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**BEYOND THE STATE:
BUILDING REGIMES FOR SPECIES
PROTECTION IN ALL OCEANS**

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BEYOND THE STATE: BUILDING REGIMES FOR SPECIES PROTECTION IN ALL OCEANS

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To those with an ecological standpoint the state system has often been a foe of environmental management. Sovereignty and state determination of environmental management are not encumbered by any obligation to consider neighbouring countries or the world as a whole. This remains a major impediment to dealing with environmental issues on the temporal and spatial scale necessary to address many problems (Wapner 1996). Issues such as ozone depletion and global warming are amongst the highest profile of contemporary problems, but increasing focus is being turned to species conservation and how this can be considered within debates over conservation of the global commons.

A range of issues have come to be understood in the global commons context. These most commonly include the oceans and atmosphere, the conservation of which has largely remained within the current state-based system through the negotiation of multilateral treaties to deal with specific issues of mutual concern. This has been the area of most detailed consideration in regime analysis, although the concept of wilderness protection (and specifically protected areas) and migratory species should also be included as areas of interest to all peoples of the world. It can also be argued that some species and some areas have an acknowledged special significance that warrants broadening the argument beyond the 'jurisdictional' into the 'ethical and political'. This is important to consider because these latter arguments are the most common areas of influence of global civil society. For instance, the International Union for the Conservation of Nature (IUCN) has successfully sponsored a protected areas agenda that has been highly influential in state management, and conservation non-government organisations have propelled the Antarctic protection regime (Wapner 1995; 1996).

If multilateral agreements and treaties can be seen as operating within the existing state-based system of global negotiation and issue management, then the activities of non-governmental, international organisations as well as their policy networks (global civil society), who often represent many nationalities and differing political perspectives, can be seen as operating beyond the state system. These latter organisations have the freedom to propel agendas and policy outside of the

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constraints of sovereign territorial negotiations and, although they eventually need to integrate with the state system to achieve a legally binding end, their activities are free from sovereign constraint.

Therefore there are two distinct areas of evolving environment protection regime formation: inside the state system and beyond the state system. When considering the global commons and migratory species it may be necessary to look toward new regime contexts that are developed and driven by global civil society and beyond the state. The development of high seas marine protected areas appears to be an area where these two worlds are meshing together as mutually progressive agendas coming from states (such as Australia and within the OSPAR Commission for the Protection of the Marine Environment of the North East Atlantic) and also global civil society.

One high profile group of species—cetacea (the order of whales, dolphins and porpoises)—offers an interesting case study of how this issue might yet evolve and these separate, yet compatible, agendas may mutually progress.

The scale and scope required to protect cetacea over large areas indicates the need for critical habitat protection within a system of ecosystem-based management that is underpinned by marine protected areas. Protected areas negotiated within a regime developed for this purpose would seek to protect the target species of cetacea primarily by mitigating threats but also by protecting the critical habitat on which they depend (IUCN 2002). The challenge lies in the cross-jurisdictional and high seas nature of the many areas that might be considered critical habitat, and the inability of individual states to fully manage this issue. The concept of ecosystem management is highly complex and requires significantly different application from region to region. Therefore regional regimes, rather than a new global convention, may offer greater opportunities for cetacean protection.

THE CONCEPT OF REGIONAL REGIMES

A regime is not easily defined. It might be an agreement restricted to two states or expanded to include multiple states and non-state actors. Regardless of the scope, within a regime there are recognised roles linked together by rules governing relations between the parties. There may or may not be a hegemon. The rules may be more or less formally articulated and the structure may or may not create a defined organisation (Keohane and Nye 1989). A regime should be understood as quite separate from a 'convention' (which might in itself form a constituent part of the regime) and also as separate from an 'international order' (such as the United Nations) which is in effect a complex that spans a wider set of issues. Regimes are a framework around which expectations converge, behavioural norms are built and rules are developed. By clustering issues together in the same forum over extended periods of time, a greater depth of information exchange takes place, understanding

is built, relationships are developed, and systems of monitoring compliance are established that both reduce the incentives to cheat and enhance the value of reputation (Slaughter Burley 1993). Regimes often include a range of tools that may be coordinated by a range of actors. In this way regimes are less concrete or codified in international law and more a part of global civil society: a regime is a system of agreed behaviour founded on the principle of reciprocity (Young 1999a).

Regimes are also distinct from organisations, which are material entities possessing offices, personnel, equipment, budgets and legal personality (Young 1999a). The United Nations Environment Program is an organisation. The arrangements to protect cetacea in the Black and Mediterranean Seas under the Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean and Contiguous Atlantic Areas 1996 (ACCOBAMS) which include the secretariat established to manage the agreement as well as the various domestic, intergovernmental and non-governmental initiatives to create marine protected areas, minimise incidental catch in fisheries and address issues such as chemical pollution all form a cetacean conservation regime.

There is now a considerable body of thought surrounding regime theory and regimes themselves. Perspectives differ markedly between a more mainstream international relations trend, otherwise called a collective-action perspective, and an alternative viewpoint based on a behavioural model, otherwise called a social-practice perspective. Those focused on a collective-action perspective centre their research on utilitarian assessments of regime member behaviour (Young 1999b), on issues such as compliance with institutional commitment, the merits of policy instruments and the application of rules. Theirs is a worldview of enforcement (Young and Levy 1999). Those focused on a social-practice perspective study the sources of behavioural change (Young 1999b), the conditions in which actors make choices and conform to rules and the integration of actors into policy communities (Chayes and Chayes 1995).

