harm natural resources (e.g. plants and animals). Burger’s survey was conducted near the Los Alamos laboratories in New Mexico, so waste management was high on the agenda. However an orientation towards activities and management in these responses is clear.

Yet not all uses of the term environmental stewardship are exclusively ethical thought or actions. Former US President Clinton's Council on Sustainable Development (PCSD) argued that stewardship is both ethic *and* practice (PCSD, 1996). It published ten goals which it claimed could guide the US towards sustainable development, the fifth of which was:

Create a widely held ethic of stewardship that strongly encourages individuals, institutions, and corporations to take full responsibility for the economic, environmental, and social consequences of their actions (PCSD, 1996).

The final report of the PCSD stated that

Environmental stewardship is an ethic and practice of responsibility toward the Earth and its natural processes for the life of products, materials and energy. It suggests that this responsibility is shared variously by all those in the flow of commerce... an essential element of an environmental management framework (PCSD, 1999, p. iii).

Whether any of the vast number of corporate stewardship programs in the US today can be attributed in any way to the Clinton Presidency policies, or whether their pre-existence provided the fertile ground from which those policies emerged is beyond the scope of this research to resolve. However the documents of the PCSD do show the link between stewardship in US public policy discourse and its use in Protestant Christian discourse. The kind of stewardship envisaged by the PCSD does not suggest that the earth itself is dependent on human stewardship or management, but states that "all those in the flow of commerce", who are in fact all people in society, must accept responsibility to reduce the impact of our own actions on the earth and "its natural processes".

In the United Kingdom, the Audit Commission (1997) argued that local government councils have potential to "provide community leadership on ...environmental stewardship" (The Audit Commission, 1997, p. 3). The Commission provided reports on local government performance in such areas as Local Agenda 21, the European Eco-Management Audit Scheme (EMAS) and waste management (The Audit Commission, 2001).

The expression "environmental stewardship" is less frequently encountered in the corporate sector of Australia than it is in the US (the Marine Stewardship Council and the Forest Stewardship Council being exceptions, but even they are located in the non-

profit sphere of civil society). It is most commonly used to describe practices or activities, particularly of a voluntary nature, in the community sector.

These two main uses of environmental stewardship, normative and descriptive of activities, suggest that it is possible to speak of stewardship as *phronesis* and locate it within virtue ethics. *Phronesis* is knowing how to exercise judgement in particular situations (McIntyre, 1984, p. 154). Stewardship is not just about technical expertise, such as regeneration of vegetation or regulation of fishing, but a consideration of appropriate and effective actions to achieve a larger purpose. McIntyre (1984) argued that ethics cannot be abstract but that it is grounded in our culture and social context. This in turn means that the cultural narratives attached to ethical issues are an important part of ethics. So too are the practices in which people are engaged, so his preference is for *phronesis* and virtue ethics. To explore the narrative of stewardship ethics a kind of genealogy is presented, examining the origins of the language and the range of big ideas which inform how it has developed within the Judeo-Christian tradition.

### **6.3 Etymology of Stewardship: first steps in a genealogy**

The Oxford English Dictionary (OED, 1993) traces the development of meaning of stewardship from feudal concepts of delegated, limited responsibility through to the rise of specialised ecclesiastical usage around 1899. Many particular forms of steward are described, but the core concept is the appointment or designation of a person to manage or administer property or affairs on behalf of another. Its earliest reference (ca.1000AD) is to *stig* + *weard* which, it suggests, translate as “Ward of the Hall” or overseer of the house. Callicott (1994, p. 16) also traces the antecedents of the word steward to “sty ward”, or overseer of animals. Steward continues to denote an office or position related to management of property, services (airline cabin attendants) or even a combination of these with animals (race stewards in turf clubs).

The household management role became glorified into high office in the English royal household. By the C12th CE, the Lord High Steward was the “prime officer under the King” of England (Beatson, 1806, p. 225 vol.1). The Gaelic equivalent of steward, *seneschal* is used of the equivalent office for Wales, and derives from the Old French terminology for officers managing households and even provincial areas<sup>93</sup>. In Scotland, David I, King of Scots and Earl of Cumberland from 1124-1153 bestowed the title of

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<sup>93</sup> <http://en.wikipedia.org/wiki/Seneschal>. The reader may recall that French was the official language of Norman England from the 12<sup>th</sup> to the 15<sup>th</sup> Century

High Steward of Scotland on Walter FitzAlan (who was descended from a lineage of stewards (*seneschal*) to Bishops in Brittany<sup>94</sup>) in 1158 (Mason, 1997). The Lord High Steward was the “principle officer of the Scottish sovereign” with responsibility for administering crown revenues, the royal household and of standing beside the sovereign in battle (OED, Brown, 1993). The title of High Steward of Scotland became hereditary, and Walter took the surname Stewart (the Scots form, itself later francophonized to Stuart) when surnames were adopted in the British Isles (Beatson, 1806, p. 125 vol. 3). When the 7<sup>th</sup> High Steward, Robert, ascended to the throne of Scotland as King Robert II, the office of High Steward was united with the crown. An Act of the Scottish Parliament in 1469 confirmed that in perpetuity “the firstborn prince of the King of Scots” would be the High Steward<sup>95</sup>. With the unification of England and Scotland in 1603, the title of High Steward became associated with the heir to the British crown, the Prince of Wales.

The idea of stewardship is however, far older than the records of English usage of the word. The English word steward was used to translate roles described in documents from the ancient near east. Some of the most accessible references in antiquity which have been translated into English as steward are found in Judeo-Christian religious writings. Indeed, Saltman and Ferroussier-Davis (2000, p. 733) suggest that the western concept of stewardship, particularly as an ethical idiom, has its roots in Judeo-Christian religion (See also Saner & Wilson (2003, p. 6) or Roach (2000, p. 69)). Beavis (1994, p. 4) also came to the conclusion that “directly or indirectly, the use of stewardship in the ostensibly secular contexts of planning, policy and environmental activism had filtered there through the involvement of some policymakers, planners and environmentalists in the church, or at least in a culture historically rooted in Christianity”. The following section explores these Christian roots of the stewardship ethic.

#### **6.4 Ancient stewardship narratives in Judeo-Christian tradition**

The source of the main concepts in a faith community is its scriptures. So a genealogy of stewardship can begin with the texts which provided the basis for the use of the English word “steward” in the English speaking Christian community. The oldest of these are the Jewish-Christian scriptures in which Hebrew terms have been translated as “steward” in the main English translations.

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<sup>94</sup> Cannon (2001)

<sup>95</sup> <http://www.royal.gov.uk/ThecurrentRoyalFamily/ThePrinceofWales/Stylesandtitles.aspx> the official web-page of the British monarchy

The first references to those who manage a household in the Hebrew scriptures are found in Genesis 43:16,19 and 44:1,4 where the term *ha-ish asher al bayith*, was translated as Joseph's *steward* in 1611 for the Authorised Version of the Bible (Young, 1973, p. 934). The word *steward* was retained in later versions (Revised Standard in 1952, the New English Bible in 1961 and the New International Version in 1973). These have been among the most widely respected scholarly/authoritative English translations of the Bible over the last 400 years. In the Jerusalem Bible (Jones, 1966) which replaced the earlier Douai Bible as the main Catholic English language Bible, the term is translated as *chamberlain*. The Hebrew narrative itself probably dates from around the eighth century BCE (Kidner, 1967, p. 184).

Beyond these strictly household contexts, the Hebrew term *soken* in Isaiah 22:15 was translated as *treasurer* in the Authorised Version (AV) of 1611, but *steward* in the Revised Standard Version (RSV) (1952), the New English Bible (NEB) (1961) (Dorman, 1988), the Jerusalem Bible (Jones, 1966) and the New International Version (NIV) of 1973. Shebna, who is designated *soken* in this verse, is further described in the NIV translation as "in charge of the palace" and an official of King Hezekiah of Judah. So steward or chancellor could be appropriate translations.

A rather indifferent pattern of use may be observed for *sar* (1 Chronicles 27:31 and 28:1), a cognate of *soken* which was rendered as *officer(s)* or *official(s)* by the AV, NEB, NIV, *commissioner(s)* in the Jerusalem Bible, but *steward* by the RSV. In Daniel 1:11,16 *melsar* is also rendered *steward* in the RSV whereas the other translations cited here used *guard*. The *melsar* in these verses was responsible for providing food for Daniel and three companions who were captives carried off into Babylon from Judah around 600 BCE.

So while the idea of steward would be readily recognised in any Christian Church today, Hall (1990, p. 31) says there are only 26 references to steward or stewardship in the Judeo-Christian Bible. Furthermore, many regular participants in church life in the US would also understand the concept of stewardship of creation. Yet neither of the two accounts of creation and the role of humanity described in Genesis 1-2 and Genesis 3 use the term nor do they apply it to human relationships with creation.

While a steward may be considered to be an official of an organisation, this title generally connotes someone who works closely with a senior official or head of an institution. The potentially compromising mixture of authority and accountability under

which a steward operates exposes the steward to a particular hazard: the temptation to assume authority without accountability, or false accusations of the same. This has seldom been better illustrated than through the biblical story of Joseph, the slave who was promoted to be the *ha-ish asher abayith*, or overseer, of a high official's household, only to subsequently fall victim of sexual harassment and find himself in prison. In the long run, his personal qualities (and divine gift as an interpreter of dreams) resulted in his release and elevation to the position of chief steward, or Governor (*mashal*) of the land of Egypt (Gen 42:6). While he is not actually described as *steward* in English, the story of Joseph in Genesis 43 and 44 has been held as a model of the ideal steward. He is "a selfless servant, who manages assets without owning them, anticipates future trends and devises (prudent) plans" (Saltman & Ferroussier-Davis, 2000, p. 732). He is also faithful to his God in an alien land and alienating circumstances.

In the specifically Christian scriptures, the New Testament, the word in the original Greek text most frequently translated as steward is *oikonomos* (De Vos, De Witt, Dykema, Ehlers, & Wilkinson, 1991, p. 216)<sup>96</sup>. Stewardship finds its equivalent in *oikonomia*, the word which also translates as "household management"<sup>97</sup> or economics. Reumann (1992, p. 11ff) describes the layered Hellenistic background informing the Christian use of the word in the times of the New Testament. In Greek society prior to the New Testament times the extended household was presided over by the *oikodespotes* or master, but actual management in a large household would often be delegated to a skilled slave or freedman who was called an *oikonomos*. Reumann shows how the parallels between the *oikos* (household) and the *polis* (or city-state) led to the term *oikonomos* being extended from the household to officials of the *polis* or city.

By logical extension, *oikonomia* came to mean arrangements in general, and while this use is not found in the Christian Scriptures, it informed the early church's broad understanding of stewardship (Reumann, 1992, p. 19). Pre-Socratic Greek writers applied *oikonomia* to explanations of the workings of the *kosmos*, in which it was understood as the divine administration of the affairs of humans and the universe. Similar concepts were also taken up by stoic historians who described all things as

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<sup>96</sup> Luke 12:42 (manager- NIV), 16:1-8 (manager- NIV); Romans 16:23 (translated treasurer –RSV, director of public works NIV), 1 Corinthians 4:1,2 ("those entrusted" - NIV); Galatians 4:2 (trustees in RSV, NIV); Titus 1:7 (overseer- NIV); 1 Peter 4:10 (NIV translates 'as good stewards' as 'faithfully administering').

<sup>97</sup> From *oikos* = house and *nomos* = law, hence the ordering of the household

being under the *oikonomia* (rule or oversight) of the *oikodespoites* who variously is known as Fate, Fortune, Nature or Providence (Reumann, 1992, p. 24).

This cosmic stewardship or economy of God does not find much direct expression in the New Testament. The parable of Jesus which describes a wise servant, found in the gospels of Matthew (25:15) and Luke (19:12), demonstrates the “notion of stewardship as a responsibility for protecting and developing one’s resources [which] lies at the heart of both the Christian and Jewish faiths” (Saltman & Ferroussier-Davis, 2000, p. 732). There seems to be an expectation of the text that the office of steward is known within the “community”. In the religious context, such stewardship becomes multi-layered.

### **6.5 *Oikonomia and divine management***

In the teaching of the New Testament there are layers of ideas of stewardship, in which the believer as steward is both entrusted with responsibilities or resources directly by God, and also participates in the community in relationships involving fiduciary duties through which one’s relationship with God is expressed. As DeVos et al. (1991, p. 289) suggest, such a model of stewardship is at the heart of the paradoxical juxtaposition of humans as part of nature, yet also as “servants of God” with divine authority for dominion over creation. This is also seen in Paul’s stewardship of the mysteries of God which have been revealed to him (Gal 4:2; 1Cor 4:1-2; 1Cor 9:17; Col 1:25; Eph 3:2), in consequence of which he feels compelled to share this message. This strong sense of divinely ordained stewardship and stewardship of religious truth seems to have informed its extensive use by the Church of Jesus Christ of Latter-Day Saints (Mormons) from 1829 to the present.

The broader concept of “arrangements in general” which *oikonomia* sometimes denotes can be found in the New Testament letters of the apostle Paul. It is seen in Eph1:10 and especially Eph 3:9, where *oikonomia* is used to denote “the plan” of “the mystery hidden for ages in God” (Reumann, 1992, p. 18). This literary structure or plan in the account of God’s purposes and acts seems informed by Greek ideas of divine arrangements which Christian historiography later developed, describing the world in relation to a grand divine design (Reumann, 1992, p. 39). Thus, for the period to the enlightenment, *oikonomia* was considered more a realm for divine rather than human management.

In the two centuries immediately following the events narrated in the New Testament, the early Church Fathers drew on this Hellenistic concept of *oikonomia* to describe the redemptive arrangements God made and which are observed in the unfolding of history. Hence the theology of Tertullian and Hippolytus referred to *oikonomia* eventually giving rise to the term *economy of God* in English translations (Reumann, 1992, p. 28). The idea that economy was the work of God, rather than humans, persisted in the West until challenged by the Reformation and the Enlightenment (Reumann, 1992, p. 41).

The idea of *oikonomia* as the economy of God, or providential history persisted in part due to the effects of the “Constantinian establishment” (Reumann, 1992, p. 57). In extant writings from the early church (prior to 312 CE) it is possible to detect ambivalent attitudes to personal wealth. However after the conversion of the Roman Emperor Constantine somewhere near 312 CE, large numbers of people from all classes of Roman society became Christians, leading eventually to legitimisation of personal wealth in the writings of theologians and church leaders (Murray, 2000, p. 128). The emergence of Christendom, the incorporation of the church into empire and the exercise of princely dominion by the church, resulted in steady accumulation of property and personnel by the official church. To finance them the Jewish *tithe*, which had been occasionally discussed by church fathers such as Augustine, became increasingly formalised as an ecclesiastical tax in the Western Church during the period from the fourth and eighth centuries (Murray, 2000, p. 136). By the ninth century, legislation for tithes as a compulsory church tax emerged as “a fusion of ...Old Testament motifs and practices with Roman and pagan institutions and ideas” (Murray, 2000, p. 137).

Even with the exodus of some European princely states from the Holy Roman Empire in the Reformation, both Catholic and Protestant churches were still established as churches of the state, through which they were supported and for whom they engendered support. This alignment of the church with the ruling “state” authority continued in Europe until recent times, for example in the Tithe Act of 1936 in the United Kingdom (Murray, 2000, p. 148). The remaining system of statutory tithe collection in the UK was finally abolished by the Finance Act (UK) of 1977.

## **6.6 From “economy of God” to stewardship ethics**

Salsich (2000, pp. 26-29) points out that throughout the history of the (Western) Christian Church there have always been discourse and practices which sought to relate the development of commerce, and eventually capitalism, to the conditional nature of



property rights and their social obligations implicit in theologies of creation. Attfield (1991) argues, contrary to Passmore (1980), that two traditions are traceable in the Patristic<sup>98</sup> period in both Eastern and Western Christian churches: “the Stewardship tradition ...and the tradition of Cooperation with Nature” (Attfield, 1991, p. 36). He suggests that even into the “medieval periods there was a widespread sense of responsibility for the care of the earth and the completion of God’s work of creation” (p. 37), two themes which may be related to Genesis 2 and 1 respectively.

The expansion of human societies in Europe in the middle ages is described by Glacken (1967) as partly a frontier experience, in which land clearance and agricultural settlement advanced into forest and swamp lands and periodically retreated again. Often monasteries, most clearly exemplified in those (like the Cistercians) following the Benedictine rule, were on the outer fringes of, and even beyond, the settled lands, providing foci for human expansion. Ironically, the pursuit of an ascetic ideal by these monastic communities opened the way for the church to become a significant factor in landscape change (and property owner!). In this process, an idealisation of life as created by God, in which the dominion of God was expressed or realised in self-sufficient peasant communities delighting in manual work, gradually led to modified environments and in turn to changing ideas and technologies (Glacken, 1967, p. 350). However, as the prominence of the monasteries in the landscape and the church in the settlements demonstrates, the project of civilisation and the conceptualisation of dominion were framed by the general stewardship tradition. The Creator had given the “garden” into the care of His highest status creature.

Attfield (1991, p. 38) argued that the stewardship tradition from the early monastic communities and the Christian Church Fathers had continuity right through to the English protestants Sir Matthew Hale (1609-1676) and John Ray (1628-1705). The stewardship they espoused is theocentric in its primary focus on the rule of God, but it sees God’s purposes largely in terms of human welfare rather than the broader welfare of the environment. That concept would eventually come to prominence in the 1960s. The steward’s role is to “care” for the earth and its constituents as “God’s viceroy”, in a manner analogous to a gardener caring for a garden which is meaningful and has value in itself (de Groot, 1992, p. 482). The Protestant Reformation in Europe not only

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<sup>98</sup> From *pater* (L) or father. The period of the Church Fathers dates from about 100 CE to the Second Council of Nicea in 787 CE.

challenged the economics of spirituality practiced at that time by the Catholic Church<sup>99</sup>, but also spurred a range of experiments in common property and social systems among the Radical Reformers. Attfield (1991, 38) suggests Calvin<sup>100</sup> (1554) explicitly applied the New Testament metaphor of stewardship to “the care of the earth as a whole”<sup>101</sup>. He may have had an influence on the English stewardship discourse. William Derham (1728), one of Ray’s followers, saw in God’s creation the provision of all that might ever be needed by any of the creatures, not just by humans (Merchant, 1980). At the same time Derham warned that humans would have to render account for the “‘sacred trust’ ...on the Day of Judgment” (Beavis, 1994, p. 5).

Ray and Hale lived in an era when humans appeared to have increasing control over the natural world. The steady flow of scientific advances and technological capacity to ensure water supplies, drain swamps and fens, and build communications networks were generally seen as benefiting humanity, but not in conflict with nature, which they viewed as “divine workmanship” (Glacken, 1967, p. 478). Stewardship of creation as a distinct ethical discourse arose as a counter to the excessive Baconian anthropocentrism<sup>102</sup> and the abandoning of recognition of the hand of God in nature (Merchant, 1980, p. 246). Bauckham (2000, p. 101) ascribes the origin of technological domination of nature to the humanism of the Italian Renaissance<sup>103</sup> and the way Francis Bacon (1561-1626) used it as a hermeneutical key to reinterpreting “the Genesis notion

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<sup>99</sup> *Indulgences* which were literally permits sold by the Church in order to raise funds for construction of church buildings to reduce the period of penance believed necessary for remission of temporal punishment for sin.

<sup>100</sup> Little (1981) argues that Calvin and the Puritans developed their theories of property and treatment of the environment on a framework established by Thomas Aquinas, which included subordination of the institution of private property to the common good (p. 55). The result is “the pervasive Christian idea that a property-holder is a steward or guardian on behalf of a larger purpose than his own private interests.”

<sup>101</sup> Although cited through Welbourne (1975), the passage to which Attfield refers is the last sentence in Calvin’s comments on Genesis 2:15: “...Let every one regard himself as the steward of God in all things he possesses. Then he will neither conduct himself dissolutely, nor corrupt by abuse those things which God requires to be preserved.” (Calvin, 1965, p. 125)

<sup>102</sup> While Bacon retained a theological framework compared to the later humanists, it was he who “believed in the biblical commandment that humankind is to have domination over nature which was given at creation but lost in the fall” (De Vos et al., 1991, p. 158).

<sup>103</sup> See also Martin Jay (1973, p. 260) in his summation of the views of Horkheimer and Adorno of the Frankfurt School: “At the root of the Enlightenment’s program of domination...was a secularised version of the religious belief that God controlled the world. As a result, the human subject confronted the natural object as an inferior, external other....the world was seen as composed of lifeless, fungible atoms” (also quoted in Smith (2001, p. 49). Note that another consequence of the enlightenment program was the deposing of God from the top level of a hierarchical view of the world, whilst retaining the hierarchical world view without any human accountability to God. Consequently exploitation of the environment does not require divine sanction given in Gen 1, and the stewardship found in Gen 2 became secularised and easy to ignore.

of dominion into a project for the mastery of nature”<sup>104</sup>. Merchant (1993, p. 275) described it as the “‘rape’ of nature for human good”, although Attfield (1991, p. 39) argues that Bacon and Descartes have been unfairly condemned as removing human activity from responsibility to God and having despotic attitudes to nature. The stewardship tradition is anthropocentric (or its proponents would argue theocentric) but Baukham points out that even the early proponents of stewardship were unable to see that human agency could have the devastating impact on the environment we now see and did not question the centrality of the role for humanity in the stewardship of the creation (Baukham, 2000, p. 101).

While the combination of Platonist and Cartesian dualism with Bacon’s scientific project<sup>105</sup> resulted in the ascendance of utilitarian views of creation/nature, the transplanting of European colonists into an alien landscape and ecosystems in the Americas gave rise to the frontier project of transforming the New World into “prosperous human communities” (De Vos et al., 1991, p. 164). To borrow from Christopher Wright’s (1983) tripartite models, not only were relationships with the land changed in the American experience, but there were consequences for society also, and consumerist cultures emerged from the enthusiasm and material wealth encountered in the new frontier experience<sup>106</sup>. This initial American frontier experience, its renewal when the older settlements on the east coast sent settlers out west, and eventually the sense of loss settlers experienced as the real frontier was converted to pastoral and agricultural lands, led to a recasting of the 18<sup>th</sup> Century romantic views of nature<sup>107</sup> and

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<sup>104</sup> Interestingly, writing from an Islamic perspective, Nasr (1976, p. 134) ascribed the environmental crisis to “the lack of Sacred Law in Christianity...[which] facilitated the disruption of nature through its unrestricted and unlimited exploitation”. This arose because Christianity is a “spiritual way”, esoteric in character because of its basis in spiritual teaching of Christ which is impossible to follow fully.

<sup>105</sup> Bacon, with his pre-occupation with power, argued for an inductive method of wresting knowledge from nature without the need to contain it within any overarching or coherent meaning. The goal was to find knowledge useable by humankind (De Vos et al., 1991, pp. 159-160). The ground had been prepared for this approach by mechanistic view of the world of both inanimate matter and living beings which arose from Descartes’ distinguishing between mind and matter. The spiritual and the moral dimensions of human experience were thus separated from directly observable matter as described in footnote 103 above.

<sup>106</sup> Kenneth Boulding famously argued that this frontier experience continued to shape the modern conceptions of a world economy. He argued that a spaceship was a more realistic metaphor than that of a frontier for the earth we inhabit (Boulding, 1966)

<sup>107</sup> European romanticism was a reaction to the dislocation caused by the industrial revolution and its underpinning philosophies which emphasised technological mastery of nature and mechanistic explanations of the universe. The reaction, led by poets and artists in England, emphasised the spiritual values of nature and its capacity to inspire people and to heighten their emotional awareness (Hay, 2002, p. 7). Woodhouse (2002, p. 138) points out that this inspiration was rooted in an experience of wild nature which was unable to be dominated. Cronon (1995, p. 73) traces the link

through the work of people like Emerson and Thoreau enabled the emergence of ideas of wilderness (De Vos et al., 1991, pp. 172-173) that continue to be influential today<sup>108</sup>. Emerson emphasised the role of experience of nature in “exalt[ing] the human spirit” (Hay, 2002 p. 8) and Thoreau emphasised the value of wildness and what it teaches us, aesthetically and morally, when we take time and immerse ourselves in it (Hay, 2002, p. 9). The combination of imbuing the wilderness with sublime qualities of romantic sensibilities together with an attraction to primitivism embodied in the frontier myth, resulted in valorisation of places which had previously been considered wastelands, places to “develop” or even just threatening (Cronon, 1995). However, in striking contrast to the earlier European romantic discourse, the neo-romanticism which emerged in 19<sup>th</sup> century America was described by Cronon (1995) as “domesticated”, a pleasing, uplifting experience rather than full of dread. The legacy of these romantic views continues to find expression among advocates for preservation of “wildness” or remnants of “nature” such as the Wilderness Society. It comes into conflict with those who advocate a more managerial approach to the environment or natural resources.

Judd (2009, p. 22) very convincingly describes the transmission of what can best be described as a “romantic DNA” from the English romanticists to the modern conservation movement. He argues that the pioneers of conservation in America drew heavily upon “three essential ideas that first took shape in the minds of” the amateur naturalist-explorers (such as Wallace) who predated the publication of Charles Darwin’s *Origin of the Species* in 1859. Those ideas can be simplified as “commercial utility, romantic attraction, and ecological necessity”<sup>109</sup>. He says that although the notions of unity and purpose were secularised in the late nineteenth century, they took shape in minds well versed in classical and Christian thinking. Stoll (2006, pp. 60-63) highlights the role of New England Puritans and their spiritual descendants in the emergence of environment thinking and environmental science.

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back to the biblical stories of Jesus and the early Christian saints’ focus on extenuating wilderness experiences as those through which an encounter with God is more profound and likely. He illustrates the extent to which fear and dread were intrinsic to the romantic experience of the sublime in nature with Wordsworth’s poem *The Prelude* (Cronon, 1995, p. 74).

<sup>108</sup> For example Paul Taylor situates his *Theory of Environmental Ethics* as “an attempt to establish the rational grounds for a system of moral principles by which human treatment of *natural* ecosystems and their *wild* communities of life ought to be guided” (Taylor, 1986, p. 9: italics mine).

<sup>109</sup> Specifically he describes them as “a practical concern for protecting those species of birds, animals and trees deemed useful to human society; a romantic appreciation for the beauty of natural from and primitive landscape; and a close understanding of the complex biological interdependencies that sustain all natural systems” (Judd, 2009, p. 22).

Cittadion (2006, p. 89) describes the geographer George Marsh, who influenced the early conservation movement in the US, as having an attitude to nature “firmly grounded in Christian stewardship”. Marsh’s *Man and nature* described the destruction caused by “Man [who] has too long forgotten that the Earth was given up for him for usufruct alone, not for consumption, still less of a profligate waste” (Marsh, 1864, p. 85).

Marsh's comments regarding human impact in Australia make interesting reading. In a section which discusses the uncertainty of the influence of clearing vegetation on climate, he describes Australia as one place from which we might learn some of the answers to these questions. He writes that, in a context where there is scientific capacity and wealth to fund research:

... large tracts of virgin forest and natural meadow are rapidly passing under the control of civilised man. Here then, exist greater facilities and stronger motors for the careful study of the topics in question than have ever been found combined in any other theatre of European colonisation. (Marsh, 1864, p. 51)

Marsh influenced Franklin Hough, the United States of America’s first “Federal Forest Agent”, right at a time when federal policy favoured transfer of federal lands to settlers and institutions (Barton, 2002, p. 131). Political sentiment ran against the idea of ownership of lands by the Federal Government. Hough and his successor, Charles Sargent, documented the decline of forests and demonstrated the need for a federal forestry service to manage forests on public lands. The third Forest Agent, Gifford Pinchot is remembered as the father of public forest conservation<sup>110</sup> in the USA because of his ability to connect the needs of forest management to President Roosevelt’s stewardship ideas.

## **6.7 Institutionalising stewardship**

While the secularisation of the natural sciences and conservation in the US proceeded in the late nineteenth and early twentieth centuries, the notion of stewardship continued to be incubated within the Christian community as a result of its particularly American character. Wunderlich (2004, p. 77) locates the development of ideas of stewardship as *personal* responsibility/accountability to God in the late nineteenth century and suggests why both secular and Christian ecclesiastical usage emerged in the US around that time.

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<sup>110</sup> Barton (2002, p. 138) shows how these ideas were in part borrowed from British Empire forestry in India.

He attributes the emergence of ecclesiastical ideas of stewardship to the need for churches operating without state support<sup>111</sup> to raise funds in an era of prolific missionary activity. This occurred at a time in which a “remarkable surge in productivity, development, and wealth in the latter half of the nineteenth century [which] coincided with the churches’ innovations of the pledge, envelope, congregational budgets, and stewardship” (Wunderlich, 2004, p. 82).

In actual fact, the groundwork for this innovation had begun much earlier in Europe with the Anabaptists (from 1525), continued later the growth of dissenting churches in the British Isles. When the authors of the US Constitution decreed that the state would not support the church, the problems of financial support faced by dissenting churches in Britain became the problems of all churches in the USA. To support the great outburst of Protestant ministry in the nineteenth century, which required voluntary funding, publications and systematised giving plans were produced. Such plans provided the groundwork for later developments in the USA (Hudnut-Beumler, 2007, p. 51).

In keeping with the rise of market based wealth in the USA from around 1815, Protestant churches developed a big vision of what the church could do (Lynne, 2005). From the early 1830s and on through the 1850s, Christian benevolence and formalised processes for fund raising such as the tithe became a significant part of the general vigour and “awakening” of the church in the USA (Reumann, 1992, p. 54), although Lynne (2005 Ch.8) suggests that “benevolence” was more commonly used than the term “stewardship” at that time. In 1858 one of the Presbyterian Churches was able to affirm in a formal statement that “Every man is a steward of God in the use and management of talents, time and substance which God has entrusted to him” (cited in Reumann, 1992, p. 54; Salstrand, 1956, p. 33). The idea of stewardship advanced by such writers differed from the benevolence of its predecessors in the concept of economics which underpinned it. Wealth was increasingly seen as the fruit of investment of capital rather than a gift from God, and proponents of the Social Gospel advocated wise “investment” for the Kingdom of Christ (Hudnut-Beumler, 2007, p. 61).

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<sup>111</sup> The European settlers of North America initially regarded “religion as a public good deserving public support” often through some form of tax (Hudnut-Beumler, 2007, p. 9), but in the formation of the independent United States of America opted to disestablish the churches. Consequently churches had to obtain funding from their members. The approach that became dominant was one in which voluntary contributions from members supported the private provision of public goods (Hudnut-Beumler, 2007, p. 12)

Parallel to the developments in the mainstream Protestant communities, the Mormons in the USA also had need of land, labour and capital in their quest to build a contemporary “Zion” in the American West in the period 1829 to 1847 (Grant, 1921). They began to migrate from Nauvoo in Illinois for the Rocky Mountains and to the Salt Lake Valley in modern Utah in 1847 (Campbell, 1988, p. 3). The Mormons gathered church resources through tithing (donations of one tenth) from their own adherents. However in the very early days they attempted to develop a radical form of communitarian life (Arrington, Fox, & May, 1976, pp. 15-40). In a council meeting in Kirtland Ohio in 1834, the founder-prophet, Joseph Smith taught that property acquired by people was to be for “their stewardship”. They believed that “the earth is the Lord’s and that men and women are only stewards of their property, not absolute owners” (Campbell, 1988, p. 137), a belief which they attempted to put into radical practice.

Codifying these beliefs in a law of consecration and stewardship based on a revelation in 1831<sup>112</sup> (Grant, 1921, p. 62), Joseph Smith taught that all property should be consecrated (in later years it was deeded, to conform with legal requirements) to the trustees of the church. The trustees (initially Bishops) would then return to the donor a “stewardship”, or portion of assets and resources which they would use to provide for their economic needs<sup>113</sup> (Campbell, 1988, p. 144). Furthermore, in relation to the lands which they claimed as emigrant settlers, distribution of water, timber and mineral wealth was the jurisdiction of the church leadership, even to the extent of not recognising indigenous Indian property rights (Campbell, 1988, p. 137).

Each person was required to “give an account...of the stewardship which is appointed unto” them (Church of Jesus Christ of Latter Day Saints, 1921, Sect.104:12). The principle of stewardship was applied in some detail to use of natural resources. Their practice of stewardship included the conservation of water and timber and community based allocation and management of the resources and the distribution structures. Gottlieb (1993, p. 20) claims that by the 1880s their systems were well established but controversial, but Campbell (1988, p. 144) claims that the stewardship program for deeding over property was dropped by 1847. The key difference between this Mormon form of stewardship and that of the Protestant churches was the Church’s claim over

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<sup>112</sup> Doctrines and Covenants Section 42.

<sup>113</sup> In actual fact no one responded to this call in the 1839s and only 40% of family heads actually deeded over their property to the Trustee-in-Trust of the Church of Jesus Christ of Latter Day Saints in 1855. (Campbell, 1988, p. 144).

property. In this way it is similar to the social construction of the oceans as commons, which has been embodied in protocols and agreements, as discussed in previous chapters. To this point in the narrative, the execution of the Protestant stewardship responsibility was a more private matter between a person and God.

Lynne (2005, Ch.8) argues that a tract published by the American Home Missionary Society in 1886 *Our Country: Its Possible Future and Its Present Crisis* “became the tract of the time for much of the Protestant Establishment during the last fifteen years of the nineteenth century” contributing to a “systematic” vision of how the churches could convert America and indeed the world. This grand vision of American Protestant churches was in part fuelled by the wider confidence in American society that they could achieve anything they set their mind to. Extracts of the tract written by Josiah Strong were reproduced in the American daily press as it appealed to a large audience. While “the word ‘stewardship’ is only mentioned once” Strong stressed that the wealth we have is entrusted to us from God, and “we are the managers of that divine trust” (Lynne, 2005, Ch.8)<sup>114</sup>. The appeal of stewardship is traced by Lynne (2005) not only to its Biblical lineage, but also linked to its close fit with the values of “white middle-class America” right through to World War 1. In particular, stewardship was a good word to use as a motto. The language of responsible management resonated with the expanding world of American commerce, and it became linked to systems and programs to mobilise fund-raising.

The inter-denominational United Stewardship Council (1920-50) was founded by Ralph Cushman (Reumann, 1992, p. 54) solely to promote stewardship in North America with an early plan to enlist ten million “Christian Stewards” carrying a membership card of the “Ten Million League of Christian Stewards” (Lynne, 2005). The campaign launched in 1920 failed due in part to a widespread American disaffection with grand scale idealism, but this gives some idea of the reach of the stewardship concept into what was perceived as mainstream American society with its strong Protestant roots.

Although the great Protestant enthusiasm for stewardship waned during the depression in the inter-war period, the prosperity of the post-war period, especially for the USA and the accompanying growth of the church and its activities up to the 1960s encouraged renewal of stewardship programs and campaigns (Wunderlich, 2004, p. 82). Palmer

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<sup>114</sup> Also Christians are “not proprietors,...but simply trustees or managers of God’s property” (Strong, 1891) cited in Hudnut-Beumler (2007, p. 62).



(1992, p. 72) points out how the renewal of stewardship campaigns in protestant churches in the 1950s through to the 1970s coincided with the rising awareness of environmental problems and the birth of environmentalism. This created both challenges and opportunities for the tradition of Christian stewardship as is shown later in this chapter. However the connections between the ideas of stewardship of personal resources and stewardship of creation as a whole had been expressed in American public life long before the 1970s.

### **6.8 Taking stewardship beyond the church**

As has already been argued, the development of the USA from its early days as a European colony was strongly imbued with neo-romantic visions of nature and confidence in human capacity to do almost anything with natural resources. However the coming of industrialisation at the beginning of the twentieth century and the changes it wrought in American society contributed to social anxiety within the community. This anxiety provided the crucible in which recast romantic views could be alloyed with the new managerialism of the Roosevelt government (Hays, 1969). John Muir and Aldo Leopold were key players in turning the nation's attention from the frontier of colonial American expansion to the wild places that remained within its boundaries and pioneered concepts of conservation and stewardship. The stewardship ideas within Christian church life were a part of this public discourse and stewardship of natural resources appeared in the teaching of the Church, especially in rural communities. Those stewardship ideas were an accessible expression of the new understandings about the way American society should treat nature and were taken up by organisers of voluntary organisations (Welchman, 2012, p. 300).

In 1914 Reeves Calkins, stewardship secretary for the Methodist Episcopal Church, attacked private property ownership, arguing that all wealth was stewardship of God's possessions (Hudnut-Beumler, 2007, p. 66). He argued that "Conservation is an extension of the Christian law of stewardship [which]...expresses [man's] relation to the social order...[and] attitude toward natural resources (Reeves Calkins, 1914 Ch IX) and "stewardship meant [*inter alia*] soil conservation in the cotton belt" (Hudnut-Beumler, 2007, p. 66). He quotes Pinchot and notes that "stewardship, as a national policy for preserving and enriching of the soil, is now recognized in every State" and that even in relation to "the natural resources of the nation...a 'Stewardship Movement'" towards conserving resources is under way. Reeves Calkins' theology was

imbued with the social gospel theology (Blake, 2007) of the progressive era which Roosevelt embodied (Hudnut-Beumler, 2007, p. 67).

The stewardship ideas which emerged in the late nineteenth century persisted not only as a paradigm for participation and responsibility in church life in America but also as a metaphor for rural values until the period of the Depression. Wunderlich (2004, p. 84) suggests that:

Stewardship [as a church funding program] was abandoned<sup>115</sup> during the 1930s in the quest for survival, urban and rural. In some regions, drought and farm abandonment planted the seeds of the conservation movement and its institutions such as the Soil Conservation Service. Memory of devastated natural resources probably aided the revival of the stewardship idea as a concept of caring for the earth.

In the years prior to 1946, some churches observed *Soil and Soul Sunday*, taking up the stewardship idea together with the observance of “Rogation Days” of prayer and penance<sup>116</sup>. In 1946 the editor of *Farm and Ranch* magazine proposed *Soil and Soul Sunday* be observed on the fifth Sunday after Easter (Simms, 1970, p. 173).

By 1946, the *American Country Life* could record in its conference proceedings that

“Land is a very special kind of property. Ownership of land does not give an absolute right to use or abuse, nor is it devoid of social responsibilities. It is in fact a stewardship. ...the land steward has a duty to enrich the soil he tills and to hand it down to future generations as a thank offering to God, the giver, and a loving inheritance to his children’s children.” (Reproduced in Wunderlich, 2004, p. 90)

In 1955 responsibility for promoting and organising a national Soil Stewardship Sunday was taken up by the National Association of Soil Conservation Districts at the invitation of the publishers of *Farm and Ranch* (Texas State Soil and Water Conservation Boards, n.d.). It is in this context that the *Eleventh Commandment*, written by Walter Lowdermilk (1939), the inaugural Vice Director of the US Soil Erosion Service (Simms, 1970, p. 11), was reprinted by the Soil Conservation Districts and Soil Conservation Service in 1955 (Roberts, 1986, p. 15): Thou shalt inherit the holy earth as

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<sup>115</sup> As shown in the previous section, this abandonment was temporary, only lasting until the revival of stewardship programs in the sixties.

<sup>116</sup> Rogation days were three days preceding Ascension Day in which prayer and penance were observed to seek God’s blessing through protection from calamity and productivity of natural resources and agriculture. (Wallace & Clearfield, 1997). This practice may have been adopted from pre-existing ceremonies in pre-Christian Europe, but its institution is formally attributed to Claudius Mamertus, bishop of Vienne in France in the fifth century.

a faithful steward, conserving its resources and productivity from generation to generation (Roberts, 1993, p. 272).

This tradition has continued to the present with the National Association nominating an annual theme for Soil and Water Stewardship Week (the change to week-long observation was instituted in 1956 and water added more recently) and the various State soil conservation agencies and Districts distribute educational materials to churches. The values and narratives of soil conservation had significance beyond those rural communities in the USA. Soil conservation became an international concern in the 1930s and developed into an international movement. Its role in Australian conservation and sustainability praxis has been significant, most recently expressed as landcare.

As the American churches grew in membership and activity in the period from the end of World War II to the 1960s, stewardship principles continued to be applied to management of all resources and especially finances, and stewardship campaigns were successfully deployed across the denominations. From its more restricted conception as a 10% tithe of income, stewardship of the whole of life found popular expression (Wunderlich, 2004, p. 82). An example of writing on this theme is seen in Rodin (2000) who identifies the fulfilment of Christian life as “stewards in the kingdom of the triune God of grace”, which he then takes 216 pages to unpack. His Christocentric epistemology only discusses the creation, or the natural world, in terms of its place in human relationships. Stewardship requires us to recognise that property rights or “ownership” is only a kind of “temporary use permit” (Rodin, 2000, p. 102). He says the Genesis mandate to have dominion and subdue must find expression in caring, giving life as stewards (Rodin, 2000, p. 82). The practical expression of his main focus is seen in participation in the life of the church and the individual Christian’s contribution of one’s inner and physical resources<sup>117</sup> to God, and in doing so, to the ministry of the church. So while he paints a very comprehensive picture of stewardship, human relationships to nature are very lightly touched on. Rodin’s book continues the long tradition of literature and oral teaching about how the believer should view property and wealth in relation to serving God and relationships with the church. By the

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<sup>117</sup> Palmer (1992, p. 71) draws attention to the “happy fortuitous coincidence of translation that the unit of money [in Palestine at the time of Jesus], the talent, is rendered in English to mean something rather different”. Thus the “parable of the talents” with its message of “wise and responsible use” was considered inherently inclusive of personal abilities and resources in Protestant exegesis to which the author was exposed in the 1960s and 1970s.

time of publication in 2000 however, another strand of Christian stewardship scholarship and discourse had already emerged and flourished.

### **6.9 Creation narratives: stewardship or domination?**

As McIntyre (1984, pp. 146-147) comments, the development of ethical traditions is a cumulative process which involves not only internal developments but also reactions to external factors. Publication of White's (1967) essay titled "*The roots of our ecological crisis*" was a major factor shaping "the agenda of an entire new academic field environmental ethics" (Minteer & Manning, 2005, p.163). His thesis that medieval Christianity is to blame for the environmental crisis of late modernity (Hamlin & Lodge, 2006, p. 4) was used as the rationale for developing new narratives of human existence and ethics. It also stimulated production of an extensive Christian literature on environmental stewardship from the early 1970s. This literature resulted from theological re-examination of scripture and its interpretation in the church, particularly within the Protestant tradition<sup>118</sup>. These scholars predominantly sought to rebut the accusation that Christian theology "inculcates an exploitative attitude to the environment" (Whitney, 1993, p. 155). Whitney argued that, while there are major weaknesses in the historical premises on which White's argument is based, the main response was general acceptance of the premises but theological responses accepting or refuting the main thesis (Whitney, 2006). A significant focus of the literature refuting his thesis examines the contribution a theology of creation to environmental ethics. It seems necessary to accompany the foregoing observations of stewardship concepts moving from the churches to the environmental movement with an examination of whether this benign stewardship concept belongs in theology of the Judeo-Christian scriptures, which is the source of the Christian narrative.

