Conservation and Society 8(4): 331-338, 2010

Article

Sea Change: Exploring the International Effort to Promote Marine Protected Areas

Noella J. Gray

Nicholas School of the Environment and Earth Sciences, Duke University Marine Laboratory, Beaufort, NC, USA *Current affiliation*: Department of Geography, University of Guelph, Guelph, ON, Canada

E-mail: grayn@uoguelph.ca

Abstract

Citing multiple threats to marine biodiversity and resources, the international marine conservation community is promoting greater adoption of marine protected areas (MPAs). Like terrestrial protected areas, MPAs are characterised by debates over the appropriate role for scientific input and citizen participation and how to balance concerns for both social equity and ecological effectiveness. This paper explores how such debates are influencing the framing of MPAs as a global policy tool, based on an 'event ethnography' conducted at the 2008 World Conservation Congress in Barcelona. International non-governmental organisations (NGOs) dominated the discussions and agenda setting, although multiple concerns for MPAs were incorporated into the discussions. The framing of MPAs highlighted a global scale and vision, reflected by and reinforcing the dominant role of the big NGOs. However, it did not go unchallenged, nor is it prescriptive.

Keywords: marine conservation, marine protected area, IUCN, non-governmental organisation, event ethnography

DOI: 10.4103/0972-4923.78149

INTRODUCTION

The world's oceans are in a crisis. Recent research suggests that no stretch is unaffected by human influence, and 41% is strongly affected by multiple 'anthropogenic drivers', such as fishing, pollutants, shipping, nutrients, and ocean acidification (Halpern *et al.* 2008). In 2007, 80% of the world's fish stocks were classified as either overexploited (28%) or fully exploited (52%) (FAO 2009). The world's coral reefs are threatened by rising sea-surface temperatures and acidification as a result of climate change, in addition to the localised impact of sedimentation, sewage discharges, nutrient loading and eutrophication from agro-chemicals, and overfishing. One-third of the coral species have an elevated risk of extinction (Carpenter *et al.* 2008).

In response to these and other problems, marine conservationists are increasingly promoting marine protected areas (MPAs), particularly 'no-take zones', as a conservation tool (Lubchenco *et al.* 2003).¹ Successive recommendations from the 2002 World Summit on Sustainable Development and the 2003 World Parks Congress called for the establishment of a global network of MPAs by 2012 (Laffoley *et al.* 2009),

including the specification that the network should include "strictly protected areas that amount to at least 20-30% of each habitat" (IUCN 2003).2 This call for a global network of MPAs was reiterated at the 2008 World Conservation Congress (WCC), including an expressed concern that only 0.65% of the world's oceans and 1.6% of the area within the nations' exclusive economic zones are currently covered by MPAs (IUCN 2009). In short, international MPA targets are not being met (Wood et al. 2008). The number of MPAs worldwide has increased from 118 in 1970 (Kelleher 1999) to an estimated 4435 as of 2006 (Wood et al. 2008). Although conservationists lament the slow rate at which MPAs are being created and the small fraction of the world's oceans included in such areas, 4435 is not an insignificant number. Social scientists have, in fact, described the rapid spread of MPAs as a 'pandemic' (Jentoft et al. 2007) and one of the most important factors in the ongoing transformation of the international seascape (Nichols 1999).

This series of statistics serves three purposes as an introduction to this paper. First, it highlights the many very real challenges facing the marine environment and the human communities who depend on it for their livelihoods. Second, it

illustrates that the manner in which we know and understand these problems is increasingly framed through science, at a global scale. Third, it suggests that the promotion of MPAs warrants close attention, given that this is the primary tool being advanced as a means of conserving and managing the marine environment. The purpose of this paper is to explore how MPAs are being framed as a conservation policy tool through organised international efforts, by considering how they were conceptualised at the 2008 WCC. The paper focuses specifically on how concerns for both conservation and human welfare are incorporated into and accommodated within this international effort to expand MPAs.

In spite of the increasing prevalence and popularity of MPAs, there is still much debate over how they should be designed and managed (Jones 2001). The 'expert knowledge' advocates argue that unless MPAs are designed according to scientific criteria, they cannot possibly meet their conservation objectives (e.g., Crowder et al. 2000; Sala 2002), whereas the 'local participation' advocates argue that conservation objectives cannot be met unless support for MPAs is cultivated through citizen participation in MPA designation and management processes (e.g., Fiske 1992; Christie et al. 2003; Dalton 2005). Debates over conservation and social welfare can often seem to be a 'dialog of the deaf' (Redford et al. 2006), although there is perhaps more room for productive engagement within the marine realm, given that it has only recently received attention on the conservation agenda (Campbell et al. 2009). Unlike terrestrial conservation, which has a history of trying to integrate local participation and human development concerns after the fact (i.e., the shift from 'fences and fines' to 'community-based' conservation), MPAs have arisen in the context of support for participatory, community-based approaches to conservation (Levine 2007). However, marine conservation has also been influenced by the recent resurgent argument against community-based approaches (Wilshusen et al. 2002), particularly in terms of the move towards thinking on transboundary or ecosystem-based scales (Brosius & Russell 2003).3