Comparing regimes from these two perspectives reveals a division between enforcement and management. Regimes from a collective-action perspective (enforcement) are regulatory arrangements created to avoid or ameliorate social dilemmas. Behavioural prescriptions—rules, norms, principles—are the essential elements of this perspective, and efforts to implement them and elicit compliance with their requirements are critical to their success. Regimes from the social-practice perspective (management) are arrangements that affect behaviour through non-utilitarian mechanisms like inducing actors to treat prescriptions as authoritative, enmeshing actors in communities that share common discourse, or stimulating processes of social learning (Young 1999b).

However, regimes can also be seen as both. They may be driven by government policy development as well as the activity of policy networks. They are the

mechanism for solving problems that have arisen in global society and, from both a collective-action and social-practice perspective, regimes enable a stable contract environment (Young 1993). Regimes may be employed to govern functional problems such as 'trade in endangered species' or operate in geographically delimited areas such as 'Antarctica' or the 'North Sea'. Some regimes, such as ACCOBAMS, reflect both geography and function.

When considering how best to mitigate the full range of threats experienced by cetacea in domestic and high seas jurisdictions, regional regimes are likely to be the most appropriate option. Collective affairs such as the marine environment emerge as areas well suited to regional management. Most of the threats and impacts facing cetacea cross national boundaries and equally exist in international waters. Cetacea are often highly migratory, crossing multiple jurisdictional boundaries. No single nation can manage the full range of issues they experience in isolation. In addition, the impacts differ significantly from region to region. A global regime might not focus appropriately on specific regional issues and concerns. Nor is it possible to contemplate environmental issues in isolation from politics. Far too often globally agreed conventions disregard the capacity of less developed regions to comply with regulations and sometimes even the basic elements of the text. In their analysis of compliance with international regulatory agreements Chayes and Chayes (1995) identify three circumstances that frequently lie at the heart of treaty infractions, including ambiguity and indeterminacy of treaty language, limitation in the capacity of parties to carry out their undertakings and the temporal dimensions of the social, economic and political changes contemplated by regulatory treaties.

Regionalism typically has three dimensions. Countries within defined geographical areas have historical experience in common. There is a developed socio-cultural, political or economic linkage that distinguishes them from the rest of the global community. And regions have developed organisations to manage crucial aspects of their collective affairs. These three dimensions are interrelated. They can also be seen as solid conditions on which to develop a regime. While the core countries may be easily identifiable, the actual boundaries of the region are often fluid and debatable (Stubbs and Underhill 1994).

By focusing on regions rather than the globe, issues such as compliance, capacity building and participation can be more appropriately addressed. Agardy (1997) points out that state management is already significantly fragmented into sectorial issues. This is compounded when there are multiple jurisdictions combined with the high seas. The concept of regime management over a geographic area with the view to managing multiple impacts and threats (possibly overseen by one management body) offers an opportunity to move past the management style Agardy calls a 'patchwork of agencies' with overlapping or redundant jurisdictions

and little accommodation and coordination between vested interests (Agardy 1997).

When developed alongside each other and with a view to linking and forming larger systems, regimes can form a 'horizontal rather than vertical system of public order. The result would be a complex pattern of decentralised authority' (Young 1999a) that should include a wide range of participants and influencers and draw on a range of tools to achieve its objectives.

Many commentators concentrating on global environmental management lament the inability of the state system to successfully address environmental issues. Some of these thinkers have proposed a reform of world order, where the size, scope and character of states is radically changed and a global governance system is put in place. Other scholars also call for a radical re-order of the state system to reflect the small scale of human operation, a decentralisation of power and a system of governance that corresponds to local on-the-ground practice (Gillespie 2001; Dryzek 1995). These schools of thought have been distinguished by Wapner (1996) as supra-state and sub-state thinkers. While they certainly seek to move away from the state system, in actuality neither of these perspectives depart from statism. They privilege the state as the core of international affairs and focus on the amendment of state activities.

At a time when the United Nations is struggling in many areas of global effort and the effects of globalism are on the march, looking at regimes in their entirety offers an opportunity to break away from a state-centred focus to international governance. In this context regimes offer an alternative to a global government. The latter remains a potential ideal to strive towards for environmental management, but it now seems incapable of forming and in the current set-up would likely buckle under its own 'heavy and burdensome' administrative and bureaucratic weight. Already many worthy international efforts suffer the debilitation that comes from a slow bureaucratic system and, while not seeking to criticise the system, this hindrance should probably be avoided if at all possible. In contrast, regime administration can be comparatively 'light and agile' as well as offering a pragmatic focus to well-defined problems, drawing in the expertise of a wide range of actors.

REGIME COMPONENTS: THE PARTICIPATION OF GLOBAL CIVIL SOCIETY

Some argument still exists as to whether regimes are the domain of states or of global civil society. In the words of Keohane and Nye (1989) regimes are 'intermediate factors between the power structure of an international system and the political and economic bargaining that takes place within it'. Specifically who actively participates in the bargaining remains open to debate. Regimes are systems

in which states and global civil society participate in different ways, providing ‘a means to order, direct and manage human behaviour in matters of common concern and involvement’ (Wapner 1995). Without doubt, states are still the main legal actors in international negotiation. However, the last four decades have seen the growing involvement of issue-based non-governmental actors in policy and law development.