As this chapter shows, although the idea of the steward is found in several parts of the Judeo-Christian scriptures, the word itself is not used in the accounts of the creation of the world, including humanity, in the first two chapters of the first book, Genesis. However Glacken (1967, p. 151) points out that God's care for the world is one unifying theme of the scriptures. Hence the details of the creation of the world are given little attention, and indeed there are two separate accounts of creation in Genesis, the book of beginnings. God and humanity are the central characters of the creation stories because relationship with God is the core theme of the Scriptures and Judeo-Christian

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<sup>118</sup> Some more examples include (De Vos et al., 1991; DeWitt et al., 1998; Hall, 1990; John Ray Institute, 2000; Rodin, 2000)

religion. Unlike nature-based religions which locate god(s) or the primary spiritual force(s) in nature and its elements, the Judeo-Christian-Islamic God is transcendent, not immanent: the creator of the world who “stands” outside of it. Hence both the human and the non-human creations share a common origin and relationship to the one Creator (Wright & Fuller, 1957).

Callicott (1994, p. 14ff) and Saltman & Ferroussier-Davis (2000, p. 732) suggest that in the first book of the Judeo-Christian scriptures, humanity<sup>119</sup> is appointed to be stewards of creation. However Callicott cautions that stewardship is only one of three possible environmental ethics which may be derived from the first three chapters of Genesis and Bauckham (2000, p. 101) suggests that a stewardship interpretation dates more from seventeenth century England. Callicott favours<sup>120</sup> a “radical biblical communitarianism” or citizenship interpretation in which the scriptures seek to show that humans’ proper relationship with other creatures is that of fellow beings (Callicott, 1989, p. 20). Fellow citizens may also have a stewardship role. They are not exclusive categories.

The central issue for theologies of creation and the meanings of stewardship is the description of the role of humans in the creation narrative in Genesis chapter 1 as “dominion”. A doctrine of creation emphasising human dominion has most often been derived from this text and is usually regarded as environmentally destructive rather than contributing to sustainability. Indeed, White (1967, p. 155) attributed the “modern ecological crisis” to “modern Western science...shaped by...the Judeo-Christian dogma of creation”. His core argument is that through “the disenchantment of nature, the de-sacralisation of politics and the de-consecration of values [which Christianity encouraged]...science, politics and ethics are freed from the rule of magic” (Lilburne, 1989, p. 22). The consequent autonomy offered to science and technical fields of human effort freed humans to work to the limits of their own logic, unconstrained by ecological parameters which had not yet entered that logic. Peterson (2001, p. 38) countered that it was not the Judeo-Christian use of Genesis per se, but the fusion of theology with Hellenistic rationalism and the eventual abandonment of God and the transcendent, that elevated reason and rational “man” above all other components of the earth’s

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<sup>119</sup> In this document, “humanity” is used as the gender neutral equivalent of general uses of “man” and “mankind” used by many of the sources.

<sup>120</sup> The one for which he has no time is an interpretation focussing on human rights over other creatures, or a “despotic” interpretation.

systems<sup>121</sup>. Like Peterson, Baukham (2000, p. 100) points out that even though the main streams of Christian thinking

“interpreted the human dominion over creation with the aid of the idea, drawn from Greek philosophical rather than biblical sources, that ...creation exists for human benefit...there was no sense of the dominion as an obligation to extend human mastery over nature, still less of the idea that nature is open to radical reshaping by human creativity.”

What it means to be human is a key subject of the first two chapters of Genesis, and is also at the core of the relationship of humans to the world around us. The two key concepts observed in both of these two differently nuanced accounts of the origins of the world and humanity are the differentiation (or “*otherness of*”) (De Vos et al., 1991) of God from the created universe and the relative separation of humanity from the rest of creation. The former results in de-sacralised nature, as noted by White, and the latter is linked to the purpose and function of humanity with consequent impact on the rest of creation or nature.

Many scholars suggest that the core of Genesis is “a compilation of old traditions that [had] existed though the (preceding) centuries which may have been written about the tenth century<sup>122</sup> BCE (Wright & Fuller, 1957, p. 45). This core, beginning at Genesis 2:4 was possibly given a more abstract prefix sometime in the sixth century BCE when “priests from Jerusalem reworked the older narrative materials, and added a considerable amount of data from documents preserved by the priests” (Wright & Fuller, 1957, p. 42).

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<sup>121</sup> She offers a succinct account of the development of modernity detached from constraints over exploitation of nature:

*The exercise and study of reason retained a theological orientation for many Enlightenment philosophers and scientists, including Descartes, Newton, and Bacon, who understood their task as the discovery of the laws of God or universal reason. In this, their goals were similar to those of natural law theologians in the Middle Ages. However, unlike the medieval synthesis, the Enlightenment did not subordinate the exercise of reason to God's laws. Rather, it shifted emphasis from reason as the transcendent source of human uniqueness to reason as the uniquely human expression of the transcendent...Both Thomas Aquinas and Descartes viewed nature as something to satisfy human needs and aid the human quest for knowledge of God and God's creation. Descartes' followers....shed the organic view of nature in favor of the mechanistic model suggested by Baconian and Newtonian science....[S]ecular modernists, especially after Descartes, transformed the Reformation's emphasis on the individual's ultimate solitude before God into a doctrine of self-sufficient individualism that needed not even God for fulfilment (Peterson, 2001, pp. 38-39).*

<sup>122</sup> During the reign of Solomon in Israel.

In Genesis 1:26 God is described as “making man in our image” and “rul[ing] over” all other animal life forms and then in 1:27 urging “male and female” humans to “be fruitful and increase in number” like all the other life forms, and also to “fill the earth and subdue it. Rule over<sup>123</sup> ...every living creature that moves...” (NIV) (New York International Bible Society, 1978). The rule of humanity described here may be considered as that of “a kingly steward, serving *for* God” (Wright & Fuller, 1957, p. 45) rather than the autonomous rule of a free agent.

Not only was the Judeo-Christian idea of rule or “dominion” counterbalanced by the view that “humans are creatures of God alongside other creatures” but it functioned to authorise the “limited use of their environment that humans then made” (Bauckham, 2000, p. 100). In the words of Eugene Hargrove, we can imagine “that early humans were more concerned with salving their fear of the nature than their guilt [at its exploitation] and that Genesis served less as a justification of environmentally offensive actions than as a comfort and hope for people ...preoccupied with survival” (Hargrove, 1989, pp. 15-16). At face value, the two humans in the Genesis 1 story represent the magnitude of early human struggles for survival. It is inconceivable within this narrative, and for the most of human history that humans could seriously threaten the rest of creation with destruction. That is the new challenge of the generations now living<sup>124</sup>.

In the parallel account of creation in Genesis 2:15, the purpose of humanity is described as “to work and take care of” the garden in which they were placed. Glacken (1967, p. 153) draws attention to the language of the peasant farmer in this account, yet overall the actual role described is that of “caretaker rather than a farmer”. This second chapter has most often been cited to support claims for human stewardship of the earth (Norton, 2005, p. 163). However, the scope of stewardship need not require inclusion of the whole of creation on the basis of this narrative. The garden described in Genesis 2 is not “the world” nor is it synonymous with “nature”, for it is given a particular and limited location, and later the man and woman are banished from it<sup>125</sup>. It is possible that, far

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<sup>123</sup> In the English translation of 1611 (Authorised by King James of England) the Hebrew word *radah* (to trample, press or rule over) was translated “dominion”, hence the frequent occurrence of the latter term in theology, eco-theology, environmental ethics and philosophy literatures.

<sup>124</sup> Of course White’s thesis was that Judeo-Christian de-sacralisation of nature liberated human curiosity and greed to gain mastery over nature and ensure its destruction. However that begs the question of why it took so long for this to come to fruition.

<sup>125</sup> In Genesis 2:8 YHWH has “planted a garden in the East” (NIV) into which “the man” was placed “to work it and take care of it”. By describing the existence of the garden as a discrete site within a larger

from designating humanity as stewards of all creation, the stewardship, or responsibility of taking care was to be exercised within the domain of human influence and impact, in this instance, in the garden. The consequence for a general stewardship ethic or framework is that stewardship need not be based on grand claims of human superiority over all forms of life, but arises from the need to be responsible within our domain of influence. The global ecological footprint is a good measure of the human domain in these early days of the third millennium.

While different authorship and rhetorical function may well lie behind the reason for the existence of these two accounts of the creation story (as per von Rad, 1972), their insertion and retention in such close juxtaposition in a sacred text, and their retention over thousands of years suggests that each account was considered important for understanding the other. Indeed, these two accounts seem to encapsulate the double role of the steward: to the steward is delegated authority, even to the point of being tempted into autonomy; yet the steward is accountable for the welfare of that which is in their care, over and above the steward's own self interests. Glacken (1967) summing up his overview of Judeo-Christian theology emphasises the equivocal position of humanity in relation to the rest of creation: "he (sic) was more a steward of God, and if he partook of the lowliness of nature, he also partook of the Godhead from which his stewardship came" (Glacken, 1967, p. 168). This, he suggests, was combined with the classical argument of design to produce an interpretation of "life, nature and the earth" which was sufficient for the "vast majority of the Western world until the sixth decade of the nineteenth century".

Berry (2000) argued that, by focussing on Chapter 1 in Genesis, White (1967) failed to give adequate consideration to other parts of scripture and Christian teaching and devotion which emphasise the need for "care, love and concern for the Creation" (Berry, 2000, p. 27 citing Sheldon, 1992, p. 26). McDonagh (1986, p. 123) points to the Israelites' relations to the land as an expression of their understanding of stewardship. Land was held in common within the tribe and the principles of the Sabbath fallows (Lev.25:2-7) and the jubilee restoration (Lev.25:10-17) underscore that YHWH is the Lord of the land and the rights of his people are only those of a tenant.

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environment in this way, and then later casting the man and woman from the garden (Gen 3:23) this account makes clear that the earth also included spaces beyond the immediate responsibility of "the man". This is frequently overlooked when using the garden-gardener motif as an ontological framework (eg. Hore-Lacy, 2006, p. 26). YHWH is the deliberately unpronounceable word for the name of the God of Israel in the Hebrew Scriptures. In English it is usually translated as The LORD or sometimes Jehovah and sometimes given vowels to become YAHWEH.



In his benchmark study of Old Testament ethics, Wright (1983), explored how the land is paradigmatic of the earth and also of economic systems: conceptualised as gift, yet remaining ever under divine ownership. The land was a gift, which “functioned as proof of the relationship between God and Israel” (Wright, 1983, p. 55) but the rights generated by that gift were encumbered by “a wide range of responsibilities” to God, family and neighbours (p. 58) and including, one might add, to the land itself and its care<sup>126</sup>.

Davis (2009, p. 26) draws attention to the ecological fragility of agriculture for Israel in the land of Canaan, where unlike the civilisations who were their neighbours, they had no irrigation nor depth of soil, but were dependent on rainfall in a climate of “seasonal aridity and periodic drought”. As a consequence, the agrarian voice in the Hebrew Scriptures can be heard in its exhortation to depend on the care of God in such tenuous circumstances.

The narrative theme of divine gift of the land to the ancient Israelites needs also to be set in the context of another theme running through all the literatures of the Old Testament: that “to YHWH your God belong the heavens, the earth and everything in it” (Deuteronomy 10:14, a legal text). The significance of the stewardship relationship within which God “gave” land to the Israelites has powerful ramifications for society and property rights which are well described by Salsich (2000, pp. 24-25). The political consequences of that narrative have dogged the Hebrews and their descendants to this day. They were not native to the land promised to Abram, their progenitor from Ur. Their ethical narratives relating to the land reflect this. Special consideration is demanded for those who lack formal access to land (widow, fatherless, sojourner/refugee). Tim Beatley in *Native to Nowhere* captures our modern economic and social disconnection from the place in which we live, caused by globalisation (Beatley, 2004). However, even he overlooks the truism expressed in the title of his book, that the majority of people in the world now are participants in, or inheritors of, some kind of migratory history. Lilburne (1989, p. 94 ff) drew attention to the way Jesus pointed out that the integrity of the created world and the process of seasonal change is independent of any human claims to either ownership or special favour from God. Instead, the reliability of the seasons should be understood as a “metaphor of God’s universal and impartial love”.

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<sup>126</sup> This is most clearly seen in the institution of the Sabbath fallow years.

These earliest narratives concerning a *garden*, and later stories and teachings relate to sustainable living in “the land”. The texts and their commentators presented above suggest that the main locus of ethical concern for the environment in the Judeo-Christian scriptures is within the area of human habitation. Sustainable management of the land takes a large place in the Hebrew Scripture, both in canon law (e.g. the Sabbath principle and its regulations) and in prophetic preaching. Yet there is no ancient Hebrew word for nature or environment (John Ray Institute, 2000, p. 3).

This stands in some contrast to some indigenous Australians and Native American peoples whose stories and teachings imply a more open landscape, in which they are said to address the whole of nature (see Peterson, 2001, pp. 10-12). This difference may be attributed (*inter alia*) to the influence on their spirituality from the different experience of the lands they regard as their own. Their origins and the meaningful stories about them are located within the very landscape they continue to inhabit, unlike migrant peoples, whose origins are distant. Eco-philosophers such as Baukham (2000) look to those of indigenous peoples for models for an environmental ethic that addresses our relations with nature and modern concerns for wilderness and the whole of nature. Yet, many people of the earth today are in fact migrant peoples, whose experience of place is not rooted in a long past, but in hope or “promise”.

It is not necessary to argue that the experience of migration distances people from the environment in which they live. Abram (1996, pp. 195-196) argues a credible case for acquisition of alphabetical writing enabling history to emerge from experience as a separate identity from “real-time experiences” (experienced time). In the Hebrew Scriptures and the unfolding Hebrew culture, the narrative of their history dominates over the present experience of place in their story in a way not seen in non-literate societies such as in that of pre-Columbian North America even until the recent past. The Judeo-Christian scriptures’ focus on history of the Hebrews and neglect of detailed discourse on wider nature could be understood in the light of Abram’s argument. For this reason one could extend Berry’s (2000, p. 27) argument with White (1967) to say that the Old Testament’s relative silence in relation to the earth (or nature) much beyond habitation indicates that, rather than advocating a destructive and acquisitive “domination” of nature, it simply does not provide organised ethical or even detailed philosophical guidelines on approaching “nature” other than recognising it as God’s creation and belonging to God by right. For example Psalm 24:1 – “The earth is the LORD’s and everything in it, the world and all who live in it” (NIV) celebrates both the

goodness of creation and the overlord-ship of The Creator. Proctor (1996, p. 287) points out that American Latino environmentalism treats nature more like a garden in which humans are active.

These key theological themes from their scriptures have been used by Christians to address the emerging issues of the wider community. The links between the stewardship movement within the churches and public policy in the United States can be gauged by this statement from President Clinton's Council on Sustainable Development in 1996:

Members of the Council were powerfully moved by testimony from a group of senior clergy and lay leaders representing a remarkably broad spectrum of religious groups. They said that the call to care for the Earth is an inescapable component and a rigorous standard of faith (PCSD, 1996, Introduction p. 6).

The Council suggested that the concept of stewardship is the best way to express "the intuitive and essential moral commitment Americans have to preserving the earth's beauty and productivity for future generations" (PCSD, 1996, Introduction p.7).

### **6. 10 Stewardship within environmental ethics discourse**

So how applicable is this kind of stewardship ethics to the challenges faced by modern societies attempting to make a transition to sustainability? Is it applicable or helpful outside a setting which is so strongly influenced by Christian culture? Christian stewardship *per se* differs most sharply from many environmental philosophical positions in its conceptualisation of the steward's accountability. The steward in De Vos *et.al.*'s (1991) comprehensive study of Christian environmental stewardship derives responsibility and authority from God, the Divine Creator of the universe. De Vos *et al* build their ontological argument on the reading of scripture that says humanity was divinely created to be steward over all of creation, or the natural world (De Vos *et al.*, 1991, pp. 284-289). Citing a 2002 survey of representative US adults, which found that 56% of respondents regarded "nature [to be] God's creation and humans should respect God's work", Clayton and Myers (2009, p. 38) suggested that "stewardship ethics that are grounded in the Bible... are taking hold in the USA".

However, even if the survey finding justified their claim about its scope, not even all Christians agree with a theological anthropology which privileges humanity over other species. Even further removed are the non-Christian eco-philosophers who do not share any of their presuppositions about the nature of humanity, the sources of authority or

even the existence of deity<sup>127</sup>. Some of these other ethical positions, while denying accountability to deity, may embrace ideas of stewardship which are grounded in recognition of accountability to others. They recognise that, by virtue of our existence within modern society, we have considerable power or control over aspects of the environment and it must be exercised ethically (Barrett & Grizzle, 1999, p. 30). As Welchman (1999, p. 415) writes “To willingly act as steward for another one must care about the persons(s) whose interests are thus served.” To which one may add that the same care should extend beyond the human community to all life forms or ecosystems.

Welchman (1999) argued that construction of morally obligatory rules is less likely to motivate people to act in ways that sustain the environment than are some of the internal dispositions we bring to our personal life. She drew attention to the distinction between externalist views of morality and virtue ethics. It is more likely that people will be motivated to voluntary stewardship out of loyalty and benevolence than by an external ecocentric ethic based solely on theory, but for which they do not care (Welchman, 1999, p. 420). For this reason she suggests that effective environmental stewardship of the natural world can develop if we “better understand how our own self-love and love for our kind can supply motivation necessary for us to make the sacrifices involved” in preserving natural entities and environments (Welchman, 1999, p. 423). The virtue of loyalty provides an internal motivation to environmental stewardship (Welchman, 1999, p. 417) in a manner similar to the virtue of patriotism (Lines, 2006). Patriotism, through which people feel deeply connected to their country, drives people to personally engage in environmental guardianship (Lines, 2006, p. 327). Environmental heroes respond out of their emotional attachment to the environment, and specific places in particular (Lines, 2006, p. 74), not so much to reasoned scientific arguments about the values of environment.

Individuals may also become involved in stewardship practices from ethical motivation. Such ethical motivations could just as easily be based on either utilitarian or on rights-based theoretical paradigms (Smith, 2001, p. 156). Utilitarian paradigms underlie economics and the broad class of State actions and programs which might be described as “conservation”. They are signified by the use of terms like benefit, future

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<sup>127</sup> Hence Saner and Wilson (1996, p. 6) comment that stewardship remains tied to an anthropocentric “value system and thus is usually at odds with ecocentric ethics”. However, (Welchman, 2009, p. 307) introduced an important distinction between anthropocentric values and anthropogenic values. The latter are values humans recognise in, or assign to nature, but are not necessarily focused on human benefit.

generations, cost-benefit, and the whole of environmental and resource economics which has been built on this foundation. Stewardship activities may arise from an actual or even a notional calculus of environmental costs and benefits.

Some of the early conservation programs were clearly based on utilitarian notions of ensuring future benefit to the present or future generations, and arguments for rainforest or coral reef preservation often include the loss of currently undiscovered benefits to humanity through bio-pharmaceuticals etc. Gifford Pinchot was one of the first government officials in the USA to effectively build conservation policies into forest management. However his utilitarian vision led him into conflict with John Muir's preservationist vision (Hay, 2002, pp. 14-15). Yet even Muir saw the benefits of preservation in anthropogenic terms and largely in terms of their aesthetic "utility".

On the other hand, the focus of more recent environmental ethics has been on the rights of natural objects and beings. Aldo Leopold was a contemporary of Pinchot and Muir. Norton (2005) comments that Leopold's intrinsic American pragmatism and his responsibilities as a resource manager made him impatient with the argument between supporters of Pinchot and Muir conducted on the basis of universal principles. In his now famous essay *The Land Ethic*, Leopold argued for an ethic which attributed rights to "the land and to the animals and plants which grow in it" (Leopold, 1949, p. 201). His basis for attributing rights was recognition that humans, land, plants and animals form an interdependent community in which humans are to respect their fellow citizens. He extended the scope of ethics beyond humans to include field "soils, waters, plants, and animals, or collectively: the land" as moral objects. He drew on Judeo-Christian teaching to support his proposal (Leopold, 1949, p. 203), but considered the land ethic to be a further evolution of ethical thought and practice.

Environmental ethics has moved away from Leopold's theism to more radical ecophilosophical positions. Naess' (1973) *Deep Ecology* gave rise to the discourse of biocentric equality (Devall & Sessions, 1985, p. 67) in light of which ideas of any divine commission to humans of stewardship of nature began to be portrayed like anthropocentric arrogance. So stewardship was rejected by "the more radical branches of ...environmental thought... as a model for human-nature relations" (Roach, 2000, p. 68).

Norton (2005, p. 163) suggests the academic discipline of environmental ethics "has concentrated mainly on questions of the ontology of environmental values." He suggests

it “is surprising that the field continues to be dominated by these questions, despite the existence of a number of alternative approaches to understanding environmental values, and despite their extreme difficulty, and lack of progress in solving these deep ontological issues.”

Norton suggests that although White (1967) made other points, the discourse facilitated by the journal *Environmental Ethics* became centred around White’s accusation “that Western culture is ‘anthropocentric’ and focussed on alternative or non-anthropocentric ethical positions” (Norton, 2005, p. 164). Norton suggests that the key lesson that should be taken from White’s essay was its attack on human hubris, whereas to go on the tangent of building an alternative ontological theory of environmental value has led to an increasing rift between those with a strong intellectual and practical commitment to economics and those committed to ecocentric approaches to values. This polarisation is a major concern for Norton, who favours a “conceptually pluralistic method for the study of environmental values” (p.181). Pluralistic processes for valuation and decision-making which involve stakeholders would avoid the rift which he suggests is inevitable between two schools which are both based in monist approaches to understanding value (Norton, 2005, pp. 180-190). It is better to forego attempts to develop monist<sup>128</sup> theories of values as guides to ethical decision-making and use.

Ecocentrism does indeed suggest we should tread more lightly on the planet, yet it also implies a retreat from any form of environmental management, for that would constitute stepping out of our place in the ecosystem. This can most clearly be seen in the way deep ecology is used to support the late modern efforts to preserve wilderness from any human impact. However, the wedge it drives between societies and economies on one hand and “nature”, on the other hand, is very similar to the rift between the romanticism of the early preservationists like John Muir and the conservationists characterised by Pinchot. The former argued for a nature unblemished by human activity (other than non-consumptive recreation). At its worst, this dichotomy has led to exile of indigenous people from their homelands in order to create national parks or nature reserves<sup>129</sup>, such as refugees from Kyulu who, in 2003 were still observed squatting near Kibwezi in

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<sup>128</sup> The monist approach he characterises as a “commitment to a belief that there is ultimately only one kind of value worth counting in decisions reading what to do to protect the environment:...with “ultimate values” (Norton, 2005, p. 183).

<sup>129</sup> For an overview of the scale of this ongoing problem see Dowie (2005) *Conservation Refugees* which points out that the practice began in 1864 with military eviction of Miwok and Ahwahnee from the Yosemite Valley, which was turned into a National Park (Dowie, 2005, p. 21).

Kenya (Kenya Land Alliance, 2005). They had been evicted from their lands in the establishment of Kenya's Tsavo National Park. The designation of lands which were traditionally the territory of the Timbishe Shoshone people as the Death Valley National Memorial in 1933 by the US National Parks Service<sup>130</sup> is just one example of similar displacement in the United States.

Langton (1998, pp. 18-34) drew attention to the way that "wilderness" in particular and even "reserve" lands in Australia are construed as lands either free of people or lands in which indigenous people do not have property rights. In 2007-2008 the Cape York Land Council and the Wilderness Society were engaged in contentious discussions about "protection" of wilderness areas, such as "wild rivers" and wetlands on Cape York and the degree to which such protection would preclude indigenous communities use of natural resources and environmental areas for economic activities such as irrigated agriculture or mining (Pearson, 2008). Within the context of a different set of power relations, fishers in Australia instinctively fight against the institution of "no-take" zones or fish habitat protected areas because they suspect they are being opposed by administrators and political lobbies who see no place for human activity in "nature", or the preferential treatment of recreational fishers over professionals.

Norton (2005, p. 234) argues that Leopold's "thinking like a mountain" was a form of anthropocentrism (*contra* Callicot (1989) who argued that Leopold's extension of moral consideration to nature was a form of ecocentrism). However, the anthropocentrism-ecocentrism debate is a false and misleading dualism, not least because humans do not exist outside of ecosystems or nature. Norton suggests that rather than needing to attribute intrinsic rights to species or ecosystems in some kind of ethical hierarchy, hierarchical models of ecosystems enable moral actors to see the complex relationships of values and impacts of human activity across time and space scales. Norton is one of several who argue that "human arrogance towards nature, not human values *per se*" is at the root of ecological destruction (Minteer & Manning, 2005, p.172)

Individuals, communities and nations need a framework of praxis in which they can cooperate strategically, without necessarily having to completely agree on philosophical positions or religious beliefs. Stewardship can provide such an ethical framework. The development of environmental stewardship by communities of professional environmental ethicists as well as communities of environmental managers or

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<sup>130</sup> <http://www.dickshovel.com/timup.html> accessed 16 Feb 2007

economists (Norton, 2003, 66) means the concept of stewardship has potential as a bridge to pragmatic consensus which in turn contributes to sustainability. Another way is to describe these two levels of appeal is to recognise it as a virtue ethic. As *poesis*, the practices of stewardship are essential to stewardship ethics and *vice versa*.

Worrell and Appleby (2000) suggest that, when applied to ethics, stewardship is more of a metaphor than a tightly framed philosophical argument. A metaphor needs unpacking, to bring into the open its assumptions, contested meanings and new applications. Stewardship as virtue ethics is more than a metaphor, but it is worth thinking about the figure of a steward with metaphorical imagination. For the metaphor of steward to be applicable as a general ecological ethic, there are three questions which need to be addressed. Who is the steward? Who appoints the steward? What is the ward to be stewarded (Roach, 2000)?

### **6. 11 Who is the steward?**

As Roach (2000, p. 71) points out, in stewardship models “the steward is in a privileged position with rights of access to and control over” a natural resource, in her case a fishery. There are very often competing claims for this privileged position. In Australia there are ongoing disputes about the extent of indigenous title remaining after the process of colonisation of lands already occupied by the first peoples. In many jurisdictions there are disputes between governments (including between levels of government) and a range of rights holders or claimants in the community.

Canada’s *Stewardship Agenda* sought to mobilise “landowners and other individual citizens, private companies and volunteers” as well as “aboriginal communities” to fulfil their role as stewards of land, air and water (Federal-Provincial-Territorial Stewardship Working Group, 2002). The same kind of general concept of *citizen as steward* is also the goal of Canada’s Oceans Policy, yet this policy also describes the federal government as having “broad responsibilities for the stewardship and management of Canada’s oceans and resources” (Government of Canada, 2002, p. 7).

In fact, when expressed in this inclusive way, stewardship becomes layered and nested. Individuals in everyday actions are responsible at some level for the integrity and sustainability of the environment, yet there are also corporate and civic spheres of responsibility. Within those layers, the various custodians of sovereignty or property rights over parts of ecosystems exercise particular stewardship responsibilities. The whole point of arguments for strong citizenship and ecological citizenship is that the



individual within the household is an actor in the global political economy through global assemblages engaged in production and consumption (Ogden, Heynen, Oslender, West, Kassam & Robbins, 2013, p.342). It needs only to be added here that the actual workings of those layers beyond the household, such as corporations and governments, occur through the practices of people in them. These people are also citizens in addition to these other roles.

There can be a danger that the legitimate rights of indigenous people become displaced in the name of stewardship claims of the nation state or environmental organisations. This kind of conflict can be seen in the Cape York Peninsula and the different claims of indigenous community organisations against the Wilderness Society in 2007. However, the stewardship praxis can also be considered to be non-exclusive and non-rival. In The Northern Territory of Australia, the 2008 Blue Mud Bay decision of The High Court upheld the traditional claims of Yolngu people over the intertidal zone, thereby giving them the right to administer both commercial and recreational fishing in the area (Altman, 2008; McEvoy, 2006).

Even the state or local government can only directly exercise stewardship by management of resources which are vested in it. Even there, many of these properties or resources are public resources, accessed and used by the community, both citizens and aliens. The stewardship paradigm can provide a framework for a continuum of responsibility from government to collectives and institutions down to the individual. This form of stewardship is also reflective as citizens exercise agency in the political processes of the nation to shape policy. Ogden *et al.* (2013, p.342) point out that citizens and consumers in developed nations are also members of global assemblages which “alter local ecosystems and communities” which may even be beyond “the boundaries and power of [our own] state”. This can be negative, particularly through impact of consumption, but those impacts can be offset through participation in networks or alternative assemblages which support grassroots groups protecting the environment. They identify these actions as contributions to “earth stewardship” (Ogden, *et.al*, 2013., p. 343).

### **6. 12 Who appoints the steward?**

In the narratives of stewardship drawn from the Judeo-Christian traditions, which have been examined here, the Creator has delegated a stewardship role to humanity (Barry, 2002, p. 136). While this has contributed richly to the stewardship narrative,

stewardship ethics has application and relevance irrespective of religious belief or disbelief. Nasr (1992) and Brown (1998, p. 17) suggest we should be speaking of a Judeo-Christian-Islamic tradition of responsibility for the environment, in which humanity owes allegiance to the divine Creator, from whom we draw authority for that role. In Nasr's Islam, "man" is "God's vice-regent (*al-khalifah*) on earth, and at the same time "God's servant" (Nasr, 1992, p. 92). Amery (2001, p. 40) adds that *khalifa* also means "steward of the earth". In the Quranic text 'God has subjected to you all that is in the earth' (XXII:65)" cited by Nasr (1992, p. 93)<sup>131</sup> the very familiar issue of etymology of "subjected" or dominion emerges. Given the close correlation of parts of the Quran with the Judeo-Christian Pentateuch, this is logical. In fact Nasr suggests one should really speak of the Judeo-Christian-Islamic tradition when speaking of care for the environment. He regards humanism, rationalism and secularism rather than theistic concepts of dominion as "approving the rape of nature" (Nasr, 1992, p. 97). Although Islam attributes to humans the prior right to natural resources (Faruqui, 2001, p. 2), there are also suggestions that humanity must care for the natural world as guardians.

Another major world religion, the Hindu religious tradition, sees the world not as the creation of Deity, but projections of the divine into the cosmos<sup>132</sup>. Hence the possibility of divine appointment does not arise. However, on the basis of the shared reality in the deity of whom all beings are projections, there is equality between all living beings and moral consideration to be given to them.

Callicott (1994) sought to develop an environmental ethic from a comparative study of world ethics. Although sceptical of ethics ever being realised on a collective scale, he suggested that without that ideal, society has no mechanism for collectively shaping behaviour (Callicott, 1994, p. 2). He was particularly drawn to indigenous traditions such as those of the Native American peoples. However Haydon (1993) suggested from within the North American context that "stewardship is easier to promote<sup>133</sup> than deep ecology or Native American Shamanism. It is much simpler to convince people that environmentalism is consistent with their existing religious beliefs than to denounce their cherished religious institutions in order to save the earth" (Haydon, 1993, p. xxi).

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<sup>131</sup> his translation

<sup>132</sup> Ravi Sivan (2008) *Earth My Mother* on ABC Radio National's Encounter program broadcast 14 September 2008. Transcript accessed on 16 Sept 2008 from <http://www.abc.net.au/rn/encounter/stories/2008/2359424.htm#transcript>

<sup>133</sup> He wrote in a North American context and seems to presuppose Judeo-Christian belief is the majority position.

Barrett and Grizzle (1999) take up the challenge of framing ethical practice which has broad appeal to people of many philosophical backgrounds or religions by suggesting that stewardship could be the pluralistic core common to the main ethical systems regardless of their “priority focus” (Barrett & Grizzle, 1999, p. 36). However the apparent need for a higher power to “appoint” humanity as stewards has been a major criticism of a stewardship ethic.

Barry proposes that an alternative approach to delegation of responsibility is to recognise the passing of the custody of the earth from one generation to the next. This is particularly applicable to the modern environmental crisis in which human societies are so impacting the earth’s systems and ecological processes that we have the potential to eliminate large numbers of species and reduce rich and complex ecosystems to degraded and unproductive functions. Barry suggests that ecological stewardship brings “relations of dependency, vulnerability, care and responsibility” into politics (Barry, 2002, p. 149). The need to control human impacts is the the core issue for stewardship, rather than notions of dominion over nature.

### **6.13 What is the ward or object of stewardship?**

The third question of stewardship ethics is “what is the object or ward of a general environmental stewardship ethic”? As has already been pointed, this dissertation is not advocating a model of stewardship which requires a core assumption that nature, creation, or the world, however it might be perceived, intrinsically depends on humans or humanity as its steward. This is *contra* DeVos et al., (1991) and others including indigenous Australian models of stewardship or caring for country. Rather, the object of stewardship is, in the first instance, an object to which some form of property rights have been attached. However, as recognised by the widespread use of stewardship in relation to the environment, the object of stewardship may often be common or public property whose sustainability in the face of anthropogenic impact requires some kind of intervention or management.

What is envisaged here, are two levels at which stewardship is exercised. The first instance is stewardship of areas, objects, places etc. for which formal arrangements of property rights such as vesting exist as noted above. Thus territorial waters, Crown lands, endangered species etc. are all already *de facto* wards of some kind of stewardship arrangements which have already been negotiated through a hierarchy of international protocols, legal institutions and even common practice. However, there is

another contingent state in which places, objects or beings are in danger of damage, destruction or unsustainable use (Barry's (2002) "misuse"). In this case, their state elicits a response of stewardship behaviour from people. Cuomo (1992) critiques a contingent or contextualised ethics of care as "no longer an ethic" (Hay, 2002, p. 91), however that fails to recognise the ways our relationships with natural environments require of us a range of context-based behaviours.

Most people find themselves in some (often many) relationships with the environment in which they have some kind of practical or legal responsibility. One of the simplest practical examples in the Australian context is an occasion of seeing litter or rubbish in the environment. Extended public awareness campaigns in the nineteen seventies and eighties fostered a general sense of responsibility to prevent or ameliorate the spread of litter. Another example is the responsibility to report uncontrolled fires to public emergency agencies. The steward is whoever finds one's self in a position where they can contribute to the welfare of nature or avert its detriment at any given moment. Thus the steward-ward relationship is dynamic and context dependent, but basically any component of the environment, such as an animal crossing a road in the path of traffic, or a coastal dune being degraded through uncontrolled pedestrian access may be ethically considered (or imagined to be) a ward at some point at which a response is required of people. Barry (2002) expressed well, that the principal aim of the stewardship ethic is "to distinguish legitimate human use of the environment from illegitimate abuse". Sayre et al (2013) said that the scale of "human dominance of [the planet's] fundamental processes" mean that the "concept of stewardship [needs to] encompass all lands and waters; urban as well as rural; the open oceans as well as lakes, rivers and coasts".

## **6. 14 Conclusion**

This chapter has shown that the main expressions of stewardship as an environmental or ecological virtue ethic have drawn deeply on Christian theology and practices in its narrative tradition. This is particularly related to its origins in the United States of America where the emergence of neo-romantic conceptions of the environment and the presence of "wilderness" came together with a re-conceptualisation of the *oikonomia* of God in American public life in the early nineteenth century. A theology of stewardship which emphasised responsibility to care for the earth as a whole has always provided a

counter narrative to the more widely discussed focus on utilisation of desacralized nature (eg. White, 1967; Merchant, 1993).

While many Christian proponents of environmental stewardship (for example the US National Religious Partnership for the Environment) base their ethics on a narrative which includes a Divine commission of humanity to be the stewards of creation, the stewardship metaphor can actually accommodate a variety of alternate narratives which still contribute to informing stewardship virtues and practices. Barrett and Grizzle (1999) argue that a “pluralistic stewardship” gives priority to the common ground on which reasonable people can agree, irrespective of the diversity of the philosophical centres of value from which their ethics are derived. Different meta-narratives in the community do not detract from stewardship ethics because of the nature of virtue ethics. As a form of phronesis, the virtues derived from the narratives inform and motivate practices. Through those practices the virtues are refined and shape dispositions. As noted already, stewardship ethics can be informed by Judeo-Christian-Islamic worldviews, and also by new meta-narratives of the place and meaning of human existence like *The Universe Story* (Swimme & Berry, 1992; Berry 1978) and other versions of cosmic or big history (eg. Nadeau, 2013).

However, rather than postulating a re-ordering of global governance, including the end of the nation-state (eg. Nadeau, 2013), stewardship ethics is advocated here because it is able to engage with existing geo-political structures of the world, described in Chapter 3. Rather than addressing questions around the grounds on which a human society might assume a level of responsibility such as that implied in stewardship, it focusses on how ought the authority which is claimed by the nation state can be ethically used in relation to the natural environment in its jurisdiction. Welchman (1999, p. 414) goes further, commenting that:

No amount of argumentation, however well intentioned, will move people to act for the sake of ‘values’ about which they do not care....in a world where many have yet to adopt and act upon widely promulgated and well-defined theories of universal human rights, equality and universal duties of impartiality and justice, to throw all one’s effort into the development of newer and better normative principles would be misguided.

She argues that human virtues like loyalty, benevolence, gratitude and virtue can predispose people with conflicting interests, to adopt behaviour of stewards toward the environment (Welchman, 1999, p. 419). Barry (2002, p. 139) argues that ecological

stewardship is itself a form of ecological virtue. Unlike rational ethical theories, ecological virtue ethics “do[es] not seek to definitively answer or solve the existential riddle of human existence, or discover some permanent solution to social-environmental relations” (Barry, 2002, p. 139). He posits that there is no possibility of arriving at any final “harmony, balance, stability or sustainability... between humans and the environment”, but what is achieved is dynamic “and something that has to be actively established, monitored and maintained”. The broad stewardship ethic he advocated as *Ecological Stewardship* finds application not only in the lives of the individual person, but also to the broader *civitas* via policy formation through the democratic processes by means of which those same citizens collectively exercise their stewardship (Barry, 2002, p. 136). In the context of Coastal and Marine environments, stewardship as a form of virtue ethics enables citizens to respond to the changing social, economic and environmental context and seek the welfare of those environments at any point in time.

In the first part of this dissertation the case was made for regarding the time in which we now live as the Anthropocene, since *Homo sapiens* “in large measure determines the earth process that once determined” them (Berry, 1978, p.9). As Norton (2005, p. 199) puts it:

What has changed in recent history, long after our moral codes were developed, is the human ability to employ pervasive and powerful technologies, as humans exert more and more dominance over natural systems. ... Natural systems, as well as conventional cultural life and cultural practices are undergoing constant “disturbance’ at every level and on every scale.

Hence the major challenge is not simply “late modernity’s” project of managing “the environment”, but *managing society* in order to reduce our negative impacts. Bookchin (1989, p. 24) says “*all ecological problems are social problems*” (italics his). Hence with Barry (2002) the primary interest here is not in the relative *values* of humans and other species or elements within the environment, nor in the ontological questions of humans’ place within nature, but what people can do to reduce their negative impact. Indeed what can we do, except, as suggested by one key informant for this research, maintain “a virtuous cycle which overcomes the negative impact of humans on our natural environment”?

More than anything this stewardship is an expression of self-control, a role informed by values, which enables people and societies to minimise the damage we do to ecosystem

and our ecological “neighbours”. Roach identifies three criteria for good stewardship: self-restraint and precaution; operate at local scales where feedback effects are felt; aim to transfer some benefit to a “longer term future and a wider community” (Roach, 2000, p. 80). These criteria suggest a humble approach to stewardship in which ecological systems and processes are respected. At the same time, the question of what constitutes the interests of the wider community raises questions of the relationship between the individual and wider society. This is the focus of the following chapter using the lens of citizenship.





## **Chapter 7 Citizens and the virtues of stewardship**

### **7.1 Introduction**

Part 1 of this dissertation describes Western Australian policies and institutions for stewardship of the marine and coastal environments within their national and international context. The common property status of these environments and their value as public good pose particular problems for a liberal democracy heavily committed to “free market” philosophies and “market-based policy instruments”, yet wanting to retain that public good. The dominant economic philosophies of progressive and conservative wings of Australian politics have both adopted philosophies which favour the institutions of (private) property rights and devalue the institutions of common property. However common property institutions provide alternative means to ensure the sustainability of a public asset or maximise its public benefit in contrast to privatisation or government management and control. Stewardship of common property and the virtue ethic of environmental stewardship, whose genealogy was mapped in the preceding chapter, are here linked to concepts of citizenship. It is argued that citizenship provides a framework for the exercise of stewardship, irrespective of the over-arching meta-narrative that informs stewardship. The notion of the person as citizen and how citizenship is best understood is central to the link between it and stewardship.

Chapters 2 and 3 trace the emergence of the International Law of the Sea Convention (LOSC) as an expression of a stewardship construct. The LOSC enshrines the Grotian idea of stewardship of international ocean commons and a form of Seldenian stewardship over waters within the territorial jurisdiction of modern nation states. In the latter case, the government of the nation within whose jurisdiction sea territory is located exercises stewardship responsibility on behalf of the nation’s citizens through the democratic processes, and also on behalf of the international community through the protocols LOSC and a number of other international conventions and treaties. However under that overarching authority of the state, a broad range of institutions including private ownership, collective management and state management provide stewardship of the national estate, natural resources or environment and resources.

McKinley and Fletcher (2012) called for public debate around the concept of marine citizenship, which they suggest offers a way to increase the capacity of public policy to mobilise individual responsibility for the oceans. Such debate needs to include coasts because of role coastal impact on ocean health, as discussed in Part 1. This chapter links

individual citizens' roles in oceans or other environmental issues to the broader framework of environmental and ecological citizenship that has been best developed by Dobson (2003, 2007). Rather than supporting "marine citizenship as a distinct policy agenda" (McKinley & Fletcher, 2012, p.84) this chapter suggests that environmental stewardship as a phronesis, grounded in ecological citizenship best represents the kind of citizen responsibility McKinley and Fletcher advocate.

In Australia's oceans and coastal policies, stewardship appears as a label for voluntary community activities and as an expression for industry to operate according to "codes of responsible fishing behaviour" (Commonwealth of Australia, 1998a, p. 10: vol 2). However, as a form of civic virtue it draws on a number of ideas of strong and ecological citizenship that have developed within, or in response to, green political theory (Barry, 2006, p21), and can offer more to the public policy process. Lest green politics be considered too narrow or partisan a base on which to build national policy, a case for a similar kind of "environmental citizenship" can also be based on liberal political theory (Bell, 2005).