MPAs are thus influenced by broader conservation debates should policies be driven by expert knowledge or local processes and how do we balance the protection of marine biodiversity and resources with concerns for human welfare? These debates occur in the abstract, among an international network of scientists and conservation professionals, as well as in relation to particular places and MPAs. Recent ethnographic work has examined how MPAs are conceptualised, implemented, and contested in particular places, especially in terms of how knowledge is produced and valued and how participation is enabled and constrained through the interactions of states, international non-governmental organisations (NGOs), the private sector and local communities (Aswani & Weiant 2004; Levine 2004; Walley 2004; Fortwangler 2007; Levine 2007; Gray 2009). However, the manner in which these debates are worked out in the international conservation arena has not yet been considered. This paper explores how MPAs were envisioned and promoted at the WCC, to consider how the global terms of debate are being set for them. How is the international marine conservation community mobilising ideas about conservation, expert science, local participation, and social welfare to inform the global proliferation of MPAs?

In addition, this research draws on recent work on the construction of scale, which considers how scales are represented and with what implications for material impacts and practices (see for example Cox 1998; Marston 2000; Herod & Wright 2002; Manson 2008). Environmental NGOs engage in a variety of scalar strategies in order to frame environmental debates and influence decision making (McCarthy 2005). For example, many NGOs draw on a discourse of global ecology that relies not only on scientific justification but also on the scalar construction of a global commons; such global representations empower international NGOs to intervene in particular places in defence of a 'global' good (MacDonald 2005). The construction of scale is ultimately a struggle for control over both ideas and processes (Bulkeley 2005). What were the scalar strategies used by actors at the WCC in order to promote MPAs?

EXPLORING MARINE PROTECTED AREA FRAMING AT THE WCC

The International Union for Conservation of Nature (IUCN) is an umbrella organisation that includes 87 states, 120 government agencies, 817 national NGOs, 91 international NGOs, and 31 affiliates. The IUCN describes itself as a 'knowledge-based organisation' that provides knowledge and tools for effective policies (MacDonald 2003). The WCC is a quadrennial meeting of all members of the IUCN and is divided into two parts: the 'Forum', which is part conference and part conservation trade show, and the 'Members' Assembly' in which the ~1100 government and NGO members of the IUCN vote on motions which, if adopted as resolutions, guide IUCN activities. The policies and positions of the IUCN are thus representative of dominant global ideas of conservation. In addition to supporting conservation activities, it also works to produce and circulate a definition of what constitutes conservation (MacDonald 2003). The WCC thus presents an excellent opportunity to investigate how MPAs are framed and promoted by the international conservation community. By conducting ethnographic research at the WCC, it is possible to examine how ideas are introduced, discussed, and contested, not just how they are neatly represented in final documents, policy statements, or resolutions.

Just as the WCC presents a novel opportunity to study the making of MPAs, so too does it constrain the ethnographic approach, which typically relies on sustained immersion in a context over a longer period of time in order to observe, listen, ask questions, record detailed fieldnotes, and produce rich, qualitative accounts of processes and meanings (see O'Reilly 2005). Responding to calls for 'ethnographic symmetry', which requires that careful attention be paid to officials at the centre of knowledge and power as well as local resource users (Robbins 2002), several scholars have begun to employ

'institutional ethnography' to study powerful international organisations (e.g., Goldman 2005). There has even been some experimentation with ethnography at 'transnational mega-events' such as the WCC. Based on his study of the 1992 Rio Earth Summit, Little (1995) argues that such events offer a new opportunity for ethnographic analysis. Recognising the ethnographic challenge posed by the complex and fragmentary nature of such mega-events (Little 1995), this paper focuses specifically on WCC events and processes related to MPAs. By participating in a 'collaborative event ethnography' (see Brosius & Campbell this issue), it was possible to focus specifically on events and processes related to MPAs while also situating these observations within a broader, collaborative analysis of other WCC activities.

Marine conservation enjoyed "an unprecedented amount of coverage" at the 2008 WCC, including 38 marine workshops, 24 motions devoted to marine issues, and 15 marine roundtable discussions, among other activities (IUCN Global Marine Programme 2008). These activities were outlined in *Marine Journey*, a glossy pamphlet designed to assist WCC attendees in locating marine-related events. I attended many of the sessions in this category, including most of those related to MPAs (concurrent events precluded the possibility of attending all relevant events). I took detailed notes relating to both formal presentations as well as informal conversations and discussions (see Emerson *et al.* 1995). I also followed discussions of Motion 067, "Accelerating progress to establish marine protected areas and creating marine protected area networks" (IUCN 2008).