In reality, non-government organisations as part of global civil society have come to play a major role in international politics, increasingly ‘wielding greater influence than students of international politics have come to expect from actors who are weaker, according to conventional criteria, than their corporate and state adversaries’ (Levy et al 1995). Now more than ever, global civil society actively participates in international negotiation and the ideas and agendas generated by global civil society, such as cetacean conservation or ecosystem-based management, impact on the process of regime formation (Young 1993; Wapner 1996).

Indeed, regimes are considered by some as ‘agents for social change’, mechanisms to address growing problems that are both difficult to deal with in the context of the state system and that can be activated by non-state actors through coercive pressure. Operating through their communities and networks, global civil society—especially international organisations—are increasingly catalysts for regime development and implementation (Young 1999a).

Cetaceans are often highly migratory species that experience a wide range of threats across multiple jurisdictions, so it is important that global civil society pushes forward a complex of agendas into any new cetacean protection regime, to ensure that these threats are properly mitigated and the ecosystem on which these species depend is protected.

REGIME COMPONENTS: ADDRESSING IMPACTS THROUGH ECOSYSTEM-BASED MANAGEMENT

If ever there was evidence of a new philosophical trend in today’s societal outlook it can be seen in the embrace of the new concept ‘ecosystem-based management’. Unfortunately as with many new ideas confusion abounds about the exact definition of ecosystem-based management (EBM). As Agardy (1997) aptly put it, EBM is often seen as ‘the joke at the party that everyone laughs at but no-one gets’.

Ecosystems do not need management. An ecosystem is ‘a spatially explicit unit of the Earth that includes all of the organisms along with all components of the abiotic environment within its boundaries’ (Likens 1992). Ecosystems have been functioning for millennia, adapting, changing, shifting, moving without active

intervention from humans. While humans have been a small part of marine ecosystem function their impact over time has, until recently, been minimal. Fisheries, for instance, have been an important part of human society since ancient times, yet the scale and scope was until recently relatively small and in most cases fit within the parameters of what the ecosystem could withstand. Any variation from this balance caused enough of a change that humans, lacking the technology available today, learnt sharp lessons about limiting their activities. This ancient wisdom has not been translated into the large-scale commercial fishing operations characteristic of the world's modern fleets. Likewise other impacts have greatly increased: coastal pollution, ozone depletion, climate change, habitat loss, noise pollution, ship traffic, introduced species and other intensive marine use have all contributed to greater stress on marine ecosystems around the world (Platt McGinn 1999).

Cetacea bear the brunt of much of these environmental impacts (see Simmonds and Hutchinson 1996). The increased environmental impacts and stressors to cetaceans have been recognised by both the Scientific Committee of the International Whaling Commission (IWC) and the Cetacean Specialist Group within the International Union for the Conservation of Nature (IUCN) Species Survival Commission. In 1993 the IWC requested that the Scientific Committee

give priority to research on the effects of environmental changes on cetaceans in order to provide the best scientific advice for the Commission to determine appropriate response strategies to the new challenge. (Reijnders et al 1999)

The IWC Standing Working Group on Environmental Concerns agreed to report on the following key areas:

1. climate/environmental change, ozone and UV-B radiation
2. physical and biological habitat degradation
3. chemical pollution
4. impact of noise
5. direct (intentional and incidental mortality) and indirect effects (ecological ramifications) of fisheries
6. disease and mortality events, and
7. Arctic issues.

Implicit in their ongoing study is the synergistic and cumulative effects of all of these factors (Reijnders et al 1999) and the Scientific Committee of IWC has conducted workshops on a number of threats and threatening processes. In 2000, Simmonds et al (2000) reported back to the IWC Scientific Committee with the first *State of the cetacean environment report*. The report provided an overview of

the seven key areas, indicating that the evidence was strong enough to require a commitment to ongoing monitoring and investigation.

Clearly human interactions with ecosystems do need management. EBM seeks to address this through the management of human interactions with and the associated impacts on ecosystems, while striving to maintain ecosystem integrity, in perpetuity, at levels that ensure the natural system maintains function and diversity in accordance with its natural cycles.

EBM, ecologically sustainable development and the precautionary principle were all fundamental policy shifts endorsed by the United Nations Conference on Environment and Development in 1992 (Griffis and Kimball 1996; Franklin 1994). Since this conference much has been made of how this paradigm shift has affected marine management. Management is moving from traditional single species and maximum sustainable yield models to embrace complex and interwoven dynamics of whole ecosystems while assessing and managing the cumulative anthropogenic impacts upon these systems. At its core the management philosophy of EBM requires a fundamental shift in the way humans view the world, what is important and the relevance of our connection with nature, and requires an explicit examination of our patterns of political and scientific inquiry (Cortner and Moote 1999).

As with any new concept, EBM is still suffering an initial period of confusion. However, it is far from a fringe idea held by a select few; this is nothing short of a real and tangible paradigm shift in thinking that has permeated government policy around the world. Despite hurdles, this new paradigm has found legitimacy and acceptance in many state policies and marine management structures (Sainsbury and Sumalia 2001). In 1998, during the negotiation process for Australia's oceans policy, the Ministerial Advisory Group recommended that EBM requires the explicit recognition of key goals, including:

- maintenance, throughout the ocean realm, of viable populations of native marine species within functioning biological communities;
- establishment and maintenance of a comprehensive, adequate and representative system of protected areas covering Australia's biological diversity;
- maintenance of ecological processes in the marine environment, including water and nutrient flows, community and trophic structures, ecosystem linkages and their annual and longer term natural cycles, and the movement of broad-ranging migratory species;
- recognition that ecosystems are dynamic and that management must take account of spatial and temporal scales that maintain the evolutionary potential of marine biological diversity, and

- accommodation of human uses of the oceans and the economic, social and cultural aspirations of people (Ministerial Advisory Group on Oceans Policy 1998).