## ***7.2 The role of "citizenship" in marine and coastal stewardship***

The Grotian institution of stewardship has its primary focus on apportioning ocean space between maritime powers. Within the territorial space claimed by modern nation-states, the state has played a key stewardship role, introduced in Chapter 2 as Seldenian stewardship. The mandate of the state comes from two directions. From the outside, it acts as steward on behalf of the international community in relation to both conservation and use of resources found within its Extended Economic Zone (EEZ). In addition, international conventions and treaties for conservation of biodiversity and minimising harm from pollution determine some of a state's policies. The state also acts as the agent of its own citizens. Its agency capacity is greatest in its jurisdiction over public lands and waters, where private property rights do not filter the state's authority to require its citizens to conform to the behaviours and use of those public goods according to appropriate institutions.

That said, even private land ownership has been argued to be a form of stewardship through arguments that can be traced to the philosophy of John Locke. His ideas of the equal worth of all people across spatial and intergenerational distance underpinned the idea that humans are tenants in common of the earth's wealth. The enclosure of the agricultural commons into private farm lands that took place in 18<sup>th</sup> century Britain was

acceptable to Locke only on the basis that such action met the criteria of common good (Brown, 2001, p. 31). The corresponding notion that land ownership is a form of stewardship has persisted and finds expression in contemporary discussion of property rights and their limitations (McKenzie Skene, Rowan-Robinson, Paisley, & Cusine, 1999).

The story of development of environmental stewardship institutions in Australia told in chapters 4 and 5 is a story of key actors who acted out into the public sphere in response to their values and ethics. They took to the public stage to ensure the sustainability of the oceans and coasts was not jeopardised by other actors whose primary interests were their private amenity or private wealth obtained at the expense of those oceans and coasts. Nixon (2011, p. 36) argues that if human beings are defined “as social, we are necessarily [defined] as citizens”, building “the civic spaces which render our societies sustainable and defensible”.

One aspect of building civic spaces in the nation state is to formalise citizenship through use of membership criteria and certification. The dominant discourse around citizenship concerns the relationship between the individual and society, in particular the nature of rights and obligations (Steward, 1991). Debates about legitimate claims on citizenship have escalated in the context of large-scale movement of people across national borders as refugees. The complex questions of citizenship rights and responsibilities must now take account of movement of refugees, multinational corporations and regional political unions, like the European Union (e.g. Christoff, 1996). While the nature of state-based citizenship is problematic, citizenship discourse is compounded by many other expressions of citizenship, such as corporate citizenship, digital citizenship and global citizenship etc. (Bell, 2005, p. 179).

Two theories of citizenship, reflecting two main branches of Western political philosophy, inform discussion of the relationship of citizens and the environment, and the commons in particular. Liberalism, in its classic formulation by John Locke, places primacy on the freedom or rights of the individual, whereas civic republican philosophies place primacy on the common good and the responsibility of citizens to work towards it (Dobson, 2007, p.280). For the civic republican, an obligation to look to the common good, now and in the future, shapes participation in civil society as well as expectations of what the government will do. The goal of the common good is sufficient justification for efforts to change attitudes and behaviour of citizens (Dobson &

Valencia Sáiz, 2005, p. 158). On the other hand liberal political philosophy seeks to safeguard the rights of citizens and gives less attention to responsibilities (Dobson, 2007, p.280). Both liberal and civic republican political ideas of citizenship can accommodate ideas of environmental citizenship and even stewardship or care for the earth, but differ in the responsibilities they ascribe to the individual citizen.

Paul Barry Clarke criticised political systems similar to those in Australia, which have operated in terms of what he calls “procedural liberalism”. He says they have limited capacity to empower citizens to act independently for the common good or to “practice the civic virtues” (Clarke, 1996, p. 1). He argues that politics has become divorced from ethics, which is regarded as a private matter. Public policies relating to the environment are constrained in market-based liberal democracies like Australia by the perceived need to minimise their intrusion into personal behaviour and impact on private property<sup>134</sup>. However Bell (2005, p. 180) argued that “liberals must abandon their conception of the environment as property”. If the environment were conceived as “a provider of basic human needs and as a subject about which there is reasonable disagreement”, then, he says, the rights and duties of “liberal environmental citizens” can be mapped out.

Liberal political theory needs to recognise that citizens are embodied individuals who always live in an environment. In other words, any citizen is also “a citizen of an environment” (Bell, 2005, p.142) and indeed, of the earth (Steward, 1991). The physicality of the environment and its biophysical processes cannot all be reduced to the abstract concept of property. Most significantly, the environment is the provider of basic needs. Consequently, argues Bell, citizens have substantive rights to meet their needs and procedural rights to participate in policy-making which protects the environment’s capacity to provide for those needs (Bell, 2005, p.186-187). It follows then that the duties of the liberal environmental citizen are to ensure the sustainability of the environment’s provision, through participation in deliberative democracy to frame legal protection, to obey just laws and promote just arrangements. So far there is congruence between liberal and civic republican ideas of environmental citizenship. However civic republicanism finds citizens have a duty to act privately for the common good, whereas liberalism is very wary of private duties. Bell (2005, p.191) suggests there is space for

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<sup>134</sup> A good example is the debate about mitigation of global warming caused by greenhouse gas emissions. The public good of stabilizing climate is countered by arguments about private losses caused by increased cost of household living expenses should “carbon pollution charges” of any form be imposed.

“a liberal state [to] support and encourage” actions that sustain the environment even though it cannot enforce them by laws.

Clarke (1996, p. 125) argued for greater efforts to enable citizens and encourage them to expand their care of themselves out into their surrounds and into the world. The demarcation between private and public sphere is less important in his civic republican construction of citizenship. Individuals should exercise “civic virtues” in a “moral space” where their own personal concerns about what matters and what is right can be acted out. In the process of taking care of self, others and the world, they become “deep citizens” (Clarke, 1996, p. 125). The role of the state is to enable or create political spaces and to provide supportive institutional frameworks for citizenship action that helps sustain the environmental commons.

Of course there are limits to what an individual citizen can become involved in. When it comes to making choices, one’s sense of place is an important factor. Citizens are more likely to become involved in an action or even a community event affecting a place to which, motivated by their personal aesthetic and ethical values, they feel some attachment and concern (Beatley, 2004, p. 51). Even in a limited and local action, Clarke (1996, p. 97) says citizens “act into the universal” of more general civic action relating to the environment, particularly if there are a number of such activities. This opens the possibility of growing engagement with wider civic virtues or political activity. He welcomes this, because he says “politics is ...at its best when there are a multitude of voices in a forum where they can be heard” (Clarke, 1996, p. 116). Certainly the story of coastal degradation contained in the numerous reviews of coastal management in Australia reveals the thread of either numerous decisions taken without a comprehensive consideration by key stakeholders (“death by a thousand cuts” (Resource Assessment Commission (RAC), 1993)) or of powerful parties triumphing over the weak, thereby capturing a public good for private gain. Environmental citizenship is a significant expression of active citizenship and several of its formulations are significant for this dissertation: citizenship of Planet Earth, environmental citizenship and ecological citizenship.

### ***7.3 Ecological citizenship as a basis for stewardship***

Complex global networks comprised of human movement, supply chains, waste streams and trans-boundary flows of pollution mean that the average Australian resident has ecological impact all over the globe. Steward (1991) links the discussions of

cosmopolitan citizenship from the 1990s<sup>135</sup> with our global impacts on ecosystems to argue that we need to address our “ecological interdependence at a global level”. This, he says, can be expressed through the notion of “citizenship of Planet Earth”, which expresses “our common human inheritance” and “duty of care to the planet” (Steward, 1991, p. 75). This concept of citizenship has been taken up in both “environmental citizenship” and “ecological citizenship”. Their significance for this discussion of stewardship lies in the way that the responsibilities of citizens are expressed in terms of stewardship.

Bell (2005) suggests that within liberal political theory this can be presented in two ways. One way is simply to recognise the responsibility of citizens to “care for the Earth” in much the same way that any citizen should care for common property. Unlike strong citizenship, “liberal environmental citizens do not have a duty to make personal choices that will contribute to the promotion of global environmental justice” (Bell, 2005, p. 190). Rather it is the responsibility of the liberal state to limit citizens’ freedom “for the sake of protecting the integrity of the environment (as the provider of basic needs)”. The core responsibility of the citizen is simply to abide by the laws of the state. The corollary to this delegation of the role of arbiter of behaviour to the state is that the liberal citizen has a responsibility to take political action to ensure the liberal state does just that. However he also suggests that liberal political philosophy does allow that a state may promote recognition of “non-enforceable political duties” by its citizens (Bell, 2005, p. 191). Stewardship is a recognisable and useful formulation of such duties toward the commons.

From the civic republican side of the debate, Dobson (2003) argues for a concept of citizenship that extends across both private and public spheres and beyond the nation-state. He regards “environmental citizenship” as “a liberal point of view” focussing on environmental rights, and adopting the language of Clarke (1996), “taking place in the public sphere”. So for example a corporation can demonstrate its environmental citizenship by sponsorship of a project or even by symbolic actions within its business operations. In contrast, Dobson defines “ecological citizenship” as “inhabit[ing] the private as well as the public sphere”. In doing so, it shares some characteristics of civic republican virtues: it represents consistent values and dispositions across the private and

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<sup>135</sup> This was published in the context of debate in the United Kingdom over citizen responsibilities vs government in relation to public goods. Recall also the discussion about cosmopolitan citizenship and seemingly endless public fora whose title somewhere included the word “globalisation” in the last decade of the second millennium.

public spheres. In this it resembles, or constitutes an aspect of deep citizenship. Like Steward's planetary citizenship, it is non-territorial.

The construct of "marine citizenship" introduced at the beginning of this chapter (section 7.1) is a bundle of awareness, and behaviours which expresses "the rights and responsibilities of an individual towards the marine environment" in such a way that the individual citizen "is motivated to change personal behaviour to lessen its impact on the marine environment" (McKinley and Fletcher, 2012, pp. 840-841). While McKinley and Fletcher describe it as "located within the broader concept of environmental citizenship" It aligns better with Dobson's ecological citizenship. However McKinley & Fletcher (2012) don't acknowledge these divergent expressions of citizenship. They argue there is a need for "a marine 'brand' of citizenship that can utilise individual behaviour as a policy channel to achieve marine environmental health benefits". However, it seems counter-intuitive to broaden citizenship beyond civic rights and responsibilities in their rather narrow common usage, only to narrow it down from environment/ecological to the marine realm. This is particularly so when personal behaviours impacting on the health of marine environments include "lifestyle preferences, travel patterns, food choices and consumer behaviour" (McKinley & Fletcher, 2012, p. 840). Perhaps it's better to speak of ecological citizenship, but ensure that marine issues receive due recognition in its application.

In contrast to this narrow focus on marine stewardship, Dobson (2003, p. 99) argues that all ecological citizens share similar obligations, but that their scope is indicated (or even determined) by one's global ecological footprint. Connelly (2006, p. 63) summarises it thus:

Liberal theories of citizenship tend to focus on the granting and maintaining of rights; civic republican views focus on a deeper reciprocity between rights and duties.

Ecological citizenship is different from the former in focusing its concern on duties, not rights, and it is different from the latter in being non-territorial.

He argues that "ecological citizenship comprises the ecological duties together with the virtues appropriate to their fulfilment" (Connolly, 2006, p. 65). He defines a virtue as "a settled disposition to act in a certain sort of way" (Connolly, 2006, p. 53), to which Annas (2006, p. 516) adds that reasons for acting this way are important. The association of virtues with ecological citizenship is also developed by Christoff (1996) and Barry (2002), but less enthusiastically by Dobson (2003, p. 127 ff). This is

discussed in the next section, but before that, there is more to say about ecological citizenship and stewardship.

Christoff (1996, p. 159) formulated ecological citizenship as the extension of citizen responsibility beyond the requirements of the state (the state being the modern successor to the classical Greek *citi*) to “assume[ing] responsibility for future humans and other species”, particularly by representing “their rights and potential choices according to the duties of environmental stewardship”. In this formulation, ecological citizens act as “ecological trustees”, not simply as fellow citizens alongside other species. The role of trustee is considered vested in these citizens on the basis of the limited capacity of species other than humans to make their preferences known within decision making processes (i.e. within the political agenda). He advocates a “green facilitative state” in which “formal political processes and state-regulatory controls over market forces” are integrated “with a self-limiting culture of moderation and responsibility producing individuals and corporate actors [who]... confine their actions to those producing ecologically sustainable outcomes” (Christoff, 1996, p. 166). This is perhaps the closest he comes to describing ethical behaviour in a chapter which is focussed on envisioning an appropriate political formulation of environmental citizenship. The ethic and practice of ecological stewardship is also about sustaining ecosystems.

To practice stewardship and adopt the disposition to act as a steward qualifies as one of Connolly’s (2006) virtues, for it offers a way for ecological citizens and McKinley and Fletcher’s (2012) marine citizens to fulfil their duties. The active side, or practice of stewardship, fits well with MacIntyre’s (1984, p. 187) definition of a virtuous practice<sup>136</sup>. Barry (2002) offers one of the clearest expositions and justifications for ecological stewardship as what he calls an “‘ideal’ ethical idiom and practice guiding human relations with the natural world” (Barry, 2002, p. 135). This is well captured in the concept of *phronesis*, and the next chapter presents some examples of people engaging in stewardship practices. Through those practices and ongoing reflection, they experienced changed understanding of their capacity and duties.

Barry acknowledges that any “anthropocentric” environmental or sustainability ethic will not be acceptable to mainstream environmental ethics which is dominated by “deep

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<sup>136</sup> He defines practice as “any coherent and complex form of socially established cooperative human activity through which goods internal to that form of activity are realised in the course of trying to achieve those standards of excellence which are appropriate to, and partially definitive of, that form of activity, with the result that human powers to achieve excellence, and human conceptions of the ends and goods involved, are systematically extended” (MacIntyre, 1984, p. 187).



ecology” (Barry, 1999, p. 12ff), but his argument is compelling. The consequence of his idea of greening citizenship is that an “ethic of use” should inform our interaction with the environment. The aim of this anthropocentric ethic is “to distinguish legitimate human use of the environment from illegitimate abuse” (Barry, 2002, p. 135). Like Christoff, he argues that there really is a need for a stewardship ethic which encourages “effective and appropriate environmental management or regulation based on non-direct, mediated and institutionalised social-environmental interaction” (Barry, 2002, p. 137). The applicability of such an ethic to the issues described as challenges for sustainability of coasts and oceans in Western Australia is easy to see. There already exists extensive anthropogenic infrastructure, modification of coastal systems and also natural areas under pressure of human activity.

Barry argues that we need an environmental ethic which guides how we use the environment and even repair damage that we do to it. This need supersedes ontological questions about the relative place of humans and other species in the scheme of things. The stewardship ethic is informed by a legacy of stewardship values professed and practiced in agricultural societies, so it embodies relationships of dependence upon the environment, yet at the same time acknowledges human influence over it. Barry (2002, p. 138) describes its “productive-ethical character”. Rural societies framed stewardship in terms of preserving that productive capacity and life-setting for future generations (Nash (1989) cited in Cary & Webb (2000, p. 17)), so stewardship is a conceptually rich word which embodies far more than a simple idea denoting community voluntary action or commercial actors maintaining environmental standards. The previous chapter “unpacked” some of the conceptual riches it carries. One of the most powerful aspects of stewardship in relation to ecological or environmental ethics is its conceptual location within virtue ethics. How does understanding the nature of virtue ethics contribute to a robust and enduring stewardship ethic, which in turn contributes to coastal and marine sustainability?

#### **7.4 Stewardship as virtue?**

Barry described stewardship as an ecological virtue (Barry, 2002, p. 139). This description addresses some of the core issues raised in the introduction to this dissertation, namely how to foster congruence between individual preferences and behaviour and policies for coastal and marine sustainability. How can individuals be educated, equipped and motivated to align their personal values and behaviour to the greater common good? How can reliance on institutions of the state to *control*

behaviours which detract from public good be minimised? How can the state facilitate the education, equipping and encouragement of its citizens (and visitors!)?

"Virtues" says Barry, "are useful... because they help us cope with contingency, unexpected change, unforeseen difficulties [and] challenges" (Barry, 2002, p. 139) which are inherent in our relationship with nature, especially in the context of coastal environments. Not only are human activities, intentions, and even values in relation to the coast contingent and changing over time, but coasts themselves are dynamic and subject to natural agents of change from both terrestrial and marine sides. Stewardship as an ecological virtue enables us to "cope" with the natural environment and the accumulating pressures of human society on coastal and marine ecological systems. This stance he contrasts against a struggle for mastery on the one hand and submission such as advocated by deep ecology on the other hand. Struggle for mastery can well be symbolised or illustrated by many examples available of escalating installation of engineered structures to control erosion, maintain navigation channels and supply sand of a quality and in a quantity determined by well-connected stakeholders' vision of how a particular coastal site should be constituted. On the other hand, Barry points out that ethics based in deep ecology have little to say beyond the imperative to maintain natural environments in their pristine state, outside human impact where possible. Such a possibility has already been passed for significant sections of the world's coasts, as Chapter 3 shows, and especially for those coastal areas where the greater numbers of people interact most intensely with coastal environments. So what does it mean then, to speak of stewardship as a virtue and a virtue ethic?

Annas (2006, p. 516) describes a virtue as "the disposition to do the right thing for the right reason, in the appropriate way". Thus virtue ethics is not theory about what is right but has been likened to development of a character trait, or acquiring a skill or expertise. This is in contrast to rationalist ethics which are based around rules or principles (Hutchings, 2010, p. 55). Aristotle, who is usually recognised as the earliest source of virtue ethics, noted that the virtues (*arête*) individuals require in order to flourish (*eudaimonia*) are dependent on the role of that individual in society and (most commonly in Aristotle's case) their social context. Virtue ethics is non-rational because virtues are acquired through *phronesis*, that is the process of education and experience that builds up one's character and not through teaching or the use of logic alone (Hutchings, 2010, p. 56).

MacIntyre's (1984) description of the virtues as formulated by Aristotle<sup>137</sup> shows why they are so compatible with, perhaps integral to, the political visions of green political theorists described above. The virtues are developed through practices which take place in the context of community. Through *phronesis* (which can also be defined as the active application of general or universal knowledge to particular specific contexts), practices develop which lead one toward some notions of the good, and in that process, through those same practices and the engagement of the community members, the notion of private and common goods is refined and adjusted. In this way virtue ethics is relational and contextual. It operates as a kind of action-reflection cycle.

Republican civic virtues, as noted above, share some common elements with stewardship ethics, but "civic republicans depict virtue solely in the civic sphere" overlooking those personal virtues which Aristotle identified as important for the functioning of the public sphere (Peterson, 2011, p. 97). Thus the distinctive element in the concepts of ecological citizenship and ecological stewardship is the interconnectedness between the personal (or private) world and the external world which embraces not only civic space in which one lives, but also the global environment and future generations (Barry, 2002; Dobson, 2003; Peterson, 2011). This arises not only out of concern for some Aristotelian conception of what is required for the civic sphere to enable human flourishing, but also out of realisation that every action of private consumption and production impacts on other people and species. The whole of the supply chain through to the final destination of the waste stream are all part of our impact. Dobson's use of the global footprint as a key justification for the parameters of ecological citizenship is a powerful argument for taking a global perspective (Dobson, 2003, p. 119).

In describing virtues as dispositions, some of the flexibility or openness of the term becomes apparent. MacIntyre (1984, p. 148) describes virtues (*arête*) as "precisely those qualities the possession of which will enable an individual to achieve *eudaimonia* and the lack of which will frustrate his movement toward that *telos*". They may also be considered as a mean between two extremes which, by their very extreme nature, are considered to be vices (Connolly, 2006, p. 53; Hutchings, 2010, p. 56). Take an example: one of the key elements of stewardship, to take ownership or responsibility, can be considered an example of such a "golden mean". The disposition to act as if one

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<sup>137</sup> mainly in *The Nicomachean Ethics* around 322 BCE

personally owns public goods and treat them in ways that selfishly diminish the benefit available to others is a well-recognised vice. At the other extreme, to remain totally unobservant and unresponsive to the deterioration of a public good and unwilling to contribute to its maintenance could be considered the opposite vice. Whereas a mean position between these vices, in which one is disposed to take personal responsibility for the ongoing care and maintenance of public goods in the same manner as one would for one's own property, can be considered one of the virtues of stewardship.

### **7.5 Stewardship and care ethics**

In Australian coastal policies, Coastcare was perhaps the clearest programmed expression of stewardship. The environmental "care" movement in Australia formally began with Landcare in Victoria, from where it developed into the national Decade of Landcare (Hawke, 1989). Initially the language of stewardship was used in the popularisation of the concept, but it was displaced by the language of care. The extension of the landcare concept into other aspects of natural resource management culminated in a number of "care" programmes supported through the Natural Heritage Trust, which are discussed in some detail in Chapter 4. However the point is again raised here to demonstrate that even in Australian policy discourse there is a close association between the language of stewardship and care.

Like stewardship and virtue ethics more broadly, care ethics are "contextual and relational" (MacGregor, 2006, p. 64). The ethic of care was developed by feminists such as Gilligan (1982) and those whom she influenced (MacGregor, 2006, p. 26) to overcome exclusions of women from other ethical theories. Even in virtue ethics, the determination of whose context really matters can bias against inclusion of women in ethics of the flourishing life. The original formulation by Aristotle was hierarchical and discriminated against any who were not male property owners of Athens society (Hutchings, 2010, p. 61ff). Feminist philosophers condemned the repression of women's voices and experience and went further, drawing attention to how women's caring work "engenders a caring stance towards nature" (MacGregor, 2006, p. 4). Merchant (1996, p. 16) described her vision of ethics as "a partnership ethic of earthcare" (cited by MacGregor, 2006, p. 4).

While care has been characterised as feminine or even feminist ethics, MacGregor (2006, p. 5) cautions against the danger of essentialism, that is, of seeing care as somehow deriving ontologically from female/maternal nature rather than having its

basis in other, more publicly defensible grounds which are subject to critique and debate. Along lines similar to the main argument in this chapter, she argues that care ethics should be grounded in citizenship and worked out in a project which she frames as “feminist ecological citizenship” (MacGregor, 2006, p. 6). She also challenges the public-private dualism of much of political philosophy ethics, suggesting that feminism has a lot to contribute to the notion and practice of citizenship because of its record in exposing those people or creatures who are invisible or ignored in the public sphere (MacGregor, 2006, p. 222). On these grounds, stewardship may also be considered a form of care ethics. To state this is not to locate it within some kind of taxonomic cross-hairs or confine it to a particular theoretical box, but to acknowledge the richness which the care ethics discourse can contribute to the way that stewardship is perceived. So how can the concept of virtue ethics best be applied to the ideas of stewardship?

### **7.6 Stewardship practices and stewardship ethics**

Within the framework of virtue ethics, stewardship aligns very clearly with MacIntyre’s description of “practice”, while at the same time, as *phronesis*, it may be considered to be itself a virtue, located (as discussed) between the extremes of possessiveness on the one hand and neglect on the other. Some of the other virtues which might also be constituents of a stewardship ethic could include love of nature, self-control, thoughtfulness, empathy and others along these lines. One of the keys to *phronesis* and virtue ethics is their reflexive relationship with practices. The idea of stewardship as virtue contributes to an understanding of what it means to practice stewardship. By the same token, the virtue of stewardship is learned through involvement in its practices, and thus enriched understanding of its meaning develops.

MacIntyre (1984) championed the merits of the virtue ethical tradition, partly in reaction to what he saw as the dominance of Weberian managerialism in most political systems. He says such systems are based on Nietzschean irrationalism, even if those Nietzschean premises have been suppressed (MacIntyre, 1984, p. 114). The virtues offer an alternative to individualism and economic liberalism which exalts the Aristotelian vice of acquisitiveness (p. 254). In stark contrast to the irreconcilable assertions of individual wills, or what he calls preferences expressed as values, the virtues are constituted collectively within community or society. Of course there may be more than a hint of optimism in his position, but as individual moral agents relate their own understanding of the good, collective community or societal goods are produced out of this collaborative conversation, rather than from bureaucratic expert opinion. Central to

this argument is MacIntyre's (1984) conception of narrative. Virtue ethics is not expressed simply as rational propositions, but formulated and expressed through shared narrative. Narrative operates at the individual and the collective level and is important because of the teleological nature of virtue ethics. The virtues, as dispositions which enable the realisation of the good or goods, are thus part of a narrative which is moving towards a desirable goal.

This narrative is not simply a historical one, but is an account of the good and its relation to the virtues and the life of the individual and the community in narrative form. MacIntyre (1984) demonstrated that Aristotle's account of the virtues forms part of a canon which has been validated over time. The historical narrative of virtue ethics writ large forms a part of this narrative. The ideas of stewardship also have a narrative tradition which informs any contemporary understanding of the good and points to appropriate stewardship practices. The accumulated narrative of stewardship described in Chapter 6 helped shape the way some people see themselves and the world, and the kinds of dispositions that are valued for their contribution to a life of worth. The Coastcare tradition, and of course its predecessor the Landcare movement, are keyed into that tradition. The virtues of care and respect for the environment, cooperation and persistence are part of Coastcare stewardship ethic. They are expressed and reinforced in narratives such as those published in the *WA Coastlines* magazine and presentations from coast-care groups at regional or state conferences.

This raises some questions about the role of the state in relation to these expressions of citizen stewardship. The enrolment of large numbers of rural community members into Landcare groups is commonly referred to as the Landcare movement. However Lockie (2004) has questioned this use of the term "movement", drawing attention to the role of government agencies in planning, inciting and supporting those groups. In comparison, the population engaged in coast-care groups and activities is far smaller. There seems no doubt that without government support the specifically coast-care groups would have trouble surviving. Not many of the other local progress associations and clubs would undertake quite such an extensive load of coastal stewardship responsibilities. The following chapter examines some of these groups and their relationship with the local, State and Commonwealth governments and programs. The objective is to see how these relationships demonstrate these ideas of citizenship and stewardship as civic virtues, and what can be learned about the possibility for future stewardship of coastal and marine environments.

## **7.7 Conclusion**

The rich narrative of stewardship examined in Chapter 6 can inform practices to reduce human impact and sustain the quality of coasts and oceans. As a process of *phronesis*, participants in stewardship have the opportunity to learn by doing and form dispositions to act in life-giving, environment-sustaining ways. This way of approaching the question of how to live and behave in relation to the coast and ocean is described by MacIntyre (1984) as virtue ethics. It is possible then to speak of both stewardship ethics and the practices of stewardship. These two aspects of the stewardship encompass the diverging ways environmental stewardship is discussed in literature. The idea of civic virtues brings these two aspects of stewardship together.

Stewardship ethics is anthropocentric, which is not fashionable in the ethical theories predominant in the Australian environmental movement. However it is grounded in ecological citizenship, which recognises the value of all life, and the ecosystems of which humans are part. It recognises the need to manage the behaviour and practices of humans, whose impacts are already pressing so heavily on the earth that they have triggered the commencement of the Anthropocene.

The challenges for policy-makers who wish to encourage wide-spread adoption of the virtues of stewardship are two-fold: how to encourage an ongoing narrative that nurtures the values and dispositions, and how to enable and facilitate activities through which *phronesis* strengthens skills and knowledge of stewardship. There are some good examples in Western Australia and the following chapter examines some of these. There is another challenge which those in government must be prepared to face: deep or active citizenship is expressed in citizens who are active in the public space and engage with policy and its implementation. This raises the possibility that they will be critical of government actions and policy from time to time. It is challenging for the state to work with civil society when some civil society organisations criticise policy or implementation, and those criticisms may be perceived to be damaging to electoral prospects (Hamilton & Maddison, 2007). Australian governments have struggled to accept this, cutting direct funding support for the Environmental Defender's Offices and attempting to change the eligibility of environmental NGOs to receive tax deductible donations. While there may be good grounds to do so in some cases, governments need to take care not to choke off expressions of citizenship that contribute to the functioning of the nation, such as ecological citizenship and stewardship.





### **PART THREE:**

## **Contributions of stewardship virtues to marine and coastal sustainability**

Part Three begins by presenting examples of examples of situations in Western Australia that show examples of the concept of civic stewardship developed in Part 2 emerging in local government and community groups. They are presented here as stories of citizens who have engaged in civil society. Key stakeholders in the groups, local government and supporting state government agencies were interviewed and secondary data consulted for some of the information used to develop these examples.

Chapter 9, the second in this part, presents the case for a wider application of civic stewardship as an ethical and conceptual basis for stewardship of environmental commons, based on the specific example of coastal environments in Western Australia.

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## **Chapter 8 Stories from the “coast-face”: civic virtue in the practice of stewardship**

### **8.1 Introduction**

In the face of anthropogenic threats to the sustainability, integrity and the values of coastal and marine ecosystems, ecological citizenship offers a way to describe how humans can relate to each other, institutional frameworks and the wider environment. This broader idea of citizenship connects with our identity as citizens of a place in which we live, and a state in which we are recognised as belonging. The chapters in Part 2 argued that stewardship ethics, particularly when considered as a virtue ethics, provides a framework to inform and give meaning to one’s exercise of personal agency within the context of the nation-state and of larger narratives about “the good life” and the earth as a good home. This chapter examines some examples of coastal community groups who have demonstrated the civic virtues in coastal stewardship. None of them directly demonstrate ocean or marine stewardship. However some of the principles and issues observed are applicable to those other contexts.

Stimulated by the opportunities presented through the national Coastcare Program (1995-2002), many coastal stewardship groups formed and then developed in ways illustrative of how coastal stewardship can be an expression of active citizenship, with individuals exercising agency, often supported by local, state and commonwealth governments. Their stories show how local government and community groups worked within the wider frameworks provided by government coastal planning, policies and programmes. Relationships between some of the actors were sometimes difficult, or even involved some conflict. These experiences illustrate the vulnerability of agendas which are dependent on community expressions of civic virtue. One of the values in those stories is the insights they may provide about the value and best use of a small, appropriate level of support from government.

The four main stories presented<sup>138</sup>, from Joondalup, Mandurah, Stirling and the Leeuwin Conservation Group, were selected in an opportunistic way: through hearing about them or meeting participants at the State Coastal Conferences and then following

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<sup>138</sup> Data were obtained from interviews with key informants and publications and conference or workshop presentations. Interviews were conducted according to University protocol for research involving human subjects.

up. They are presented as expressions of stewardship as civic virtue and cases from which some lessons can be learned. No claim is made that they are representation of all that is happening in Western Australia. In each story there are themes shared in common: threats to the coastal ecosystem; local versus wider interests; and personal decisions regarding the personal effort they give to activism on the one hand and practical stewardship activities on the other.

## **8.2 Methods used**

To obtain the empirical data used in this dissertation, key informants in Western Australia who were involved in the delivery of the state and the commonwealth Coastcare and Coastwest programs were identified and invited to participate. Out of a number of interesting cases of community groups and local government working together, three cases were chosen and key informants contacted for interviews. A permit (2005/15, see Appendix A) was obtained from the Murdoch University Human Research Ethics Committee for semi-structured interviews using the guides shown in Appendices B to E. All participants agreed to their interview being recorded. Additional information was obtained from secondary sources such as local government and community groups web sites which are all acknowledged.

In all, twenty one people were interviewed between 2005 and 2011, as shown in Appendix F. Their responses were rendered anonymous, and where included in the text of this dissertation, have been coded by the category of informant and a serial number for respondents in each category. The codes are: A = Australian Government officer; C= community group member; G= Western Australian Government officer; E= educator; L= local government employee; N= Regional NRM Facilitator.

## **8.3 Coastal stewardship in the City of Joondalup**

The City of Joondalup was established in 1999 to create a new regional urban hub on the northern edge of the rapidly expanding Perth metropolitan region. The Joondalup Local Government Area was excised from the coastal side of the Shire of Wanneroo, and encompasses 98.9 km<sup>2</sup>, stretching along 16 km of coast from Marmion to Burns Beach. There are 167,623<sup>139</sup> people resident in the City of Joondalup in 2013.

The City of Joondalup offers an interesting case study in coastal stewardship because the community and the local government developed formal mechanisms for coastal

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<sup>139</sup> Estimated Resident Population, 30 June 2013 published by the City of Joondalup, <<http://profile.id.com.au/joondalup/population-estimate>> accessed 21 June 2014.

stewardship through the Joondalup Community Coast Care Forum (JCCCF) which provides a key link for local stewardship groups and the Council. The Australian Local Government Association web site portrayed the City of Joondalup as a case study in integrating community involvement to achieve better results in coastal management (Armstrong, 2005).

Management of coastal reserves is a major issue for the City of Joondalup, which has ownership of the entire 16 km of coastline (Armstrong, 2005). As most of it was, until recently, on the urban fringe, some of the coastal reserves in the city of Joondalup were “in almost pristine condition” as recently as 2007 (Norman, 2007, p. 41). However significant parts of its reserves had become highly degraded due to the low level of management (Armstrong, 2005) they received prior to some of the initiatives described here. Norman (2007) considered the key issues were to keep weeds from establishing in the City of Joondalup’s “many fragments of land in relatively natural state” and preventing their deliberate damage or accidental harm from nearby activities. These issues are common to many local governments as will be seen further into this chapter.

Stewardship responsibilities for these natural coastal (and other) reserves developed through partnerships between the City of Joondalup and community members. The City of Joondalup was also pro-active in developing an environmental education program for primary schools, which seeks to link them with coast-care groups. One of its goals is to engender active citizenship in the participants. So in some ways, the initiatives of the City of Joondalup and its citizens exemplify what has been proposed in Part 2. That is, the combination of learning and practicing stewardship activities can be a form of phronesis in which learning by doing helps to form dispositions of respect and care for the environment. Three instructive aspects of this are the JCCCF, the City of Joondalup’s “Adopt a coastline” program and one organisation in the community which works with the JCCCF.

### **8.2.1 Joondalup Community Coast Care Forum (JCCCF)**

The JCCCF was established in 2000 at the initiative of staff in the newly constituted city council to be “a community organisation acting as a reference group for monitoring issues and initiating action relating to the Joondalup coastal strip, particularly in relation to conservation, recreation, development, education and culture” (City of Joondalup, 2009).

As a reference group for the City of Joondalup, the JCCCF is like a peak body of local coast-care groups and not a committee or organ of the council. One of the motivations driving the council's engagement in this initiative was its desire to reduce the number of environmental "friends of" groups and environmental activists independently attempting to provide input into council planning and policy processes, and consuming council staff resources for discussion and negotiation.

The establishment of the forum has allowed the different community groups to come together into a single body allowing for more efficient approval processes for council projects, the development of community led events and projects and improved NRM outcomes have been achieved. (Armstrong, 2005, pages not numbered)

In 2007 there were a total of 14 "friends groups" exercising stewardship for the 100 natural areas of public land in the City of Joondalup (Norman, 2007). JCCCF membership is now open to anyone "with an interest in the coastal strip and related issues" and who pays the \$10 annual subscription (City of Joondalup, 2009). Some of the members of the JCCCF were also members of the city's Conservation Advisory Committee<sup>140</sup>.

Although land continued to be sub-divided and cleared of native vegetation in the City of Joondalup<sup>141</sup>, the key issues identified by the JCCCF were the protection and management of existing coastal reserves rather than land clearance. Michael Norman, the founding Chairperson of JCCCF told a workshop of coastcare practitioners "the issue is not saving the bush or saving the coastline, so much as maintaining it"<sup>142</sup>. In addition to providing community input into council decision making processes, members of JCCCF and its affiliated groups personally care for patches of coastal vegetation. Mr Norman personally looks after "a coast reserve, but also some bushland areas in the Sorrento area" and described the former as "my site at Sorrento, that I'm working on. It's about a kilometre long" (Norman, 2007). This demonstrates the level of personal engagement and "ownership" that is a signature of many people involved in the JCCCF. The JCCCF also develops project proposals and applies for Coastwest or other grants and organises special events and projects. They have undertaken weed and

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<sup>140</sup> In October 2009 all advisory committees of the City of Joondalup Council were abolished.

<sup>141</sup> M. Apthorpe in "Working Together, the City and the Community of Joondalup" presentation to the Coastal Issues, Local Solutions 2007 workshop at Denmark, 30 Oct 2007. Quoted from a transcript of her presentation.

<sup>142</sup> "Working Together, the City and the Community of Joondalup" presentation to the Coastal Issues, Local Solutions 2007 workshop at Denmark, 30 Oct 2007. Quoted from a transcript of presentation and cited here as (Norman, 2007).

vegetation mapping, highlighted conservation zones and prepared cost estimates for corrective works.

From its formation in 2000, to May 2012, the JCCCCF or its associated member groups, had obtained Coastwest/Coastcare grants worth a total of \$142,449, for 12 projects. The numbers of people committed to regular work on the sites being managed were small, but they were able to mobilise a wider section of the community for specific tasks or working bees, with attendance of 24-38 people considered noteworthy. They were able to obtain volunteers from the ranks of Rotary Exchange students and high school students (MacDonald & Zakrevsky, 2007). Limited labour was also contributed by primary school students through the Adopt-a-Coastline program described below, but this is an educational program rather than a source of labour.

Recognising the limited capacity and resources of volunteer “friends groups” for natural areas, in 2002 the JCCCCF compared them to the City of Joondalup budget for maintenance of built parks and gardens. “We found that about \$6 million a year was being spent on reticulated and dry parks, that is just mowing and watering and fertilising them... so we decided we were going to get some of it” (Norman, 2007). One of their strategies to obtain a greater share of council funding for their projects was to ensure that forum members were present at every public consultation meeting held to develop the Strategic Plan of the City of Joondalup. “We made sure that caring for the environment became a key focus area”. They then “convinced the Mayor that we needed a management plan for the entire coast”. As a consequence, they were able to leverage part of the \$115 million budget of the City of Joondalup to address the natural areas of the coast which had previously been seen as not requiring expenditure or active management. They also encouraged their members to nominate for council membership in elections. In 2006 two sympathetic candidates were elected, and in 2007 Mr Norman was also elected to the council. He was awarded the WA Coastal Award for Excellence in Outstanding Coastal Leadership in October 2007.

A member of the JCCCCF commented that, in spite of concerns about what she considered to be some political problems within the JCCCCF, “it’s certainly a great resource to the city.” One of its important contributions is the knowledge and skills of its members and community volunteers. The members are “all volunteer ... and put hours and hours of volunteer time into it. We’ve got town planners, we’ve got environmentalists, we’ve got a whole range of people who contribute to the holistic

stewardship of community and environment”. These contributions are not simply delivered through practical actions on the ground, but also through policy formation and planning decisions for which public opinion is sought. The JCCCCF in its monitoring role also contributes to “open and accountable, honest development processes” (C4).

Some community members take a very broad view of the causal linkages in challenges of sustainability of coastal reserves, citing the link between uses of adjacent private land and activities on the coastal reserves. One key informant for this research suggested that liquor licence arrangements for a tavern opposite one local beach had worked against the coastal stewardship agenda:

We rehabilitated this very huge blow-out. A really nice job we did. And one night, \$7,000 worth of funding was destroyed by a drunken mob that had been to the tavern and got the cases of alcohol....they were coming from miles around, trekking down into the dunes. (C4)

The informant argued that the licensing and operation of a commercial tavern fall within the business of the JCCCCF “because [it] is directly going to impact on our coastal processes”. In response to these observations, the JCCCCF developed an alternative strategy to bring tourism income to the city’s coastal strip. Their first effort was to design a coastal eco-tourism trail from Kings Park to the beach reserves in the City of Joondalup, shifting the activity from night time to day, and seeking to attract people whom the members consider less likely to engage in anti-civic behaviour.

Over time, as the members of the JCCCCF and the various stewardship groups became more knowledgeable and confident, they expressed their opinions on operational matters, within the forum and also directly to council staff. The operations staff of the council may “find it offensive to be directed by, or be told what to do, by community members, by volunteers and it doesn't even matter what their qualifications are, but [they say] ‘I'm getting paid to do this job, why should I listen to you. I've got the experience and I know what I'm doing’” (N2).

Of course such practices raise issues of governance: council staff are accountable to their line managers and not individual electors, so sometimes a dedicated steward of a particular area may cross the line of good governance in the effort to “get things done”. However, there is a case for community members reporting to the council any occurrence of weeds or other environmental threats for which timely response may be



important to deal with the problem. The key is ensuring that all parties are aware of and follow an agreed protocol.

In its relations with the elected council of the City of Joondalup, engagement by the JCCCCF in council affairs has proved advantageous to the staff responsible for maintaining natural areas within the city boundaries. When budgets are discussed, the JCCCCF has agency to persuade “councillors to put real money into coastal management. They can cajole, bully and coerce and ask and beg, to see that real resources are put into coastal management” (L3). The JCCCCF has been so effective in its lobbying, that “the coastal budget has risen dramatically” (L3) as has been described above.

In its early days the JCCCCF could rally 20 or 30 volunteers to come and weed a section of coastal reserve, thereby multiplying the effectiveness of the lone council employee responsible for natural areas, however in more recent times the Forum has become more a source of expertise. The council now has staff dedicated to natural areas and also uses contractors to do a lot more work on the ground, both from its own budget allocation and from external grants obtained with the assistance of the JCCCCF and its constituent stewardship groups (L3). This represents a strengthening civic engagement which set in train long term changes in the strategic planning of the local government and civil society. This in turn brings hope of long-lasting changes in the condition of the local coastal reserves.

The JCCCCF is a civic space in which its members actively exercise their citizenship for stewardship, yet the word stewardship is not one they often use. However within Joondalup and the JCCCCF itself, some key actors introduced here, have very strong views about stewardship.

### **8.2.2 The Church of Jesus Christ Latter Day Saints embraces coastal stewardship**

One foundation member of the JCCCCF was also a member of the local Stake (or congregation) of the Church of Jesus Christ Latter Day Saints (CJCLDS)<sup>143</sup>. In 1998 the church obtained a Coastwest/Coastcare grant of \$10,665 to stabilise and rehabilitate dunes at a very popular local beach. The work was mostly done by young people from the church, and they received a State Coastcare award for this project in 2001. A poster describing the project and its underpinning philosophy was on display at the awards

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<sup>143</sup> Commonly referred to as the Mormons

night. That poster contained the only published reference to stewardship in Coastwest/Coastcare that year, and it expressed how they understood stewardship.

The church's involvement in Coastcare began in about 1997 as a means for the church community to serve the wider community. Their youth lay brush on dunes to prevent erosion and encourage revegetation. This was part of a Coastwest/Coastcare funded project of what was then the City of Wanneroo. The young people received some compensation for their efforts, which they used to defray the costs of a CJCLDS pilgrimage to Sydney.