In addition, I conducted 11 in-depth interviews with WCC attendees who work on MPAs, either with government agencies (3 people), international NGOs (3 people), smaller local or national NGOs (3 people) or in private consulting (2 people). Six of the interviewees were identified using purposeful and snowball sampling (the interviewees were either individuals I had previously met or were referred to me by mutual colleagues), while the remaining five interviewees were people I identified as relevant individuals based on their involvement at the WCC. Four interviewees had extensive experience with the IUCN and had attended previous WCC meetings, while others were less familiar with the IUCN and were attending their first WCC. Nine of the interviews were recorded and transcribed, while I took detailed notes on the other two interviews. Although this sample is neither representative nor very large, the common themes that emerge from these interviews, taken in conjunction with participant observation of the WCC events and activities, offer insights into how MPAs are being framed in this international arena.

THE GLOBAL MARINE PROTECTED AREA TARGET

One main focus of the discussions on MPAs at the WCC was the goal of establishing a global network of MPAs by 2012. These discussions framed MPAs as a *globally* applicable tool, to be used to protect *global* oceans. Given the international

membership of the IUCN, it is not surprising that discussions at the WCC would be framed at a global scale. However, I want to explore the particular way in which the global MPA target was discussed and the implied consequences of such a framing.

To know if this global network is, in fact, being established, there needs to be a way to systematically count, visualise, and track the implementation of MPAs. A new tool was released to aid this effort—the marine layer on Google Earth, which was developed with the cooperation of the IUCN Global Marine Programme and researchers (see Wood et al. 2008 for related work). As one IUCN staff member said during an MPA workshop, "If we can't mark new achievements, we can't produce a compelling picture globally... the Google tool is not a solution in and of itself, but it does give greater visibility". Conference delegates with knowledge of particular MPAs were encouraged to add information to the online tool in order maximise the global visibility of MPAs. By depicting 'progress' as the spatial proliferation of MPAs, such representations serve to legitimise MPAs as a global tool, regardless of what is actually happening in particular locations.

Participants in one session on 'MPA Networks: Lessons Learned' widely agreed that the primary function of the 2012 target for a global network of MPAs (or 'the target') was to "generate political will" and to "put political pressure" on governments to meet the target. One interviewee emphasised this saying, "the point of the global target is psychological. It's really about motivating change". One function of the global target is to frame MPAs as 'the solution' for all countries; this enables NGO members of the IUCN to 'jump scales', putting international pressure on individual governments to implement MPAs. To this end, the WCC was represented as just one in a series of international meetings (e.g., the World Parks Congress, the International Marine Protected Areas Congress) that are "opportunities to catalyse the process," as explained by one presenter at an MPA workshop. Delegates at the WCC are not only conscious of the power of IUCN resolutions, policies, and documents to frame conservation issues; they are strategic in their efforts to use this venue to promote particular agendas. The degree to which such targets actually influence particular governments varies. As one interviewee noted,

"Things like the IUCN resolutions, they tend to have less influence on the United States government than they do on other governments... for other countries, if you talk to their MPA practitioners, they'll very clearly say, I talked to our Secretary, and our Secretary has agreed that we have to move forward because we want to meet our targets".

One interviewee, who works on MPAs as well as other marine conservation issues, reported that his organisation joined the IUCN specifically to access the resolution process in order to influence domestic policy.

"Resolutions are as useful as you make them... So you have to tailor the resolutions to what you want or what you need... [we] showed the politicians, this is what the

IUCN congress is calling for... Then we approached the IUCN, and said this is what is going on in Costa Rica, and the IUCN board of directors sent a letter to the Costa Rican government...and this gave us a tremendous amount of support in Costa Rica for the policy [related to shark finning] to prevail".

This 'boomerang strategy', wherein activists seek the support of international allies in order to influence state behaviour, is increasingly common (Keck & Sikkink 1999). In this case, the framing of MPAs as *the* global policy tool for marine conservation serves the interests of members who seek additional resources to support their own work on MPAs in particular countries.

The global 2012 target was seldom questioned during the workshops and other events. Typically, the target was supported as a means of generating political will and donor support for MPAs. However, in one MPA workshop, a delegate from the Caribbean pointed out that although the target had created political stimulus and generated donor funding for the creation of MPAs, "there is limited capacity and very few MPAs are effectively managed or managed at all... political will and donor interest is just the first step". Another delegate commented that "the global goals are helpful but it takes time [to set up MPAs]". The target was publicly discussed as a helpful, if insufficient, means for promoting and supporting MPAs. Privately, however, several interviewees admitted they had reservations about the target. As one interviewee said,

"those targets are useful from a political standpoint, but... if they represent a driver for change that leads people to make bad decisions or certain types of decisions, then I would actually be against targets... it takes a certain amount of time to have a certain amount of in-depth dialog and planning, but instead you create this political imperative that leads to ill considered decisions, whether it's non-democratic or non-scientific, whatever the case may be, then you undermine your own process".