Implicit in these goals is a recognition that human uses must be accommodated within the ecosystem capacities and that the ecosystem requires protection from impact, not active management intervention.

A great deal of thought has since been dedicated to the more complex sub-definitions of EBM that include sectoral, social and economic considerations. While these are worthwhile contributions to operationalising EBM, they are in reality more representative of ecologically sustainable development. Furthermore they often focus on the sectoral context within which they have been developed and fail to recognise the value of biodiversity to both their own sector (Leadbitter et al 1999), to other sectors, and most importantly the ecosystem as a whole.

John Stuart Mill (1859) wrote that every successful movement must experience three stages: ridicule, discussion and adoption. Echoing this, the concept of conserving nature for its own sake is resisted by some sectors and the issue of ecosystem protection has frequently been discredited as operating against economic sustainability (Daly and Cobb 1994; Hawken 1993). However, to reflect accurately the economic worth and use options of different marine ecosystems an accurate assessment of total economic value is necessary (Barbier 1992). Total economic value consists of direct and indirect use values, option values and existence values (Pearce and Turner 1990), as illustrated in table 1.

Table 1: Value of wilderness

| Use values | | | Non-use values |
|--|--|---|---|
| Direct value | Indirect value | Option value | Existence value (intrinsic value) |
| <i>The resources and services provided directly by the natural area or by directly harvesting and exploiting wildlife</i> | <i>The indirect functions that support the economic activity which are provided by the natural area.</i> | <i>The amount parties are willing to pay to conserve the ecosystem or components of it for future use</i> | <i>Value attributed to the asset with no connection to the use value. This would include the worth of wildlife species, natural areas and overall biodiversity as having intrinsic value and stewardship value.</i> |
| <ul style="list-style-type: none"> • sustainably harvested products such as water, meat, fish, timber, plants • tourism/recreation • genetic material • education • human habitat • other services such as water transport | <ul style="list-style-type: none"> • ecological functions and roles • protection functions • waste assimilation • microclimate functions • macroclimate functions • carbon store | <ul style="list-style-type: none"> • future use of direct and indirect value columns | <ul style="list-style-type: none"> • biodiversity • species diversity • cultural heritage |

Adapted from Barbier (1992).

When the indirect values of the world ecosystems such as natural capital stocks and critical functioning ecosystems are calculated, the numbers are startling. Costanza et al (1997) have calculated that ecosystems provide at least US\$33 trillion worth of services annually which are currently identified only outside the market system. The comparison between marine and terrestrial ecosystem value is calculated as US\$20 949 : US\$12 319 trillion respectively, with ocean services including food production, nutrient cycling, regulation of atmospheric chemical composition and nutritional regulation of populations. Many of the other services such as climate regulation, hydrological flow regulation, waste treatment, raw materials and genetic resources have yet to be calculated, and so the already high value will undoubtedly increase markedly when this is included. When proper account is

taken of the values of natural areas and products, *true* sustainable management of these areas also makes economic sense (Costanza and Daly 1992).

Intrinsically EBM recognises these values and understands that land and sea are not simply inert, but in a natural state provide an array of functions and services to the ecosystem as a whole. Increasingly the value of these services and functions is being legitimised through moral and legal consideration (Cortner and Moote 1999).

In order to be effective EBM must involve a range of interests and experts, involving a mixture of science, policy, politics and law. Cortner and Moote (1999) suggest that four basic themes must be addressed to ensure EBM success. These are important considerations for application to any new regimes.

- **Socially defined goals and objectives:** reflecting societal values rather than the narrow scientific concepts focused on reductionist theories. (An example used by Cortner and Moote is the newly held concept of ‘returning ecosystems to pre-European settlement’. This reflects a ‘social’ concept rather than a ‘scientific’ one of ecosystem function.) The goals and objectives must be tempered by an understanding that ecosystem processes must be protected above all other values.
- **Holistic, integrated science:** recognising that ecosystems are open, changing and complex, and that downstream effects must be considered. Science from every stage of the process should be included therefore removing the tyranny of the old system of externalities (which were effectively ignored in management).
- **Adaptable institutions.** Recognising that knowledge is sparse, and that the complexity of ecosystems may be ever changing, management should remain flexible and readily adaptable to change. In this sense management decisions are treated as a working hypothesis that must be regularly reviewed and amended to reflect new knowledge or understanding.
- **Collaborative decision making.** Reflecting management at an ecosystem level, as opposed to prescribed political boundaries, EBM must be able to include a range of interdisciplinary expertise in the decision-making process including ecological, political, generational and cultural. This should not mean reducing management decisions to the lowest common denominator, but to include collaborative thinking in the decision-making process (Cortner and Moote 1999).

Adaptive management is clearly a fundamental principle of EBM. To achieve this management must move from ‘reactive’ to ‘pro-active’. Research has to re-orientate itself to view the ecosystem as a whole, using multiple components such as reef health, high order predator presence or water quality as indicators of management success. Risk assessments of management choices must be ongoing and adaptive to new information, and multiple sectoral uses must be viewed as

cumulative rather than isolated impacts. Importantly, safeguards such as marine protected areas should be built into the system from an early stage to secure system integrity and sites where species congregate (Roberts and Hawkins 2000) in the absence of full scientific certainty. Without doubt this is a major task to undertake in any large marine area, but it is a necessary step towards humans being able to manage their involvement with marine ecosystems.