Their two leaders, one of whom was an environmental educator, then negotiated with the council of the newly created City of Joondalup and subsequently applied for a Coastwest/Coastcare grant themselves. In 1998-99 they received \$10,665 for similar work. This intentional partnership with the city in an environmental project was a new direction for this church, as "the Latter Day Saints tended to avoid getting involved in environmental issues" (C4). However from the very first encounter with Coastwest/Coastcare, the word stewardship in the Coastcare documents attracted the attention of one leader. As has been described in Chapter 6, the leader also explained that stewardship

... is a Latter Day Saints concept ... stewardship doesn't just mean stewardship for the environment, it's a total stewardship. It's the mind, it's the body, the environment. They're all integrated for the Latter Day Saints....This seemed to be the ideal opportunity for us to be able to live our doctrine, be of service to the community. (C4)

In addition to the satisfaction of completing the project itself, receiving the Coastcare award for the project became transformative for the leadership of the Church. They embraced coastal stewardship as "part of the culture now. ... The whole Ward<sup>144</sup> is mobilised to go out there and plant and do whatever is needed" in other projects further up the coast, even where the church is not the project proponent. The transformation is symbolised by the presence of only one decorative item in their chapel, which is the painting of a seascape, presented to the church as part of its Coastcare Award. Its prominent display near the offices of the governing council is a deliberate effort to turn the attention of the church leaders to stewardship of the natural environment (C4).

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<sup>144</sup> The local unit (congregation or parish) of the Church of Jesus Christ Latter Day Saints

The experiences of the working on those two projects, and recognition from the Western Australian Planning Commission with the Coastcare Award have resulted in participants and the church community more generally developing “a sense of stewardship of the area, a sense of ownership” (C4). The City of Joondalup’s bushland maintenance team also encouraged a sense of ownership on the part of the participants, involving them in planning projects and interpretive education. “We wanted to increase [volunteers’] knowledge and...increase their sense of stewardship” (C4).

So awareness of the big ideas behind the coastal reserves, in combination with the physical experience of the power of coastal processes in storms and of the impact of vandalism on “their” handwork, all contributed to a deep learning experience. In addition to the biophysical learning, the social aspect of many different people from all walks of life out on the dunes “in casual clothes” (C4) getting dirty doing physical work together was also important, particularly for younger people’s developing understanding of community, of *civitas*.

It’s not easy to measure the long term impact of these activities on the church community, but the organiser asserted “I’m quite sure that those kids who participated [will] go back and show their kids what they did” (C4). This organiser subsequently became more involved in the Joondalup Community Coast Care Forum as it developed in the years since that first project.

This community group which is defined by their faith and religious practice, already had a particular concept of stewardship. The efforts of a couple of coastal champions, together with support and recognition from local and state governments, expanded that distinctive communal stewardship into an expression of civic virtue and even ecological citizenship.

### **8.2.3 Adopt-a-Coastline program in the City of Joondalup**

Another informative case is the Adopt-a-Coastline, a program initiated by the City of Joondalup about the time the JCCCF was forming, but quite independent of the latter. It assists local schools in the City of Joondalup to provide environmental education, and in turn fosters stewardship of the coast and natural areas generally (Davis & Stocker, 2006). The program has run continuously since inception, and is considered by its coordinators to be very effective at engaging “students [to] participate in a lifelong learning project about caring for the coast into the future” (L1). Originally a contract arrangement to educate groups of students at a beach site, the education program of the

City of Joondalup now offers Adopt-a Coastline to schools as a structured program, which brings together the state's curriculum in the areas of science, society and environment and active citizenship, and the city's own strategic plan for lifelong learning and active citizenship. It combines activities on a coastal site with classroom work and sometimes plant propagation back in the participating school. Two staff are involved, an education specialist and a horticulturalist. The main activity on-site is restoration of dunes impacted by human activities.

The City of Joondalup works with schools to deliver the eight-week program during the second term of the school year. A class makes four visits of about 90 minutes duration (at fortnightly intervals) to a field site. After an initial orientation, they assess survival of plants from the previous year, remove tree guards and in the remaining three visits, plant out tube seedlings. Council train the pupils in transplanting techniques, using seedlings raised jointly with the school over the preceding months. They also help students observe plants, animals and coastal processes, and answer the many questions that arise in the field. Each year applications are invited from schools and the program has run for twelve years with 4 schools at a time. There are 64 schools within the City of Joondalup.

The staff of the city council adapt the program to the needs of each school and the teachers involved: "we can tailor it to the school... it is really about active citizenship and taking part in their community" (L1). Teachers involved say the program offers "a thematic approach to all learning areas, across the whole curriculum. It is articulated with the curriculum especially because it articulates with the overarching statements" (E1). However, it is not just at the higher levels of outcome statements. The teachers surveyed for this research suggested that learning outside the class is an important supplement to class activity and that education needs to allow "multiple intelligences to emerge"<sup>145</sup>. Their educational goals for the program included helping the "students to become less aware of self and more aware of the environment" (E1).

Since education is a responsibility of the Western Australian State Government, the significant involvement of the City of Joondalup in the Adopt-a-Coastline program must fit within its strategic priorities. The restoration activities undertaken with pupils out on

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<sup>145</sup> Howard Gardner (1983) coined this term when arguing that there is a spectrum of intelligences or capacities that enable people to develop in life. Focus on the particular capacities measured by IQ testing has limited our understanding of intelligence, and in education has reduced opportunity for the development and expression of interpersonal, intrapersonal and emotional intelligence (among others) (Coleman, 1996, pp. 38-39).

site does make a small contribution to sustaining the city's natural reserves, but its main benefits are wider. The educational goals of the program can be expressed in terms similar to the praxis of virtue ethics described in Chapter 6.

From [the Operations] aspect, it's basically to try to teach the kids that the environment is important and also to give them a bit of ownership so they can put some plants in the ground and hopefully they'll come back in the years to come and not vandalise it like has happened a lot in the past. And we've noticed since we've been doing it over the last few years vandalism has actually dropped. On the coastline we used to put tree guards and things in and they used to always get wrecked. In the last couple of years we haven't had any real damage at all. (L2)

The praxis or combination of the intellectual learning and the practice of revegetation and care for planted areas led to a change in children's attitude, with increased respect for revegetated areas. The impact goes beyond personal actions of the children involved, because they act as citizens among their peers. The staff member observed:

they all meet on the weekends and they just talk to each other and I guess that just transfers through and we've definitely had considerably less vandalism. None of our plants have been vandalised this year at all at this stage. (L2)

The children's influence extends beyond to their peers to other members of their families. The Adopt-a-Coastline staff commented:

One of the things about primary school kids is they go home and give their parents a hard time. "You shouldn't be doing that because you should be recycling" or whatever the line is, so the kids will go out, and if their parents start to go over the sand dunes the kids will say "Look Mum and Dad, you shouldn't go up there because there'll be erosion" and they go and have their family Christmas and they say "Oh yeah you know you shouldn't do this....." and it just spreads like that. I guess it's like a slow moving wild fire. I think it's by word of mouth, but it's definitely having an impact. (L2)

Considering these students are less than twelve years old, their speaking up among their peers and family may be considered appropriate training for the kind of active citizenship that Clarke (1996, p. 97) called for: taking private concerns into public space. For while we could consider the family to be a private space, for a child to express their own values to family is a similar experience. As has already been noted, the staff described the program as fostering the development of "active citizenship".

The City of Joondalup staff and school teachers involved in the programme frequently used the expression of “ownership” to convey the individual’s acceptance of duty of care and responsibility for the environment, but they seldom use the term “stewardship” and their understanding of the term “stewardship of the coast” was unclear:

it indicates some sort of mentor or guidance... to guide/steer people in the right direction for taking care of the coast. That’s what stewardship means to me, and setting things in place, to actually facilitate that. (L1)

The teachers gave very articulate explanations of their program in terms of a larger discourse of citizenship, but in common with many of the people with whom this research has been discussed in casual settings, environmental stewardship was not part of their working vocabulary. One of the participating teachers described “stewardship of the coast” as “serving others/ community/ being a good citizen” (E1). Some descriptions were closer to the concepts explored in this research.

One said “not owning, but being responsible for the health and care of an area. In this way we can enjoy the environment and ensure that future generations can also enjoy” (E2). Another described stewardship saying “in this context it may imply responsibility/ ‘ownership’ of the part of the beach the students worked on. The individual/s who take responsibility for the care of something?” (E3)

While the word “stewardship” does not appear in the name or advertising of the program, nor in its content, the idea of stewardship as a civic virtue aligns closely with both the concept of active citizenship and educational models of praxis adopted by this program.

Programs like Adopt-a-Coastline are often inspired and initially driven by passionate or gifted teachers, but in order to be sustained, the program needs to be supported with resources. In this case, the local government plays a significant role in providing resources to sustain its availability to schools within its jurisdiction, sharing resources and helping manage risks of accident, at low cost. It shows how local government can provide resources for a number of schools in an ongoing program. Such easy access to resources lowers the threshold of motivation and competence required of any individual teacher to commence activities on the beach, which are surrounded by risk management protocols in Western Australia, as in most other Australian jurisdictions. The combination of expertise and resources required for the educational activity itself and

for risk management/duty of care can become insurmountable barriers for teachers. That is why teachers like “Adopt-a-Coastline”.

Even though the number of students passing through the program (about 120 each year) is small in comparison to the population, it has now been operating for 12 years and it is possible there is a multiplier effect through efforts to disseminate the news of the program via media releases to local papers and the *School Connections* magazine.

Parents will see that, the community will see it and our students may see it. That points to the fact that students have been working along these prominent sites. You can see it from the road. So it's not like it's in a hidden site. You can see it and perhaps that deters people from wanting to touch them. We try and encourage that. There really hasn't been any vandalism. And even where people do still walk through them with their dogs etc it doesn't seem to be [any vandalism]. (L 1)

These three aspects of coast care in the City of Joondalup show how the ideas of active citizenship and stewardship have animated the Council's engagement with the schools and hence the children in its boundaries. This in turn led to creation of a dynamic forum to link local citizen concerns with the business of government and the wider range of resources available for coastal stewardship.

#### **8.4 Coast care in the City of Mandurah**

The regional centre of Mandurah, about 70 km south of Perth, provides another example of a local government formalising linkages with coast care groups to facilitate community-level stewardship. Mandurah was a small holiday town as recently as the 1970s, but with improved roads along the coast, south to Bunbury and north to the Perth metropolitan area, it grew rapidly, acquiring city status in 1990. It is a classic manifestation of Australia's “sea change” phenomenon, just one hour's travel from a capital city and experiencing phenomenal population growth. The population doubled in the fifteen years to 2010, when it reached 70,413 (City of Mandurah, 2011). Along its 51 km of coastline, a string of seaside hamlets has experienced transformation from collections of holiday cottages to now include many substantial homes of commuters and retirees, as well as ever more holiday accommodation. All of this increased human pressure on the beach and coastal reserves in the City of Mandurah through increased use of the coast and its dunes by local people, holiday makers and day-visitors from metropolitan Perth.

In addition to impacts of its ribbon-pattern of development along the Indian Ocean coast, Mandurah is located in an estuarine environment. It sits at the natural discharge of the Peel-Harvey estuary system, which is heavily impacted by human land use throughout its extensive catchment. It also occupies part of the extensive Yalgorup wetlands system. Thus sustainability of coastal, wetland and estuarine ecosystems are all linked for the Mandurah region.

The city's coastcare initiatives which are described here are just a part of its overall commitment to sustainability. It joined the Cities for Climate Protection Program in 1999 and hosted Western Australia's first conference on climate change and the coast in 2007 (City of Mandurah, 2010). These institutional developments occurred in the context of the rapid expansion of urban settlement into rural farmlands, riparian bushland and coastal dune systems, as real estate in Mandurah is sold on the reputation of its coastal lifestyle.

The City of Mandurah (2005) stated that "the repair of current problems and sustainable management of the coast lies in the hands of the whole community" so "the city has been active in developing and supporting partnerships between the local coast-care group[s], schools, individuals and local organisations". The council employed staff (six full-time and three part-time in 2006) to run education programs as well as work with coastcare and other groups who exercise stewardship of natural areas. It established the Mandurah Coastcare Co-ordinating Committee (MCCC) in 1996, whose role was to "enable the Community [through a number of local] Coastcare Coordinators to advise on general coastal management issues to help protect our coast" (City of Mandurah, no date). The coordinators were drawn from the six coast-care groups which were established along the length of the coast within the council's jurisdiction, ensuring that the whole coastline was cared for.

Besides their role in community education and awareness-raising, the natural resources staff employed by the council also

...educate and empower staff [of the council] including the planners, so that they become more sensitive to the environment and reshape their plans to include [key environmental elements]. (L4)

The council reasoned that if the values of the planners are changed so that their plans better reflect values of the active environmental section of the community, then there



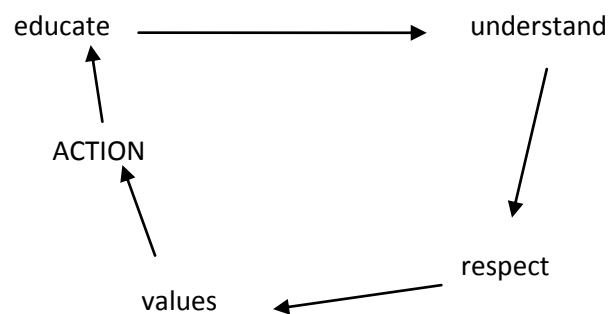
will “no longer be a need to have people in front of bulldozers on behalf of the environment. So it helps the work of the council” (L4).

The City of Mandurah promotes community-based coastcare and other forms of “care” groups, encouraging them to adopt responsibility for particular natural sites. A coast-care group has been established for each of the six coastal zones. The approach to coast-care groups adopted by the City of Mandurah reflects the provisions of the Coasts and Clean Seas Programme (1995-2002) in which all three levels of government were to be involved in partnership with the community. The Natural Resource Management (NRM) Officer explained

Coast-care groups couldn’t exist without partnership from the City of Mandurah. ...The community has the passion but not the means to implement anything. The commonwealth (sic) contributes the money for implementation. This comes from Coastwest and State Government and from the NHT wealth. (L4)

While this verbal statement contains some inaccuracies of attribution, it shows awareness of the different resources and the three roles of each level of government in the Australian federal system.

Environmental Education was accorded a high priority in the City of Mandurah. At one stage there were nine people employed in this capacity. The City of Mandurah promotes a package of stewardship education resources called “Adopt-a-beach”. This can be used with schools in the city, in a manner similar to the programme in the City of Joondalup. An NRM Officer is available to work with any school or community group who needs that assistance. One of the NRM Officers (L4) described the education process as setting up a virtuous cycle to overcome the negative impact of humans on our natural environment (Fig 8-1).



**Figure 8-1: A virtuous cycle of respect for natural spaces**

This model of behaviour (Fig. 8-1), sketched by the officer drawing on a background in education and validated in observations in the community, is an empirical example of virtue ethics developing through phronesis (Hutchings, 2010, p. 56) described in Chapter 7. The term commonly used by the NRM Officer to summarise this cycle was “taking responsibility” rather than stewardship. Through this program the relationship of children to the “natural” environment changed. By “adopting” bush or beach “they take ownership. The ownership empowers them to develop respect and look after it”. “Understanding generally leads to respect, which leads to behaviours which reduce vandalism” (L4). At this point the interests of the city council, and the carers of the coast align in a low cost strategy for environmental sustainability.

When the NRMO was asked how she understood the term “stewardship”, the response was “I guess people putting their passion or consideration into some sort of action that is correct and responsible for their area... so carrying out their values in a responsible manner” (L4). So even though “stewardship” is not a part of the regular vocabulary within this program, the ideas that it embodies are already being expressed in this program.

Mandurah Coast Care Coordinating Committee is a peak body, established to facilitate communication and coordination of community-based stewardship groups, while keeping the minutiae of coordinating the groups out of council business. It also, in theory, increases the agency of these civil society groups as they work together and expedite matters that need not be referred to the council. However there is another point of view. One Mandurah NRM Officer candidly described why she thought the City of Mandurah established the MCCC and promotes coast-care groups:

The rationale for Coastcare coordination in Mandurah is to get extra money from the government. Even if the groups don’t do anything but just have regular meetings, they are important for the council. (L4)

This comment sounds rather self-serving and perhaps a little cynical, but it does demonstrate the city council’s strategic approach to its many responsibilities in a fast-growing regional centre, where the cost of expanding its infrastructure to serve the growing population is a major issue (City of Mandurah, 2011).

In reality the groups do much more than have regular meetings. Any funds obtained through community grants programmes are committed to specific project activities thereby indicating the engagement of those groups in coastal stewardship. Some groups don't consider themselves to be particularly active in the face of the massive scale of the issues that they confront. The NRMO laments that "Sometimes I think all people in a group just have the same passion to clean up rubbish and attend planting days etc, but we have few members and few activities" (L4). Yet in spite of the lack of organised group activities, "most of my group members do individual acts of cleaning up etc. They carry their plastic bag along the beach" (L4) doing their own voluntary work.

However, as indicated in the introduction to this case study, the work of the groups and the Natural Resource Management Officers (NRMO) is not limited to mobilising volunteers. They also play a role in transforming the business community's ideas of what it considers to be "usual". It aims to disarm some of the institutionalised threats to coastal sustainability like encroachment of hostile urban sub-divisions.

The NRMOs help educate, leading to better planning and values changed so there is no longer any need to have people in front of bulldozers on behalf of the environment. (L4)

These observations demonstrate that members of a local community are often very willing to accept a modest role in stewardship of public or common property spaces, but may need some encouragement or social affirmation to translate their personal concern into action in the public space (or commons), where they see signs that they are not working in vain against commerce and officialdom.

### **Community coast-care groups**

The local coast-care groups play an important role in enabling individuals to translate their personal love and concern for the coast into practical actions.

The groups accept responsibility [for a designated coast] as volunteers. A lot of people respect nature but don't take action when left to their own. But people join the groups so they can take action.

For many people it is as simple as just picking up rubbish and taking it home. For some it is more organised participation in planting days. (L4)

The shared values and social affirmation individuals receive in the coast-care group enable or empower them to articulate their values into practices for which they may

receive some training, and perhaps eventually through repetition this way of thinking develops into their disposition.

The coordinators are the means for the city council to influence the coast-care groups, but also the means it seeks to be informed of their needs. One of the six Coastcare Group Coordinators took his voluntary position as coordinator and representative on the MCCC because he wanted “to be actively involved in looking after the beach in (...) and that was the job they gave me” (C5). He went on to say there are

three basic things that I want to achieve along the beach, and that is to stabilise the sand, plant shrubs and keep it clean. ... if I can have support to do those three things I'll continue to do it with the coast, with the City of Mandurah. But if I didn't have support I wouldn't do it. I would still do it personally, but if they're not going to toe the line or help with someone who's a volunteer, I wouldn't do it. (C5)

So here is a very highly motivated individual who has technical expertise in horticulture and revegetation, wants to make a difference, and willing to work within council policy and plans. He personally demonstrates the high level of motivation and readiness that many coast-care group members share in relation to taking personal action in the coastal commons.

I would use my own vehicle, my own trailer and I would get down to the beach and spread my own brushing.

Yeah, and I would grow my own plants and put them on the beach, and take my own shovel and rake and pick up muck.

This level of personnel stewardship activity was not a response to representations from the City of Mandurah or Coastcare staff, but was something he started out of his own initiative.

I did, but I never felt comfortable doing it [brushing and planting] because I thought well, should I be doing it? I must be breaking some law here, insurance or... I'm doing this. But I thought well blow it, no. Just because of my surfing background I thought no, the beach is me and I'm the beach, so I'm doing it anyway. (C5)

These comments highlight another important role for community-based stewardship arrangements like Mandurah Coastcare. Some people, like this respondent, have their own ideas about what should be done, which may be very well intentioned, but out of step with a wider consensus of what constitutes “best practice”. Within toleration limits, this respondent is willing to work within the council's plan. The council in turn is

always really obliging on the phone if I need a vehicle or a trailer, I've got access to it. If I need money to cover expenses, there's money there. If something is going to be done along my beach, I call my beach, our beach, they'll ring me up before it happens just to let me know, so nothing's a shock. They really value your opinion and your local knowledge, so it's just not, they don't pay just lip-service to our group. They actually do listen. (C5)

Normally this level of support may only be provided to community groups, not for individuals. Yet by engaging people with high motivation and perhaps propensity to go out and do their own work like this person, their activities can be directed into plans and protocols that reduce risk of unintentional harm to people or ecosystem.

The City of Mandurah has an “overall plan ... for the coast and different things have been identified in the plan” (C5) and the coordinators take responsibility for their section of the plan. However, as noted above, the Coastal Coordinating Committee also advises the Council on wider coastal matters. “We discuss some big issues which have an impact on the whole city from time to time” such as a “development which was potentially going to encroach onto the foreshore strip along the beach” (C5). At those times the practical matters of on-ground or “hands on” stewardship are squeezed off the agenda, but the committee's views on matters such as major development issues are “fed back to the council and they listen to our voice, which is good as well”. In this way the council maintains a feedback loop between community stewardship practitioners and the planners and policy makers.

The Bouvard Coastcare Group formed in 1996 (City of Mandurah, 2005) and is one of Mandurah's coast-care groups whose scope has gone far beyond individual acts of cleaning up a beach to significant contributions to coastal management. The members share “a sense of stewardship of the coast” which is expressed inter alia in “greater community ownership of the dunes” (Bouvard Coastcare Group, 2005). One of the initial factors uniting them was their shared sense that their vision for their holiday hamlet was under threat from the advancing front of urbanisation. However over the years since then, the Bouvard Coastcare Group developed into a significant stewardship body, seeking to influence public policy, personal behaviour of beach users and to restore and protect the coastal reserves within their jurisdiction. Their work was recognised as an “Outstanding Community Group Effort” at the State Coastal Conference in 2005. However this group consisted of only 10 local residents assisted by extra volunteers who attended advertised work days (City of Mandurah, no date, p. 3).

The nomination for that award described the group as managing “land in public ownership, such as the Yalgorup National Park, as well as land vested [in] the City of Mandurah and some areas of vacant Crown Land along the coast” (City of Mandurah, no date, p. 5).

The Bouvard Group is very passionate about stopping four-wheel drive vehicles in CALM reserves. They are banding together to solve a local problem. (L4)

Their concern about vehicle damage includes the Yalgorup National Park, which comprises the greatest area of coastal reserve within the Melros area. Closer to their homes, other issues arousing their passion include the use of off-road motorcycles and sand boarding on the fore-dunes. At least one member of the group was authorised by the City of Mandurah as an honorary Ranger enabling him to issue penalties to people contravening council by-laws.

Like many coast-care groups in Western Australia, the Bouvard Coastcare Group worked on improved design and formalisation of access ways to the beach, restricting vehicles in the coastal system and education activities as preventative strategies. Where blow-outs had already occurred, they did some restoration of dune vegetation. They received \$56,600 in 1998 and 1999 for two projects to protect and rehabilitate dunes at Tim’s Thicket. By the last funding round in 2003, the Bouvard group had brought \$82,624 into the area from Coastwest/Coastcare for projects, most of which were rehabilitation related, although they did commission some serious technical products to inform the rehabilitation. As a result of their work there has been “increased community knowledge” and “greater community ownership of the dunes” in the Cape Bouvard area (City of Mandurah, 2005).

The story of this group illustrates how individuals may unite around a common threat, particularly when motivated by the "Not In My Backyard" (NIMBY) syndrome. With appropriate encouragement and support from local government and the State-employed Regional Coastcare Facilitator, the group and its membership became a significant part of coastal management for a vulnerable area in jurisdictions shared by the city of Mandurah and the Department of Environment and Conservation (then the Dept. of CALM). There is a sense in which having brought their personal values and issues about coastal development into the public arena, they became more open to taking on concern for the greater common good. This is similar to the argument made by Clarke (1996) that participation in the public arena leads to the emergence of a deeper

citizenship. For the Bouvard Coastcare Group, the MCCC was an essential partner in their applications for large grants, as was the Coastwest/Coastcare program. Without the linkages to council and to the Department of CALM (as it was then) it could not have been so proactive, but would have remained just another lobby group protesting against urban expansion.

### **8.5 Leeuwin Conservation Group**

The Leeuwin Conservation Group (LCG) in the Shire of Augusta-Margaret River was formed in 1970 as an environmental lobby group opposed to sand mining on the Blackwood River. It became incorporated in 1972. Thirty three years later, on 29 May 2003, the organisation was wound up due to its inability to pay court costs arising from an unsuccessful writ served against the WA Planning Commission for its approval of residential subdivisions at Gnarabup. This was a conservation organisation which put the cause it espoused ahead of its own survival. Yet although the group commenced and ended its existence in the thick of environmental activism, along the way its members also became involved in local stewardship activities on the ground, including projects funded by Coastwest/Coastcare grants.

Former office-bearers were interviewed to learn about their perceptions of stewardship and citizenship as they relate to political activism and practical caring for place. The respondents became involved in the LCG in the mid-1980s and had leadership roles in the organisation at some time during their participation.

At its peak, the LCG had about 150 members, but most of the time its membership ranged from 50 to 80, the majority of whom lived within the shire of Augusta-Margaret River. Being a significant holiday destination, Augusta-Margaret River has always had a significant number of absentee landowners, some of whom were able to contribute to the organisation's campaigns by drawing on their broader experience in science or politics. Each respondent had at some time, lived away from the region, or migrated in, bringing with them analytical and communication skills which, combined with passion fed by their sense of place, contributed to the effectiveness of the organisation. Their key successes were opposition to a proposal to replace native forest with plantations on the Donnybrook sunk-lands, opposition to sand mining at Beenyup, and supporting Bramley Forest Block's gazettal as reserved forest.

The most active group members engaged at close quarters with the Environment Protection Authority, Shire Council and government agencies. They were able to do so

because of their own capacity to engage with the existing mechanisms for public participation in environmental policy making and to network with key allies in the “environmental” community in Perth.

We got access to government, to ministers etc

... our submissions were based on sound thinking, particularly because we involved experts and students. The addressed planning, conservation and community impacts and had sound ideas. (C3)

We had a group of people who had trained themselves in well-reasoned argument. It takes a lot of time and it's a valuable skill. (C2)

In 1998 the LCG, working with the Department of CALM, received a Coastwest/Coastcare grant of \$13,930 to rehabilitate blowouts on the Kilcarnup Cliffs at Cape Mentelle. The following year, they received another grant of \$8,360 for rehabilitation of Boodjidup beach. Both of these projects involved closing off some access ways, planting and laying brush to revegetate the dunes. The work at Boodjidup generated some conflict with beach users who wanted to continue driving onto the dunes that were being revegetated.

Considering the amount of physical work involved in these projects, and that the group had already achieved relative effectiveness in its environmental activism, why did the group become involved in the physical activities of coastal site-works?

Well, the work needed to be done.

...the coast has been carved up by 4WDs. There were tracks going everywhere. And you know B, he's the man that gets down the coast a lot. I love it, I spent years and years (I don't do it any more) down there like fishing and walking along the beach and so forth, swimming and ... Yeah so, I just thought some of these places, these tracks they needed to be shut down. It was a bloody shocker! Some of the most extraordinary beautiful places like Kilcarnup was just, it was just a mess over the cliffs. So this was one way that we could get in and actually get these things protected. So the idea was we would stop the 4WDs getting in there and rehabilitate them, and that's what we did. It took about 7 years and so all up I suppose made about \$100,000 in both places. And yeah, so it's there, and you go down and the gates are still in place and the rehabilitation's been done.

I mean the idea was to turn Boodjidup back into a wilderness beach, this beautiful wilderness beach, which was done. And if people want to go down there, they walk down there. And Kilcarnup, we just stopped them driving all over the cliffs and CALM



came in and they did all sorts of landscape work there. And yeah, we put the path through and rehabilitated areas so it's pretty positive stuff. (C1)

Like many groups which took on projects supported by Coastwest/Coastcare grants, the LCG found this project to be far bigger and took longer to complete than they initially imagined. It also involved them in conflict with some members of the public. The project involved installing a gate on a key access point from the car-park to restrict vehicle movement to rehabilitation work and official management vehicles. Fishers and surfers had been driving from that car park into the dunes to access the beach along the coast. Initially the gates themselves were destroyed or damaged by people determined to continue driving into those dunes, but as the informant describes, eventually vehicle access was stopped and with additional help from brushing and revegetation, the eroded areas were rehabilitated.

The dune rehabilitation project was itself a form of political action. It arose from participants' views concerning how the coastal environment should be experienced ("this beautiful wilderness beach") and treated or managed. While it involved practical actions of care similar to an act of litter removal, it also drew the group members into contesting in the public sphere concepts of personal freedom and responsibility, public property and personal rights.

A former member described some of the tension felt by environmental activists when trying to address the large-scale, long term land-use planning issues while also engaged in practical stewardship of heavily impacted sites.

So seeing the impact of putting people here without putting any infrastructure in - you know, no [formal] access to the beach, no protection whatsoever - how quickly it degraded and yet being involved in the rehab, you know how quickly it can heal. But on the other hand you are always behind the eight-ball. So the work we were doing in the [local] Progress Association and the work [L1] had been doing was catching up on bad planning 10, 15, 20 years ago. When do we actually get to the point where we're now at least level pegging or something? It just seems a monstrous thing to impose on community groups to get them to, you know, manage books and grants and do the voluntary work. And to have the community input disregarded when the political force is pushing in another direction. (C2)

This latter comment indicates the kinds of pressures many volunteers feel when working to protect natural places from localised degradation in the face of larger impacts from land use planning decisions. It also demonstrates how, in spite of the effort required to

participate in the practical activities of restoration projects, some people are also drawn into environmental advocacy or into local government. They want to influence the wider environment which impacts on “their patch”. One of the interesting facets of the community coastcare network is the way that groups have provided a space for people with these different levels of motivation to meet and work together.

So there are a lot of people who don't want to go to meetings you know. They would far rather do the practical work and never have anything to do with a meeting, and then there are people who know they're good at the meeting/submission type things, but there's a cross-over point too. [One of the women involved] here has been very strongly involved in the political/legal goings on. (C2)

For some people, participation in restoration activities is a form of recreation or even therapy! The following quotes come from a volunteer with another organisation in the same Local Government Area (LGA). They reflect a different point of departure in an LGA where there was such intense environmental activism as they reflect different relationships with the same Local Government.

I began focusing on coastcare as form of therapy for an extremely busy life. We were running a business, had young kids, building houses, you know the story. A friend and I would spend one morning a week brushing and planting at Redgate beach, having a swim and sharing morning tea. It was relaxing, made me feel good to be productive and ensured I spent regular time at the coast. Because I was busy, I felt that the last thing I wanted to do was to involve myself with bureaucracy or waste time trying to organise other people to come along and help. It seemed easier to just get on with it ourselves. (Broadhurst, 2007)

For one member, partnership with the local council was important, for the council “had some truly passionate people keen to see the coast preserved despite the growing pressures. All the paper work was taken care of, and our job was to keep doing what we love, tending the damaged dunes” (Broadhurst, 2007). This enabled the volunteers to participate without accepting responsibility for managing projects. One of the benefits to the council was the way this partnership met the eligibility criteria for Coastwest/Coastcare grants for projects that might be seen as almost falling into the responsibility of the council as Coastal Manager, such as a 1.3 km pathway which focused pedestrian traffic onto a hard surfaced path (rationalise access) rather than leaving it unregulated throughout the fragile fore-dunes at Gnarabup.

Eventually this volunteer with a self-confessed “phobia to grants” (sic) found herself in the position of writing up an application for project funding. This volunteer who became involved in “coastcare as a form of therapy” found:

We have also become part of a wide network that I had no idea existed. ...our local Cape to Cape Catchments Group...have invited us to many workshops and assisted us to hold our own. COASTSWAP, which is a regional group, enables us to meet other stakeholders and share information, South West Catchments Council, which is a community representative body that coordinates natural resources management in the South West Region provides us with information...South West Development Commission provides information and funds. (Broadhurst, 2007)

This widening circle of contacts and the web of organisations involved in NRM was described to a Community Coastcare Forum in Denmark in 2007, not as a problem, but as a source of assistance to the community volunteers. It seems that through this experience she became empowered to act as a citizen, influencing the application of policy and programs in her local community.

Some years after the dissolution of the LCG, the respondents continue to see value in “on-ground” restoration work in spite of seeing the large scale demolition of some of those values in the housing development which they unsuccessfully opposed. For example C1 commented that now

I’m the Vice President and Secretary of the (xyz) Catchment Group, so I’m involved in that on-ground stuff at the moment too, with that group. And I think it’s really worthwhile, you know. (C1)

The comments from these and other community volunteers involved in coastal stewardship reveal the layered and changing nature of their experience. Although some (or possible all) of the motivations for involvement may be very personal and short term or immediate, by engaging with the environmental processes in the coastal landscape, they are drawn into the larger time-frames and scales over which the latter operate. Perhaps they begin to experience a greater awareness of the importance of public policy and civic action and an openness to become personally involved. Paulin (2007) has drawn attention to the dangers of community groups being disempowered by government programs, but there is no expression of this in Broadhurst’s account of her experiences.

## **8.6 Coastcare in the City of Stirling**

The City of Stirling local government area encompasses some of metropolitan Perth's most high use, high profile beaches and has a major thoroughfare (West Coast Highway) built very close to the primary sand dunes overlying limestone. The city also encompasses Star Swamp, which in the 1970s was still covered by some bushland and regrowth of some significance and capable of regeneration but not protected with reserve status. The preservation of Star Swamp as the result of major battle by local community groups (Friends of Star Swamp) and more distant supporters heralded the emergence of many other "friends groups" in civil society in greater metropolitan Perth.

Stirling City Council, like other councils, sought to control or organise the demands of these environmental groups by providing them with representation in council advisory committees. A Coastal Advisory Committee was established around 1993 "to provide a means of communication between the city of Stirling and the community concerning the management of the city's coastal zone" (Terms of Reference, 2000). Its membership comprised ex officio members of the City of Stirling, councillors including those elected from Coastal Ward, and representatives nominated by each of a number of specified beach related organisations and local community associations. This is hardly surprising given the high use and profile of Scarborough and Trigg Beaches.

Scarborough has the only high-rise (24 levels) hotel on the metropolitan beach-front, built in 1986 for the America's Cup sailing regatta off Fremantle.

In 2000, five graduate students from the University of WA and Edith Cowan University sought to establish a coast-care group for Scarborough and Trigg beaches. This was welcomed by the Works Manager of the City of Stirling, because maintaining cleanliness and infrastructure at these two beaches was costly to the City Council. In September 2000, Council approved a recommendation to "endorse the Coastcare process" and "the establishment of a community coastcare group to mainly serve the Scarborough and Trigg beach areas". A report to the council stated "this coastcare group is not one that will lead to another unmanageable community group" reflecting the council's experience with civil society groups opposing the hotel construction or attempting to preserve remnant natural vegetation within the city's jurisdiction. In this case, the council was advised that "a coastcare group could become the means to promote community awareness and seek cooperation in the resolution of public use issues" (City of Stirling, 2000) and it authorised staff to assist with publicity, a public

forum, and formalisation of relationship of the group to council and its Coastal Management Advisory Committee in particular.

In August 2001 the Stirling City Council agreed to “INVITE<sup>146</sup> the Stirling Coastcare to meet with the Coastal Advisory Committee with the view that there is one formal committee” (City of Stirling, 2001). This suggests there were some issues around who was on the committee. Coastcare was considered a resource for the City of Stirling in its struggle to cope with the “sizeable number of continuing issues [which] were identified involving public misuse or mistreatment of coastal dune systems and public facilities”. The Executive Manager for Works advised the council

it is important to recognise that regulation and policing will only partly resolve these issues and that it actually requires community-oriented strategies to overcome community-generated problems. Coastcare simply dwells on this principle to bring about a ‘user-caring’ community ethos to our coastal environment. (City of Stirling, 2001).

The minutes of council meetings indicate its hope that the coast-care group will provide support from within the community to counter or control “antisocial” behaviour which damaged assets and natural areas whose maintenance was the responsibility of the city council. It indicates an instrumental view of the coast-care group. No mention is made of any role for this group in contributing to planning decisions, whether approval of construction plans or council operations planning. The council was simply hoping for more compliant, careful beach users. However that was not to be. At least one of the Stirling Coastcare committee members was a “supporting activist” (C8) in the campaign against subdividing Star Swamp for housing. He was also in campaigns against a major arterial highway terminating near the coast in the City of Stirling and eventually would bring that awareness and willingness confront authority into the work of Stirling Coastcare. One of the consequences arising from the inception of Stirling Coastcare, was that the City of Stirling joined other metropolitan councils in supporting the Regional Coastal Facilitator with an annual contribution of \$2,000 (City of Stirling, 2003).

In 2002 when the group was just getting established, the Regional Coastal Facilitator (Coastcare) had described Stirling Coastcare as:

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<sup>146</sup> upper case in the original

a small but enthusiastic group who are dedicated to protecting the dunes from Scarborough to Trigg. Stirling Coastcare hopes to gain the support of the City of Stirling as they endeavour to undertake projects on council land in the near future. (Ronalds, 2002, p. 6)

In her case study of Stirling Coastcare, Carter (2003) reports that the group was still struggling to obtain council support when they obtained a grant for \$9,000 “in the 2002-2003 round” of Envirofund. Carter observed that due to loss of a key founding member, Stirling Coastcare was unable to accept this grant. This is reflected in its absence from Envirofund reports. However, the awarding of the grant itself helped the council to realise that Stirling Coastcare was a potential asset and sought to re-invigorate some new leadership (Carter, 2003, p. 68). Stirling Coastcare did re-organise, but the following year a “re-application” for a revegetation project was unsuccessful. Stirling Coastcare Association only obtained an ABN from the Australian Tax Office (ATO) in June 2004. Neither this group nor the City of Stirling have ever obtained Coastwest funding for projects, a surprising contrast with its neighbours in Cottesloe, Cambridge and Joondalup!

Carter (2003, pp. 70,71) found that Stirling Coastcare had no committee or organisational structure in 2003. She observed that coastal planning in Stirling was more focussed “on the provision of infrastructure and not on the sustainable management of natural areas”. She observed “there is resentment that the local council is the primary bearer of the significant costs ... of coastal management within Stirling” (Carter, 2003, p. 72). In the years following Carter’s research, Stirling Coastcare did manage to form a committee, but there were ongoing tensions within the group. By 2008, conflict within the group over who were the legitimate office-bearers was at a peak. No doubt there were personal and local politics fuelling the conflict, but according to the respondents, the conflict was, at least in part, also fuelled by divergent visions of what the coast should look like.

Differing view of what public infrastructure council could construct on the coastal reserves continued to be a bone of contention between councillors involved in the group and the people who were then on the verge of forming a new group:

...we’re exactly the opposite. We’re wanting to work with the environment and also then what comes into it as well, is climate change, biodiversity, having a bigger linkage and getting away from this fragmentation of the environment, and that’s what’s happening with the City going in and cutting bits and pieces out and fragmenting the

whole coastline. That's what we're trying to stop. That's why we're strong on the environmental side. Because every time we hear there's money for the coast, and there's big money, it ends up being spent on the infrastructure, not on the environmental side of the foreshore. (C7)

On the other hand the members interviewed said that, in line with the original recommendations to the council in 2000, the City of Stirling gave them "a couple of areas" in which to work:

and that's the way we were supposed to work and maybe the linkage of those two areas, Waterman's and North Beach. And we were working at North Beach and they had this jetty here [indicates on aerial photo] and all these rocks in here and had it closed off. (C7)

The respondents became frustrated by the small impact their work was having in these focus areas where council was also impacting the natural vegetation with infrastructure, while the large areas of coastal vegetation were gradually being infested with weeds that could be controlled more easily by protecting the better areas as first priority.

I was looking at it and I'm saying, well, we're here doing this great job in this little area, and over here there is more damage happening there than what we're making good here. So what's the use of doing that if that's happening! So that's when we got involved in sort of looking at a wider scope. And then I said, well I've got to look over the six and a half km of Stirling Beach, and then looking at priorities, like we had *Lachenalia* infestations, and *Lachenalia* gets away by 30% a year and I thought, well if I can do something about it now, then I won't have to do five times the area in a couple of years' time. (C7)

This frustration, together with opposing views within the Stirling Coastcare Association over the merits of locating and installing particular infrastructure, contributed to political division and a rift from which two community coast-care groups emerged just about the time of the interviews. Stirling Natural Environment Coastcare Inc. was formed in late 2008. It registered for an ABN in Jan 2009. Although West Coastcare Inc. only registered for an ABN in March 2012, it received a grant of \$4,080 from Envirofund (Round 10) in 2007-08 to revegetate dunes near Waterman's Bay, so it must have incorporated early in the year. In the Summer 2009 edition of *Coastlines* a two-page article describes the work of Stirling Coastcare as a distinct entity, but the article is written under the title of "natural environment coastcare in Stirling" (Kolb, 2009).

By formally separating into two separate entities, the conflicting parties within the former Stirling Coastcare Inc. were able to reduce their conflict. Their different foci have enabled them to come to a working compromise with the City of Stirling. West Coastcare Inc. focuses more on some particular localities, whereas Stirling Natural Areas Coastcare Inc. “looks at the bigger picture” (N2) such as a weed strategy for the whole coastal reserve system of the City of Stirling, using GIS maps of all the heavy weed infestations in the coastal reserves.

Although Stirling Natural Environments Coastcare Inc. had not received any large grants from the state or commonwealth community NRM programs when members were interviewed, they considered they had a role in supporting the council.

the natural areas [staff working for the council] who are responsible for managing the environmental side, that’s non-infrastructure, on the coast are actually funded peanuts to do the job. So for us, we’re there really to support them and to do, pick up shortfalls if we possibly can, and to apply for funding that will help them meet, and raise the level of the overall management of their coastline. That’s really what we’re trying to do. (C7)

Soon after that, in the 2008 special Community Coastcare round of funding from Caring for our Country, Stirling Natural Environments Coastcare Inc. received \$10,082 for a project to work with the Stirling City Council weeding the natural areas and promote the use of non-invasive plants in cultivated gardens. In 2009 the group received a special commendation in the Community Group Effort category of the WA Coastal Awards for Excellence. The group then received a Community Action Grant of \$19,728 in the 2009-10 round of Caring for our Country. Right to the end of 2012 the group profile featured on the home page of Caring for our Country<sup>147</sup>. It highlighted their work on this project to rehabilitate a section of coastal reserve by removing weeds and replanting with indigenous plants<sup>148</sup>.

In spite of expressing support for the council, they remained critical of its role in stewardship of the coast:

...the problem with stewardship, is having the commitment from local government to be able to support a high level of stewardship on the coast. I don’t think they’re able to at the moment... because they’re responsible to their councillors who are representing

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<sup>147</sup> <http://www.nrm.gov.au/index.html>

<sup>148</sup> Accessed Dec 2012 at <http://www.nrm.gov.au/projects/cag/wa/rehabilitating/index.html>



their community. It's not supporting the environment or the stewardship of maintaining a biodiverse environment that supports an Australian environment. (C8)

This comment demonstrates how strongly the notion of a “natural” coastal environment informs the position taken and the action of these community volunteers and activists. Their disagreement with, and opposition to councillors who are elected community representatives, raises one of the difficulties with practice of strong citizenship: what if an agenda for citizen action runs counter to the legitimate, democratically elected authority? In representative democracy the pressure point on which citizens can best exercise agency is at the ballot box. But here there are citizens “annoying” the executive staff of the council and engaging in ongoing conflict with some councillors. In practice, at least in the case of weeding and regeneration of natural vegetation, some level of compromise is essential for any action to take place, because the land is under the control of the council and the work is slow and requires considerable effort.