Another interviewee echoed this sentiment, saying:

"One of the dangers of setting targets like this... is that it can effectively incite a rush to create MPAs where no MPAs are needed or to create MPAs that are too simplistic that won't work. You know 2012 is a heartbeat away, it's so soon, and good MPAs take about ten years to plan and get implemented, that's the reality, if they're really planned with participation from the stakeholders that are really going to be affected, it can take a long time to do... in the rush to 2012, the tendency is to put in MPAs in places where there are few uses and almost no conflict... often they're biodiversity hotspots but functionally they're not as important as some other areas, so ecologically they might not be the best places to set them up".

The emphasis on accelerating progress towards meeting the

2012 target, as expressed both during Forum workshops and in Motion 067, creates an incentive to increase the number of MPAs without necessarily considering whether this will, in fact, lead to better conservation outcomes; both scientifically-informed site selection *and* participatory processes are compromised by haste. This danger seems apparent to many, but is not part of how MPAs are framed through 'the target'. Conservation progress was represented in terms of the number and percentage of global coverage of MPAs, as underscored by the prominence of efforts to increase the global visibility of MPAs. Although many respondents and workshop discussions highlighted the importance of ensuring that MPAs are effective in meeting their goals, numbers, targets and maps do not represent effectiveness, only prevalence.

BALANCING CONSERVATION AND DEVELOPMENT IN THE TARGET

The discussions surrounding Motion 067, "Accelerating progress to establish marine protected areas and creating marine protected area networks", presented a compelling example of the manner in which conservation and development interests were balanced in the framing of MPAs at the WCC. Three motions relating to the 2012 MPA target were submitted to the IUCN for consideration prior to the WCC by three different sets of IUCN members (one group based in the US, including The Nature Conservancy, World Wildlife Fund-US, Wildlife Conservation Society, and Natural Resources Defense Council, one group of French NGOs, and one group of Latin American NGOs) (IUCN 2008). These three motions were consolidated into a single motion for consideration by the assembly. The preamble of this consolidated motion, in its initial form, emphasised global statistics related to fishing and overfishing, threatened species, marine dead zones, marine biodiversity, and the current, inadequate increase in the number of MPAs to address these problems (statistics very similar to those which opened this paper). Prior to being introduced to the assembly for voting, the motion was discussed in a 'contact group', a meeting of motion sponsors and any other interested parties. Contributors to the contact group discussion included representatives of government agencies from Canada, Iceland, France, Norway, and the US, representatives of several oceanfocused NGOs from the US, Australia, and Canada, as well as representatives from NGOs who sponsored the original motions.

The two-hour discussion focused on a few key issues: ensuring that the motion represented the best available science and statistics; revising the motion so that it did not obligate governments to consider MPAs in relation to their work on fisheries; and detail-oriented debates over grammar, and the proper protocol for referencing existing treaties and other legal documents. Although participants debated which scientific sources to reference and which statistics to include, no one questioned the framing of MPAs as a scientifically-justified policy tool.

Perhaps the most contentious issue that arose during the

discussion of Motion 067 was whether the resolution should refer to MPAs in the context of fisheries management, or limit its scope to MPAs as tools for biodiversity conservation. While there is scientific consensus regarding the ecological benefits of 'no-take' MPAs, particularly within reserve boundaries (Lubchenco et al. 2003; Lester et al. 2009), evidence of their value as fisheries management tools is less conclusive (Sale et al. 2005; Smith et al. 2006). During the discussion, one NGO participant argued that the motion should recognise that "fisheries are the main threat to marine biodiversity", while a representative from Norway demanded that the contact group "take out the reference to fisheries; we're talking about MPAs not fisheries". This debate over how to reference fisheries reflects an underlying tension in MPA policy making—whether and to what extent MPAs should be 'no-take' areas that restrict fishing (and thus restrict economic opportunities) and whether the focus of MPAs should be on biodiversity conservation or fisheries management (or both). No-take areas, by definition, restrict fishing. However, so long as the discussion (and motion) did not include specific reference to fisheries, the question of how to balance conservation with economic interests did not have to be directly addressed. The outcome of the discussion was to reduce the references to fisheries and limit the extent to which the motion implied that states should use MPAs as fisheries management tools (as opposed to environmental conservation tools). This was a concession granted by representatives of environmental NGOs in order to appease the representatives of government agencies responsible for fisheries management, who cannot unreservedly endorse MPAs, given the wide array of political constituencies they represent (in contrast to NGOs).

The motion framed MPAs as a useful tool for "ensuring the conservation and sustainable management of marine and coastal biodiversity" as well as for contributing to "sustainable development and in particular poverty-alleviation efforts". Human welfare concerns were thus acknowledged in the motion, although they were not discussed directly by the contact group. However, the process through which MPAs should be established was not discussed in either the motion or the contact group meeting; the motion focused solely on justifying and encouraging an increase in the implementation of MPAs.