EBM has already been used as the foundation of a regime. The Antarctic management system under the Commission for the Conservation of Antarctic Living Marine Resources (CCAMLR) embraces the EBM principles and puts them into action through the CCAMLR Ecosystem Monitoring Program using selected species and sites as indicators of long-term trends. There are two priority focus areas at this stage: fisheries and climate change (de la Mare et al 1996). One of the striking features of the CCAMLR convention is the obligation to manage fisheries from an ecosystem perspective, requiring a full range of ecosystem dynamics such as the flow-on effect to the natural predators of target stock—seabirds, seals and whales—to be assessed (de la Mare et al 1996). This has meant that a shift from ‘descriptive’ to ‘predictive’ planning has also been required and a whole new research thrust has been created to fulfil the CCAMLR obligations (Scientific Committee for the Commission for the Conservation of Antarctic Living Marine Resources 1984).

Critics of EBM still argue that the principles are fuzzy, ambiguous and untested. While recognising that there is considerable work required to achieve EBM as an end goal, it can be countered that CCAMLR has effectively implemented the principles, albeit at a modest level, and is actively evolving EBM in the Antarctic marine environment. States are also embracing these principles in an effort to recover from the damaging practices of past management, and there is a great opportunity for EBM to be applied to areas of common heritage beyond Antarctica and state jurisdictions.

The holistic premise of EBM makes it an appropriate foundation on which to build cetacean protection regimes, enabling management to address and mitigate known impacts, while at the same time monitoring and addressing impacts on ecosystem functions and therefore securing ecosystem health for the species concerned. The concept, accurately articulated, provides the agreed principles and norms from which sustainable and adaptive rules can be built.

REGIME COMPONENTS: PROTECTION OF CRITICAL HABITAT

A fundamental tenant of EBM relating to species and community protection is the declaration of marine protected areas over critical habitat. This is seen in Article 8 of the Convention on Biological Diversity (CBD), which calls for states to ‘establish marine protected areas for the conservation and sustainable use of

threatened species, habitats, living marine resources and ecological processes' (CBD, Article 8(a), (b) and (e)). The UN Food and Agricultural Organisation (FAO), in acknowledging the importance of marine protected areas, recently stated:

Marine reserves represent an important tool to be used in conjunction with other appropriate management measures, not just for protecting many ecosystems and leaving proportions of them intact, but also for providing a baseline state for monitoring. To be effective, reserves have to cover a relatively large proportion of the ecosystem at the regional level. (FAO 2000)

When looking to put in place protective mechanisms for specific species, populations or groupings of species, safeguarding habitat that is critical to their survival is important. Agardy (1997) comments that species that are an appropriate focus of marine conservation initiatives include:

1. species in imminent danger of extinction;
2. species that play a central role in ecological communities and may serve as indicators of the condition of habitats (keystone or umbrella species) or of ecosystem declines;
3. species that serve as a conservation 'hook' allowing management to scale up from single species directed conservation to ecosystem management, capturing public attention and providing a mechanism for education.

In many cases all three of these criteria apply to cetacea and in all cases at least the last two criteria apply. At a simplistic and basic level they are high order predators, whose health reflects the ecosystem in which they live (Nukamp and Nollkaemper 1997). Indeed, Reeves and Leatherwood (1994) have urged greater attention be paid to cetacean protected areas and have stated the importance of protecting critical habitat and restricting human activity within these areas. They have also called for these protected areas to be 'embedded in broader based initiatives'. Such initiatives could be biosphere reserves or EBM. Placing increased protection over a very important ecological area or habitat that is of key significance to a particular species may be a more effective way of protecting species than managing the species or impacts one by one (Christensen et al 1996). ACCOBAMS acknowledges the need to protect habitat, as do the many regional seas programs. The Convention for Biological Diversity Jakarta Mandate specifically refers to the need for greater protection over critical habitat, and domestic legislation in Australia refers to critical habitat identification (*Environment Protection and Biodiversity Conservation Act 1999* (Cth)).

The important focus in this context should be not only the protection of the animals but protection of the critical aspects of the ecosystem on which they depend. Migratory and non-migratory species all have habitat areas that are of critical

importance for their survival. A cetacean's critical habitat is the areas within its range that are essential for day-to-day survival, as well as for establishing and maintaining a healthy population growth rate. This can apply to either a whole species or a particular population of that species. Acknowledging that cetacea are complex and socially evolved species (Baird 2000; Bower 2000; Connor 2000; Fox 2001; Rendell and Whitehead 2001; Whitehead and Mann 2000; Samuels and Tyack 2000; Whitehead and Weilgart 2000; Whitehead 1998; Norris 2002), areas that are regularly used for feeding and hunting, breeding and courtship, and raising calves, and in some cases areas used for migrating, socialisation and communication, should be considered as essential critical habitat, especially if these are always or regularly used.

Unlike land-based critical habitat, however, marine critical habitat boundaries may be less fixed, especially in terms of hunting and feeding areas that are dependent on upwelling and other ever-changing oceanographic conditions. For instance, many species are known to feed in and around upwellings which vary depending on local and large-scale oceanographic conditions to some extent during a season and from year to year.

Protected areas have traditionally been concentrated in inshore state jurisdictions, but many areas of critical habitat for cetacean species will be either on the high seas or over multi-jurisdictional areas. Some areas might move seasonally or with climate change patterns and declarations of these areas need to be constantly monitored and adapted to accommodate the elastic nature of marine ecosystems. Some consideration might also be given to rolling habitat protection with specific reference to migrating animals or communication channels that are used on a seasonal basis.