The key respondents expressed their understanding of stewardship in a manner similar to farmers, likening it to an inheritance. “Stewardship means we inherited something and I’ve got to look after it for future generations. That’s what it really means to me” (C7). Another said “Well I’ve always wanted to try and leave it in a better state to what you found it. You are responsible for looking after it” (C8).

### **8.7 Discussion**

These cases demonstrate some of the key issues that arise in official efforts to foster what Chapter 7 has described as stewardship, active citizenship or civic virtue. There are interesting and important lessons about education, learning and citizenship.

Providing support for stewardship groups helps sustain the voluntary activity of their members. At least some individuals who engage in caring for the coast (a form of stewardship of commons) became more engaged with local government, and some with other levels of government. This engagement from amateur, community members can be messy and even tense, but can be beneficial for the local government or agency involved.

The cities of Mandurah and Joondalup assigned a high level of importance to civic education. Staff in both councils described “active citizenship” as a key educational objective for their work with schools. McKinley and Fletcher’s (2012, p. 842) idea of marine citizenship, is an example of what the staff mean by active citizenship. They want individuals to act in a personally responsible manner which does not damage

environmental and civic assets. Their indicator of achievement of this objective is the decrease in reports of young people damaging vegetation or infrastructure.

Matsuda (2009) said there are two important levels of education for active citizenship, basic and applied. “Basic education” for skills and knowledge is typical of the kind of education taking place in schools. “Applied education” enables participants to learn “how to deal with policy problems and how to collaborate with others” (Matsuda, 2009, p. 238). The Mandurah and Joondalup programs for schools aim for these outcomes of cooperation and problem solving skills through structured experience on the beach. Adult members of the coast-care groups and their peak coordinating bodies can also be said to experience “applied education” (Matsuda, 2009, p. 238) through their participation, peer learning and input from technical advisers in local government or the coastcare network. Even the members of the now dissolved Leeuwin Conservation Group noted with some pride how their competence in researching policy issues and writing submissions grew during their involvement in the group, giving them increasing capacity to contribute into the policy processes of local and state governments.

Technical knowledge and skills were acquired by members within all the groups. They learnt about the ecology of their coastal areas and about the coastal processes that continually reshape the shore. Some members of the Joondalup and Stirling groups became expert in weed management and revegetation. Assistance from their council staff, as well as from coastal and marine facilitators funded through the Commonwealth Government programs was important in developing technical capacity. Government for its part sought to utilise the stewardship role of its citizens as an alternative to enforcement on the one hand and remedial activities to repair damage to public or common property on the other hand. What is interesting about the cases of Joondalup and Mandurah is that the councils invested in their citizens, enabling them to have a meaningful role and satisfying effect through access to council resources. The availability of Coastwest/Coastcare grants opened new possibilities for stewardship by the groups. The Joondalup, Stirling and Mandurah councils welcomed the access to external funding, because it increased the resources available to manage some of the natural areas within their jurisdiction.

There are concerns over many small grants given to community groups. In 2005 the Australian Local Government Association noted criticism from coastal councils for the “ad hoc nature of environment grants with few programs providing recurring funding, a

task requiring the use of scarce council resources” (Australian Local Government Association, 2005, p. 3). However a national facilitator described the importance of linking small projects into wider networks:

The difficulty with development on the coast being left to individual groups is just ridiculous, absolutely ridiculous. Yes they can be a tool, but they need to be supported a lot more. And I do think that there still needs to be some sort of volunteer work. I can't see otherwise how it can be done because, again, councils, regional [NRM] bodies don't have the staff. They don't have the money. I mean they might put plans together, but who actually continues to manage it and oversight it? So to a degree ... there has to be more support for community groups and it has to be localised and there has to be real ownership of this stretch of beach really. But linking them up I think will be one of the best ways to go. (A1)

Some of the linking happens through the JCCCF and the Mandurah CCCF. As already described, the state government's coastal planning programme also provides coherence to individual sites within the framework of state coastal planning.

Active stewardship of public assets by individuals in the groups led some of them to participate in governance. The JCCCF is the most mature expression of local government creating a mechanism to allow community members to take up responsibilities that the council itself could not manage with its limited resources. The need to manage occasional friction between community members and its staff pose a kind of transaction cost on the relationship. Aulich (2009) observed that in spite of attempts to engage citizens in governance, there are not many expressions of participation in Australia. The Joondalup case provides an insight into what might be involved in participatory governance.

Citizen engagement for the sake of public good can be fragile. It requires nourishing. The comradeship of the group and the satisfaction from small restoration projects build members' appetite for ongoing civic engagement at other levels. Even the bruising experienced by Leeuwin Conservation Group found some degree of healing in the practices of caring for a patch of coast. However group members also feel pressured by administrative processes associated with grants and activism. Practical and financial support are ways to enable groups to do more themselves, and in turn have productive partnership with local government, the land manager.

Gardner (1993) classified Environmental NGOs in Canada as either advocacy groups who “strengthen and expand the accountability of government” or stewardship groups who “service the recreational and social needs of ENGO members and mount projects to protect the environment” (Gardner, 1993, p. 67). For the groups in Western Australia described here, this dichotomy breaks down or dissolves. The group members moved towards embracing both of these activities. In part this is because of the small scale at which they operated. As local residents, their experience and love of place, the narratives of meaning and purpose which inform their ethics and the performance of stewardship activities reinforced an ethical disposition of stewardship. Lerner (1993, pp. 5-6) suggests that since “people tend to have strong concern for and commitment to anything in which they invest time and effort” environmental stewardship group members “develop broader environmental interests and a stronger personal identification with nature”. Many participants also find they become politicised and “part of an active, effective environmental constituency”.

The advocacy or political activity of the members or groups as a whole is very rational, considering that ownership of the coastal public spaces over which they exercise their stewardship is vested in one of the three levels of government and in most of these cases, local government. So any discussion of longer term sustainability issues means they have to engage with local government, where the decisions about resource allocation and land use planning are made. In Mandurah and Joondalup the coastal coordinating group and community forum provide a dialogical space where representatives of the council, who respect the community groups, and community representatives, who appreciate the complexity of their council’s responsibilities, can thrash out some of the issues in a process that is underpinned by expectations of resolution rather than openly contested politics.

The broad population of coast-care group members envisage the Australian coast cloaked in natural vegetation, as can be seen from the origins of dune care narrated in Chapter 4. A common thread of revegetation, rehabilitation and protecting vegetation runs through these cases. One group fought against development planning decisions, as well as thoughtless users of coastal access. Another small group battled their local council to retain vegetation in small coastal reserves rather than recreational infrastructure, or highly managed landscapes like lawns. In these ways they seek to preserve a strip of wilderness, often between urban settlement and the sea. The coastal reserves may be considered as the domestication of wilderness, even as these group

members work to maintain their “wildness”. In their vulnerable situation between human activity and tough environmental conditions, Cronon’s (1995, p.89) observation is especially true, that these small patches of wildness “depend on our management and care. We are responsible” for their survival and integrity. Their survival has added importance in light of rising global climate change. It is possible that the coastal landforms and vegetation that have evolved in this unstable environment are those most suited to adapting to the ongoing forces for change that are part of global warming and rising sea-levels.

### **8.8 Conclusion**

These cases of community stewardship groups and their engagement with local government are examples of the principles advanced in Chapters 6 and 7 regarding what happens when local residents become involved in the practice of stewardship. Through that experience they are open to the virtues of stewardship and may take on more public roles for the civic good. These cases indicate the important roles which government initiatives play in complementing, supporting and guiding the energy and passion that drives grassroots community action.

The national Coastcare programme was an important catalyst for these groups to form and councils to develop integrating institutions. Other government community support programs such as *Bushcare* also played a role. This underscores the need for these kinds of government programs to ensure that community capacity development is a part of their goals and to try and ensure that the evaluation criteria include some measures to evaluate its achievement. As Chapters 4 and 5 made clear, this has not happened to date. Dobson (2007, p.285) warns that the experience of groups like these has contributed numerous narratives and a “whole vocabulary of action” which “is going to waste” because of changing government policy and a failure to evaluate these key elements.

Education is really important. Knowledge of coastal processes and local flora and fauna feature high on the learning agenda of group members, many of whom did not know a lot about them when they joined the group. The West Australian Herbarium, Department of Environment and others, mediated often by the regional coastcare/coastal coordinators have contributed a lot to community knowledge of coastal systems, and management. Peer to peer sharing of skills is also an important activity for which government support may be required into the longer term future.

If local actors operate solely from within the perspective of their own homes and personal sense of place, conflict between stakeholders with alternative visions can arise. Similarly there can be a failure to “join up the dots” for environmental, social and even economic processes across the larger landscape resulting in unforeseen conflicts or degradation, so it is important that local actors engage with the processes and institutions of government (local and state) which provide strategic planning of land uses when the actions of these actors take place in the commons. These stories of coastcare group members’ involvement in broader planning and policy making initiatives show how initial motivation (which may come from personal values and sense of place) develops into a broader and more inclusive citizenship as a result of accepting a stewardship role.

The examples presented here illustrate how active citizenship can develop when governments allow, or better still encourage, it to happen. It is possible to also see at work a form of stewardship as virtue ethic developing as people participate in stewardship activities, reflect on them, seek the information they require, and through reiterations of these cycles acquire or strengthen values of respect, care and notions of the public good.

If government programs are valued not only in terms of their biophysical outcomes, but also in terms of fostering the virtue of stewardship thinking and behaviour, then programs such as Coastwest and Coastcare could be seen as contributing to moral capital, in addition to the rather more commonly expressed purpose of ensuring the sustainability of environmental capital.

## **Chapter 9 Strengthening civic stewardship in Western Australia: towards an *enabling State***

### **9.1 Introduction**

This dissertation addresses the daunting policy challenge of how best to sustain the Western Australian coastal and marine commons. Much of the damage to the world's oceans derives from human activity on the coast, and coasts themselves are under threat from rising human populations with ever more intrusive technology in their hands. The challenge in Western Australia is particularly acute. There are 20,780 kilometres of coast and the main human population is concentrated in the south-west corner, leaving few resources for management or environmental management in the remote areas. Many stakeholders compete for their particular interests in coastal and marine resources. The challenge for their sustainability has been well expressed by McKinley and Fletcher (2012, p.839) as how to mobilise individual citizens to take greater personal responsibility for the impact of their direct use of these ecosystems, for their consumer choices whose impacts flow through the economy to impact coasts and oceans and to mobilise their participation in policies and governance processes to ensure ongoing sustainability of coasts and oceans.

Part one of this dissertation showed that citizens' relationships with coastal and marine environments are shaped by particular concepts of stewardship which contributed to the vulnerability of coasts and oceans by constituting them as commons, with weak or absent management regimes and seemingly unstoppable human impacts. However, in Part 2, an alternative understanding of stewardship outlined is offered, as a more appropriate way to relate to the commons and motivate responsible behaviour of individuals within society and their environment. The stewardship theme has already appeared in policies for Australian coasts and oceans, but it has mainly been used as bureaucratic rhetoric, through which policies flag the need for marine resource users to act responsibly, according to "codes of practice". A secondary use of the term stewardship has been its application to community-based, volunteer actions, principally demonstrated in community coast-care groups.

The central argument of this dissertation is that more productive and collaborative management of the coastal and marine commons, which involves all of the relevant stakeholders, might be better achieved through framing the notion of stewardship within the discourse of active ecological citizenship. If stewardship is more clearly recognised

as a key civic virtue rather than an abstract ethical ideal or symbolic embellishment of policy, neither of which have impact on the behaviour of stakeholders, then it would indeed mobilise individual citizens to be engaged. Reframing stewardship of the commons in terms of civic virtue not only addresses individual behaviour, but also profoundly influences the relationship between government and civil society actors, including businesses and community groups, as Part 3 has demonstrated.

In accepting stewardship as a civic virtue users of the coasts and seas recognise the need to subordinate their access and use of coasts and seas to the good of the whole community. By implication, the welfare of the commons itself must also be sustained, and explicitly so if community means the “community of life”. By publicly endorsing civic virtue in relation to coastal stewardship, governments can offer encouragement to members of the community who are already engaged in voluntary stewardship activities, helping them to see their work as important and integral to the larger task of the sustaining the commons. Stewardship will not simply be written off as the marginal activities of a few fanatics, nor as a low-cost ploy by governments to shift costs to volunteers. By locating stewardship among the virtues of ecological citizenship, and not limiting it to national citizenship, the welfare of all life species and ecosystems becomes the purpose of stewardship. In those situations where responsibility for managing particular commons is delegated to government, its duty is to serve the broader common good. It should avoid reducing that duty to narrow bureaucratic functions of balancing competing partisan interests, or privatising commons through creation of individual property rights. In summary, governments have an important role in creating the conditions which enable their citizens to develop civic virtues. This chapter draws key lessons from the preceding chapters and suggests some opportunities to enable wider adoption of stewardship virtues.

## ***9.2 Civic imaginary and the (marine and coastal) commons***

The development of oceans and coastal policies in Western Australia over the last three decades has firmly entrenched official recognition of oceans and coasts as commons. It is expressed in Western Australia's most recent coastal planning policy document, the revised Statement of Planning Policy (SPP) 2.6, gazetted in 2013 (Western Australian Planning Commission, 2013) which reaffirms public ownership of the coast. Public ownership, or recognition of the coastal commons, is not merely an economic or legal abstraction. It is grounded in histories, connections and cultural values linked to coastal and marine places, which are shared by communities of common interest.



These shared stories, values and connections are part of what Taylor (2002, p. 106) called the “social imaginary, “that common understanding that makes possible common practices and a widely shared sense of legitimacy... a sense of the normal expectations that we have of one another, ... some sense of how we all fit together in carrying out the common practice”. While rooted in history, this social imaginary is constructed in the imaginations and ideas of a society. Clarke (1996, p. 24) showed how contemporary understandings of citizenship develop as much from a social imaginary as they do from their putative historical roots. Dechaine (2009, p. 60) modified Taylor’s definition of social imaginary to describe “a social horizon for defining the constituents and limits of civic culture”, which he called the civic imaginary. He was describing how it acts as “an ethical horizon for the articulation of the citizen as an embodiment of personhood” which can be used to deny citizen status to some people. However, this argument can be reversed. It is also possible to consider the civic imaginary as the shared ideas, normal expectations, imaginations and ideas of what citizenship means, how far it extends beyond the human species, our duties, and the ways that we might cooperate to fulfil those duties.

The idea of a common heritage of humanity is one such idea. When the United Nations applied the concept of the common heritage of humanity (Shackelford, 2009) to the deep ocean floor and Antarctica, it was an attempt to link the potential economic value of resources on the ocean floor to the broader community beyond those who appropriate the resources. It also drew attention to a wider range of values than just the economic for those shared resources and places. Recognition of the shared heritage embodied in a common resource provides grounds on which to develop appropriate mechanisms for its collective stewardship

Yet Marine and coastal spaces and resources are not perceived in the same way by all stakeholders, as demonstrated by the wide range of cultural models of the sea (Kennedy, 2007) and the coasts (Stocker & Kennedy, 2009), which exist within any large community. Kennedy (2007, p. 159) is representative of many who find a stewardship model of the sea to be deficient on the grounds of its apparent claims for superior agency for the human species over the rest of the biosphere. However as explained in Chapter 6, stewardship is not presented here as a conceptual model of the sea *per se*. Rather it is a guide to human behaviour, a pragmatic ethic based on recognition of the enormous and often destructive impact on ecosystems around the planet caused by the sum of every person’s daily activities. The notions of the marine and coastal commons

are constructs of human society, which bring to our attention ways that human society might reduce its negative impacts through stewardship, with its inherent goal of sustainability of the ecosystems and their constituent species.

The argument for ecological citizenship introduced in Chapter 7 suggests that the relationship of the individual person to the environmental commons is not just ownership of property. Ecological citizenship means recognition that citizens are located within the broader community of life and ecological systems on earth. This recognition is implicit in Australia's EPBC Act of 1999, which in some measure protects the rights of all species to continued existence.

Brown (2001, pp. 33-43) develops a similar model of humans within the world through the concept which he calls the "commonwealth of life". This is based on extending the tent of moral consideration to cover all life and natural systems. Leopold (1949) used "the community of life" to express the same idea. From the basis of equal standing Brown examines duties of the individual and legitimate roles for government in relation to the commons by reframing John Locke's conception of stewardship. At its core is the recognition of other stakeholders and their rights of access to the commons on which they depend. Stewardship of the commons is expressed through the premise that "we may take from the commons as long as there is 'enough and as good for others'" (Brown, 2001, p. 31). Thus private property regimes have legitimacy because, and to the extent that, they enable all the stakeholders to meet their subsistence needs and to the extent that in total, the common resources are better able to meet the needs of all when managed under this regime. So, while Hardin's (1968) thesis of the "tragedy of the commons" has been (mistakenly) invoked as a justification for conversion of common property regimes<sup>149</sup> to private property, Brown calls us to consider the condition of the commons not only as a fund of resources, but also as subject to the rights claims of all stakeholders across the dimensions of space and time, including its own constituent elements. Since stewardship is the operation of fiduciary duties for the common good of all (Brown, 2001, p. 31), and the whole commonwealth of life are stakeholders in that good, it is a useful model of the relationship of any stakeholder to the commons.

Stewardship praxis, through which individuals recognise their duty to act for the good of all and find ways to do this, is an antidote to the current policy impulse to allocate

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<sup>149</sup> These should really be called open access, rather than common property regimes.

parcels of private property rights over the commons<sup>150</sup>. Allocating private property rights is not the only way of determining the value of conserving natural objects or life forms, which are conceptualised as assets or resources in that process. Privatisation or alienation assumes that the common good is served by the sum of all self-interests, yet this is clearly not always so. Dobson and Valencia Sáiz (2005, p. 158) suggest that the idea of citizenship “offers the possibility of checking self-interest against the common good in systematic ways”. Ecological citizenship shares many similarities with the idea of “the commonwealth of life” and stands in contrast those models which cast people as consumers, or limit our options to those actions applicable to the marketplace. If ecological citizenship can be embedded in the civic imaginary it opens the possibility for ecological stewardship to be an expression of civic virtue.

### ***9.3 Citizenship, civic virtue, stewardship***

Ecological citizenship can be based on the communitarian duties exemplified in Leopold’s (1948) community of life and Brown’s (2001) commonwealth of life as discussed, or based on taking responsibility for one’s ecological footprint (Dobson, 2003, p.99). Chapter 7 demonstrated that some degree of consideration to the common good is compatible with both liberal and progressive points of the political and economic compass, however Babcock, 2009, p.517) argues civic republicanism “provides a useful construct for thinking about how to make people behave in more environmentally responsible ways” because of its “emphasis on public education, civic involvement and ...civic virtue”.

Citizenship theory suggests that, not only do citizens need to fulfil their personal duty as global or ecological citizens through appropriate practices, but they also have a responsibility to make “sure that governments do what they must to provide the context for sustainable behaviour” (Dobson & Valencia Sáiz, 2005, p. 157). This expression of active citizenship does not relegate environmentally responsible behaviour to the private sphere of individual behaviour, but brings it into the civic space. Babcock (2009, p. 520) points out that the challenges of environment (which includes coastal and marine commons) require that citizens “must transcend their individual [intentions]... to the greater public or communal good” of sustaining the environment (or commons). She argues this is expressed in the republican concept of civic virtue, which she describes as

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<sup>150</sup> While the introduction of tradeable quotas in Australian and New Zealand fisheries in the 1990s are closest to this theme, a most striking example is seen in the conversion of traditional grazing commons to private land title in Kenya (Ensminger & Rutten, 1991).

“habits and dispositions ... orientation to the common good” (Babcock, 2009, p. 520).

Development of any public policy to ensure sustainability of marine and coastal environments can only arise from some recognition of the common good found in their well-being. However the common good cannot be ensured by policy and government agencies alone. Considerate actions are required of all whose ecological footprint even potentially marks to sea.

Coastal and marine stewardship expressed in this way is more than practices, it is an expression of civic virtue, or better still, ecological virtue (Barry, 2002, p.139). Babcock (2002, p. 516) argues changing norms “is more effective than other means of inciting behaviour change”. Moral suasion was been criticised (eg. Curtis & De Lacy, 1998; Marsh & Pannell, 1997) for its failure to change behaviour in agriculture when those practices appear locked into the prevailing economic system of agriculture production. However many of the activities which impact on the coastal and marine commons are leisure pursuits. Leisure and sport is a major activity on the coast and nearshore waters. In these situations, ethics may be just as powerful as any other driver of human behaviour, especially when it is virtue ethics for which adequate support is given to phronesis, the cycle of ethical reflection, practice and reflection again, through which a disposition to stewardship and minimising one’s ecological footprint is encouraged and given a sound rationale.

Virtues are reinforced or learned in a deeper way by their practice. Assessment of economic viability, technical feasibility and efficiency will continue to shape the choices made, but stewardship of place, resources and the environment can be the guiding principle informing how those types of assessment are used to inform decision-making.

#### ***9.4 Stewardship observed***

Even though coastal stewardship is framed in this way as an ecological virtue, its ethical nature has not always been recognised, even by those who understand what coastal stewardship means. Coastal and marine stewardship are not very well recognised in spite of policies to foster them. However, for all that, the Coastal Action Plan of 1995 did enable the form of community coastal stewardship which had emerged in NSW to be extended around Australia and further developed. In the period to the end of 2012 (the conclusion of the period under study) active stewardship of Australia’s coastal and marine areas increased. Some of this activity was an effort to catch up with

intensification of human impact on the more frequently used coastal and marine areas. However, as shown in Chapters 4 and 5, stewardship endeavours in many local communities were accompanied by significant development of institutions and policy frameworks to strengthen or increase overall stewardship. In addition to community-based stewardship groups, there have been enhanced frameworks for state stewardship of Australia's natural heritage.

The stewardship role of the state, acting on behalf of Australia's citizens, is exemplified by key legislation such as the EPBC Act, the National Representative System of Marine Protected Areas (NRSMPA), ongoing protection measures by the states and heritage listing at state and national levels to protect coastal areas. In public policy discourse in Australia there is a delicate balance to be struck between conservationists who want to increase the area which is protected from extractive activities and those who claim the state is exceeding its mandate by excluding commercial or recreational fishing activities from marine protected areas. The proclamation of an expanded national marine reserves system in November 2012 was greeted with celebration by the former and lamentations and protest from the latter (Milman, 2012). A similar public debate is observed in Western Australia around state policies for protection of public coastal foreshore reserves and marine protected areas (Chapter 5).

There is a thread within Australian culture which values the role of government in transcending individual interests and protecting the common good. There is also a constituency which holds contrary values, placing priority on protecting personal freedoms from government interference. To these people, any restriction on personal action is considered as infringing on their rights. Fishing is one activity around which this conflict can be readily observed. The "rights" platform is expressed through bumper stickers with slogans like "I fish and I vote" (Campbell, 2013, p. 6) and the Shooters and Fishers Party, whose first member was elected to an Australian State Parliament (NSW) in 2007<sup>151</sup>. There is little reference to, or use of the term "stewardship" in these political debates, dominated as they are by questions of rights. The challenge for those who can see danger in the current trends of human impact on coastal and ocean systems is to frame an effective stewardship narrative in ways that find sufficient bipartisan support from both progressive and conservative streams of Australian politics to be implemented.

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<sup>151</sup> Shooters and Fishers Party home page - <http://www.shootersandfishers.org.au/>

Yet this dissertation has shown there are many active stewardship endeavours. Others, such as the community-initiated protection of fish habitat around Cottesloe Reef<sup>152</sup> in Western Australia have yet to be told. The stories from the coast-face in Chapter 8 form an important counterbalance to the views expressed so loudly in political slogans such as those just quoted. These stories are linked by their depiction of how sense of place connects with local citizenship in expressions of civic virtues and engagement with wider government institutions and processes. These cases also portray the tensions between personal self-interest and the emergence of civic responsibility of sufficient strength to mobilise individuals to participate in stewardship of the coastal commons.

Perhaps the strong sense of place of some people can cynically be described as self-interest in the face of threats to "their beach" or "their views". Yet even if a kind of "self-interest" may have driven some people to become active, the ongoing effort they exert, to persist with voluntary work in revegetation and rehabilitation or even regional planning, appears to have been sustained by their deeper commitment to citizenship and civic virtues. The stories of these groups, together with the analysis of policies and programs presented in earlier chapters, indicate some of the important lessons for successful implementation of a broad and strategic stewardship of coasts and oceans.

## ***9.5 What is required for implementation***

On the basis of the foregoing arguments for the value of coastal and marine stewardship as a means of mobilising individual agency, here are some lessons on how the virtues of stewardship may be widely practiced and more effective. Government is a key institution, but so too is the corporate sector and "the market". Local communities, whose citizens exercise agency through their personal actions, their choices in the market and political life, as well as in communities of practice, are of course the base where stewardship is worked out.

### **9.5.1 Roles of government**

Government has a key role in defining property, the commons and the institutions by which they are governed. In his 2009 Reith Lectures, Sandel (2009) criticised the dominant political philosophy of the United States and the United Kingdom for its limited view of government as only correcting market failure. He argued that democratic government should be based on "a politics of the common good"<sup>153</sup> which

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<sup>152</sup>See <http://beachcombers-kit.fish.wa.gov.au/coastal-marine-life/habitats/marine-conservation-areas/cottesloe-reef-habitat-protection-area/>

<sup>153</sup> Lecture 4 A new politics of the common good. (Sandel, 2009).

“invites us to think of ourselves less as consumers, and more as citizens”. This argument stands in stark contrast to the current fashion favouring “dry” or neo-liberal economic philosophies. It also contrasts with early American land policy, which Barton (2002, p. 130) argues was based on an underlying belief that the role of government was to transfer the natural resources of the United States to citizens and ensure their property rights. Australia inherited from its cultural origins in the United Kingdom a predisposition toward government protecting the common good, exemplified in values such as a fair wage for all workers. This has carried over into natural resources management, in which Australian governments, as do those of many other Commonwealth countries, play a stronger role than those of the United States (Barton, 2002). However, even here there has been an increasing shift towards framing the stakeholders for natural resources as “markets” and preference for use of “market-based mechanisms” to determine distribution of management effort as well as the resources themselves.

Even though governments might continue to “provide the context for sustainable [or stewardship] behaviour”, unless there are “shifts in attitude at a deep level”, people’s “behaviour could revert to type” (Dobson & Valencia Sáiz, 2005, p. 157). Phronesis has been presented here as the way knowledge and practical experience contribute to changed attitudes. Whatever else it does, government involvement in the marine and coastal commons must contribute to the long term cultivation of stewardship virtues through which individuals become personally active in behaviours which sustain, rather than degrade ecosystems and species. Such a role can be described as that of “an enabling state”<sup>154</sup>.

The notion of an enabling state has been applied to regional development planning in Australia (McGrath, Armstrong, & Marinova, 2004). Some guiding principles proposed by Latham (2001) which are most relevant to NRM policy and planning include:

- Look to community-led solutions: to devolve power to communities and build social capital and capacity.

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<sup>154</sup> This term has been used in relation to changes in delivery of social services (Wallace, 2013) in the United Kingdom which were initiated in the 1990s. The level of health and social services provided directly by the national government was reduced and an “internal market” created by requiring frontline agencies to purchase those services from competing providers by means of tender processes (Taylor, 2000). Market-based models for delivery of services have been introduced into Australia, including health and education.

- Keep on boundary crossing through collaborative partnerships that effectively integrate the traditional silos of government, focus on locations and broaden the circle of collaboration.
- Demand responsibility all round.
- Practise a new politics of trust in which the state identifies skills and devolves power to communities of interest. (McGrath et al., 2004, pp. 570-571)

The Coastcare program of 1995-2002 was a good example of an enabling Commonwealth Government. The resources provided to local governments and community stewardship groups reflect the principles of devolution and collaboration. At the same time engagement of state governments brought all the key stakeholders into cooperation. Government needs to continue support for initiatives that encourage ecological citizenship through communities of practice and education. The Commonwealth has capacity to fund programs and to monitor compliance to high level legislation and international obligations. This means it can bring together stakeholders in multi-party partnerships, as it did with the Coasts and Clean Seas initiative, and should have done for integrated bioregional planning.

The Commonwealth Government's vision for innovative integrated oceans bioregional management planning soon wound down to become a process of declaring a system of representative marine protected areas. Was the vision just too ambitious? Is it beyond the capacity of the Government of Australia to coordinate all the sectors involved in an ocean bioregion, or did it just lose interest in projects for which market-based mechanisms were not key? Vince (2013, p. 328) remains hopeful that a more holistic approach will return to the commonwealth policy agenda, a process in which the goal will be sustainability and the means to achieve it will be the integration of social, economic, cultural and environmental values involved in Australia's stewardship of oceans within its EEZ. One of the key determinants of success of such agenda is the capacity of the Commonwealth to facilitate negotiations, not only between the various sectors, but also with state governments, at least some of whom will inevitably hold opposing political ideologies to the Commonwealth Government of the day.

Local government is particularly important for the coastal environment, since a significant amount of public coastal estate is vested in it. The responsibilities of coastal management fall as a burden on local government, which seldom has resources to spare,



and derives little income from public coastal lands<sup>155</sup>. The examples of local government presented in the previous chapter indicate that local government can empower community stewardship groups to take a significant level of responsibility. In two of those cases, the councils provided resources and authority to the groups. The groups in turn recognised their accountability to their council. Equally important, through this engagement group members contributed to council policy formation and council projects. A form of active citizenship is demonstrated in the relationships of community coast-care groups with the local council staff and their elected councillors, as they relate to the group's primary mission of coastal stewardship.

A danger for local government, which often has limited access to income<sup>156</sup> and other resources, is that can be captured by vested interests in relation to land use decisions. Those vested interests can be balanced by downward and upward accountability. Stewardship values developed and promoted through coast-care groups mobilise community people to keep the local government accountable to its electoral base. A coastal planning official explained:

I think you get good stewardship when you have local champions, community group champions or regional champions. I think the reality is that groups function if you can have a lot of individual community stewards ... but to really achieve something within a group they need ... champions ... and those few people who can have a view to the bigger picture.

The state government plays a higher-level role, ensuring that good policies guide local planning decisions, transcending local vested interests. At the state government level, influence of local vested interests is counterbalanced by a broader public constituency and the expertise and other resources available in the government's agencies.

West Australian Government support for stewardship documented in Chapter 5 includes its planning institutions, reserves and protected areas and direct financial support to community coast-care groups and local government. Support for community-based coastal stewardship was maintained through several successive changes in national government and its programs. The total funding for coastal and marine stewardship as

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<sup>155</sup> In 2007, on average across Australia, local government was derived from "rates" or charges for services to landholders (37%), sales of goods or services (29%) and 17% from grants from higher levels of government (Productivity Commission, 2008, p. 26).

<sup>156</sup> Only 3% of local government income comes from rates, or a taxation on properties within its jurisdiction (Australian Local Government Association <<http://alga.asn.au/?ID=42>> accessed 14 Jun 2014

even increased through partnership with the Commonwealth Government. The state's Coastal Planning Programme Planning helps integrate plans for infrastructure and allocation of uses of the coast in Western Australia into strategic planning. This gives coherence and integrity to local participatory processes. However the government's failure to release an official State Coastal Strategy suggests the current government has lost faith in a single big policy for the State's extensive coastline. The Government of Western Australia needs to carry to completion this and similar projects, even if they were initiated by a government of another political persuasion.

One of the major challenges for Australia's experiments with community-based natural resource management policies has been the growing preoccupation with achieving narrowly defined strategic outcomes and "value for money". There is a tension between mobilising the energy and commitment of local communities to pursue their particular interests on the one hand, and focussing investment on clearly defined outcomes as part of an overall strategy for the region, or the state. Closely related to this are the added tensions between those holding highly scientific or technical view of the issues and desirable solutions, versus those who argue that building community capacity is at least as important for long term sustainability (McKinley & Fletcher, 2010, p. 383).

One way to resolve these tensions is through nested layers of responsibility compatible with Australia's three levels of government. The Commonwealth Government has powers and the financial capacity to introduce innovative programs as it did with Coast and Clean Seas, and the Natural Heritage Trust. However it needs to ensure that the innovations are sustainable within the limitations and the strategic interests of the other stakeholders. The state governments are well placed to build community capacity and also ensure that there are overarching land and other natural resource management plans which link local stewardship actions with government and private sector activities. Local government can provide direct support for community groups and integrate their stewardship roles into local planning and its own management of the public estate.

#### **9.5.2 Corporate sector**

The corporate sector of society has its own strategic role in relation to stewardship and sustainability. It not only serves the needs of its clients and shareholders, but it actively shapes consumer demand and plays into the political space. Its role in the flows of matter and energy is seen in its consumption of natural resource and production of valuable and waste products, and their impacts on coastal and marine environments. The

Commonwealth Coastal Policy of 1995 included industry in the scope of its objectives, even though there was little clarity about what stewardship means in relation to industrial activities. The Coastcare program did have a corporate sponsorship component, in which corporate partners contributed support for regional facilitators, sharing costs with local and sometimes state governments. Community Coastcare groups received benefits of some corporate sponsorship through Landcare Australia Ltd. While some of these sponsorships were contested for the apparent incompatibility of the sponsor's profile with an environmental agenda<sup>157</sup>, they did link mainstream commerce with Coastcare. With the end of Coastcare, all sponsorship activity has been privatised, left to Landcare Australia Ltd. Yet the corporate sector has a greater role to play than sponsorship.

In spite of policy vagueness about corporate stewardship in relation to the coasts, stewardship itself is not alien to the corporate sector in Australia. A range of stewardship programs have emerged, even though they are not always prominent and are seldom viewed as a holistic stewardship philosophy or comprise a strategy across the whole sector. Many of these stewardship programs owe their existence to some government initiative or pressure which created an enabling environment for voluntary industry stewardship. Corporate stewardship initiatives can be broadly divided into product stewardship and resource stewardship.

Product stewardship seeks to reduce the negative impacts of products manufactured by modern technology. It still has a relatively low profile in Australia, but there are national stewardship schemes for oil products, tyres, packaging and televisions. See Appendix F for a detailed description. Their existence shows that stewardship ethics can be integrated into the economy if given adequate support. Product stewardship goes some way to directly address the environmental problems caused by discharge of contaminating substances into the environment, including into coastal and marine waters.

Resource stewardship focuses on reducing the unsustainable extraction of renewable resources like forest products and fisheries and other marine produce. Unlike product stewardship, resource stewardship generally consists of voluntary stewardship

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<sup>157</sup> In 1991, Land Rover's sponsorship was considered problematic given the ongoing issues of four-wheel driving on beaches. They impact on birds, invertebrates down on the beach and vegetation in the dunes. Xerox sponsorship was criticised for that company's copiers and printers' apparently insatiable appetite for paper, and by extension, acceleration of deforestation.

certification programs organised by key players in an industry, often with one or more international NGOs. The Marine Stewardship Council certification of a fishery as “sustainable” is the fishing industry standard<sup>158</sup>. Other organisations like Greenpeace also have campaigns to persuade supply chains to use seafood from sustainably managed fisheries and fishing systems. Greenpeace is most prominent with its imprimatur endorsing “sustainable” canned tuna. The Australian Marine Conservation Society does not certify any particular branded fisheries products, but produces a “sustainable seafood guide” which enables consumers to discriminate in favour of species which it has assessed as coming from more sustainable fisheries.

It should be possible to integrate these existing stewardship agendas into an integrated framework, a compelling narrative that shows the respective duties of corporate or industry entities, governments and local communities in coastal and marine stewardship. Such a framework for stewardship would be founded on the “precautionary principle” as it applies to the use or protection of sensitive environments, sustainable use of resources, taking responsibility for the whole life of products, responsibility for wastes and recognition of the values of places other than the economic value of the extracts they can yield. This would then go some way toward some of the new approaches to governance and the economy advocated by Vidas (2011) albeit at a much smaller scale than the global one he envisages. Yet it must begin at local level, at the level of the business enterprise and the community.

### **9.5.3 Local communities, communities of concern**

Local communities are a key site for the development of stewardship as a civic virtue. Whatever their initial motivations for involvement may be, participation in coastal stewardship groups enriches participants’ sense of place and civic agency. However, the population living in close proximity to the coast is only a small part of the overall population which has impact on coastal and marine ecosystems. As noted in early chapters, many people have an ecological footprint extending into the oceans and around coasts, if not a direct physical impact. Communities of practice and communities of common interest in coastal and marine sustainability may be just as important as local coast-care groups *per se*. Surf-rider Associations are a good example of communities of practice.

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<sup>158</sup> Other related examples include certification of products including tea and coffee, or health and beauty products by international wildlife and forest protection NGOs.

Stewardship groups typically arise from a champion mobilising people by touching their affective connection with their special coastal place. Local community groups may even form around a primary goal of preventing some activity because it decreases the perceived amenity of the members, disregarding any consideration of wider community needs (the NIMBY<sup>159</sup> syndrome). One group mentioned in Chapter 8 started with a NIMBY attitude. As they got involved in coast-care they became champions of good coastal planning and management and not simply opponents of one perceived threat.

Outside the more focussed coast-care groups, civil society groups or “civic associations” (Young, 2000, p. 161) with broader agendas, may take up stewardship of a place among their other responsibilities. These voluntary associations of people seek to contribute “to the collective life of the neighbourhood, country or world”. Coastal community progress associations have been active in Western Australia, receiving Coastwest grants for projects. They are well placed to embed coastal and marine stewardship into the general ethos and practices of a local community.

Since the objective of coastal stewardship groups is to care for particular coastal places, rather than representing the community’s interests, their membership may not be sufficiently socially diverse to be considered as representative of the community (Young, 1989). Perhaps they should make more effort to have diverse and inclusive memberships, but they are still able to provide environmental services which the economic and government sectors do not. Local government councils and state and national governments need to ensure participation and inclusion of all citizens by attending to social difference (Young, 1989, p. 273), but stewardship groups usually have sufficient struggle to ensure their own existence and capacity to fulfil their mission. Stewardship groups need to balance the benefits of compatible people bonding to sustain their involvement in public service with the potentially greater reach into the whole community that comes from diverse and representative membership.

The significance of stewardship groups in the Coastcare program was demonstrated in some of the case studies in Chapter 8, and also explained by a key informant:

... groups that I have worked with along the South Coast ... are fanatical about what they’re doing, ... there is nothing in it for them in a material sense, absolutely nothing.

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<sup>159</sup> Not In My Back Yard

They're not saving their own farm land. They are saving a public resource because they feel responsible in some way for what's happening on the coast. (G3)

As has already been made very clear, coastal stewardship focuses on lands vested in any of the three levels of government. These groups are an expression of civic ecological citizenship. The challenge they address is how to reduce damaging actions of the general public, to mobilise stewardship actions within the same public community, and to manage coastal resources which generally do not yield an income. This means the public policy debate about appropriate government interventions needs to be conducted in such a way that the real issues which impact coastal stewardship are taken into account.

Community interest in "their beach" or coastal area which translates into action is considered a public asset by local council staff. Coast-care groups and their involvement in bodies linked to councils enables them to participate in "networks of informal power and [have access] to institutions of formal politics" (Bender, 2000 quoted by Light, 2003, p. 54) such as their local council and state coastal planning bodies. Council staff managing coastal reserves on limited funds are able to use the commitment of community labour to projects and formal requests from groups as leverage within the council budgeting process. The unfolding and widening scope of engagement of such people makes these coastal stewardship groups such interesting examples of civic virtue in action.

Communities of practice are examples of wider community engagement in coastal stewardship. Surf-riders' associations have identified needs for managing impact of themselves and other visitors to high value surf locations and obtained Coastwest/Coastcare funding for projects to rehabilitate and mitigate impacts, even though they may not live in that locality. Educational (eg. Marine Education Society of Australia) and scientific organisations (Australian Marine Sciences Association) have also been active and demonstrate a different entry point into civic virtue. It would be good to get an organisation like RecFishWest, the peak body for angling clubs in Western Australia, to commit to marine stewardship.

Communities of interest are another form of civic engagement. They can be quite large and diverse in their membership base. Australia's Marine and Coastal Community Network (MCCN) founded in 1993 had over 9,000 registered participants in 2003 (Binkley, Gill, Saunders & Wescott, 2006, p. 269). The MCCN was a network

established to enable wide distribution of information and a means to mobilise community participation in public activities for the sake of coastal and marine issues, such as the development of *Australia's Oceans Policy* (Binkley, Gill, Saunders & Wescott, 2006, p. 270). Its membership goals were to include as many people as possible rather than have a coherent philosophy or viewpoint. Other communities of concern include environmental NGOs and their peak organisations, such as the Conservation Council of Western Australia, whose mission is environmental advocacy.

#### **9.5.4 Civic education**

A consistent theme emerging from the case studies of coast-care groups is that of learning. Babcock (2009, p.516) flags the importance of public education in any effort to change behavioural norms. This is recognised in coast-care groups, for whom raising community awareness is a significant activity (Fig.4-8). Some of this is publicity relates to their own group activities, but some is education to increase understanding of marine and coastal environments and awareness of issues around sustaining them. Educational organisations received 6% of the grants from Coastwest and Coastcare in Western Australia between 1996 and 2012 (Fig.5-1). Civic education encompasses citizenship, citizens' rights and responsibilities, and also systems and processes of government. For ecological citizenship, this must be broadened to include ecological or environmental literacy, as well as training in skills needed for protection and rehabilitation of environmental features or assets.

The established wisdom recognises the importance of local and indigenous knowledge regarding the environment for any management decisions. However many of the people participating in coast-care groups admit to a lack of knowledge of their own local coastal environment. Foxwell-Norton (2013) argues that feelings of ignorance on the part of ordinary citizens is reinforced by a policy discourse dominated by the knowledge systems of the environmental sciences, which enhances the power of the experts at the expense of citizen confidence. She argues that policy makers should make more meaningful use of our "cultural geography" in which knowledge of the coast is framed as "Australian beach culture", reversing the elevation of the status of coastal scientists and technicians.

The Coastwest/Coastcare Program did capitalise on beach culture, by sponsoring fun-focussed events at metropolitan and some southwest beaches during summer. Their main purpose was to encourage people to experience and enjoy the beach. The greater

goal was to foster positive attitudes to the coast and ocean as a step towards forming dispositions to act responsibly.