When the motion reached the assembly floor for voting, numerous objections were raised. A key theme in these objections was the lack of consideration in the motion for human rights and participatory processes. A member of the Forest Peoples Programme from the UK commented that lack of concern for the rights of local and indigenous communities had been an issue in discussions of the MPA target at previous meetings (e.g., the Seventh Conference of the Parties for the Convention on Biological Diversity in 2004) and asked that this text be added to the motion: "taking into account respect for the rights of indigenous peoples and local communities and their full participation in achieving marine conservation". A representative of a Miskito NGO from Honduras agreed,

proposing that the motion should "promote participation of local, coastline, and island populations, specifically those indigenous and afro-descendant populations, in the planning and management of marine areas as they are to be used for sustainable livelihoods". The motion was referred back to the sponsors for revision; in the final version, a paragraph was inserted acknowledging the "obligations of parties towards indigenous and local communities" and noting the need for "full and effective participation". This is not only in keeping with the IUCN mission, but also consistent with guidelines for MPAs published by the IUCN (e.g., Kelleher 1999; Pomeroy et al. 2004). The revised motion was approved by 97% of the government and 100% of the NGO representatives and adopted as resolution 4.045 (IUCN 2009). Although the objections to this motion should have been anticipated and pre-emptively addressed, a representative of one of the international NGOs who sponsored the motion seemed surprised by it. Having observed this, one interviewee remarked:

"It shows you maybe something is not on the agenda that should be. You can see a dichotomy between people who work at these BINGOs (Big International NGOs), you have the upper echelon, and you have people on the ground who obviously are more in tune with this kind of stuff, but the communication might not be there".

Indeed, many of the NGO members who put forward and supported Motion 067 were representatives of the 'upper echelon'—programme staff from head offices rather than regional offices. The formation and discussion of Motion 067 was dominated almost entirely by senior staff from large international NGOs and government agencies from developed countries; other voices, such as representatives of NGOs from developing countries or indigenous groups, were conspicuously absent.

BIG NGOS AND THE MPA AGENDA

The role of BINGOs in framing the discussion of MPAs was evident both during forum events (workshops and presentations), the resolutions process, and in the comments of interviewees. As one respondent said:

"It seems to me that the ability to get things onto the radar screen of the assembly now is very much a function of how influential a particular NGO is, so the big NGOs, CI [Conservation International], TNC [The Nature Conservancy], WCS [Wildlife Conservation Society] and WWF [World Wide Fund For Nature] for the most part, are the ones that are able to get resolutions in; they develop those resolutions for the most part in isolation of the other members, so they're not really consensus resolutions. Those NGOs are all global, so in a way it's a consensus of their own worldview and their own people saying this is important".

Prior to the assembly (but after the forum events), a group of approximately 20 representatives from the BINGOs as well as from several smaller NGOs concerned with marine issues met to discuss the resolutions process. I was allowed to observe the meeting, but was asked not to take notes and to keep the content of the meeting confidential. However, it is the function of this meeting that is of interest. This group of NGO staff had clearly been coordinating their efforts on various marine issues, including Motion 067 regarding MPAs, for some time. The meeting reflected their interest in offering a cohesive, consistent message and unified support for the various motions that members of the group had sponsored.

This collective NGO effort is not necessarily problematic, nor is it surprising. However, it does represent a shift in how the IUCN forum and resolutions process functions. Several interviewees who had attended previous IUCN congresses and general assemblies (dating to the early 1980s) commented that in the past there had been broader input to discussions and resolutions from a variety of members. One interviewee who has been involved with the IUCN in various capacities described this shift:

"So the purpose of these general assemblies was to have the ability to convene members and to set conservation priorities in two ways, to have sessions where people brainstormed about emerging issues or things that were really important to everybody jointly... and the other way that they helped... was through this resolution process. And in the old days... the IUCN marine program would help members understand the [resolutions] process and have meetings running up to the general assembly, not physical meetings but communicate with the members, say this general assembly is coming up, we have some issues like MPAs, how does the group want to go forward with a resolution on MPAs... that seems to have disappeared from the marine program, I don't see that happening at all".

Another interviewee, a BINGO employee who has worked extensively on MPAs but is less familiar with the IUCN and the WCC, explained the danger of limiting input to a small group:

"The conservation community is... for all the talk about it being this massive enterprise, there are only a handful of actors. There are a handful of actors that set directions and signals, and if those actors are all using the same approaches... you run the risk of going down a path you don't want to, and waking up ten years later and saying 'that was dumb, why were we all doing that?""

Both of these interviewees were supportive of MPAs, but concerned with how input to resolutions and policy documents related to MPAs is concentrated among a few organisations.