The implication for critical habitat protected area design is that more flexible definitions of marine protected areas for cetaceans are needed in some cases. One option might be larger overall biosphere reserve-type areas which can include a number of flexible, highly protected 'core areas' corresponding to cetacean critical habitat with boundaries that are adjusted as needed from year to year or even within seasons. Such adjustments should be adaptive, constantly reviewed and sensitive to signals from the wider environment.

Much research over the next few decades will be focused on defining, locating and understanding the parameters of cetacean critical habitat. Some of these areas will be conventional geographical aspects and others will be more 'fluid' oceanographic parameters such as temperature, salinity and current. Thus, critical habitat may be defined as not only the fixed and seasonally changing boundaries of the 'places' cetaceans habitually use, but also the non-geographically-based 'conditions' that sometimes more precisely define such an area as critical habitat.

Protection needs to take into account the maintenance of ecosystem function over the long term, which is likely to mean a restriction of users that have access to these areas. It is also important that the critical habitats are surrounded by well-managed buffer zones. In many areas critical habitat will need to be considered as a network of areas rather than a single reserve (Roberts and Hawkins 2000).

PROTECTED AREAS ON THE HIGH SEAS

To date most marine protected areas have been declared within state jurisdictions; however a number of countries—notably Australia and Germany—have sought to extend this agenda to the high seas. As recently as July 2000 the United Nations General Assembly (2000) has noted

the need to give consideration to the use of marine protected areas (MPAs) as a tool for integrated ocean management. They also stressed that such MPAs, which could range from highly protected to those supporting multiple uses, could provide for a regime incorporating biodiversity conservation, fisheries, mineral exploration, tourism and scientific research in a sustainable manner. In this connection, mention was made of the need for identifying methods to establish and manage MPAs on the high seas. It was also noted that such arrangements should be fully consistent with UNCLOS [UN Convention on the Law of the Sea].

Driving the agenda, international conservation organisations have identified ‘cetacean hot spots’ that need protection from a range of anthropogenic threats—specifically fisheries by-catch, shipping, whaling and seismic testing (Cripps and Christiansen 2001). A recent study by the IUCN also identified cetacea as candidates for high seas marine protected areas to protect against threats and ‘usefully contribute to the protection and re-establishment of these species’ (Baker et al 2001).

A number of conventions already provide the precedent for the designation of protected areas as part of an international agreement within territorial waters or Exclusive Economic Zones (EEZ). This can be seen as a development of international custom in this area, dating as far back as the 1940s with the Convention on Natural Protection and Wildlife Preservation in the Western Hemisphere, which aimed to protect species from anthropogenic impacts by regulating trade, protected areas and international cooperation. Similarly the African Convention on the Conservation of Nature and Natural Resources 1968 sets out the need for conservation areas and maintenance of habitat outside these areas (Lyster 1993). In 1979 the Convention on the Conservation of European Wildlife and Natural Habitats (Berne Convention) also embarked on a similar experience, specifically with migratory species and birds in mind. The Berne

Convention places a strong emphasis on the protection of habitats and in some areas prohibits deliberate damage of breeding or resting sites (Lyster 1993). More of a framework in nature, the Convention on the Conservation of Migratory Species of Wild Animals (CMS) also seeks to protect areas of importance to Appendix I species. Article III obliges countries to take appropriate measures to set up protected areas for listed species.¹ However, it is widely assumed that these protected areas are to be within sovereign territory.

Much of the dissenting debate that still exists in relation to increased ecosystem or species protection on the high seas surrounds access to fisheries resources and right of passage. Clearly none of these instruments specifically allude to high seas and, given the existence of political debate surrounding the declaration of marine protected areas outside of territorial waters or EEZs, it is important to note that a number of cooperative systems already exist that link marine protected areas together across wide geographical areas. Examples such as the Circumpolar Protected Area Network Plan which encompasses national marine protected areas within eight Arctic countries and the 1990 Protocol for Specially Protected Areas and Wildlife in the Wider Caribbean Region indicate there is a will to cooperate to this end (de Fontaubert et al 1996).

FROM MANAGEMENT TO ENFORCEMENT: GOVERNANCE BY A FEW FOR THE MANY

The question that is often asked in this situation is ‘If the high seas belong to everyone, can they be governed by a few?’ Part of this question can be immediately diffused by Australia’s recent assertion that high seas marine protected areas are not an extension of sovereignty, sovereign rights or the jurisdiction of any state, but should remain part of the global commons under the rights and obligations of the United Nations Convention on the Law of the Sea (UNCLOS) (Australian Federal Department of the Environment and Heritage 2001). In this sense governance would be on behalf of the many and the dissent

1 Convention on the Conservation of Migratory Species of Wild Animals, Article III(4): ‘Parties that are Range States of a migratory species listed in Appendix I shall endeavour:

- a) to conserve and, where feasible and appropriate, restore those habitats of the species which are of importance in removing the species from danger of extinction;
- b) to prevent, remove, compensate for or minimise, as appropriate, the adverse effects of activities or obstacles that seriously impede or prevent the migration of the species; and
- c) to the extent feasible and appropriate, to prevent, reduce or control factors that are endangering or are likely to further endanger the species, including strictly controlling the introduction of, or controlling or eliminating, already introduced exotic species.’

would be on behalf of the few. The other element worth considering here is the benefit to high seas ecosystem conservation of this level of cooperative management. It can be argued that UNCLOS has already established a mandate for high seas protected areas through Article 195(5), which requires measures to protect 'rare and fragile ecosystems as well as the habitat of depleted, threatened or endangered species and other forms of marine life'. This is further reinforced by Article 197 requiring cooperation on a global basis, and Agenda 21's recommendation that states should seek to designate critical habitat as protected areas (Agenda 21 Chapter 17).