However, ecological citizens do need sound knowledge of the life forms, coastal processes and ecology if the current pattern of anthropogenic damage to them is to be stopped or ameliorated. The stories from the coast-face (Chap. 8) show that participation in activities such as restoration over a number of seasons increased participant's understanding of coastal processes and the marine environment. Many of these people had little prior knowledge of the taxonomy or ecology of marine and coastal life forms. Perhaps part of their ignorance can be attributed to the "migrant" status of most Australians. However the problem is not unique to Western Australia. McKinley and Fletcher (2012, p. 841)<sup>160</sup> summarised broad international findings that publics lack knowledge and awareness of the marine environment, so they are unable to understand the ways humans depend on them and the impacts we have on them. However local stewardship groups become pools of skill and knowledge about coastal ecology, restoration and management through a combination of experiential learning and seeking information from expert sources. In virtue ethical theory, this process of phronesis, or acquisition of knowledge through practice, also informs values and dispositions.

Hawthorne and Alabaster's empirically tested model of environmental citizenship placed "desire to act" as one of the choke points<sup>161</sup> in the linkage of all the factors influencing environmental citizenship behaviour (Hawthorne & Alabaster, 1999, p. 41). Many people have used the coasts and oceans to extract the products that they wanted, such as fish, and to pursue recreational activities such as surfing, boating and vehicle use. In the process some of them become very knowledgeable but may not have the disposition to stewardship or care for the marine or coastal environment. In Chapter 8, some of the cases describe how community coast-care groups sought to change the dispositions and behaviours of people who were driving or sand-boarding on fragile fore-dune systems. Figure 8.1 shows how one NRM Officer placed respect and values as controls operating between knowledge and action in a model of individual engagement in stewardship.

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<sup>160</sup> See also the earlier work of Fletcher and Potts (2007).

<sup>161</sup> The other two critical factors are ability to act (agency) and environmental literacy.



Civic education also includes awareness and skills required for interpersonal relationships, management and governance. Members of the community at large are relatively disengaged from governance of the commons and perhaps of their municipality in general. Key informants consulted for this research and contributors in coastal conferences and workshops described, often with some pleasure, how they came to understand and to actively engage with public planning and coastal management institutions and processes. They became more active citizens and the Coastcare program played an important role in this process. While the NHT community funding programs were criticised for their complexity and bureaucratic nature, the incentive they provided, together with facilitators to actively support group members, enabled many members to develop skills in planning and writing applications for grants. Along the way, their project management skills and understanding of the way state and local governments operate also developed.

The local government programs for schools described in Chapter 8 show how those participatory educational activities “encourage young people to become active citizens”<sup>162</sup>. The programs were heavily linked with the local coast-care groups. The presence of community volunteers increased the children's broader inter-generational learning about active citizenship. Warburton and Gooch (2007, p. 47) found that older environmental volunteers in coastal Queensland not only “saw the need to improve the environment for future generations”, but also wanted “to pass on their knowledge and awareness of the environment” to the young. Although those programmes did not formally use the term stewardship, the notions of adopting, personal care, and advocacy on behalf of the coastal commons are good expressions of the core ideas of stewardship. The emergence of greater civic obedience and respect for public property on the part of young people was perceived to be a very practical benefit of the programmes.

Civic education within the context of coastal stewardship occurs best when it takes place in the “*civitas*” and not just the classroom. Strong citizenship has been criticised as a universalising process which results in a kind of cosmopolitan citizenship focus in

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<sup>162</sup> See for example the comment by Mayor Troy Pickard in 2013 accessed on 17 Dec 2013 from [http://www.joondalup.wa.gov.au/Welcome/Citynews/13-07-18/Students\\_Do\\_Their\\_Bit\\_for\\_Coastline\\_Conservation.aspx](http://www.joondalup.wa.gov.au/Welcome/Citynews/13-07-18/Students_Do_Their_Bit_for_Coastline_Conservation.aspx)

“This successful program, fully funded by the City of Joondalup, encourages young people to become active citizens and make a real difference to their local community and environment,” he said. The City looks after about 17km of beaches and it is great to see young people working with us to help improve and maintain our pristine coastline for generations to come.”

which representation of special interests can lose their voice (Young, 1989). However, where the public conversations and activity takes place within the environment in which the citizens live, and its impact is observed, surely there is scope to address special interests. Examples include installation of facilities to provide access for disabled people and a range of treatments for sites sacred to indigenous Australians.

Civic education needs to be part of the school curriculum, but should also take them out of the classroom. The curriculum should include strategies to exposure students to stewardship as *phronesis*, the process of ongoing learning in cycles of theory, practical action and reflection. However ongoing civic education for ecological citizens needs to be provided for all Australians, not just those living in coastal suburbs, but including all those whose local knowledge of coastal systems is lacking or poor. Coast-care and other stewardship groups are an effective way for that to take place and deserve government investment in their support. Babcock (2009, p.534) quotes Sherry (1993) to make the point that “civic virtue [does] not spring unbidden from the human heart, but need[s] careful nurturing” through education.

#### **9.5.5 Recover and expand the narrative of stewardship**

The final lesson to be drawn from this examination of coastal and marine stewardship in Western Australia is that engendering stewardship will not happen without a narrative of stewardship that accords with the wider cultural context. Coasts and coastal life has become a major part of Australian cultural narrative, in spite of the strong hold retained by “the bush” on historical identity narratives. The coastal image<sup>163</sup> in popular imagination can be either conducive or subversive to ongoing stewardship. Tim Winton’s *Blueback* (1997) evokes in the reader a sympathetic and respectful attitude toward the marine world. In stark contrast, television advertisements for off-road vehicles or for outdoor recreation products often evoke feelings of mastery over nature. In this context of narratives of freedom and self-expression, attempts to reduce human impact on coastal dunes and beaches through regulatory mechanisms, such as zoning, signage and barrier fencing start from a place of disadvantage. Jumping the fence, or going around access barriers may not be considered a shameful act in a local culture that valorises freedom and mastery above other values. The Leeuwin Conservation Group (Section 7.4) encountered active opposition to their efforts to reduce vehicle damage to

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<sup>163</sup> Stocker and Kennedy (2009) examine seven socially constructed cultural models of the coast which may be said to underpin these expressions in popular discourse. Those models are more comprehensive than this snapshot; including philosophical views of economics, the self and society, and the nature of life itself and how they influence how the coast is perceived.

dune systems. While improved design or more intensive enforcement of traffic management may help in the short term, the long term challenge is to help those opposing to see the world (especially coasts and oceans) differently.

Encouraging the citizens of the community to see themselves as ecological citizens, with stewardship as a virtue, means to shift attitudes rather than simply constrain behaviour. By way of comparison, the wide adoption of marine citizenship in the UK would have to “overcome barriers [of] low levels of public marine environmental awareness, limited knowledge of the role of individuals in addressing marine environmental issues... and a lack of a coherent strategy to mobilise individuals as a policy channel” (McKinley & Fletcher, 2010, p. 842). Yet already the support provided by the Commonwealth and West Australian governments to local governments, schools and community coast-care groups for engagement in coast-care as stewardship praxis offers a model of how those barriers can be overcome. What remains is to give greater attention to stewardship as ethical praxis connected to narratives already existing in society.

MacIntyre (1984, p. 127) argued that morality is tied to, or conveyed within a tradition, the narration of which is integral to the way a society or community inherits and understands morality and the virtues it promotes. These narrative traditions can also be the vehicle through which to transfer and nurture the values and virtues that enable society to sustain the environment in which it is situated. So for a nation like Australia, whose citizens carry narratives from many different linguistic, cultural and even ecological backgrounds, there is a question of which tradition or narrative is sufficient to provide virtues that are needed in by citizens in common. Brown and Spink’s (1997, pp. 30-31) advice has been cited earlier, but is most relevant here too:

Adoption of the stewardship ethic integrates the different agendas of the many interests in coasts and oceans, the various professions and occupations and institutions. “It imposes a duty of care” in all aspects of policy, planning and use of marine and coastal commons.

They characterise this broadly shared stewardship as “community stewardship”, which engages in integrated management of oceans in the national jurisdiction. The impossibility of achieving this through a “blueprint” approach to environmental management (Brown & Spink, 1997, p. 31) highlights the need for shared narratives which carry and reinforce stewardship ethics. Furthermore, understanding stewardship

as a virtue ethic makes clear the cycle of reflection and practice through which the virtue of stewardship is learned and developed.

## **9.6 Conclusions**

This research project was born out of curiosity about the Australian Government's expressed intention to engender "a sense of stewardship for coastal and marine areas" in the community (Commonwealth of Australia, 1995, p.26). The stewardship could be substantive, or use of the word could just be symbolic, a rhetorical device. The research has examined how government policy framed the idea of stewardship in relation to coasts and oceans and how stewardship played out in the implementation of that and related policies between 1995 and 2012.

Steinberg's thesis that the current governance arrangements for the world's seas are the product of a succession of regimes that are well described as stewardship is used as a basis to understand how the notion of commons is embedded in International and Australian ideas of oceans and coasts. An argument is developed for the validity of adopting an environmental stewardship ethic, and its value to addressing the question of sustainability of coastal and marine ecosystems in particular.

Planet Earth as a whole is undergoing such major changes due to human actions that it is said to have passed from the Holocene into the Anthropocene. The scale of these changes can only be reduced or reversed if humans take responsibility for their actions. Stewardship is a useful English word, able to describe the required attitude or disposition and the actions which result. Stewardship is especially important for the sustainability of commons or public goods and services, of which oceans are exemplars.

For sustainability of coastal and ocean ecosystems, stewardship can be framed as a virtue ethic: a combination of a disposition to care, skills to enable effective action and a narrative which supplies meaning and validity and which enables it to be communicated and strengthened. Virtues develop through the process of *phronesis*, engaging in practices informed by ethics, which leads in turn to refinement and deeper understanding of the ethic of stewardship. Stewardship of coasts and oceans is best framed not merely as a personal virtue, but as a civic virtue, informing personal behaviours and motivating participation in the public sphere, where advocacy for the rights of other citizens, species and ecosystems is an expression of "deep" citizenship. When understood as a virtue ethic, stewardship comprises both the disposition to care and take responsibility and also the activities by which this ethic is manifested. Hence

the word is used to describe both of these aspects in policy and environmental discourse.

### ***Key findings***

From 1996 to 2012, Australia's policies in relation to NRM, and coasts and oceans, mainly framed stewardship as voluntary activity by the community. Stewardship language was mostly descriptive of stewardship activities, rather than a clearly articulated ethical concept. Nonetheless, interview and some secondary data indicate participating in stewardship activities can be described as a form of phronesis, informed by values and also influencing development of attitudes and dispositions.

Financial support to community groups, such as that provided through Coastwest, partnered with technical support and group capacity development is very important. Such a combination enables community members to translate their disposition and attitude (ethic) into collective action. Support like this was also available in the initial Coastcare Program, regional coastal and marine NRM facilitators funded by NHT2 and the Caring for our Country programme in Western Australia.

Ecological stewardship citizenship expressed as coastal or marine stewardship can be expressed through a variety of civil society structures, such as NGOs. However local communities are important nurseries for the culture of public virtue. Connection with neighbours and sense of place in the local environment are relatively easy, non-threatening steps to encourage on the road to active ecological citizenship begins without fear. Many forms of civil society organisation can be effective in stewardship of coastal or marine places.

In addition to stewardship of place, resource and product stewardship are important partners in ecological stewardship as it applies to the coast and oceans. The corporate sector, through its role in the production and distribution of goods and services in the market economy, also has responsibility of stewardship through the same argument presented here.

Civic education which encourages the broadest understanding of citizenship is important. To be effective, civic education for young people could include immersion in the community and for ecological citizenship, immersion in the environment. Programs

which bring students and environmental stewardship groups together are important strategies and should be supported.

The limited actions of coastal stewardship groups will not reverse the decline of the world's oceans and coastal areas. However, when framed with a stewardship ethical narrative, those activities may encourage adoption of a stewardship ethic and development of civic virtues more broadly. If the decision makers in industry, government and each individual market transaction perceive themselves as ecological citizens and practice the virtues of stewardship, perhaps progress could be made on key issues like climate change, coastal land use planning and management and resource recycling.

Commonwealth engagement in national coastal stewardship had declined from its apotheosis in 1996, through successive NRM policies. The Caring for our Country program seems to have paid little attention to the lessons that could have been learned the national Coastcare program when it commenced, in particular the need to facilitate partnerships between all three tiers of government.

Coastal and marine areas continue to be faced with the multiplicity of threats discussed in Chapters 4 and 5. In spite of increasingly sophisticated documentation of the damage, its causes and underlying drivers, many people are unable to make connections between their own quotidian decisions and actions and the downstream impact. A conversation has been opened about ways that ocean citizenship can be encouraged and effective in engaging wider support for appropriate action (Kennedy, 2007; McKinley & Fletcher, 2012; Vincent, 2011). That conversation would be well served by focussing on marine and coastal stewardship as a civic virtue. It offers a clearer way to communicate the behaviours, values and dispositions represented by "ocean citizenship".

### ***Further research***

This research project has opened up many questions which remain to be explored. One of the more obvious ones is to what extent has the succession of NRM programs increased stewardship? Clarke (2011) noted the failure of NHT1 evaluations to examine the extent to which this outcome had been realised.

A related question warranting further research is what methodology might be used to assess the adoption of "a sense of stewardship" or a stewardship ethic or disposition?

This research is also unable to answer whether it is realistic to expect attempts at holistic, cross-sectoral, integrated bioregional planning to succeed. Is it possible or reasonable to expect that sustainability plans can be developed by a participatory governance approach which integrates the environmental conservation needs with the production-consumption needs of society and industry within one framework? One way to answer these questions would be to compare the process in Australia with comparable integrated ecosystem planning on large scales in other parts of the world, even if they are not marine ecosystems.

### ***9.8 Epilogue***

When environmental stewardship is framed as a virtuous expression of ecological citizenship, it is able to guide the actions and responses of people in their various roles within the coastal and marine environment. Each person is in some way a consumer, community member, citizen and decision maker, each of these roles having some potential to increase or decrease the human impact on coasts and oceans. Multiplication of policies and regulations will never provide protection from the impact of the quotidian decisions of the large population whose ecological footprints mark the marine and coastal environment. Virtue ethics is proposed as a way that people can internalise the need to align their own small and large decisions with the long term good of the marine and coastal environment at local and global scale.

Local coastal stewardship organisations provide examples of civic virtue, in which taking action further informs the values, dispositions and competency of the actor. Governments have an important role in fostering civic education for stewardship, and providing support for communities of locality, practice and interest to develop ways to play their roles as stewards. Stewardship of place, resources and products are very closely-related concepts which could form a very clear theme for civic education which aims to develop ecological citizenship. This is not only applicable in Western Australia, but also to other jurisdictions around the world.





## References cited

- Abram, D. (1996). *The spell of the sensuous: Perception and language in a more-than-human world* (First Vintage Books ed.). New York: Vintage Books.
- Agardy, T., & Alder, J. (2005). Coastal Systems. In R. M. Hassan, R. Scholes & N. Ash (Eds.), *Ecosystems and human well-being: current state and trends* (Vol. 1, pp. 513-549). Washington: Island Press.
- Alexandra, J., & Riddington, C. (2007). Redreaming the rural landscape. *Futures*, 39(2-3), 324-339.
- Altman, J. (2008). Understanding the Blue Mud Bay decision. Retrieved 8 Oct 2008, from Crikey <http://www.crikey.com.au/Politics/20080801-Understanding-the-Blue-Mud-Bay-decision.html>
- Amery, H. A. (2001). Islam and the environment. In N. I. Faruqui, A. K. Biswas & M. J. Bino (Eds.), *Water Management in Islam* (pp. 39-48). Tokyo: United Nations University Press.
- Anand, R. P. (1983). *Origin and development of the law of the sea: history of international law revisited*. The Hague: Martinus Nijhoff.
- Anderson, J. (1997). *Stewardship and Public Service: A discussion paper prepared for the Public Service Commission of Canada*. Ottawa: Public Service Commission of Canada.
- Anderson, L. G. (1976). The relationship between the firm and the fishery in common property fisheries. *Land Economics*, 52(2), 179-191.
- Annas, J. (2006). Virtue Ethics. In D. Copp (Ed.), *The Oxford Handbook of Ethical Theory* (pp. 515-594). Oxford: Oxford University Press.
- Anton, D. (2002). International ocean law and the sustainable management of Western Australian marine and coastal resources. In S. L. Boulter (Ed.), *Coast Law in Western Australia* (pp. 15-64). Perth: Environmental Defender's Office, Western Australia.
- Antunes, P., & Santos, R. (1999). Integrated environmental management of the oceans. *Ecological Economics*, 31(2), 215-226.
- Appleby, T. (2007). The Public Right to Fish - Is it fit for purpose? *The Journal of Water Law*, 16(6).

- Appleby, T. (2008). Response to 'another view of the public right to fish - and the question of regulation or ownership'. *The Journal of Water Law*, 19, 41-42.
- Armstrong, K. (2005). Case studies of coastal councils: City of Joondalup, WA: Integrated community involvement to achieve results. *ALGA Policy and Research: Environment*. Retrieved 12 Jun 2006, from [www.alga.asn.au/policy/environment/coasts/caseStudies/joondalupWA.php](http://www.alga.asn.au/policy/environment/coasts/caseStudies/joondalupWA.php)
- Arrington, L. J., Fox, F. Y., & May, D. L. (1976). *Building the City of God: Community and cooperation among the Mormons*. Salt Lake City, Utah: Deseret Book Company.
- Arthurton, R., Barker, S., Rast, W., & Huber, M. (2007). Water. In UNEP (Ed.), *Global Environmental Outlook 4* (pp. 115-156). Nairobi, Kenya: United Nations Environment Program.
- Ateweberhan, M., Feary, D. A., Keshavmurthy, S., Chen, A., Schleyer, M. H., & Sheppard, C. R. C. (2013). Climate change impacts on coral reefs: Synergies with local effects, possibilities for acclimation, and management implications. *Marine Pollution Bulletin*, 74(2), 526-539.
- Attfield, R. (1991). *The ethics of environmental concern* (2 ed.). Athens, Georgia: University of Georgia Press.
- Attorney-General's Department. (1980). *Offshore constitutional settlement: A milestone in co-operative federalism*. Canberra: Australian Government Publishing Service.
- Aulich, C. (2009). From citizen participation to participatory governance.
- Australia and New Zealand Environment and Conservation Council, Task Force on Marine Protected Areas. (1998). *Guidelines for establishing the National Representative System of Marine Protected Areas*. Canberra: Australia and New Zealand Environment and Conservation Council, Task Force on Marine Protected Areas. Environment Australia.
- Australia and New Zealand Environment and Conservation Council, Task Force on Marine Protected Areas. (1999). *Strategic plan of action for the National Representative System of Marine Protected Areas: A guide for action by Australian Governments*. Canberra: Australia and New Zealand Environment and Conservation Council. Environment Australia.

- Australian Bureau of Agricultural and Resource Economics. (2001). *Australian Fisheries Statistics 2000*. Canberra: Australian Bureau of Agricultural and Resource Economics.
- Australian Bureau of Agricultural and Resource Economics. (2013). *Australian Fisheries Statistics 2012*. Canberra: Australian Bureau of Agricultural and Resource Economics.
- Australian Bureau of Statistics. (2004). How many people live in Australia's coastal areas? *Year Book Australia 2004*, 1301.0.  
<http://www.abs.gov.au/AUSSTATS/abs@.nsf/featurearticlesbyCatalogue/0EC9360424EA347ECA256DEA00053A70?OpenDocument#>
- Australian Bureau of Statistics. (2009). Environmental views and behaviour, 2007-08 (2nd Edition). Retrieved 14 Jul 2012, from  
<http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/4626.0.55.0012007-08%20%282nd%20issue%29?OpenDocument>
- Australian Bureau of Statistics. (2011). Regional Population Growth, Western Australia. *1367.5 Western Australian Statistical Indicators, 2010*. Retrieved 7 July 2011, from  
<http://www.abs.gov.au/ausstats/abs@.nsf/Products/887E148C8E0783BBCA25781D000D6902?opendocument>
- Australian Bureau of Statistics. (2012). Environmental views and behaviour, 2011-12. Retrieved 20 Sept 2014, from  
<http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/4626.0.55.001main+features32011-12>
- Australian Government Land and Coasts Caring for our Country Review Team. (2012). *Report on the Review of the Caring for our Country initiative*. Canberra: Australian Government Land and Coasts.
- Australian Local Government Association. (2005). *2004-05 national NRM survey of coastal councils*. Retrieved from  
[www.alga.asn.au/policy/environment/coasts/survey/report.php#download](http://www.alga.asn.au/policy/environment/coasts/survey/report.php#download)

- Australian National Audit Office. (2008). *Audit Report No.21 (2007-08) - The Regional Delivery Model for the Natural Heritage Trust and the National Action Plan for Salinity and Water Quality*. Canberra: Australian National Audit Office.
- Australian Research Council Centre of Excellence for Coral Reef Studies. (2008). What is the Coral Triangle Initiative? Retrieved 4 Jul 2011, from [www.coralcoe.org.au/events/ctiworkshop/ctiinfo.html](http://www.coralcoe.org.au/events/ctiworkshop/ctiinfo.html)
- Australian Soil Conservation Council. (1989). *National Soil Conservation Strategy*. Canberra: Australian Government Publishing Service.
- Babcock, H. M. (2007). Grotius, ocean fish ranching, and the Public Trust Doctrine: Ride 'em Charlie Tuna. *Stanford Environmental Law Journal*, 26, 3-76.
- Babcock, H. M. (2009). Civic republicanism provides theoretical support for making individuals more environmentally responsible. *Notre Dame Journal of Law, Ethics and Public Policy*, 23, 515-536.
- Barrett, C. B., & Grizzle, R. E. (1999). A holistic approach to sustainability based on pluralistic stewardship. *Environmental Ethics*, 21(1), 23-42.
- Barry, J. (1999). *Rethinking green politics: nature, virtue, and progress*. London: Sage.
- Barry, J. (2002). Vulnerability and virtue: Democracy, dependency, and ecological stewardship. In B. A. Minteer & B. P. Taylor (Eds.), *Democracy and the claims of nature: critical perspectives for a new century* (pp. 133-152). Lanham ML: Rowman & Littlefield.
- Barry, J. (2006). Resistance is fertile: from environmental to sustainability citizenship. In A. P. Dobson & D. Bell (Eds.), *Environmental Citizenship* (pp. 21-48). Cambridge Mass.: MIT Press.
- Barton, G. A. (2002). *Empire forestry and the origins of environmentalism*. Cambridge: Cambridge University Press.
- Barwick, G. (1971). Introduction. In ACF, *Conservation of the Australian Coast* (pp. 1-3). Parkville, Vic: Australian Conservation Foundation.
- Bauckham, R. (2000). Stewardship and Relationship. In R. J. Berry (Ed.), *The Care of Creation* (pp. 99-106). Leicester: InterVarsity Press.
- Beamish, R. J., & Neville, C.-E. M. (2006). Ecosystem bill of rights. In D.R.Rothwell & D. L. VanderZwaag (Eds.), *Towards principled oceans governance: Australian*

- and Canadian approaches and challenges* (pp. 233-245). Abingdon UK: Routledge.
- Beatley, T. (2004). *Native to Nowhere: Sustaining home and community in a global age*. Washington: Island Press.
- Beatson, R. (1806). *A political index to the histories of Great Britain and Ireland: or a complete register of the hereditary honours, public offices and persons in office from the earliest period to the present time* (3 ed.). London: Longman, Hurst, Rees and Orme.
- Beavis, M. A. (Ed.). (1994). *Environmental Stewardship: History, theory and practice. Workshop Proceedings (March 11-12, 1994)*. Winnipeg: University of Winnipeg: Institute of Urban Studies.
- Bell, D. R. (2005). Liberal Environmental Citizenship. *Environmental Politics*, 14(2), 179-194. doi: 10.1080/09644010500054863
- Bender, T. (2000). The new metropolitanism and a pluralized public. *Harvard Design Magazine*, Winter/Spring(10), 70.
- Béné, C. (2004). Poverty in Fisheries: a review and some further thoughts. In A.E. Neiland & C. Béné (Eds.), *Poverty and small-scale fisheries in West Africa* (pp. 61-101). Dordrecht: Springer Science+Business Media.
- Bennett, M. (2010, 20 May). Metro growth 'a threat' to coast, news, *The West Australian*.
- Berry, R. J. (2000). *The care of creation: focusing concern and action*. Leicester England: Inter-Varsity Press.
- Berry, T. (1978). *The new story*. New York: The American Teilhard Association for the Future of Man Inc.
- Berry, T. (1999). *The great work: our way into the future* (1st ed.). New York: Bell Tower.
- Berwick, M. (2006). The challenge of coastal governance. In A. J. Brown & J. A. Bellamy (Eds.), *Federalism & Regionalism in Australia* (pp. 83-94). Canberra: ANU E Press.

- Bijma, J., Pörtner, H.-O., Yesson, C., & Rogers, A. D. (2013). Climate change and the oceans – What does the future hold? *Marine Pollution Bulletin*, 74(2), 495-505. doi: <http://dx.doi.org/10.1016/j.marpolbul.2013.07.022>
- Binkley, Marian, Gill, Alison, Saunders, Phillip, & Wescott, Geoff. (2006). Community involvement in marine and coastal management in Australia and Canada. In D. R. Rothwell & D. L. VanderZwaag (Eds.), *Towards principled oceans governance: Australian and Canadian approaches and challenges* (pp. 249-280). London: Routledge.
- Blackadder, J. (nd). Coastcare. Retrieved 20 Nov 2013, from Asia-Pacific Forum for Environment and Development, Institute for Global Futures <http://www.apfed.net/ki/database/doc/BPP026.pdf>
- Blake, C. N. (2007). New Century, same crisis. *Commonweal*, 134(18). [www.commonwealmagazine.org/print\\_format.php?id\\_article=2038](http://www.commonwealmagazine.org/print_format.php?id_article=2038)
- Block, P. (1993). *Stewardship: Choosing Service over Self-Interest*. San Francisco: Berrett-Koehler Publishers.
- Bollmann, M., Bosch, T., Colijn, F., Ebinghaus, R., Froese, R., Güssow, K., . . . Weinberger, F. (2010). *World Ocean Review 1: Living with the ocean 2010*. Hamburg: Maribus GmbH.
- Bookchin, M. (1989). *Remaking society*. Montreal: Black Rose Books.
- Boulding, K. E. (1966). The Economics of the Coming Spaceship Earth. In H. Jarrett (Ed.), *Environmental quality in a Growing Economy* (pp. 3-14). Baltimore MD: Resources for the Future/John Hopkins University Press.
- Boulter, S. L. (Ed.). (2002). *Coast law in Western Australia: papers presented at the 'Lines in the sand' conference organised and held by the Environmental Defender's Office on 15 May 2002*. Perth: Environmental Defenders Office WA.
- Bouvard Coastcare Group. (2005). Bouvard Coastcare Group: Outstanding Community Group Effort. *Coastal Awards for Excellence 06-09-2005*. Retrieved 26 Mar 2009, from [http://www.mandurah.wa.gov.au/community/coastcare/awards/community/coastcare/awards/documents/coastal\\_award\\_submission.pdf](http://www.mandurah.wa.gov.au/community/coastcare/awards/community/coastcare/awards/documents/coastal_award_submission.pdf)
- Brazil, P. (2001). Offshore constitutional settlement 1980: a case study in federalism. *Occasional paper*.

- Brearely, A. (2006). *Earnest Hodgkin's Swanland: Estuaries and Coastal Lagoons of South-Western Australia*. Perth: UWA Press.
- Bricknell, S. (2010). *Environmental crime in Australia*. Canberra: Australian Institute of Criminology.
- Brinkman, R. (2011). *WAMSI Project Final Report: Oceanic conditions at Ningaloo Reef -analysis of downscaling climate into the Ningaloo Reef Tract*. Perth: Western Australian Marine Science Institute.
- Broadhurst, G. (2007). *Margaret River Coastal Residents' Association*. Paper presented at the Community Coastal and Marine Management Forum, Denmark 2007, Denmark.
- Bromley, D. (1992). Common Property as an institution. In D. Bromley, D. Feeny, M. A. McKean, P. Peters, J. L. Gilles, R. J. Oakerson, C. F. Runge & J. T. Thomson (Eds.), *Making the commons work* (pp. 3-15). San Fransisco: Institute for Contemporary Studies.
- Brown, A. J. (2007). Federalism, regionalism and the reshaping of Australian governance. In A. J. Brown & J. A. Bellamy (Eds.), *Federalism and regionalism in Australia* (pp. 11-32). Canberra: ANU E Press.
- Brown, L. (Ed.). (1993). *The New Shorter Oxford English Dictionary on historical principles*. Oxford: Oxford University Press.
- Brown, P. G. (1997). Stewardship of climate. *Climatic Change*, 37(2), 329-334.
- Brown, P. G. (1998). Towards an economics of stewardship: the case of climate. *Ecological Economics*, 26, 11-21.
- Brown, P. G. (2001). *The Commonwealth of Life: A treatise on stewardship economics*.
- Brown, V. A., & Spink, M. S. (1997). *Caring for the Commons: Socio-cultural Considerations in Oceans Policy Development and Implementation: Australia's Oceans Policy Issues Paper 4*. Canberra: Department of the Environment.
- Brundtland, G. H., & World Commission on Environment and Development. (1987). *Our common future*. Oxford ; New York: Oxford University Press.
- Burger, J. (2002). Restoration, stewardship, environmental health, and policy: Understanding stakeholders' perceptions. *Environmental Management*, 30(5), 632-604.

- Butler, A. J., Rees, T., Beesley, P., & Bax, N. J. (2010). Marine Biodiversity in the Australian Region. *PLoS ONE*, 5(8), e11831. doi: 10.1371/journal.pone.0011831
- Butler, W. E. (1990). Grotius and the Law of the Sea. In H. Bull, B. Kingsbury & A. Roberts (Eds.), *Hugo Grotius and international relations* (pp. 209-220). Oxford: Oxford University Press.
- Callicott, J. B. (1989). *In Defence of the Land Ethic*. Albany, NY: State University of New York Press.
- Callicott, J. B. (1994). *Earth's Insights*. Berkeley: University of California Press.
- Calvin, J. (1965). *A Commentary on Genesis* (Banner of Truth Trust reprint of the 1847 Calvin Society English ed.). London: Banner of Truth Trust.
- Campbell, A. (1991). *Landcare, testing times: National Landcare Facilitator, Second Annual Report* Retrieved from <http://triplehelix.com.au/documents/NLFRReport1991.pdf>
- Campbell, A. (2013). Marine biodiversity conservation in Australia: marine protected areas and politics. *AQ - Australian Quarterly*, 84(2), 4.
- Campbell, E. E. (1988). *Establishing Zion: The Mormon Church in the American West, 1847-1869* Retrieved from <http://www.signaturebookslibrary.org/EstZion/EZforeword.htm#Foreword>
- Cannon, J. (2001). "lord high steward". *A Dictionary of British History*. Oxford Reference Online Murdoch University. Retrieved 6 February 2007, from <http://0-www.oxfordreference.com.prospero.murdoch.edu.au:80/views/ENTRY.html?subview=Main&entry=t43.e2139>
- Carbon, B. (1991). Conservation through reserves: a tribute to some early players. In R. Hughes (Ed.), *Reflections on 20 years* (pp. 1-4). Perth: Environmental Protection Authority.
- Carr, A. (2002). *Grass roots & Green tape: Principles and practices of environmental stewardship*. Annandale: Federation Press.
- Carson, L., & Hartz-Karp, J. (2005). Adapting and combining deliberative designs. In J. Gastil & P. Levine (Eds.), *The Deliberative Democracy handbook* (pp. 120-138). San Francisco: Jossey-Bass.



- Carter, P. L. (2003). *Community and Government partnerships for the sustainable development of our coast*. (Honours Thesis), Murdoch University, Murdoch.
- Cary, J., & Webb, T. (2000). *Community landcare, the National Landcare Program and the landcare movement: the social dimensions of landcare*. Canberra: Social Sciences Centre, Bureau of Rural Resources.
- Centre for International Economics. (2005). *Evaluation of the Natural Heritage Trust Envirofund*. Canberra: Australian Government Department of Environment and Heritage.
- Christensen, J. (2009). *Recreational fishing and fisheries management: a HMAP Asia Project Paper*. Perth: Asia Research Centre Working Paper No.157, Murdoch University.
- Christoff, P. (1996). Ecological citizens and ecologically guided democracy In B. Doherty & M. De Geus (Eds.), *Democracy and green political thought* (pp. 151-169). New York: Routledge.
- Church of Jesus Christ of Latter Day Saints. (1921). *Doctrine and Covenants*. Salt Lake City, Utah: Church of Jesus Christ of Latter Day Saints.
- Churchill, R. (2015). The 1968 United Nations Convention on the Law of the Sea. In D.R. Rothwell, A. G. Oude Elferink, K. N. Scott & T. Stephens (Eds.) *The Oxford handbook of the law of the sea* (pp. 24-45). Oxford: Oxford University Press.
- Churchward, B. (1991). A Conservationist's view. In R. Hughes (Ed.), *Reflections on 20 years of the Environmental Protection Authority* (pp. 33-41). Perth: Department of Conservation and Environment.
- Cicin-Sain, B., & Knecht, R. W. (1998). *Integrated coastal and ocean management: concepts and practices*. Washington, D.C.: Island Press.
- Cittadino, E. (2006). Ecology and American social thought. In D. M. Lodge & C. Hamlin (Eds.), *Religion and the New Ecology* (pp. 73-115). Notre Dame: University of Notre Dame Press.
- City of Joondalup. (2009). Joondalup Community Coast Care Forum. Retrieved 3 Apr 2009
- City of Mandurah. (2005). Malcolm Flett: Outstanding Coastal Leadership. *Coastal Awards for Excellence 2005*. Retrieved 27 Mar 2009, from

[http://www.mandurah.wa.gov.au/community/coastcare/awards/documents/malcolm\\_flett\\_submission.pdf/file/at\\_download](http://www.mandurah.wa.gov.au/community/coastcare/awards/documents/malcolm_flett_submission.pdf/file/at_download)

City of Mandurah. (2010). Environmental Sustainability. In City of Mandurah (Ed.), *Snapshot of our sustainability journey*. Mandurah: City of Mandurah.

City of Mandurah. (2011). *Annual Report 2010-2011*. Mandurah: City of Mandurah.

City of Mandurah. (no date). Mandurah Coastcare: My Coast. Mandurah WA: City of Mandurah.

City of Stirling. (2000). Item RR1, Minutes of the Technical Services Committee Meeting 26 Sept 2000. Retrieved 5 Sept 2013, from <http://services.stirling.wa.gov.au/newmins/ts/2000/September/Frame.htm>

City of Stirling. (2001). Coastcare Group- proposed establishment, Item PR8 Minutes of Technical Services Committee Meeting, 28 August, 2001. Retrieved 5 Sept 2013, from <http://services.stirling.wa.gov.au/newmins/ts/2001/August/Frame.htm>

City of Stirling. (2003). Council contribution to coastal project support officer, PR4 minutes of Technical Services Committee Meeting 22 April, 2003. Retrieved 3 Sept 2013, from <http://services.stirling.wa.gov.au/newmins/ts/2003/April/Frame.htm>

Claridge, G., & Claridge, C. L. (1997). *Australia's Oceans Policy: Socio-Cultural Considerations, Expanding the Role of Collaborative Management and Stewardship in the Conservation Management of Australia's Marine and Coastal Resources, Issues Paper no 5, a report commissioned by Environment Australia*. Canberra: Dept of the Environment.

Clarke, B. (2002a). Coastcare: 1995-2001: Strengths, challenges and contribution to coastal management in Australia *Report prepared for Environment Australia*. Adelaide: University of Adelaide.

Clarke, B. (2002b). *Coastcare: A shining model of community participation or Government cost-cutting device?* Paper presented at the Coast to Coast 2002, Tweed Heads, NSW.  
<http://www.coastal.crc.org.au/coast2coast2002/proceedings.html>

Clarke, B. (2004). More than a sum of its parts, a reflection of Australia's Coastcare program under NHT I, 1995-2002 *Proceedings of Coast to Coast 2004*,

- Australia's 6th National Coastal Management Conference, The Second Decade - Coastal planning and management in Australia towards 2014*. Hobart.
- Clarke, B. (2006). Australia's Coastcare Program (1995-2002): its Purpose, Components and Outcomes. *Geographical Research*, 44(3), 310-322. doi: doi:10.1111/j.1745-5871.2006.00391.x
- Clarke, B. (2008). Seeking the Grail: Evaluating whether Australia's Coastcare Program achieved "meaningful" community participation. *Society & Natural Resources: An International Journal*, 21(10), 891 - 907.
- Clarke, B. (2011). *NRM and the coast: past, present and future*. Paper presented at the 20th NSW Coastal Conference, 8-11 November 2011, Tweed Heads, NSW. <http://www.coastalconference.com/2011/>
- Clarke, B., & Cutler, C. (2008). *Coastwest Evaluation, 1996-2007. Final Report*. Flinders University of South Australia. Adelaide.
- Clarke, B., & Harvey, N. (2013). Wither (sic) coastal management in Australia - a call for national leadership. In D. C. Conley, G. Masselink, P. E. Russell & T. J. O'Hare (Eds.), *Proceedings 12th International Coastal Symposium (Plymouth, England)* (pp. 915-920). Journal of Coastal Research, Special Issue No 65.
- Clarke, P. A. B. (1996). *Deep citizenship*. East Haven, Conn.: Pluto Press.
- Clayton, S. D., & Myers, G. (2009). *Conservation psychology understanding and promoting human care for nature* Retrieved from [http://www.murdoch.ebilib.com.AU/EBLWeb/patron/?target=patron&extendedid=P\\_428230\\_0&](http://www.murdoch.ebilib.com.AU/EBLWeb/patron/?target=patron&extendedid=P_428230_0&)
- Cockfield, G. (2010). *Between markets and the State: Natural Resources Management policy in Australia*. Paper presented at the Australian Political Studies Association Conference 2010: Connected globe: conflicting worlds, Melbourne 27-29 September 2010. [http://apsa2010.com.au/full-papers/pdf/APSA2010\\_0133.pdf](http://apsa2010.com.au/full-papers/pdf/APSA2010_0133.pdf)
- Coleman, D. (1996). *Emotional Intelligence*. London: Bloomsbury.
- Colgan, C. S. (1997). "Sustainable Development" and Economic Development Policy: Lessons from Canada. *Economic Development Quarterly*, 11(2), 123-137. doi: 10.1177/089124249701100202

- Collard, L., & Palmer, D. (2008). Looking for the residents of Terra Australis: The importance of Nyungar in early European coastal exploration. In P. M. Veth, P. Sutton, M. Neale & National Museum of Australia (Eds.), *Strangers on the shore: early coastal contacts in Australia*. Canberra: National Museum of Australia Press.
- Collier, P. (2007). *The bottom billion: why the poorest countries are failing and what can be done about it*. New York: Oxford University Press.
- Committee on International Capacity-Building for the Protection and Sustainable Use of Oceans and Coasts, National Research Council. (2008). *Increasing capacity for stewardship of oceans and coasts: A priority for the 21st Century*. Washington DC: National Academies Press.
- Commonwealth of Australia. (1992). *National strategy for ecologically sustainable development*. Canberra: Australian Government Publishing Service.
- Commonwealth of Australia. (1995). *Living on the Coast: The Commonwealth Coastal Policy*. Canberra: Department of the Environment Sport and Territories (DEST).
- Commonwealth of Australia. (1998a). *Australia's Oceans Policy* (Vol.1). Canberra: Environment Australia.
- Commonwealth of Australia. (1998b). *Australia's Oceans Policy: an issues paper: caring, using, understanding*. Canberra: Environment Australia.
- Commonwealth of Australia. (1998c). *Australia's Oceans Policy: Specific sectoral measures* (Vol. 2). Canberra: Environment Australia.
- Commonwealth of Australia. (2002). *Bilateral Agreement between the Commonwealth of Australia and the State of Western Australia to deliver the extension of the Natural Heritage Trust*. Canberra: Australian Government Retrieved from <http://www.nht.gov.au/publications/agreements/pubs/bilaterals-wa.pdf>.
- Commonwealth of Australia. (2004). *Natural Heritage Trust Annual Report 2002-03*. Canberra: The Natural Heritage Trust.
- Commonwealth of Australia. (2007). *Natural Heritage Trust Annual Report 2005-06*. Canberra: Australian Government NRM Communications Unit.
- Commonwealth of Australia. (2008). *Caring for our Country Business Plan 2009-10*. Canberra: Department of the Environment, Water, Heritage and the Arts, and the Department of Agriculture, Fisheries and Forestry.

- Commonwealth of Australia. (2009a). *Caring for our Country Business Plan 2010-11*. Canberra: Department of the Environment, Water, Heritage and the Arts, and the Department of Agriculture, Fisheries and Forestry.
- Commonwealth of Australia. (2009b). *Natural Heritage Trust Annual Report 2008-09*. Canberra: Community Information Unit, Department of Sustainability, Environment, Water, Population and Communities.
- Commonwealth of Australia. (2010). *Caring for our Country Business Plan 2011-12*. Canberra: Department of the Environment, Water, Heritage and the Arts and the Department of Agriculture, Fisheries and Forestry.
- Commonwealth of Australia Department of Primary Industries and Energy. (1992). *NSCP projects 1992-93: a compendium of projects funded under the National Soil Conservation Program*. Canberra: Dept. of Primary Industries and Energy.
- Connolly, J. (2006). The virtues of environmental citizenship. In A. Dobson & D. Bell (Eds.), *Environmental Citizenship* (pp. 49-73). Cambridge, Mass.: MIT Press.
- Council of Australian Governments. (2013). Communique: COAG Meeting, 13 December 2013. Retrieved 10 Jan 2014, from <http://www.coag.gov.au/node/516>
- Crawford, D. (1992). "The injured coastline" - a parliamentary report on coastal protection in Australia. *Coastal Management*, 20(2), 189 - 198.
- Cronon, W. (1995). The trouble with wilderness; or, Getting back to the wrong nature. In W. Cronon (Ed.), *Uncommon Ground: Rethinking the human place in nature* (pp. 69-90). New York: Norton & Co.
- CSIRO. (2005a). An encouraging increase in used-oil recycling. *ECOS*, 123, 6.
- CSIRO. (2005b). Tougher drive to reduce industrial packaging waste. *ECOS*, 123, 6.
- Cuello Nieto, C. (1997). Towards a holistic approach to the ideal of sustainability. *Society for Philosophy and Technology*, 2(2), 41-48.
- Cullinan, C. (2011). *Wild Law: a manifesto for earth justice*. (2 ed.). White River Junction, VT: Green Books
- Culver, R. (1972). Natural forces at work on the coastline and their effects. In ACF (Ed.), *Conservation of the Australian Coast* (pp. 21-28). Parkville, Vic: Australian Conservation Foundation.