One concern with this concentration of input is that concerns for human welfare, social justice, and indigenous rights will be ignored or forgotten, as illustrated in the process surrounding Motion 067. One interviewee who attended many of the MPA

sessions said, "I don't really see a lot of the local side, I've only been seeing it from the BINGO side. And they haven't been talking about it in terms of indigenous rights or anything like that. It's been more where do we stand and how can we do gap analysis and see where we need to go?" However, the importance of considering the impact of MPAs on resource users and coastal communities was acknowledged in several MPA sessions, including by BINGOs. For example, one session entitled "MPAs: Good for Fish, Good for People?" was devoted to brainstorming the social impact of MPAs, both positive and negative. It is not that concerns for human rights, social impact, and participatory processes in MPAs were not considered at the WCC; rather, these conversations were taking place in separate rooms from the discussions of ecological aspects of MPAs and MPA targets. One interviewee from the US agreed that discussions of how to balance ecological and social concerns had been largely absent from the WCC.

"I don't know that I've actually heard a lot of those conversations going on. I've been in, not all, some of the MPA sessions, so if that conversation was happening at a conference level, I'm not sure that I heard it... I heard all kinds of side bar conversations during lectures that point out that this is always hard for folks to do... but I'm not sure I've heard some kind of sustained, multi-use trade-offs conversation going on".

Given the size of the WCC, it is possible to accommodate and include many different perspectives somewhere within the myriad workshops and discussions. However, these diverse perspectives are not necessarily brought into conversation with one another, nor are they equally influential.

CONCLUSION

Marine conservation has joined the growing list of environmental problems deemed 'global' through the collective efforts of scientists and political actors such as NGOs (see Taylor & Buttel 1992). Building on efforts of past international meetings, delegates at the WCC promoted the increased implementation of MPAs in order to establish a global network. A key element of this global scaling was the unveiling of new tools to increase the global visibility of MPAs, such as Google maps that depict MPAs across the world's oceans. What are the effects of this global framing? In the past, states asserted control through such scientific and technical processes, by surveying, zoning, and mapping the biological resources within their territory (Scott 1998; Neumann 2005). Similarly, now, it is largely the international NGOs who are empowered through this global construction, because they are able to produce knowledge at this scale, thereby defining the goals of conservation (Brosius 2006); in this case the goal is to increase the number of MPAs. Given the increasing role of NGOs, private donors and organisations in the actual implementation and management of MPAs (Fortwangler 2007; Levine 2007), this global visualisation

is directly tied to material practices such as the flow of funding and changing rules for resource access. For small NGOs whose objective is to promote MPAs in particular places, IUCN offers the possibility for them to 'jump scales', indirectly influencing domestic policy by supporting an international mandate for MPAs (see Keck & Sikkink 1999). However, the dominant role of BINGOs in setting the international MPA agenda deserves greater scrutiny, not for the purpose of critiquing these NGOs' international policy efforts, but because there are many voices not being included in these discussions, as evidenced by the discussion of Motion 067. Given that the IUCN is a 'knowledge-based organisation' tasked with serving the needs of all of its members, it is pertinent to ask whose knowledge is being highlighted, whose knowledge is being sidelined, and what opportunities there are for input to the process (as opposed to simply receiving a pre-defined message).

Another consequence of the global framing of MPAs at the WCC is that difficult questions of effectiveness, conservation and development trade-offs, and impacts can be avoided. Are MPAs in fact meeting conservation goals? If so, what is the impact on resource users and others who live near them? Are MPAs the best conservation strategy? Both ecological priorities and social concerns related to MPAs were acknowledged at the WCC, but at different venues. When Motion 067 was challenged because of its failure to account for local rights and participation, text was simply added to address this concern; the question of how to handle potential incompatibilities between local rights and conservation was never raised. It becomes essential to tackle such problems at particular sites and MPAs, but a global discourse that asks only for more MPAs can afford to ignore such concerns. This is not to say that individual delegates at the WCC do not understand or grapple with these issues, only that an abstract, global discussion does not require them to do so in the public international arena of the WCC. The simultaneous promotion of MPAs and sidestepping of questions of effectiveness and trade-offs that occurred at the WCC suggests that the international framing of MPAs offers both opportunities and constraints for establishing MPAs in particular places. By promoting MPAs in a general sense, the target and global framing leave room for MPAs to be worked out in a variety of ways in practice. This is as it should be; IUCN does not push a 'cookie cutter' approach, aiming only to provide tools and support to practitioners to use in locally appropriate ways (e.g., Pomeroy et al. 2004). However, the promotion of MPA targets also directs international efforts and resources toward increasing the number of MPAs, whether advisable or not. As a result, communities around the world must engage with the MPA juggernaut, regardless of their desire to do so.

ACKNOWLEDGEMENTS

The author is grateful to Lisa Campbell for feedback and support as well as to other members of the Event Ethnography team put together by Pete Brosius. Financial support to attend the WCC was provided

by the Oak Foundation and through the Advancing Conservation in a Social Context project, funded by the John D. and Catherine T. MacArthur Foundation. The suggestions provided by two anonymous reviewers are appreciated.