Recently, the Ligurian Sanctuary for marine mammals has been created. Signed in 1999 by France, Italy and Monaco, the sanctuary covers 99 000 square kilometres within the Mediterranean and therefore operates as a form of internationally declared protected area. This large protected area differs significantly from the sanctuaries declared under the IWC (Southern Ocean and Indian Ocean), which only seek to protect listed whales from commercial whaling, by addressing a range of threats to cetacea in this region. The Ligurian Sanctuary agreement includes measures to protect marine mammals and their habitat from negative impacts, prohibition of deliberate taking or disturbance and an undertaking to comply with driftnet regulations,² and forms parts of an ecosystem-orientated regional regime.

As none of the parties to the Ligurian Sanctuary have claimed an Exclusive Economic Zone within the Mediterranean waters, this sanctuary could be considered as a declaration over high seas operating under UNCLOS Article 120. However the text of the agreement sets up a degree of ambiguity about enforcement over the high seas areas and in the best case it seems the parties have limited themselves to exercising rights that would be included in the broad concept of the Exclusive Economic Zone (Scovazzi 2001).

Increasing the mandate of the Ligurian Sanctuary, the CMS agreement ACCOBAMS, operating in the Mediterranean and Black Seas, also seeks a higher level of conservation status of cetacea and their habitat. One element of the strategy is the establishment and management of specially protected areas for cetacea corresponding to the areas that serve as their habitat or provide important food resources (ACCOBAMS Annex 2 art 3; Scovazzi 2001).

The Protocol Concerning Specially Protected Areas and Biological Diversity in the Mediterranean 1999 (SPAMI) also provides some insight into this issue. SPAMI is applicable to all the marine waters of the Mediterranean, overriding the previous

2 This lack of an absolute ban on the use of driftnets is heavily criticised by many commentators and has been seen as a step backwards from the 1993 prohibitions on driftnets. Clearly this demonstrates the elasticity apparent in the development of international wildlife law.

Protocol Concerning Mediterranean Specially Protected Areas, which was limited to territorial waters. Interestingly SPAMI seeks the involvement of non-signatories to 'cooperate in implementation of the protocol' (Scovazzi 2001) and provides that parties take measures consistent with international law to ensure that no one engages in any activity contrary to the protocol's principles and purposes.

The real extent and benefit of this developing regime which includes both ACCOBAMS and the Ligurian Sanctuary will only be known through time and testing. However these elements provide some indicative direction for the development of other regional cetacean protection regimes.

Therefore, while the answer to the initial question is not straightforward, precedents and guides are developing in international law and politics. Exclusionary 'governance' may not be possible nor preferable but significant 'guidance and pressure' is now actively being pursued in several circumstances on the high seas.

PROGRESSING FROM NORMS TO RULES: THE CHALLENGES OF HIGH SEAS JURISDICTIONS

In July 1998, 15 Northeast Atlantic states and the members of the European Community signed the Sintara Statement, within the framework of the Convention for the Protection of the Marine Environment of the North East Atlantic 1992 (OSPAR) which states that:

the [OSPAR] Commission will implement the strategy on the protection and conservation of the ecosystems and biological diversity of the maritime area and, in doing so, inter alia: ... identify those marine species, habitats or ecosystems that need to be protected, conserved or restored ... [and] promote the establishment of a network of marine protected areas to ensure the sustainable use and protection and conservation of marine biological diversity and its ecosystems. (OSPAR 1998)

In this case, OSPAR is clearly seeking jurisdiction over, and clearly aims to actively manage, the high seas and in this way is progressing international legal assumptions about high seas protected areas and governance.

Similarly, during the 2000 IUCN World Congress Australia and New Zealand successfully tabled a resolution requiring the Director General to work with members and agencies to explore high seas marine protected areas, 'with the objective of implementing effective protection, restoration and sustainable use of biodiversity and ecosystem processes on the high seas', and called on governments, non-government organisations and agencies to better integrate legal mechanisms

for this aim, and to identify candidate areas for collaborative management (IUCN 2000).

Other mechanisms currently exist that also provide channels for implementation of cetacean-specific marine protected areas as part of an ecosystem-based regime such as the International Maritime Organisation Guidelines for the Designation of Special Areas and the Identification of Particularly Sensitive Sea Areas that provide for protection from the harmful impacts of shipping. Equally the International Whaling Commission (IWC) provides for open and closed waters including the designation of sanctuary areas. However, given the need to adopt the principles of ecosystem-based management these protected areas would be better recognised under conventions such as CMS or CBD with cooperative relationships developed with IMO, IWC or other relevant fora.

A legitimate concern about the declaration of high seas protected areas relates to continued access rights for non-signatories and the ability to regulate the activities of non-signatories. In many areas of the world these conflicts would relate to fisheries access or destructive fishing techniques.