- Cumbrae-Stewart, F. W. S. (1934). *Australian Boundaries: A Paper read before the Australian and New Zealand Society of National Law, Sydney 20 August 1933*. Brisbane: The University of Queensland.
- Cuomo, C. J. (1992). Unravelling the problems in Ecofeminism. *Environmental Ethics*, 14, 351-363.
- Curtis, A., & De Lacy, T. (1998). Landcare, Stewardship and Sustainable Agriculture in Australia. *Environmental Values*, 7, 59-78.
- Dale, P. (1991). *Managing Australian Coastlands*. Melbourne: Longman Cheshire.
- Davis, E. F. (2009). *Scripture, culture and agriculture: an agrarian reading of the Bible*. Cambridge: Cambridge University Press.
- Davis, J. K., & Stocker, L. (2006). 'Adopt-a-Beach': *Educational praxis for sustainability* Paper presented at the National Conference of the Australian Association for Environmental Education, 3-6 October 2006, Bunbury W.A.
- Davison, A. (2000). *Technology and the contested meanings of sustainability*. Albany, N.Y.: State University of New York Press.
- de Groot, W. (1992). *Environmental science theory: concepts and methods in a one-world, problem-oriented paradigm*. Amsterdam: Elsevier.
- de Marco, G., & Bartolo, M. (1997). *Malta in the United Nations*. London: Kegan Paul International.
- De Vos, P., De Witt, C., Dykema, E., Ehlers, V. J., & Wilkinson, L. (1991). *Earthkeeping in the nineties: stewardship of creation* (Rev. ed.). Grand Rapids, Mich.: Eerdmans Pub. Co.
- Dechaine, D. R. (2009). Bordering the Civic Imaginary: Alienization, fence logic, and the Minuteman Civil Defense Corps. *Quarterly Journal of Speech*, 95(1), 43-65. doi: 10.1080/00335630802621078
- Department for Planning and Infrastructure. (2002). *Review of the structural arrangements for coastal planning and management in Western Australia*. Perth: Department for Planning and Infrastructure.
- Department for Planning and Infrastructure. (2004). Locke Estate Busselton (Class 'A' Reserve No. 22674) Investigation of beach stabilisation *DPI Report*. Fremantle: New Coastal Assets Branch, DPI.

- Department of Agriculture, Fisheries and Forestry. (1995). *Decade of Landcare Plan: National Overview published 1995*. Canberra: Australian Government Department of Agriculture, Fisheries and Forestry.
- Department of Agriculture, Fisheries and Forestry. (2012). Operating environment in 2012 for Landcare and related community-based groups in each of the states and territories across Australia. Retrieved 1 May 2012, from <http://www.daff.gov.au/natural-resources/landcare/council/operating-environment>
- Department of Agriculture, Fisheries and Forestry, & DEWR, Department of Environment and Water Resources. (n.d.). *Phase 3 of the Natural Heritage Trust*. Canberra: Australian Government.
- Department of Agriculture, Fisheries and Forestry, & DEWR, Department of the Environment and Water Resources. (2007). The Environment Stewardship Program. Retrieved 9 October 2007, from <http://www.nrm.gov.au/funding/pubs/q-and-a.pdf>
- Department of Conservation and Environment. (1980). Introduction to Coastal Management in Western Australia *Bulletin No 49*. Perth: Department of Conservation and Environment.
- Department of Conservation and Environment. (1984). *Proceeding from the Coastal Planning and Management Seminar held 19-21 Nov 1984, Perth*. Perth: Department of Conservation and Environment.
- Department of Environment, Housing and Community Development. (1978a). *A basis for soil conservation policy in Australia*. Canberra: Research Directorate, Dept of Environment, Housing and Community Development, Australian Government Publishing Service.
- Department of Environment, Housing and Community Development. (1978b). *A Basis for Soil Conservation Policy in Australia: Commonwealth and State Government Collaborative Soil Conservation Study 1975-77. Report 1*. Canberra: Australian Government Publishing Service.
- Department of Environment and Conservation. (2007). *Shoalwater Islands Marine Park Management Plan 2007-2017*. Perth: Department of Environment and Conservation.

- Department of Environment and Conservation. (2010). *2009 - 2010 Annual Report, Department of Environment and Conservation*. Perth.
- Department of Environment and Conservation. (2013). Ngari Capes marine Park management plan 2013-2023. *Management Plan*.
- Department of Environment and Conservation. (n.d.). Park Finder: Ningaloo Marine Park. Retrieved 11 Nov 2010, from [http://www.dec.wa.gov.au/component/option,com\\_hotproperty/task,view/id,50/Itemid,1584/](http://www.dec.wa.gov.au/component/option,com_hotproperty/task,view/id,50/Itemid,1584/)
- Department of Fisheries. (2008). *A strategy for managing the recreational catch of Demersal Scale Fish in the West Coast Bioregion*. Perth: Department of Fisheries, Western Australia.
- Department of Fisheries. (2009). *Integrated Fisheries Management: Government Policy*. Perth: Government of Western Australia, Department of Fisheries.
- Department of Foreign Affairs and Trade. (2009). *Australia Fact Sheet*. Retrieved 24 May 2009
- Department of Parks and Wildlife. (2014). *Department of Parks and Wildlife 2013-14 Annual Report*. Kensington, Western Australia: Department of Parks and Wildlife.
- Department of the Environment, Water Heritage and the Arts. (n.d.). *Fact sheet - Marine Bioregional Planning -the process*. Canberra: Australian Government Retrieved from [www.environment.gov.au/mbp](http://www.environment.gov.au/mbp).
- Derham, W. (1728). *Physico-Theology: or A Demonstration of the Being and Attributes of God, from His Works of Creation* (6th ed.). London: Innys.
- Devall, W. (1988). *Simple in means, rich in ends: practicing deep ecology*. London: Green Print.
- Devall, W., & Sessions, G. (1985). *Deep Ecology: Living as if nature mattered*. Salt Lake City: Peregrine Smith Books.
- DeWitt, C. B., Baer, R. A., Derr, T. S., Skillen, J. W., Lugo, L. E., & Ehlers, V. J. (1998). *Caring for creation: responsible stewardship of God's handiwork*. Grand Rapids, Mich.: Baker Books.
- Dobson, A. (2003). *Citizenship and the environment*. Oxford: Oxford University Press.



- Dobson, A., & Valencia Sáiz, Á. (2005). Introduction (to the special issue). *Environmental Politics*, 14(2), 157-162. doi: 10.1080/09644010500054822
- Donaldson, B., Eliot, I., & Kay, R. (1995). *Final Report of the Review of Coastal Management in Western Australia: A report to the Minister for Planning*. Perth: Coastal Management Review Committee.
- Doney, S. C., Fabry, V. J., Feely, R. E., & Kleypas, J. A. (2009). Ocean Acidification: The other CO<sub>2</sub> problem. *Annual Review of Marine Science*, 2009(1), 69-92.
- Dovers, S. (2013). The Australian Environmental Policy Agenda. *Australian Journal of Public Administration*, 72(2), 114-128. doi: 10.1111/1467-8500.12013
- Dowie, M. (2005). Conservation Refugees. *Orion Magazine*, 2005(6), 16-24. <http://www.orionsociety.org/pages/om/05-6om/Dowie.html>
- Dryden, P. (2004, 19 Feb, 2004). *Aspects of the 'Sea Change' phenomenon in the Surf Coast region of Victoria*. Paper presented at the Inaugural National Research Colloquium, 2004, Canberra.
- Dryzek, J. S. (2005). *The politics of the Earth: environmental discourses* (2nd ed.). Oxford: Oxford University Press.
- Duxbury, J., & Dickinson, S. (2007). Principles for sustainable governance of the coastal zone: In the context of coastal disasters. *Ecological Economics*, 63(2-3), 319-330.
- Ehrlich, P. R., & Holdren, J. P. (1972). A Bulletin Dialogue on "The Closing Circle": Critique. *Bulletin of the Atomic Scientists*(May 1972), 16-27.
- Encyclopedia Britannica Inc (Ed.). (2006). *Britannica concise encyclopedia*. Chicago: Encyclopedia Britannica.
- Ensminger, J., & Rutten, A. (1991). The Political Economy of Changing Property Rights: Dismantling a Pastoral Commons. *American Ethnologist*, 18(4), 683-699. doi: 10.2307/645447
- Environment Australia -Marine Group. (1999). *Improving performance in partnership: Mid Term Evaluation of Coasts and Clean Seas 1997-1999 Final report*. Canberra: Environment Australia.
- Environment Protection and Heritage Council. (2004). Co-regulatory Frameworks for Product Stewardship: An Industry Discussion Paper. Retrieved 30 Jan 2007,

from

[http://www.ephc.gov.au/pdf/product\\_stewardship/ProductStewardship\\_IndustryDP.pdf](http://www.ephc.gov.au/pdf/product_stewardship/ProductStewardship_IndustryDP.pdf)

Environment Protection and Heritage Council. (2008). Product Stewardship. Retrieved 14 Aug 2008, from

[http://www.ephc.gov.au/nepms/product\\_stewardship/product\\_stewardship.htm](http://www.ephc.gov.au/nepms/product_stewardship/product_stewardship.htm)

Environment Protection and Heritage Council. (2009). *19th Meeting of EPHC*

*Communique, 5 November 2009*. EPHC Retrieved from

[http://www.ephc.gov.au/sites/default/files/EPHC\\_Cmq\\_\\_Communique\\_2009\\_11\\_05.pdf](http://www.ephc.gov.au/sites/default/files/EPHC_Cmq__Communique_2009_11_05.pdf).

Evans, F. (2008). Genealogical Approach. In L.M. Given (Ed.), *The SAGE encyclopedia of qualitative research methods* (pp.370-372). Thousand Oaks, California: SAGE Publications Inc.

Faruqui, N. I. (2001). Islam and water management: Overview and principles. In N. I. Faruqui, A. K. Biswas & M. J. Bino (Eds.), *Water management in Islam*. Tokyo: United Nations University Press.

Federal-Provincial-Territorial Stewardship Working Group. (2002). *Canada's Stewardship agenda: naturally connecting Canadians*. Stewardship Division, Canadian Wildlife Service Retrieved from [www.stewardshipcanada.ca](http://www.stewardshipcanada.ca).

Fletcher, S., & Potts, J. (2007). Ocean Citizenship: An Emergent Geographical Concept. *Coastal Management*, 35(4), 511 - 524.

Floit, C. (1993). Reconsidering freedom of the high seas: Protection of living marine resources on the high seas. In J. M. Van Dyke, D. Zaelke & G. Hewison (Eds.), *Freedom for the seas in the 21st Century* (pp. 310-326). Washington DC: Island Press.

Flood, M, Stobutzki, I, Andrews, J, Ashby, C, Begg, G, Fletcher, R, Gardner, C, Georgeson, L, Hansen, S, Hartmann, K, Hone, P, Horvat, P, Maloney, L, McDonald, B, Moore, A, Roelofs, A, Sainsbury, K, Saunders, T, Smith, T, Stewardson, C, Stewart, J & Wise, B (eds) 2014, *Status of key Australian fish stocks reports 2014*. Canberra: Fisheries Research and Development Corporation.

- Foster, E. G., Haward, M., & Coffen-Smout, S. (2005). Implementing integrated oceans management: Australia's south east regional marine plan (SERMP) and Canada's eastern Scotian shelf integrated management (ESSIM) initiative. *Marine Policy*, 29(5), 391-405.
- Foxwell-Norton, K. (2013). Communication, culture, community and country: the lost seas of environmental policy. *Continuum*, 27(2), 267-282. doi: 10.1080/10304312.2013.766307
- Fuchs, D. A. (2003). *An institutional basis for environmental stewardship: The structure and quality of property rights*. Dordrecht: Kluwer Academic Publishers.
- Gabrielsen, P., & Bosch, P. (2003). *Environmental Indicators: Typology and Use in Reporting*. EEA Internal Working Paper: European Environment Agency.
- Gammage, B. (2011). *The biggest estate on earth : how Aborigines made Australia*. Crows Nest, N.S.W.: Allen & Unwin.
- Gardner, H. (1983). *Frames of mind*. New York: Basic Books.
- Gardner, J. E. (1993). Environmental Non-Government Organizations (ENGOS) and sustainable development. In S. C. Lerner (Ed.), *Environmental Stewardship: studies in active earthkeeping* (pp. 9-41). Waterloo: University of Waterloo, Department of Geography.
- Garrett, P., & George, J. (2007). *Caring for Our Coasts*. Canberra: Australian Labor Party.
- Gilligan, C. (1982). *In a different voice: Psychological theory and women's development*. Cambridge, MA: Harvard University Press.
- Gjerde, K. M., Currie, D., Wowk, K., & Sack, K. (2013). Ocean in peril: Reforming the management of global ocean living resources in areas beyond national jurisdiction. *Marine Pollution Bulletin*, 74(2), 540-551. doi: <http://dx.doi.org/10.1016/j.marpolbul.2013.07.037>
- Glacken, C. J. (1967). *Traces on the Rhodian Shore*. Berkeley: University of California Press.
- Gordon, E. (2009). Freedom of the seas Part 4. *Freedom of the Seas, 1609: Grotius and the emergence of international law*. Retrieved 7 Sept 2010, from

<http://blogs.law.yale.edu/blogs/rarebooks/archive/tags/Seraphim+de+Freitas/default.aspx>

- Gottlieb, R. (1993). *Forcing the Spring: The transformation of the American environmental movement*. Washington DC: Island Press.
- Government of Canada. (2002). Canada's Oceans Strategy. In O. Directorate (Ed.), (pp. 36). Ottawa: Fisheries and Oceans Canada.
- Government of Western Australia, State Natural Resource Management Office. (2011). State NRM Programm community grants: Successful projects 2010-11. Retrieved 2 May 2012, from [http://www.nrm.wa.gov.au/media/34529/successful\\_community\\_projects\\_2010-11.pdf](http://www.nrm.wa.gov.au/media/34529/successful_community_projects_2010-11.pdf)
- Government of Western Australia, State Natural Resource Management Office. (2012). State NRM Programm community grants: Successful projects 2011-12. Retrieved 10 May 2012, from [http://www.nrm.wa.gov.au/media/30820/successful\\_community\\_projects\\_2012.pdf](http://www.nrm.wa.gov.au/media/30820/successful_community_projects_2012.pdf)
- Grant, H. J. (1921). *The Doctrine and Covenants of the Church of Jesus Christ of Latter-Day Saints*. Salt Lake City, Utah: The Church of Jesus Christ Latter-Day Saints.
- Greene, D. (2006). The role of the private sector in envrionmental stewardship. (30 May 2005). <http://www.deh.gov.au/soe/2006/integrative/private/index.html>
- Gullett, W., & Rose, G. (2011). Australia's marine jurisdictions under international and domestic law. In W. Gullett, C. H. Schofield & J. Vince (Eds.), *Marine resources management* (pp. 25-40). Chatswood, NSW: LexisNexis Butterworths.
- Gurran, N., Blakely, E. J., & Squires, C. (2007). Governance Responses to Rapid Growth in Environmentally Sensitive Areas of Coastal Australia. *Coastal Management*, 35(4), 445 - 465.
- Hajkowicz, S. (2009). The evolution of Australia's natural resource management programs: Towards improved targeting and evaluation of investments. *Land Use Policy*, 26(2), 471-478.

- Hall, D. J. (1990). *The steward: a biblical symbol come of age* (Revised ed.). Grand Rapids, Mich.: W.B. Eerdmans.
- Halpern, B. S., Longo, C., Hardy, D., McLeod, K. L., Samhour, J. F., Katona, S. K., . . . Zeller, D. (2012). An index to assess the health and benefits of the global ocean. *Nature*, 488(7413), 615-620.
- Hamilton, C. (2003). The Resource Assessment Commission: lessons in the venality of modern politics. In S. Dovers (Ed.), *Managing Australia's environment* (pp. 117-132). Sydney: The Federation Press.
- Hamilton, C., & Maddison, S. (2007). *Silencing dissent: how the Australian government is controlling public opinion and stifling debate*. Crows Nest, N.S.W.: Allen & Unwin.
- Hamlin, C., & Lodge, D. M. (2006). Beyond Lynn White: Religion, the contexts of ecology and the flux of nature. In C. Hamlin & D. M. Lodge (Eds.), *Religion and the New Ecology* (pp. 1-25). Notre Dame, Indiana: University of Notre Dame Press.
- Hannam, I. (2003). Soil conservation in Australia. *Journal of soil and water conservation*, 58(6), 112A-113A.
- Hardin, G. (1968). The tragedy of the commons. *Science*, 162, 1243-1248.
- Hargrove, E. C. (1989). *Foundations of environmental ethics*. Englewood Cliffs, N.J: Prentice Hall.
- Harvey, N., & Caton, B. (2003). *Coastal Management in Australia*. Melbourne: Oxford University Press.
- Harvey, N., & Clarke, B. (2007). Policy implications for Australian coastal communities affected by sea-level rise. *Just Policy*(46), 52-59.
- Harvey, N., Clarke, B., Pelton, N., & Mumford, T. (2012). Evolution of sustainable coastal management and coastal adaptation to climate change. In R. Kenchington, L. Stocker & D. Wood (Eds.), *Sustainable coastal management and climate adaptation* (pp. 75-99). Collingwood, Vic.: CSIRO Publishing.
- Hassall & Associates Pty Ltd. (2005). *Natural Heritage Trust Phase 1 Final Evaluation*. Sydney: A report prepared for the Department of Agriculture, Fisheries and Forestry and the Department of Environment and Heritage.

- Haward, M. G. (1996). Institutional framework for Australian ocean and coastal management. *Ocean & Coastal Management*, 33(1-3), 19-39.
- Haward, M. G. (2003). The Ocean and Marine Realm. In S. Dovers & S. Wild River (Eds.), *Managing Australia's Environment* (pp. 35-52). Annandale, NSW: Federation Press.
- Haward, M. G., & Vince, J. (2008). *Oceans governance in the twenty-first century: managing the blue planet*. Cheltenham, UK: Edward Elgar.
- Hawke, R. J. L. (1989). *Our country our future: Statement on the environment*. Canberra: Australian Government Publishing Service.
- Hawthorne, M., & Alabaster, T. (1999). Citizen 2000: development of a model of environmental citizenship. *Global Environmental Change*, 9(1), 25-43.
- Hay, P. (2002). *Main currents in Western environmental thought*. Sydney: UNSW Press.
- Haydon, T. (1993). Foreword. In J. B. Callicott (Ed.), *Earth's Insights* (pp. xi - xxiv). Berkeley: University of California Press.
- Hays, S. P. (1969). *Conservation and the Gospel of Efficiency* (Atheneum ed.). New York: Atheneum.
- HC Coombs Policy Forum (2011). *NRM Literature Review: Document II*. Canberra: HC Coombs Policy Forum-Fenner School of Environment and Society NRM initiative, Australian National University.
- Heller, M., & Pedersen, B. (2004). *All the West was won ... a two Coast harmony*. Paper presented at the Coast to Coast 2004, Hobart, Tasmania.  
[http://www.cdesign.com.au/proceedings\\_c2c2004/pages/coastfinal00050.pdf](http://www.cdesign.com.au/proceedings_c2c2004/pages/coastfinal00050.pdf)
- Henry, G. W., & Lyle, J. M. (2003). *The National Recreational and Indigenous Fishing Survey*. Canberra: Australian Government Department of Agriculture Fisheries and Forestry.
- Herr, R., & Haward, M. (2001). Australia's Oceans Policy: Policy and process. In M. Haward (Ed.), *Integrated Ocean Management: Issues in implementing Australia's Ocean Policy: papers from the Australia-Canada Ocean Research Network Workshop, Vancouver, B.C. Canada, 10-11 December 2000*. Hobart: Cooperative Research Centre for Antarctica and the Southern Ocean.

- Herriman, M., Tsamenyi, M., Ramli, J., & Bateman, S. (1997). *Australia's Oceans Policy. Background Paper 2: International Agreements*. Canberra: Department of the Environment, Commonwealth of Australia.
- Hilts, S. (1994). The Natural Heritage Stewardship Program. In M. A. Beavis (Ed.), *Environmental Stewardship: History, theory and practice: Workshop Proceedings (March 11-12, 1994)* (pp. 108-117). Winnipeg: University of Winnipeg, Institute of Urban Studies.
- Hopkins, D., & Wood, D. (2006). Ningaloo Marine Park Tourism Scoping Paper. Perth: Curtin Sustainable Tourism Centre.
- Horden, P., & Purcell, N. (2000). *The corrupting sea: a study of Mediterranean history*. Oxford: Blackwell.
- Hore-Lacy, I. (2006). *Responsible dominion*. Vancouver: Regent College Publishing.
- House of Representatives Standing Committee on Climate Change, Water, Environment and the Arts (2009). *Managing our coastal zone in a changing climate: the time to act is now*. Canberra: The Parliament of the Commonwealth of Australia.
- Howes, M. (2000). A brief history of Commonwealth Sustainable Development policy discourses. *Policy, Organisation & Society*, 19(1), 65-85.
- Hudnut-Beumler, J. (2007). *In pursuit of The Almighty's Dollar: A history of money and American Protestantism*. Chapel Hill: University of North Carolina Press.
- Hughes, T. P., Baird, A. H., Bellwood, D. R., Card, M., Connolly, S. R., Folke, C., . . . Roughgarden, J. (2003). Climate change, human impacts, and the resilience of coral reefs. *Science*, 301(5635), 929-933.
- Hugo, G., Feist, H., & Tan, G. (2013). Population change in regional Australia, 2006-11. *Australian Population and Migration Research Centre Policy Brief*, 1(3).
- Hutchings, K. (2010). *Global ethics: an introduction*. Cambridge, UK: Polity.
- Hutchinson, T. H., Lyons, B. P., Thain, J. E., & Law, R. J. (2013). Evaluating legacy contaminants and emerging chemicals in marine environments using adverse outcome pathways and biological effects-directed analysis. *Marine Pollution Bulletin*, 74(2), 517-525. doi: <http://dx.doi.org/10.1016/j.marpolbul.2013.06.012>
- Independent World Commission on the Oceans (1998). *The ocean our future*. Cambridge: Cambridge University Press.

- Intergovernmental Committee on Ecologically Sustainable Development (1996). *Report on the implementation of the national strategy for ecologically sustainable development 1993 -1995*. Canberra: Department of the Environment, Sport and Territories.
- Intergovernmental Panel on Climate Change (IPCC). (2007). *Intergovernmental Panel on Climate Change Fourth Assessment Report: Climate Change 2007*. Cambridge: Cambridge University Press.
- Intergovernmental Panel on Climate Change (2007). Summary for Policymakers. In M. L. Parry, O. F. Canziani, J. P. Palutikof, P. van der Linden & C. E. Hanson (Eds.), *Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* (pp. 7-22). Cambridge, UK: Cambridge University Press.
- International Programme on the State of the Oceans (IPSO) (nd). Implementing the Global State of the Oceans Report. from [http://www.stateoftheocean.org/pdfs/ipso\\_report\\_051208web.pdf](http://www.stateoftheocean.org/pdfs/ipso_report_051208web.pdf)
- James, P. (2007). Reframing the nation-state: Rethinking the Australian dream from the local to the global. *Futures*, 39(2-3), 169-184.
- James, R. J. (2000). The first step for the environmental management of Australian beaches: Establishing an effective policy framework. *Coastal Management*, 28, 149-160.
- Jay, M. (1973). *The Dialectical Imagination: A history of the Frankfurt School and the Institute of Social Research 1923-1950*. London: Heinemann.
- John Ray Institute. (2000). Environmental Stewardship (summary of a consultation held at St George's House 15-17 September, 2000). Retrieved 21 July 2004, 2004, from [http://www.jri.org.uk/brief/windsor\\_2000.htm](http://www.jri.org.uk/brief/windsor_2000.htm)
- Jones, S. B., & Finley, J. C. (1993). Public Forest Stewardship Ethic. *Journal of Extension*, 31(3).
- Judd, R. W. (2009). *The untilled garden: natural history and the spirit of conservation in America, 1740-1840*. Cambridge: Cambridge University Press.



- Kalen, S. (2006). The Coastal Zone Management Act of Today: Does Sustainability Have a Chance? *Southeastern Environmental Law Journal*, 1(2006-2007), 191-221.
- Kay, R., & Alder, J. (1999). *Coastal Planning and Management*. London: Spon Press.
- Kay, R., & Alder, J. (2005). *Coastal planning and management* (2nd ed.). Abingdon, UK: Taylor and Francis.
- Kay, R., Eliot, R., Panizza, V., & Donaldson, B. (1997). Reforming coastal management in Western Australia. *Ocean & Coastal Management*, 35(1), 1-29.
- Kay, R., & Lester, C. (1997). Benchmarking the future direction for coastal management in Australia. *Coastal Management*, 25(3), 265-292.
- Kellert, S. R. (2003). Human values, ethics, and the marine environment. In D. G. Dallmayer (Ed.), *Values at Sea: Ethics for the marine environment* (pp. 1-32). Athens, USA: The University of Georgia Press.
- Kenchington, R., Stocker, L., & Wood, D. (Eds.). (2012). *Sustainable Coastal Management and Climate Adaptation: Global Lessons from Regional Approaches in Australia*. Collingwood, Vic.: CSIRO Publishing.
- Kennedy, D. J. (2007). *Ocean views: an investigation into human-ocean relations*. (PhD Thesis (Ph D )), Murdoch University, Perth. Retrieved from <http://wwwlib.murdoch.edu.au/adt/browse/view/adt-MU20080523.120432>
- Kenya Land Alliance. (2005). Main issues surrounding wildlife management and perpetuate Human-Wildlife conflicts in Kenya. *Kenya Land Alliance Fact Sheet*. 5. Retrieved 14 Feb 2007
- Keogh, K., Chant, D., & Frazer, B. (2006). *Ministerial Reference Group for Future NRM Programme Delivery - Review of arrangements for Regional Delivery of Natural Resource Management Programmes*. Canberra Australian Government NRM Team.
- Kidner, D. (1967). *Genesis: an introduction and commentary*. Leicester, England: Inter-Varsity Press.
- Kildow, J. (1997). The roots and context of the Coastal Zone Movement. *Coastal Management*, 25, 231-263.
- Kolb, R. (2009). Natural environment coastcare in Stirling. *Coastlines*(Summer 2009).

- Landcare Australia Limited. (2004). *Annual Report 04*. Sydney: Landcare Australia Limited.
- Landcare Australia Limited. (2009). *Annual Report 2008 - 2009*. Sydney: Landcare Australia Limited.
- Landcare Australia Limited. (2010). *Annual Report 2009 - 2010*. Sydney: Landcare Australia Limited.
- Landcare Australia Limited. (2011a). *Annual Report 2010-2011*. Sydney: Landcare Australia Limited.
- Landcare Australia Limited. (2011b). *Coastcare national group survey 2011 Report*. Sydney: Landcare Australia Limited.
- Langton, M. (1998). *Burning questions: emerging environmental issues for indigenous peoples in Northern Australia*. Darwin: Centre for Indigenous Natural and Cultural Resource Management, Northern Territory University.
- Latham, M. (2001). The enabling state: from government to governance. In P. Botsman & M. Latham (Eds.), *The enabling state: people before bureaucracy*. Annandale, NSW: Pluto Press.
- Lauterpacht, E. (1978). State Territory: Bonser v. La Macchia. *International Law Reports*, 51, 39-?
- Lavelle, P., Dugdale, R., & Scholes, R. (2005). Nutrient cycling. In R. Hassan, R. Scholes & N. Ash (Eds.), *Ecosystems and human well-being: Current state and trends* (Vol. 1, pp. 331-353). Washington: Island Press.
- Lele, S. M. (1991). Sustainable Development: A critical review. *World Development*, 19(6), 607-621.
- Leopold, A. (1949). *A Sand County Almanac*: Oxford UP.
- Lerner, S. C. (1994). Local stewardship: Creating an environmental vangard. In M. A. Beavis (Ed.), *Environmental Stewardship: History, theory and practice. Workshop Proceedings (March 11-12, 1994)* (pp. 92-108). Winnipeg: University of Winnipeg: Institute of Urban Studies.
- Lerner, S. C. (Ed.). (1993). *Environmental stewardship: studies in active earthkeeping*. Waterloo, Ont.: Dept. of Geography, University of Waterloo.

- Lewis, H. (2005). Defining product stewardship and sustainability in the Australian packaging industry. *Environmental Science & Policy*, 8(1), 45-55.
- Liebke, D. (1999). Go to work or go to the beach: why property investors should learn how to surf. *Residex articles*, (12 January 1999).
- Light, A. (2003). Urban Ecological Citizenship. *Journal of Social Philosophy*, 34(1), 44-63. doi: 10.1111/1467-9833.00164
- Lilburne, G. R. (1989). *A Sense of Place: A Christian Theology of the Land*. Nashville: Abingdon Press.
- Lines, W. J. (2006). *Patriots: defending Australia's natural heritage*. St. Lucia, Qld.: University of Queensland Press.
- Little, D. (1981). Towards a New Land Use Ethic. In anon (Ed.), *Toward a new land use ethic* (pp. 52-64). Warrenton, Virginia: Piedmont Environmental Council.
- Lockie, S. (2004). Collective agency, non-human causality and environmental social movements. *Journal of Sociology*, 40(1), 41-58.
- Longhurst, A., Sathyendranath, S., Platt, T., & Caverhill, C. (1995). An estimate of global primary production in the ocean from satellite radiometer data. *Journal of Plankton Research*, 17(6), 1245-1271. doi: 10.1093/plankt/17.6.1245
- Lynne, R. W. (2005). *Visions of Giving in the Protestant Story of "Stewardship" 1820s to 1920s Eighteen resources for the "visionsofgiving.org" website, 2005 Edition* Retrieved from <http://www.visionsofgiving.org/document.php?loc=3&cat=4&sub=1>
- MacDonald, M., & Zakrevsky, M. (2007). Coastwest bolsters Mullaloo dune crusade. *WA Coastlines, Autumn 2007*, 1&11.
- Mace, G., Masundire, H., & Baillie, J. (2005). Biodiversity. In R. Hassan, R. Scholes & N. Ash (Eds.), *Ecosystems and human well-being: current state an trends, Volume 1* (pp. 77-122). Washington: Island Press.
- MacGregor, S. (2006). *Beyond mothering earth: ecological citizenship and the politics of care*. Vancouver: UBC Press.
- MacIntyre, A. C. (1984). *After virtue: a study in moral theory* (2nd ed.). Notre Dame, Ind.: University of Notre Dame Press.

- Malley, D. F. (1994). Stewardship in some Federal aquatic management policies, and the need for new models for environmental practice. In M. A. Beavis (Ed.), *Environmental Stewardship: History, theory, and practice. Workshop Proceedings (March 11-12, 1994)* (pp. 76-91). Winnipeg: University of Winnipeg: Institute of Urban Studies.
- Marchant, L. R. (2008). *The Papal line of Demarcation and its impact in the eastern hemisphere on the political division of Australia, 1479-1829*. Greenwood, W.A.: Woodside Valley Foundation.
- Marmion, B. (2013). Eighty Mile Beach marine park created: Ministerial media statement 29 January 2013. Retrieved 20 Dec 2013, from <http://www.mediastatements.wa.gov.au/pages/StatementDetails.aspx?listName=StatementsBarnett&StatId=7176>
- Marsden Jacob Associates. (2010). *Review of the Environmental Stewardship Program*. Canberra: Department of Sustainability, Environment, Water, Population and Communities.
- Marsh, G. P. (1864). *Man and nature*. London: Sampson Low, Son and Marston.
- Marsh, S. P., & Pannell, D. J. (1997). *What we think we know about extension, and why its not enough for Landcare*. Paper presented at the Western Australian Landcare Conference, Geraldton.
- Martinez, M. L., Intralawan, A., Vazquez, G., Perez-Maqueo, O., Sutton, P., & Landgrave, R. (2007). The coasts of our world: ecological, economic and social importance. *Ecological Economics*, 63(2), 254.
- Mason, R. A. (1997). Stuart, house of. In J. Cannon (Ed.), *The Oxford Companion to British History*: Oxford University Press Oxford Reference Online. Oxford University Press. Murdoch University.
- Matsuda, N. (2009). Citizens in the Era of Governance: Citizen Participation and Active Citizenship. *Interdisciplinary information sciences*, 15(2), 231-242. doi: 10.4036/iis.2009.231
- May, V. (2001). Urban beaches: a European perspective on uses values and futures of urban beaches. In L. Ewing, T. Herrington & O. Magoon (Eds.), *Urban Beaches: Balancing public rights and private development. Proceedings of the*

- NSBPA 4th Annual conference* (pp. 39-51). Hoboken, NJ.: American Society of Civil Engineers.
- McCaskill, M. (1972). Final summation. In ACF (Ed.), *Conservation of the Australian coast: Papers of an Australian Conservation Foundation symposium held in association with the Adult Education Dept, University of Adelaide 7-9 November 1969* (pp. 69-71). Parkville, Vic: Australian Conservation Foundation Inc.
- McClintock, W. L., Baines, J. T., & Taylor, C. N. (2000). *Retreat from the frontier: Fishing communities in New Zealand*. Paper presented at the 8th International Symposium on Society and Resource Management, Bellingham, WA USA, June 17-22, 2000, Western Washington University, Bellingham, Washington USA. [http://www.tba.co.nz/pdf\\_papers/2000\\_frontier.pdf](http://www.tba.co.nz/pdf_papers/2000_frontier.pdf)
- McDonagh, S. (1986). *To care for the Earth: a call to a new theology*. Quezon City: Claretian Publications.
- McEvoy, E. (2006). Offshore Native Title in Australia. Retrieved 8 Oct 2008, from [http://ntru.aiatsis.gov.au/research/offshore%20native%20title/offshore%20native%20title\\_1.htm#blue](http://ntru.aiatsis.gov.au/research/offshore%20native%20title/offshore%20native%20title_1.htm#blue)
- McGrath, N., Armstrong, R., & Marinova, D. (2004). Participatory development for regional sustainability in Western Australia: an enabling state? *Local Environment*, 9(6), 561-574. doi: 10.1080/1354983042000288067
- McKenzie Skene, D. W., Rowan-Robinson, J., Paisley, R., & Cusine, D. J. (1999). Stewardship: From Rhetoric to Reality. *Edinburgh Law Review*, 3(1).
- McKinley, E., & Fletcher, S. (2010). Individual responsibility for the oceans? An evaluation of marine citizenship by UK marine practitioners. *Ocean & Coastal Management*, 53(7), 379-384. doi: <http://dx.doi.org/10.1016/j.ocecoaman.2010.04.012>
- McKinley, E., & Fletcher, S. (2012). Improving marine environmental health through marine citizenship: A call for debate. *Marine Policy*, 36, 839-843.
- McNeil, B. (2008). Global ecology of the oceans and coasts. In M. G. Patterson & B. C. Glavovic (Eds.), *Ecological economics of the oceans and coasts* (pp. 27-50). Cheltenham, UK: Edward Elgar.
- Merchant, C. (1980). *The Death of Nature: women, ecology and the scientific revolution* (1990 ed.). San Francisco: Harper & Row.

- Merchant, C. (1993). The Death of Nature. In M. Zimmerman (Ed.), *Environmental Philosophy: from animal rights to radical ecology* (pp. 268-283). Englewood Cliffs, NJ: Prentice Hall.
- Merchant, C. (1996). *Earthcare: women and the environment*. New York: Routledge.
- Milligan, J., O’Riordan, T., & Watkinson, A. (2006). Living with a changing coastline: exploring new forms of governance for sustainable coastal futures. *Tyndall Centre Working Paper*.  
[http://library.coastweb.info/322/1/Tyndall\\_Coastal\\_Working\\_Paper.pdf](http://library.coastweb.info/322/1/Tyndall_Coastal_Working_Paper.pdf)
- Milman, O. (2012). Does Australia's marine reserve plan justify the grand rhetoric. *The Guardian online*.  
<http://www.theguardian.com/environment/2012/jun/14/australia-ocean-protection-marine-reserves>
- Minteer, B. A., & Manning, R. E. (2005). An appraisal of the critique of anthropocentrism and three lesser known themes in Lynn White’s “The historical roots of our ecologic crisis”. *Organization & Environment*, 18(2), 163-176.
- Morris, C. (2004). Networks of agri-environmental policy implementation: a case study of England's Countryside Stewardship Scheme. *Land Use Policy*, 21(2), 177-191.
- Morrison, T. H., McAlpine, C., Rhodes, J. R., Peterson, A., & Schmidt, P. (2010). Back to the Future? Planning for environmental outcomes and the new Caring for our Country program. *Australian Geographer*, 41, 521-538. doi: 10.1080/00049182.2010.519763
- Muller, G. (2010). Marine parks dividing voters. *Bush Telegraph* 18/8/2010. Retrieved 25 Nov 2010, from  
<http://www.abc.net.au/rural/telegraph/content/2010/s2986392.htm>
- Murray, S. (2000). *Beyond Tithing*. Milton Keynes, UK: Paternoster.
- Naess, A. (1973). The Shallow and the Deep, Long-Range Ecology Movement. A Summary. *Inquiry*, 1(16), 95-100.
- Nannup, N. (2003). The Carers of Everything *Swan Region Strategy for Natural Resource Management* (pp. 1-4). Midland, W.Australia: Swan Catchment Council.

- Nash, R. (1989). *The rights of nature : a history of environmental ethics*. Madison, Wis: University of Wisconsin Press.
- Nasr, S. H. (1976). *Man and Nature: The spiritual crisis of modern man* (Mandala ed.). Kuala Lumpur: Foundation for Traditional Studies.
- Nasr, S. H. (1992). Islam and the Environmental Crisis. In S. C. Rockefeller & J. C. Elder (Eds.), *Spirit and Nature: why the environment is an issue: an interfaith dialogue* (pp. 83-108). Boston, Mass.: Beacon Press.
- National Archives (UK). (n.d.). The Cabinet Papers: The Cod Wars. Retrieved 18 Nov 2009, from <http://www.nationalarchives.gov.uk/cabinetpapers/themes/cod-wars.htm>
- National Packaging Covenant Council. (2005). *The National Packaging Covenant*. Canberra: Environment Protection and Heritage Council.
- Natural Resource Management Ministerial Council. (2002). Framework for the extension of the Natural Heritage Trust.  
[www.nht.gov.au/publications/framework/pubs/extension-framework.pdf](http://www.nht.gov.au/publications/framework/pubs/extension-framework.pdf)
- Natural Resource Management Ministerial Council. (2006). *National cooperative approach to Integrated Coastal Zone Management: framework and implementation plan*. Canberra: Australian Government Department of the Environment and Heritage.
- Nellemann, C., Hain, S., & Alder, J. (Eds.). (2008). *In Dead Water - merging of climate change with pollution, over-harvest and infestations in the world's fishing grounds*. Arendal, Norway: United Nations Environment Programme.
- New York International Bible Society. (1978). *Holy Bible: New International Version*. London: Hodder & Stoughton.
- Nichols, K. (1999). Coming to Terms with "Integrated Coastal Management": Problems of Meaning and Method in a New Arena of Resource Regulation. *The Professional Geographer*, 51(3), 388-399.
- Nie, M. (2003). Drivers of natural resource-based conflict. *Policy Sciences*, 36(3-4), 307-341.
- Nixon, J. (2011). *Higher education and the public good: Imagining the University*. London: Continuum.