Notes

- The most recent IUCN definition of a protected area refers to marine as well as terrestrial protected areas. A MPA is "a clearly defined geographical space, recognized, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values" (Dudley 2008: 8).
- 2. The goal of establishing a 'global network of MPAs' is consistently invoked at various conferences and meetings, although the specific target varies. For example, the Fifth World Parks Congress called for strict protection of 20–30% of each habitat by 2012 (IUCN 2003), while the Eighth Conference of the Parties to the Convention on Biological Diversity set a target of protecting at least 10% of each of the world's ecological regions, including marine (CBD 2006).
- For an early review of the evolution of MPAs as a conservation tool, see Bjorklund (1974). The establishment of MPAs has lagged behind terrestrial efforts, in part because it was only with the advent of snorkelling and SCUBA diving in the mid-twentieth century that underwater environments became familiar (Jones 2001). As of 1994, there were 1,306 MPAs compared with 37,000 terrestrial protected areas (Jones 2001).
- See http://iucn.org/about/union/members/for details on IUCN membership.

REFERENCES

- Aswani, S. and P. Weiant. 2004. Scientific evaluation in women's participatory management: Monitoring marine invertebrate refugia in the Solomon Islands. *Human Organization* 63(3): 301–319.
- Bjorklund, M.I. 1974. Achievements in marine conservation, I. Marine parks. Environmental Conservation 1(3): 205–223.
- Brosius, J.P. 2006. Seeing communities: Technologies of visualization in conservation. In: *The seductions of community: Emancipations, oppressions, quandaries* (ed. Creed, G.W.). Pp. 227–254. Santa Fe: School of American Research.
- Brosius, J.P. and D. Russell. 2003. Conservation from above: An anthropological perspective on transboundary protected areas and ecoregional planning. *Journal of Sustainable Forestry* 17(1/2): 35–60.
- Bulkeley, H. 2005. Reconfiguring environmental governance: Towards a politics of scales and networks. *Political Geography* 24(8): 875–902.
- Campbell, L.M., N.J. Gray, E.L. Hazen and J.M. Shackeroff. 2009. Beyond baselines: Rethinking priorities for ocean conservation. *Ecology and Society* 14(1): 14. [online] URL: http://www.ecologyandsociety.org/vol14/iss11/art14/.
- Carpenter, K.E., M. Abrar, G. Aeby, R.B. Aronson, S. Banks, A. Bruckner, A. Chiriboga, et al. 2008. One-third of reef-building corals face elevated extinction risk from climate change and local impacts. Science 321(5888): 560–563.
- CBD. 2006. Decisions adopted by the Conference of the Parties to the Convention on Biological Diversity at its Eighth Meeting (Decision VII/15, Annex IV). Convention on Biological Diversity, Curitiba, Brazil.
- Christie, P., B.J. McCay, M.L. Miller, C. Lowe, A.T. White, R. Stoffle, D.L. Fluharty, et al. 2003. Toward developing a complete understanding: A social science research agenda for marine protected areas. Fisheries 28(12): 22–26.
- Cox, K.R. 1998. Spaces of dependence, spaces of engagement and the politics of scale, or: Looking for local politics. *Political Geography* 17(1): 1–23.
- Crowder, L.B., S.J. Lyman, W.F. Figueira and J. Priddy. 2000. Source-sink

- population dynamics and the problem of siting marine reserves. *Bulletin of Marine Science* 66(3): 799–820.
- Dalton, T.M. 2005. Beyond biogeography: A framework for involving the public in planning of US marine protected areas. *Conservation Biology* 19(5): 1392–1401.
- Dudley, N. (ed.). 2008. Guidelines for applying protected area management categories. Gland: IUCN.
- Emerson, R.M., R.I. Fretz and L.L. Shaw. 1995. Writing ethnographic fieldnotes. Chicago: University of Chicago Press.
- FAO. 2009. *The state of world fisheries and aquaculture 2008*. Rome: Food and Agriculture Organization of the United Nations.
- Fiske, S.J. 1992. Sociocultural aspects of establishing marine protected areas. Ocean & Coastal Management 17(1): 25–46.
- Fortwangler, C. 2007. Friends with money: Private support for a national park in the US Virgin Islands. *Conservation and Society* 5(4): 504–533.
- Goldman, M. 2005. Imperial nature: The World Bank and struggles for social justice in the age of globalization. New Haven, CT: Yale University
- Gray, N.J. 2009. Waves of change? Politics of knowledge and participation in marine protected areas. Ph.D. thesis. Duke University, Durham, NC, USA.
- Halpern, B.S., S. Walbridge, K.A. Selkoe, C.V. Kappel, F. Micheli, C. D'Agrosa, J.F. Bruno, et al. 2008. A global map of human impact on marine ecosystems. Science 319 (5865): 948–952.
- Herod, A. and M.W. Wright. (eds.). 2002. *Geographies of power: Placing scale*. Malden, MA: Blackwell.
- IUCN. 2003. Recommendations of the Vth IUCN World Parks Congress. Gland: IUCN.
- IUCN. 2008. Motions. World Conservation Congress, Barcelona, Spain, 5–14 October 2008.
- IUCN. 2009. Resolutions and recommendations of the World Conservation Congress, Barcelona, Spain, 5–14 October 2008.
- IUCN Global Marine Programme. 2008. Looking forward to the 2008 IUCN Congress. http://cmsdata.iucn.org/downloads/wcc_insert_marine.pdf. Accessed on September 5, 2008.
- Jentoff, S., T.C. van Son and M. Bjorkan. 2007. Marine protected areas: A governance system analysis. *Human Ecology* 35(5): 611–622.
- Jones, P.J.S. 2001. Marine protected area strategies: Issues, divergences and the search for middle ground. *Reviews in Fish Biology and Fisheries* 11(3): 197–216.
- Keck, M.E. and K. Sikkink. 1999. Transnational advocacy networks in international and regional politics. *International Social Science Journal* 51(159): 89–101.
- Kelleher, G. 1999. Guidelines for marine protected areas. Gland: IUCN.
- Laffoley, D., K. Gjerde and L. Wood. 2009. Progress with marine protected areas since Durban, and future directions. *Parks* 17(2): 13–22.
- Lester, S.E., B.S. Halpern, K. Grorud-Colvert, J. Lubchenco, B.I. Ruttenberg, S.D. Gaines, S. Airame, *et al.* 2009. Biological effects within no-take