Article 4 of Annex V to the OSPAR Convention deals with the question of fisheries, and presumably the restriction of fisheries. It states that the commission would draw problems to the attention of the competent authority or body for that activity. Likewise Article 15 of the Convention on the Protection of the Marine Environment of the Baltic Sea Area 1992 (HELCOM) requires:

Parties shall individually and jointly take all appropriate measures with respect to the Baltic Sea Area and its coastal ecosystems influenced by the Baltic Sea to conserve natural habitats and biological diversity and to protect ecological processes. Such measures shall also be taken in order to ensure the sustainable use of natural resources within the Baltic Sea Area. To this end, the Contracting Parties shall aim at adopting subsequent instruments containing appropriate guidelines and criteria. (HELCOM art 15)

The question of enforcement of high seas marine protected areas clearly remains. While parties participating in the regime may choose voluntarily to be bound by the constraints of a high seas marine protected area, non-parties may not and could in fact exercise their legal rights to freedom of the high seas.

Article 87 of UNCLOS, 'Freedom of the High Seas', states that the high seas are open to all states, whether coastal or land-locked. This comprises freedom of navigation, of overflight, to lay submarine cables and pipelines, to construct artificial islands and other installations permitted under international law, of scientific research and of fishing, subject to the conditions laid down in Section 2.

However, Article 118 does temper the cooperation of states in the conservation and management of living resources. It states:

States shall cooperate with each other in the conservation and management of living resources in the areas of the high seas. States whose nationals exploit identical living resources, or different living resources in the same area, shall enter into negotiations with a view to taking the measures necessary for the conservation of the living resources concerned. They shall, as appropriate, cooperate to establish subregional or regional fisheries organizations to this end. (UNCLOS Article 118)

The article suggests that parties to UNCLOS also have an obligation to cooperate with any area-specific regime, rather than to antagonise it.

This problem of non-party antagonism is also being considered in other high seas issues. In September 1997 the General Council of the Northwest Atlantic Fisheries Organisation (NAFO) resolved a Scheme to Promote Compliance by Non-Contracting Party Vessels with the Conservation and Enforcement Measures Established by NAFO. In this scheme NAFO have created a system for pro-active engagement of their member states in the NAFO regulatory area. Their scheme acknowledges the rights of non-parties under international law to freedom of the high seas but at the same time seeks to monitor, report and with consent board vessels not fishing under the NAFO agreement and therefore deemed to be 'undermining the NAFO Conservation and Enforcement Measures' (NAFO 1997). The sanctions proposed are strong. Ultimately the scheme aims to prevent landing or shipment of fish caught by non-parties or outside of acceptable quotas. However, as compliance with the sanction is in effect voluntary this becomes more a matter of politics and pressure than international law.

The FAO Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas, adopted at the Twenty-Seventh Session of the FAO Conference, also extends this compliance obligation. Not yet in force, it forms an integral part of the Code of Conduct for Responsible Fisheries. Specifically Article VI of the agreement requires parties to exchange information on vessels authorised by them to fish on the high seas, and obliges FAO to facilitate this information exchange (FAO 2001). Importantly the agreement states that 'under international law as reflected in the United Nations Convention on the Law of the Sea, all States have the duty to take, or to cooperate with other States in taking, such measures for their respective nationals as may be necessary for the conservation of the living resources of the high seas' (FAO 2001). At the same time there is a reminder of the duties of conservation and sustainable use of marine living resources on the high seas in Agenda 21.

Again the FAO agreement recognises the freedom of the high seas, but seeks to increase flag state responsibility for vessel movements and activities while providing information exchange that effectively highlights where vessels are acting either illegally or not in the spirit of an existing fishing agreement. The FAO agreement does not go so far as the NAFO but certainly provides moral support for the increased NAFO sanctions.

In both these cases, enforceability therefore moves out of the territory of international law on this issue and into the territory of international politics. Reflecting then on the proposed declaration of marine protected areas within the high seas OSPAR area, it seems clear that parties will need to rely on similar enforcement measures, which will be political rather than legal in nature. This is a fundamental aspect of a regime.

In the main, treaties concerned with the management of wildlife across jurisdictions have no legal means of enforcing their will on non-parties to the treaty. By way of example, CCAMLR seeks to regulate the activity of parties in a high seas area, being the area south of 60 degrees latitude and between that area and the Antarctic convergence that forms part of the Antarctic marine ecosystem. This has been an ambitious and arguably successful convention, yet enforcement relies on political pressure by requiring the commission to draw to the attention of a non-party any activity that affects the implementation of the objective of the convention. There are clearly difficulties within this system in that the commission operates by consensus and reaching this can be difficult (Lyster 1993). However, it is important to recognise that the commission has instructions to use political pressure to seek enforcement.

CONCLUSION

If regimes can be considered as agents for social change, the leap from norms to rules must be considered as part of the process (Chayes and Chayes 1995). Development of an ecosystem-based regime that includes the protection of critical habitat in all necessary jurisdictions should be seen as a legitimate tool in cetacean conservation. Limits in existing international law should not be used as an impediment to progressing this aim on the high seas and there is evidence that states are pro-actively addressing this agenda. OSPAR and the ACCOBAMS/Ligurian Sanctuary certainly reinforce the legitimacy and efficacy of regional regimes, and a gradual development of custom reinforcing high seas protected areas for cetacean conservation can be seen.

Experience has show us that high seas marine protected areas, critical habitat designations, ecosystem-based management and species conservation will initially be developed beyond the state system as an agenda of global civil society. It is therefore important to consider the development of ideas and proposals that are

appropriate to the task at hand and to acknowledge the potential to connect the agendas under a regime or regimes. Indeed, these agendas developed as part of a regime offer a hopeful future for species and ecosystem protection.

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