- Norman, M. (2007). *Working Together, the City and the Community of Joondalup*. Paper presented at the Coastal Issues, Local Solutions 2007 workshop, Denmark, Denmark, W.Australia.
- Norton, B. G. (2005). *Sustainability: A Philosophy of Adaptive Ecosystem Management*. Chicago: University of Chicago Press.
- O'Riordan, T. (1998). Civic Science and the Sustainability Transition. In D. Warburton (Ed.), *Community and sustainable development: Participation in the future* (pp. 96-116). London: Earthscan.
- Ocean Health Index. (2013). Ocean Health Index 2013: Results summary. Retrieved 5 Sept 2014, from [http://www.oceanhealthindex.org/News/Summary\\_Of\\_2013\\_Findings](http://www.oceanhealthindex.org/News/Summary_Of_2013_Findings)
- Ogden, L., Heynen, N., Oslender, U., West, P., Kassam, K., & Robbins, P. (2013). Global assemblages, resilience, and Earth Stewardship in the Anthropocene. *Frontiers in Ecology and the Environment*, 11(7), 341-347.
- Opschoor, J. B. (2008). Fighting climate change - human solidarity in a divided world. *Development and Change*, 39(6), 1193-1202.
- Osorio, L., Lobato, M., & Castillo, X. (2005). Debates on Sustainable Development: Towards a Holistic View of Reality. *Environment, Development and Sustainability*, 7(4), 501-518.
- Ostrom, E. (1990). Reflections on the commons. In E. Ostrom (Ed.), *Governing the commons*. New York: Cambridge University Press.
- The Oxford English Dictionary. (1993). The New Shorter Oxford English Dictionary on historical principles. In L. Brown (Ed.). Oxford: Oxford University Press.
- Page, R., & Johnston, P. (2008). *State of the World's Oceans*. Dordrecht: Springer.
- Palmer, C. (1992). Stewardship: a case study in environmental ethics. In I. Ball, M. Goodall, C. Palmer & J. Reader (Eds.), *The Earth Beneath: A critical guide to green theology* (pp. 67-86). London: SPCK.
- Pannell, D. J., Ridley, A., Seymour, E., Regan, P., & Gale, G. (2007). Regional natural resource management arrangements for Australian states: structures, legislation and relationships to government agencies. from <http://www.general.uwa.edu.au/u/dpannell/cmbs2.pdf>



- Pannell, D. J., & Roberts, A. M. (2010). Australia's National Action Plan for Salinity and Water Quality: a retrospective assessment. *Australian Journal of Agricultural and Resource Economics*, 54(4), 437-456. doi: 10.1111/j.1467-8489.2010.00504.x
- Passmore, J. (1980). *Man's responsibility for nature: ecological problems and Western traditions* (2nd ed.). London: Duckworth.
- Paulin, S. (2007). The Impact of Government Funding Mechanisms on Urban Community Participation in Natural Resource Management in Perth, Western Australia: A Case Study. *The International Journal of Environmental, Cultural, Economic and Social Sustainability*, 3(4), 39-46.
- Pauly, D., & Alder, J. (2005). Marine Fisheries Systems. In R. M. Hassan, R. Scholes & N. Ash (Eds.), *Ecosystems and human well-being: current state and trends* (Vol. 1, pp. 477-504). Washington: Island Press.
- Pearson, G. (2008, August 18). Cape's future is progress, *The Australian*. Retrieved from <http://www.theaustralian.news.com.au/story/0,,24134568-5013172,00.html>
- Peterson, A. (2011). *Civic Republicanism and civic education: the education of citizens*. Basingstoke: Palgrave Macmillan Ltd.
- Peterson, A. L. (2001). *Being Human: Ethics, Environment and Our Place in the World*. Berkeley: University of California Press.
- Peterson, E. H. (2002). *The Message: The Bible in contemporary language*. Colorado Springs, Colo.: NavPress.
- Petrachenko, D. (2012). Australia's approach to the conservation and sustainable use of marine ecosystems. *Australian Journal of Maritime and Ocean Affairs*, 4(3), 74-76.
- Pew Environmental Initiatives. (2013). New Marine Park in the Kimberley is the largest in Western Australia. Retrieved 20 Dec 2013, from <http://www.pewenvironment.org/news-room/other-resources/new-marine-park-in-the-kimberley-is-the-largest-in-western-australia-85899519186>
- Pitcher, T. J., & Cheung, W. W. L. (2013). Fisheries: Hope or despair? *Marine Pollution Bulletin*, 74(2), 506-516. doi: <http://dx.doi.org/10.1016/j.marpolbul.2013.05.045>

- Poloczanska, E. S., Hobday, A. J., & Richardson, A. J. (Eds.). (2009). *Report Card of Marine Climate Change for Australia (2009)*: NCCARF Publication 05/09.
- Porter, C. F. (1986). Introduction to the seminar on the proposed M10 Marine Park. In J. R. Ottaway & R. B. Humphries (Eds.), *Seminar on the Proposed M10 Marine Park: Proceedings of the seminar held at the Marmion Angling and Aquatic Club, Perth, WA, June 12, 1985* (pp. 3-10). Perth: Department of Conservation and Environment.
- Pouliquen-Young, O. (2002). Evolution of the system of protected areas in Western Australia. *Environmental Conservation*, 24(02), 168-181.
- President's Council on Sustainable Development. (1996). *Sustainable America: A New Consensus for Prosperity, Opportunity, and A Healthy Environment for the Future, February 1996*. Washington: President's Council on Sustainable Development Retrieved from [http://clinton2.nara.gov/PCSD/Publications/TF\\_Reports/amer-top.html](http://clinton2.nara.gov/PCSD/Publications/TF_Reports/amer-top.html).
- President's Council on Sustainable Development. (1999). Towards a Sustainable America: Advancing Prosperity, Opportunity, and a Healthy Environment for the 21st Century. <http://clinton2.nara.gov/PCSD/Publications/>
- Pressey, B. (2013). Australia's new marine protected areas: why they won't work. *The Conversation*. Retrieved from The Conversation website: <http://theconversation.com/australias-new-marine-protected-areas-why-they-wont-work-11469>
- Proctor, J. D. (1996). Whose Nature? The contested moral terrain of ancient forests. In W. Cronon (Ed.), *Uncommon Ground: Rethinking the human place in nature* (pp. 269-297). New York: WW Norton.
- Productivity Commission. (2008). *Assessing local government revenue raising capacity: Research report*. Canberra: Productivity Commission.
- Rapport, D., & Friend, A. (1979). *Towards a comprehensive framework for environmental statistics: a stress-response approach*. Statistics Canada Catalogue 11-510. . Ottawa: Minister of Supply and Services Canada.
- Ratcliffe, F. (1972). The Coast- postwar changes & overall conservation problems in a developing country. In ACF (Ed.), *Conservation of the Australian Coast* (pp. 11-19). Parkville, Vic: Australian Conservation Foundation.

- Readford, R. (2000). *The inside story of Ballina Lighthouse Beach Community Dune Care: a decade of dune care*. Tintenbar, NSW: Ballina Lighthouse Beach Community Dune Care Group.
- Reeves Calkins, H. (1914). *A man and his money* Retrieved from chestofbooks.com database Retrieved from <http://chestofbooks.com/religion/Harvey-Reeves-Calkins/A-Man-and-His-Money/Chapter-IX-Stewardship-And-Conservation.html>
- Resource Assessment Commission (RAC). (1993). *Coastal Zone Inquiry: Final Report*. Canberra: Commonwealth of Australia.
- Reumann, J. (1992). *Stewardship and the economy of God*. Grand Rapids, Michigan: William B. Eerdmans.
- Ringius, L. (2001). *Radioactive waste disposal at sea: Public ideas, transnational policy entrepreneurs, and environmental regimes*. Cambridge Mass.: MIT Press.
- RioTinto. (2007). Product stewardship. Retrieved 28 Dec 2010, from [http://www.riotinto.com/ourapproach/7178\\_product\\_stewardship\\_2007.asp](http://www.riotinto.com/ourapproach/7178_product_stewardship_2007.asp)
- RioTinto. (2009). Product Stewardship: Results. Retrieved 28 Dec 2010, from [http://www.riotinto.com/ourapproach/17203\\_product\\_stewardship\\_17274.asp](http://www.riotinto.com/ourapproach/17203_product_stewardship_17274.asp)
- RioTinto HSE. (2008). Standard E9 - Land use stewardship. Retrieved 28 Dec 2010, from <http://www.riotinto.com/documents/ReportsPublications/LandUseStewardship.pdf>
- Roach, C. M. (2000). Stewards of the Sea: A model for justice? In H. Coward, R. Ommer & T. Pitcher (Eds.), *Just Fish: Ethics and Canadian marine fisheries*. St John's NF: Institute of Social and Economic Research, Memorial University of Newfoundland.
- Roach, C. M., Hollis, T. I., McLaren, B. E., & Bavington, D. L. Y. (2006). Ducks, bogs, and guns: a case study of stewardship ethics in Newfoundland. *Ethics and the Environment*, 11, 43-70.
- Roberts, B. (1986). Soul Conservation: People, Religion and Land (pp. 21). Toowoomba: Soil Conservation of Australia.
- Roberts, B. (1993). *Ground Rules: Perspectives on Land Stewardship*. Toowoomba, QLD: USQ Press.

- Roberts, R. W. (1989). *Land Conservation in Australia: a 200 year stocktake*. Sydney: Soil and Water Conservation Association of Australia.
- Robins, L., & Kanowski, P. (2011). 'Crying for our Country': eight ways in which 'Caring for our Country' has undermined Australia's regional model for natural resource management. *Australasian Journal of Environmental Management*, 18(2), 88-108. doi: 10.1080/14486563.2011.566158
- Rockström, J., Steffen, W., Noone, K., Persson, Å., Chapin, F. S., III, Lambin, E., . . . Foley, J. (2009). Planetary Boundaries: Exploring the Safe Operating Space for Humanity. *Ecology and Society*, 14(2).
- Rodin, R. S. (2000). *Stewards in the kingdom: a theology of life in all its fullness*. Downers Grove, Ill.: InterVarsity Press.
- Rogers, A. D., & Laffoley, D. (2013). Introduction to the special issue: The global state of the ocean; interactions between stresses, impacts and some potential solutions. Synthesis papers from the International Programme on the State of the Ocean 2011 and 2012 workshops. *Marine Pollution Bulletin*, 74(2), 491-494. doi: <http://dx.doi.org/10.1016/j.marpolbul.2013.06.057>
- Ronalds, C. (2002). New Coastcare Groups. *WA Coastlines, Spring 2002*, 6.
- Rothwell, N. (2012). The great divide, *The Weekend Australian, Review*, pp. 4-6.
- Roy Morgan Research. (2013). *Landcare and Coastcare awareness survey 2013*. Sydney: Landcare Australia Limited.
- Ruhl, J. B., & Salzman, J. (2006). Ecosystem services and the Public Trust Doctrine: working change from within. *Southeastern Environmental Law Journal*, 1(2006-2007), 223-239.
- Rundle, G. E. (1978). Conserving Australia's wilderness- Progress report: Western Australia. In J. Moseley (Ed.), *Australia's Wilderness: Conservation progress and plans* (pp. 178-186). Hawthorn, Vic: Australian Conservation Foundation.
- Safe Work Australia. (2012). Quad bike stewardship program. Retrieved 15 Mar 2013, from <http://www.safeworkaustralia.gov.au/sites/swa/whs-information/agriculture/quad-watch/quad-stewardship-program/pages/quad-bike-stewardship-program>

- Salsich, P. W. (2000). Towards a property ethic of stewardship: A religious perspective. In C. Giesler & G. Daneker (Eds.), *Property and Values: alternatives to public and private ownership* (pp. 21-40). Washington DC: Island Press.
- Salstrand, G. A. E. (1956). *The story of stewardship in the United States of America*. Grand Rapids, Michigan: Baker Book House.
- Salt, B. (2003). *The big shift: welcome to the third Australian culture: the Bernard Salt report* (2nd ed.). South Yarra, Vic.: Hardie Grant Books.
- Saltman, R. B., & Ferroussier-Davis, O. (2000). The concept of stewardship in health policy. *Bulletin of the World Health Organisation*, 78(6), 732-739.
- Sandberg, A. (2003). Commons for whom? New coastal commons on North-Norwegian coasts. In E. Berge & L. Carlsson (Eds.), *Commons: Old and new* (pp. 135-140). Trondheim, Norway: Dept of Sociology & Political Science, Norwegian University of Science and Technology.
- Sandel, M. (2009). A New Citizenship 2009 *Reith Lectures*: BBC Radio 4.
- Sanders, C. (1991). Coastal zone management in the EPA. In R. Hughes (Ed.), *Reflections on 20 years* (pp. 69-75). Perth, W. Aust.: Environmental Protection Authority.
- Saner, M., & Wilson, J. (2003). Stewardship, good governance and ethics. *Policy Briefs*. 2006, from [www.iog.ca](http://www.iog.ca)
- Saunders, C. (1997). *The Australian Constitution [annotated text]* (2 ed.). Carlton, Vic: Constitutional Centenary Foundation.
- Scientific and Technical Advisory Panel. (2011). *Marine debris as a global environmental problem: Introducing a solutions based framework focused on plastic. A STAP Information Document* Washington, DC: UNEP.
- Scott Gordon, H. (1954). The economic theory of a common-property resource: the fishery. *Journal of Political Economy*, 62, 124-142.
- Scottish Parliamentary Corporate Body. (2009). *Marine (Scotland) Bill: Policy Memorandum*. Edinburgh: Scottish Parliamentary Corporate Body.
- Seddon, G. (2005). *The Old Country: Australian landscapes, plants and people*. Cambridge: Cambridge University Press.

- Selden, J. (1652). *Of the dominion, or, Ownership of the sea* Two Books. (M. Nedham Trans.). London: Printed by William Du-Gard, by the appointment of the Council of State.
- Shackelford, S. J. (2009). The tragedy of the common heritage of mankind. *Stanford Environmental Law Journal*, 28(1), 109-157.
- Sharp, A., & Blackadder, J. (Eds.). (2008). *Making a difference, a celebration of Landcare*. Canberra: Department of Agriculture Fisheries and Forestry.
- Sharp, B. (2008). Designing property rights for achieving sustainable development of the oceans. In M. G. Patterson & B. C. Glavovic (Eds.), *Ecological economics of the oceans and coasts* (pp. 289-312). Cheltenham UK: Edward Elgar.
- Sharp, N. (1996). Reimagining sea space in history and contemporary life: Pulling up some old anchors *North Australia Research Unit, Discussion Paper*. Canberra: North Australia Research Unit, Australian National University.
- Sharp, N. (1998). *Reimagining Northern Seascapes in Australia: Open Access, Common Property and the Return of Responsibility?* Paper presented at the 'Crossing Boundaries', Seventh International Conference for the Study of Common Property, Vancouver.  
<http://dlc.dlib.indiana.edu/archive/00000160/00/sharp.pdf>
- Sharp, N. (2002). *Saltwater people: the waves of memory*. Crows Nest, N.S.W.: Allen & Unwin.
- Sherry, S (1993) Without virtue there can be no liberty. *Minnesota Law Review* 78, 61-69
- Shorter, D. (1997). ANH close to dating Aboriginals' arrival. *ANU Reporter*, 28(8).
- Shotton, R. (Ed.). (2005). *Deep Sea 2003: Conference on the governance and management of deep-sea fisheries. Part 1: Conference reports 1-5 December 2003*. Rome: Food and Agriculture Organisation of the United Nations.
- Siewert, R. (1995). Help needed for coastal package. *The Greener Times*, April 1995, 18.
- Silfe, B. D. (2004). Taking Practice Seriously: Toward a Relational Ontology. *Journal of Theoretical and Philosophical Psychology*, 24(2), 157-178.
- Simms, D. H. (1970). *The Soil Conservation Service*. New York: Praeger Publishers.

- Sitarz, D. (1994). *Agenda 21: The Earth Summit Strategy to save our planet*. Boulder, Colorado: Earth Press.
- SMEC Australia Pty Ltd. (2006). *Evaluation of coastal, estuarine and marine outcomes of regional investment. Report prepared for the Dept of Environment and Heritage and Dept of Agriculture, Fisheries and Forestry*. East Malvern, Victoria: SMEC.
- Smith, A. G. (1972). Impacts of engineered structures on coastal marine environments. In ACF (Ed.), *Coastal Conservation in Australia* (pp. 51-61). Parkville, Vic: Australian Conservation Foundation.
- Smith, M. (2001). *An Ethics of Place*. Albany NY: State University of New York.
- Smith, T., & Doherty, M. (2006). *The suburbanisation of coastal Australia: paper prepared for the 2006 Australia State of the Environment Committee* Retrieved from <http://www.deh.gov.au/soe/2006/integrative/coastal/index.html>
- Smyth, C., Prideauz, M., Davey, K., & Grady, M. (2003). *Oceans Eleven: The implementation of Australia's Oceans Policy and ecosystem-based marine planning*. Carlton, Vic.: Australian Conservation Foundation.
- Smyth, D. (1997). *Australia's Oceans Policy: issues paper 6: socio-cultural considerations-saltwater country* Canberra: Commonwealth of Australia.
- State NRM Office. (2007). *Agency statement of important Natural Resource Management Assets in Western Australia*. Perth: Unpublished Report prepared for NRM Senior Officers Group. Government of Western Australia.
- State of the Environment 2011 Committee. (2011). *Australia: State of the Environment 2011: an independent report presented to the Australian Government Minister for Sustainability, Environment, Water, Population and Communities*. Canberra: Department of Sustainability, Water, Population and Communities.
- State of Western Australia. (2003a). *Coasts WA: better integration: The Western Australian Government's response to the Coastal Taskforce report*. Perth: Dept. for Planning and Infrastructure.
- State of Western Australia. (2003b). Draft Media Release: Coastwest Boost to WA's Coastal and Marine Environments. Retrieved July 2003
- Steffen, W., Grinevald, J., Crutzen, P., & McNeill, J. (2011). The Anthropocene: conceptual and historical perspectives. *Philosophical Transactions of the Royal*

*Society A: Mathematical, Physical and Engineering Sciences*, 369(1938), 842-867. doi: 10.1098/rsta.2010.0327

Steffen, W., Persson, A., Deutsch, L., Zalasiewicz, J., Williams, M., Richardson, K., Crumley, C., Crutzen, P., Folke, C., Gordon, L., Molina, M., Ramanathan, V., Rockström, J., Scheffer, M., Schellnhuber, H.J., Svedin, U. (2011). The Anthropocene: From global change to planetary stewardship. *Ambio*, 40(7), 739-761. doi:10.1007/s13280-011-0185-x

Steinberg, P. E. (1999). Lines of division, lines of connection: Stewardship in the world ocean. *The Geographical Review*, 89(2), 254-264.

Steinberg, P. E. (2001). *The social construction of the ocean*. Cambridge: Cambridge University Press.

Stern, N. H. (2007). *The economics of climate change: the Stern review*. Cambridge: Cambridge University Press.

Steward, F. (1991). Citizens of Planet Earth. In A. Andrews (Ed.), *Citizenship* (pp. 65-88). London: Lawrence & Wishart.

Stocker, L., Kenchington, R., Kennedy, D., & Steven, A. (2012). Introduction to Australian coasts and human influences. In R. Kenchington, L. Stocker & D. Wood (Eds.), *Sustainable coastal management and climate adaptation* (pp. 1-27). Collingwood: CSIRO Publishing.

Stocker, L., & Kennedy, D. (2009). Cultural models of the coast in Australia: Toward sustainability. *Coastal Management*, 37(5), 387-404.

Stocker, L., Kennedy, D., Kenchington, R., & Merrick, K. (2012). Sustainable coastal management? In R. Kenchington, L. Stocker & D. Wood (Eds.), *Sustainable coastal management and climate adaptation* (pp. 29-55). Collingwood: CSIRO Publishing.

Stoll, M. (2006). Creating Ecology: Protestants and the moral community. In D. M. Lodge & C. Hamlin (Eds.), *Religion and the New Ecology* (pp. 53-72). Notre Dame, Indiana: University of Notre Dame Press.

Strong, J. (1891). *Our Country: Its possible future and its present crisis* (rev. ed.). New York: Baker and Taylor for the American Missionary Society.



- Swimme, B., & Berry, T. (1992). *The universe story: from the primordial flaring forth to the Ecozoic Era- a celebration of the unfolding of the cosmos* (1st Ed.). San Francisco: HarperCollins.
- Taylor, C. (2002). Modern social imaginaries. *Public Culture*, 14(1), 91-124.
- Taylor, I. (2000). New Labour and the enabling state. *Health & Social Care in the Community*, 8(6), 372-379. doi: 10.1046/j.1365-2524.2000.00262.x
- Taylor, P. W. (1986). *Respect for Nature: A Theory of Environmental Ethics*. Princeton: Princeton University Press.
- Texas State Soil and Water Conservation Boards. (n.d.). The origin and observance of Soil Conservation Week. Retrieved 3 Nov 2009, from [http://www.tsswcb.state.tx.us/files/docs/infoed/Origin\\_\\_\\_Observance\\_of\\_Soil\\_Stew\\_Week.pdf](http://www.tsswcb.state.tx.us/files/docs/infoed/Origin___Observance_of_Soil_Stew_Week.pdf)
- The Audit Commission. (1997). *it's a small world: Local government's role as steward of the environment*. Audit Commission.
- The Audit Commission. (2001). Environmental Stewardship: Lewes District Council. Retrieved 18 Apr 2007, from <http://www.audit-commission.gov.uk/reports/BVIR.asp?CategoryID=&ProdID=A9A5B0EC-66A5-4494-BB12-BBC76BCE0C8B>
- The Ecologist. (1993). *Whose common future? Reclaiming the commons*. London: Earthscan.
- Thom, B. (2004). *The Australian Coast: images, problems and solutions*. Keynote address. Paper presented at the Coast to Coast '04, Australia's National Coastal Conference 19-24 April 2004 in Hobart, Hobart. [http://www.wentworthgroup.org/docs/Bruce\\_Thom\\_Coastal\\_Address.pdf](http://www.wentworthgroup.org/docs/Bruce_Thom_Coastal_Address.pdf)
- Thom, B., & Harvey, N. (2000). Triggers for late twentieth century reform of Australian coastal management. *Australian Geographical Studies*, 38(3), 275-290.
- Thornton, P. (2001). Coastal tourism in Cornwall since 1900. In S. Fisher (Ed.), *Recreation and the sea* (pp. 57-83). Exeter: University of Exeter Press.
- Tinley, K. (1984). Coastal Processes vs Development Expediency *Proceedings from the coastal planning and management seminar* (pp. 26-29). Perth: Department of Conservation and Environment.

- Tyrrell, T. (2011). Anthropogenic modification of the oceans. *Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences*, 369(1938), 887-908. doi: 10.1098/rsta.2010.0334
- United Nations. (1985). United Nations Convention on the Law of the Sea. Retrieved 7 May 2007, from [http://www.un.org/Depts/los/convention\\_agreements/convention\\_overview\\_convention.htm](http://www.un.org/Depts/los/convention_agreements/convention_overview_convention.htm)
- United Nations Conference on Environment and Development. (1992). Agenda 21. In N. A. Robinson (Ed.), *Agenda 21 and the UNCED Proceedings* (Vol. IV, pp. 1-627). New York: Oceana Publications Inc.
- United Nations Development Programme. (2007). Fighting Climate Change: Human Solidarity in a Divided World. *Human Development Report, 2007/2008*. <http://hdr.undp.org/en/reports/global/hdr2007-2008>
- United Nations Environment Programme. (1997). *Global Environmental Outlook*. Nairobi, Kenya: United Nations Environment Programme.
- United Nations Environment Programme. (1999). *Global Environmental Outlook 2000*. Nairobi: United Nations Environment Programme.
- United Nations Environment Programme/Global Programme of Action. (2006). *The state of the marine environment: Trends and processes*. The Hague: UNEP/GPA.
- Van Dyke, J. M. (1993). International governance and stewardship of the High Seas and its resources. In J. M. Van Dyke, D. Zaelke & G. Hewison (Eds.), *Freedom for the seas in the 21st Century* (pp. 13-22). Washington DC: Island Press.
- Van Dyke, J. M. (2000). Sharing ocean resources in a time of scarcity and selfishness. In H. N. Scheiber (Ed.), *Law of the sea: The common heritage and emerging challenges* (pp. 3-36). The Hague: Martinus Nijhoff.
- Vidas, D. (2011). The Anthropocene and the International Law of the Sea. *Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences*, 369(1938), 909-925. doi: 10.1098/rsta.2010.0326

- Vidot, A. (2012). Caring For Our Country review finds positives to build on. Retrieved 3 May 2012, from <http://www.abc.net.au/rural/news/content/201202/s3438071.htm>
- Vince, J. (2003). *The Development of Australia's Oceans Policy: Institutions and the 'Oceans Policy Community'*. Paper presented at the Australasian Political Studies Association Conference, University of Tasmania, Hobart. <http://eprints.utas.edu.au/526/1/JVincefinal.pdf>
- Vince, J. (2004). *The development of Australia's Oceans Policy: Change and stability in a policy community*. (Doctor of Philosophy), University of Tasmania, Hobart.
- Vince, J. (2008). *Australia's Oceans Policy: Ten years of policy implementation*. Paper presented at the Public Policy Network Conference: 31 Jan - 1 Feb 2008, Sunshine Coast, Australia. [eprints.utas.edu.au](http://eprints.utas.edu.au)
- Vince, J. (2013). Marine bioregional plans and implementation issues: Australia's oceans policy process. *Marine Policy*, 38(0), 325-329. doi: <http://dx.doi.org/10.1016/j.marpol.2012.06.009>
- Vincent, A. C. J. (2011). Saving the shallows: focusing marine conservation where people might care. *Aquatic Conservation: Marine and Freshwater Ecosystems*, 21(6), 495-499. doi: 10.1002/aqc.1226
- von Rad, G. (1972). *Genesis, a commentary*. London: SCM.
- Wallace, B., & Clearfield, F. (1997). Stewardship, spirituality and natural resources conservation: A short history *Technical Report* Social Sciences Institute or North Carolina A&T State University.
- Wallace, J. (2013). *The rise of the enabling state: A review of policy and evidence across the UK and Ireland*. Dunfermline, Scotland: The Carnegie Trust UK.
- Walter, J. (1996). *Tunnel Vision: The revival of political imagination*. Sydney: Allen & Unwin.
- Walton, J. K. (1997). The seaside resorts of Western Europe, 1750-1939. In S. Fisher (Ed.), *Recreation and the sea* (pp. 36-56). Exeter: University of Exeter Press.
- Walvin, J. (1978). *Beside the seaside: A social history of the popular seaside holiday*. London: Allen Lane / Penguin.


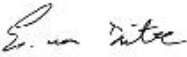
- Warburton, J., & Gooch, M. (2007). Stewardship Volunteering by Older Australians: The Generative Response. *Local Environment*, 12, 43-55. doi: 10.1080/13549830601098230
- Ward, T., & Butler, A. (2006). 'Coasts and oceans', theme commentary prepared for the 2006 Australia State of the Environment Committee Retrieved from <http://www.deh.gov.au/soe/2006/commentaries/coasts/index.html>
- Welbourne, F. B. (1975). At Man's Dominion. *Theology*, 78, 561-568.
- Welchman, J. (1999). The virtues of stewardship. *Environmental Ethics*, 21, 411-423.
- Welchman, J. (2009). Hume, Callicott, and the Land Ethic: Prospects and problems. *The Journal of Value Inquiry*, 43, 201-220.
- Welchman, J. (2012). A Defence of Environmental Stewardship. *Environmental Values*, 21(3), 297-316. doi: 10.3197/096327112x13400390125975
- Wensing, E. (2008). Caring for our country. *Australian Planner*, 45(2), 22-23. doi: 10.1080/07293682.2008.9982649
- Wescott, G. (2001). Community Based Management. In M. Haward (Ed.), *Integrated Oceans Management: Issues in Implementing Australia's Oceans Policy*. Hobart: Cooperative Centre for Antarctica and the Southern Ocean.
- Wescott, G. (2006). Is there a role for the Federal Government in implementing Integrated Coastal Management In Australia? In N. Lazarow, R. Souter, R. Fearon & S. Dovers (Eds.), *Coastal Management in Australia: Key Institutional and Governance Issues for Coastal Natural Resource Management and Planning* (pp. 29-34). Brisbane: Cooperative Research Centre for Coastal Zone, Estuary and Waterway Management, Australia
- Wescott, G. (2009). Stimulating Vertical Integration in Coastal Management in a Federated Nation: The Case of Australian Coastal Policy Reform. *Coastal Management*, 37(6), 501 - 513.
- Western Australian Planning Commission. (2001). *Coastal zone management policy for Western Australia: for public comment*. Perth: Western Australian Planning Commission.
- Western Australian Planning Commission. (2013). State Planning Policy 2.6: State Coastal Planning Policy. *Government Gazette*(136, 30 July 2013).

- Western Australian Planning Commission. (nd). Perth Coastal Planning Strategy. Retrieved 29 Sep 2012, from <http://www.planning.wa.gov.au/659.asp>
- Western Australian Planning Commission, & Western Australia Department for Planning and Infrastructure. (2005). *Perth Coastal Planning Strategy: Information Sheet*. Perth: Western Australian Planning Commission.
- Western Australian Planning Commission, & Western Australia Department for Planning and Infrastructure. (2008). *Draft Perth coastal planning strategy: for public comment*. Perth: Western Australian Planning Commission.
- Western Australian Planning Commission, & Western Australia Department of Planning. (2010). *Directions 2031 and beyond: metropolitan planning beyond the horizon*. Perth: Western Australian Planning Commission.
- White, L., Jr. (1967). The historical roots of our ecologic crisis. *Science*, 155, 1203-1207.
- White, M. E. (1997). *Listen, Our Land Is Crying: Australia's Environment: Problems And Solutions*: Kangaroo Press.
- White, R. (1981). *Inventing Australia*. Crows Nest, NSW: Allen and Unwin.
- Whitney, E. (1993). Lynn White, Ecotheology, and History. *Environmental Ethics*, 15(1), 151-169.
- Whitney, E. (2006). Christianity and changing concepts of nature: an historical perspective. In D. M. Lodge & C. Hamlin (Eds.), *Religion and the New Ecology* (pp. 26-52). Notre Dame, Indiana: University of Notre Dame Press.
- Wilson, B. R. (1985). Marine reserves in Western Australia. In J. R. Ottaway & R. B. Humphries (Eds.), *Seminar on the proposed M10 Marine Park: Proceedings of the seminar held at the Marmion Angling and Aquatic Club, Perth, WA, June 12, 1985*. Perth: Department of Conservation and Environment.
- Winton, T. (1993). *Land's Edge*. Sydney: Macmillan.
- Winton, T. (1997). *Blueback*. Sydney: Pan.
- Winton, T. (2012). The Sea Change comes to Canberra: An address by Tim Winton to Parliamentarians in the Mural Hall, Parliament House Canberra; 9 May, 2012. Retrieved 30 May 2012, from <http://www.saveourmarinelife.org.au/a-sea-change-sundowner-with-tim-winton>

- Woodhouse, P. (2002). Development policies and environmental agendas. In U. Kothari & M. Minogue (Eds.), *Development theory and practice: critical perspectives* (pp. 136-156). Basingstoke Palgrave.
- Worm, B., Barbier, E. B., Beaumont, N., Duffy, J. E., Folke, C., Halpern, B. S., . . . Watson, R. (2006). Impacts of Biodiversity Loss on Ocean Ecosystem Services. *Science*, 314(5800), 787-790. doi: 10.1126/science.1132294
- Worrell, R., & Appleby, M. C. (2000). Stewardship of Natural Resources: Definition, Ethical and Practical Aspects. *Journal of Agricultural and Environmental Ethics*, 12(3), 263-277.
- Worsley, P. M. (1955). Early Asian Contacts with Australia. *Past and Present*, 7(1), 1-11.
- Wright, C. J. H. (1983). *Living as the people of God: The relevance of Old Testament Ethics*. Leicester: Inter-Varsity Press.
- Wright, G. E., & Fuller, R. E. (1957). *The Book of the Acts of God: Christian scholarship interprets the Bible*. London: Gerald Duckworth & Co Ltd.
- Wunderlich, G. (2004). Evolution of the stewardship idea in American country life. *Journal of Agricultural and Environmental Ethics*, 17(1), 77-93.
- Young, I. M. (1989). Polity and group difference: A critique of the ideal of universal citizenship. *Ethics*, 99, 250-274.
- Young, I. M. (2000). *Inclusion and democracy*. Oxford: Oxford University Press.
- Young, R. (1973). *Analytical concordance to the Holy Bible* (8th, revised ed.). Guilford, UK: Society for Christian Literature, Lutterworth Press.
- Zacharias, M. (2014). *Marine policy: an introduction to governance and international law of the oceans*. Abingdon, UK: Routledge.
- Zalasiewicz, J., Williams, M., Haywood, A., & Ellis, M. (2011). The Anthropocene: a new epoch of geological time? *Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences*, 369(1938), 835-841. doi: 10.1098/rsta.2010.0339
- Zann, L. P. (1995). *Our Sea Our Future: Major findings of the state of the marine environment report for Australia*. Townsville, Qld.: Great Barrier Reef Marine Park Authority.

## Appendices

### Appendix A: University Human Ethics Research Permit

 <p><b>Murdoch</b> UNIVERSITY</p>	<p><b>Research Ethics Office</b> Division of Research and Development</p> <p style="text-align: right;"><a href="http://www.murdoch.edu.au">www.murdoch.edu.au</a></p>										
<p>Chancellery Building South Street MURDOCH WA 6150 Telephone: 9360 6677 Facsimile: 9360 6686 <a href="mailto:human.ethics@murdoch.edu.au">human.ethics@murdoch.edu.au</a> <a href="http://www.research.murdoch.edu.au/ethics">www.research.murdoch.edu.au/ethics</a></p>											
<p>Monday, 14 April 2008</p> <p>Dr Ian Barnes ISTIP Murdoch University</p> <p>Dear Ian,</p> <table border="0" style="width: 100%;"> <tr> <td style="width: 40%;"><b>Permit No.</b></td> <td>2005/015</td> </tr> <tr> <td><b>Project Title</b></td> <td>Coastal Stewardship in Western Australia</td> </tr> <tr> <td><b>Chief Investigator</b></td> <td>Dr Ian Barnes</td> </tr> <tr> <td><b>Co-Investigator</b></td> <td>Dr Laura Stocker &amp; Mr John Davis</td> </tr> <tr> <td><b>Renewal Report Received</b></td> <td>14-April-2008</td> </tr> </table> <p>On behalf of the Murdoch University Human Research Ethics Committee, I certify that this project is renewed until <b>31-March-2009</b>, subject to any conditions listed below. This approval is effective <b>ONLY</b> with respect to the project as described in the original application and any subsequent amendments that have received approval.</p> <p>As a condition of the approval of your human research ethics application you are required to report immediately anything, which might affect ethical acceptance of your project's protocols, including:</p> <ul style="list-style-type: none"> <li>▪ Adverse effects on subjects</li> <li>▪ Proposed changes in the protocols</li> <li>▪ Unforeseen events that might affect continued ethical acceptability of the project.</li> </ul> <p>Kind Regards,</p> <div style="text-align: center;">  </div> <p>Dr. Erich von Dietze Manager of Research Ethics</p> <p>cc: Mr John Davis</p>		<b>Permit No.</b>	2005/015	<b>Project Title</b>	Coastal Stewardship in Western Australia	<b>Chief Investigator</b>	Dr Ian Barnes	<b>Co-Investigator</b>	Dr Laura Stocker & Mr John Davis	<b>Renewal Report Received</b>	14-April-2008
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<div style="background-color: red; color: white; padding: 5px; display: flex; justify-content: space-between;"> <span>HREC Renewal Receipt 221107</span> <span>CRICOS Provider Code: 901251 ABN 51 615 349 313</span> </div>											

## ***Appendix B: Generic Letter requesting consent from participant in interview***

*Printed on University Stationary*

Salutation etc

I am a lecturer at Murdoch University researching community participation on coastal management. I am assisted in this project by Mr John Davis, PhD research student. John has already contacted you and described the work we are doing.

You can help in this study by consenting to a semi-structured interview in which John will ask you to describe your experiences in coast care activities. It is anticipated that the interview could be completed in 30 minutes unless you wish to extend the time. The interview will be structured around questions about how you came to be involved in caring for the coast, the community groups, organisations and projects in which you have participated and how the activities in which you have been involved related to government policies and programs on coastal management. We would prefer to tape record the interview to enable free conversation, while capturing the information you may provide. If you consent to the interview being recorded, please sign the additional consent on the form attached.

The results from this interview will be used for a published article and to inform policy advice on coastal sustainability. Participation in this research is voluntary. All personal information given in the interview is confidential and no names or other personal information that might identify you will be used in any publication arising from the research. A summary of the findings of your interview will be prepared and can be provided to you for feedback.

If you are willing to participate in this research, please return the signed consent form indicating your agreement to be interviewed by John. If you have any questions about the interview, please feel free to contact either John Davis, on 9430 6188 or me, Laura Stocker, on 9360 2889.

John and I are happy to discuss with you any concerns you may have on how this study has been conducted, or alternatively you can contact Murdoch University's Human Research Ethics Committee on 9360 6677.

Yours sincerely,

Dr Laura Stocker



***Appendix C Generic Consent form for interview participants***

## Consent Form

I have read the information above. Any questions I have asked have been answered to my satisfaction. I agree to be interviewed for this research; however, I know that I may change my mind and withdraw my permission at any time.

I understand that any identifying information provided will be treated as confidential and will not be released by the investigator unless required to do so by law.

I agree that research data gathered for this study may be published, provided my name or other information, which might identify me, is not used.

Please circle one of the following two options regarding the taping of the interview

1. I do not wish for the interview to be recorded

2. I consent to the interview to be recorded

2 a (If you have consented to being recorded, please circle either “do” or “do not”)

I do/ do not consent to the use of my interview transcript for future publications by the researcher.

Participant:

Date:

## ***Appendix D: Typical Semi Structured Interview with community group members - Key Questions***

Probing will occur as required.

1. How did you come to be involved with the <name of group>?
2. What were the early issues in which your group was involved and what were the main activities?
3. Did there come times where you felt the group had to choose between taking on more or less advocacy, or more or less practical work on the ground?
4. How did you work through those choices?
5. What have been the outcomes?
6. What has been the real strength of the group? What did it do best?
7. What has been the relationship of <your group> and the <local> council?
8. In what ways have the State or Commonwealth government programs like <landcare/coastcare> been of assistance to the work of your group?
9. How could the various levels of government better enable the community to be better stewards of the <local> coastal and marine zone?
10. What do you understand stewardship of the coast to mean?
11. Other than what you have already mentioned, are there any other key ingredients necessary to ensure future sustainability of our coasts?

## ***Appendix E: Typical Semi Structured Interview with Local Government Officer - Key Questions***

Probing will occur as required.

1. How did you come to be involved with the <name of group>?
2. What were the early issues <the group> was involved in and what have they been able to do?
3. What kind of relationships have there been between the council and the group?
4. What has been the real strength of the group? What did it do best?
5. In what ways have the State or Commonwealth government programs like <landcare/coastcare> been of assistance to the group or to Council?
6. How could the combined efforts of council and the various levels of government and the community contribute to better stewardship of the <local> coastal and marine zone?
7. What do you understand stewardship of the coast to mean?
8. Other than what you have mentioned already, are there any other key ingredients necessary to ensure future sustainability of our coasts?

## ***Appendix F: List (anonymous) of key informants interviewed***

<b>Role / designation</b>	<b>Code</b>	<b>Year interviewed</b>
Tourism Official	G1	2006
State Government Planner	G2	2012
DEC Planner	G3	2007
Surfrider Foundation	C8	2009
Australian NRM Facilitator	A1	2008
Coastwest Coordinator	G4	2012
Regional Coastal & Marine Facilitator	N1	2009
Regional Coastal & Marine Facilitator	N2	2011
Stirling Coastcare member	C8	2008
Stirling Coastcare member	C7	2008
Cottesloe Coastcare member	C6	2009
Mandurah Landcare Officer	L4	2006
Mandurah CC group coordinator	C5	2006
Former Leeuwin Conservation Group	C2	2005
Former Leeuwin Conservation Group	C3	2005
Former Leeuwin Conservation Group	C1	2005
Primary school teacher (Joondalup)	E1	2006
Primary school teacher (Joondalup)	E2	2006
Primary school teacher (Joondalup)	E3	2006
City Council staff	L1	2006
City Council staff	L2	
JCCCCF member	L3	2009
JCCCCF member	C4	2006
National Park Advisory group member	C9	2007
Total	21	

In this table, A = Australian Government officer; C= community group member;

G= Western Australian Government officer; E= educator;

L= local government employee; N= Regional NRM Facilitator

## ***Appendix G: Product Stewardship in Australia***

Product stewardship seeks to reduce the negative impacts, environmental and social, of products by keeping designers and manufacturers within the circle of responsibility of a product to the end of its working life. The first product stewardship protocols in Australia to be formally named as such were developed for oil and oil products<sup>164</sup>. This may have been because of the dispersible nature of oil as a pollutant, the risk posed by storing this flammable liquid, and its value in recycling. Europeans extended the responsibility of producers for their products from “cradle to grave” (Extended Producer Responsibility), but this would be difficult to enforce because not only are oils mixed by end users, but oil produced by one refinery is indistinguishable from the next.

The increasing volume of wastes like oil, increasing intractability of modern waste streams and the recognition of high resource values in waste have been major contributors to the impetus for product stewardship<sup>165</sup>. Used oil and other wastes were previously treated as a common pool “bad” and the cost of its disposal was borne by local governments. One of the core concepts behind product stewardship programs is the belief that sharing the responsibility for the whole life cycle will encourage manufacturers and users to find innovative and low cost ways to minimise or eliminate waste. By 2004 80% of the annual production of used oil in Australia was recycled. However to achieve this result, the commonwealth government invested more than \$10 million in collection network facilities (CSIRO, 2005a).

Disposal of used packaging emerged as an environmental issue in the 1960s and 1970s, particularly as single use plastic containers displaced re-usable containers like glass beverage bottles and began to appear in the landscape as litter and landfill (Lewis, 2005, p. 46). Although it did not use the term ‘product stewardship’, South Australia’s Container Deposit Legislation (1975) was the first policy initiative in Australia aimed at reducing the impact of packaging and connecting disposal of containers back to sale of beverages through a deposit on the container.

The Australia New Zealand Environment Conservation Council in a National Packaging Covenant adopted the principle that “all participants in the packaging chain” accept

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<sup>164</sup> The Product Stewardship (Oil) Act came into effect on 1 January 2001.

<sup>165</sup> Why has Product Stewardship become an issue? Accessed from <http://www.productstewardship.us/displaycommon.cfm?an=1&subarticlenbr=56> on 28 Dec 2010

shared responsibility for the impacts of their activity (Lewis, 2005, p. 49). In 1999, the National Packaging Covenant (Lewis, 2005) sought to achieve a 60% national recycling target for used packaging but has been less successful than the oil stewardship program (CSIRO, 2005b). The revised covenant, which also applies to packaging used in commercial, industrial and government premises, is based on the principle of product stewardship, which it defines as “the ethic of shared responsibility through the lifecycle of products including the environmental impact of the product through to and including its ultimate disposal” (National Packaging Covenant Council, 2005).

In 2004 the Environment Protection and Heritage Council (EPHC) released an industry discussion paper on co-regulatory frameworks for Product Stewardship based on an approach recognising “that manufacturers, importers, governments and consumers have a shared responsibility for the environmental impacts of a product throughout its full life cycle” (EPHC, 2004, p. 2). This paper was released to establish grounds for a single framework across Australia in which the various voluntary elements would be underpinned by a National Environment Protection Measure on co-regulatory product stewardship (EPHC, 2004, p. 8).

On 5 November 2009 the EPHC agreed to a *National Waste Policy* which includes the product stewardship framework and announced that televisions and computers were to be the first products covered by the framework (EPHC, 2009).

Under the policy, product stewardship initiatives for “end of life tyres” were scheduled to commence in 2010 (EPHC, 2009), since public submissions on a national Draft Tyres Product Stewardship Agreement closed in July 2008 (EPHC, 2008).

In addition to product stewardship programs underpinned by the “safety net” of National Environment Protection Measures (EPHC, 2004), a number of industries and individual firms have adopted their own product stewardship programs, such as MobileMuster<sup>166</sup>, DrumMuster<sup>167</sup> (Greene, 2006) and programs in the computer industry. The non-profit *Australian Battery Recycling Initiative*’s vision is “effective stewardship of all end-of-life batteries”<sup>168</sup>. All of these initiatives have incentive from government policies to achieve “zero waste”.

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<sup>166</sup> For mobile phones

<sup>167</sup> For drums used to contain and transport agricultural chemical chemicals

<sup>168</sup> <http://www.batteryrecycling.org.au/about/about-abri> accessed 10 Dec 2013

RioTinto, one of Australia's major mining conglomerates<sup>169</sup>, reported in 2009 that "95% of [its] businesses had an active product stewardship programme or had started the process" although only 24% had them "in use" (RioTinto, 2009). For RioTinto, product stewardship means "overseeing the safe production, use and disposal of metal and minerals products as society continues to need them" (RioTinto, 2007). Since its role in the life cycle of its products is limited this programme depends on cooperation of all the other actors along the way.

In Australia, Product Stewardship still has a relatively low profile. Yet its existence is another case which supports the argument that stewardship ethics can be integrated with programs to generate greater participation and support.

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<sup>169</sup> In the relaunched environmental stewardship statement of 2009, RioTinto no longer explains what it means by environmental stewardship: the sub heading simply says "We take a strategic approach to driving improved environmental performance". Like many other corporate bodies it uses the term stewardship as a heading for a discussion of sustainable development and specific environmental sectoral policies such as air, water etc. Strangely, under the "land" section, RioTinto has a "Land use stewardship standard" (RioTinto HSE, 2008). In some ways this too is a loose way of using the term 'stewardship' that fails to use the full potential of the concept across RioTinto's operations.