- marine reserves: A global synthesis. *Marine Ecology Progress Series* 384: 33–46.
- Levine, A. 2004. Local responses to marine conservation in Zanzibar, Tanzania. *Journal of International Wildlife Law & Policy* 7(3-4): 183–202.
- Levine, A. 2007. Staying afloat: State agencies, local communities, and international involvement in marine protected area management in Zanzibar, Tanzania. Conservation and Society 5(4): 562–585.
- Little, P.E. 1995. Ritual, power and ethnography at the Rio Earth Summit. *Critique of Anthropology* 15(3): 265–288.
- Lubchenco, J., S.R. Palumbi, S.D. Gaines and S. Andelman. 2003. Plugging a hole in the ocean: The emerging science of marine reserves. *Ecological Applications* 13(1): S3–S7.
- MacDonald, K.I. 2003. IUCN The World Conservation Union: A history of constraint. Address given to the Permanent Workshop of the Centre for Philosophy of Law, Higher Institute for Philosophy of the Catholic University of Louvain (UCL), Louvain-la-neuve, Belgium, Feb. 6, 2003. https://tspace.library.utoronto.ca/bitstream/1807/9921/1/aian%20 Macdonlad-%20IUCN.pdf. Accessed on September 4, 2008.
- MacDonald, K.I. 2005. Global hunting grounds: Power, scale and ecology in the negotiation of conservation. *Cultural Geographies* 12(3): 259–291.
- Manson, S.M. 2008. Does scale exist? An epistemological scale continuum for complex human-environment systems. *Geoforum* 39(2): 776–788.
- Marston, S.A. 2000. The social construction of scale. *Progress in Human Geography* 24(2): 219–242.
- McCarthy, J. 2005. Scale, sovereignty, and strategy in environmental governance. *Antipode* 37(4): 731–753.
- Neumann, R.P. 2005. Making political ecology. London: Hodder Arnold.
- Nichols, K. 1999. Coming to terms with "Integrated coastal management":

 Problems of meaning and method in a new arena of resource regulation.

 Professional Geographer 51(3): 388–399.
- O'Reilly, K. 2005. Ethnographic methods. London: Routledge.
- Pomeroy, R.S., J.E. Parks and L.M. Watson. (eds.). 2004. How is your MPA doing? A guidebook of natural and social indicators for evaluating marine protected area management effectiveness. Gland: IUCN.
- Redford, K.H., J.G. Robinson and W.M. Adams. 2006. Parks as shibboleths. *Conservation Biology* 20(1): 1–2.
- Robbins, P. 2002. Obstacles to a First World political ecology? Looking near without looking up. Environment and Planning A 34(8): 1509–1513.
- Sala, E., O. Aburto-Oropeza, G. Paredes, I. Parra, J.C. Barrera and P.K. Dayton. 2002. A general model for designing networks of marine reserves. *Science* 298(5600): 1991–1993.
- Sale, P.F., R.K. Cowen, B.S. Danilowicz, G.P. Jones, J.P. Kritzer, K.C. Lindeman, S. Planes, et al. 2005. Critical science gaps impede use of no-take fishery reserves. Trends in Ecology and Evolution 20(2): 74–80.
- Scott, J.C. 1998. Seeing like a state: How certain schemes to improve the human condition have failed. New Haven, CT: Yale University Press.
- Smith, M.D., J. Zhang and F.C. Coleman. 2006. Effectiveness of marine reserves for large-scale fisheries management. *Canadian Journal of Fisheries and Aquatic Sciences* 63(1): 153–164.