

Chapter 22

IUCN/WCPA Protected Areas Program: Making Space for People and Biodiversity in the Anthropocene

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Abstract Protected areas have emerged as a cultural feature and perhaps the largest land resource allocation decision in human history. Yet they are not without controversy on their adequacy for conservation and social justice. We argue that protected areas not only are necessary for conservation, they also contribute to human well-being and social justice in the Anthropocene. The World Parks Congresses have been a major forum for advancing global protected area policy and practice.

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Recently the IUCN-World Commission on Protected Areas and the IUCN-Global Protected Areas Program has been moving toward a vision parallel and complementary to the proposed Earth Stewardship initiative of the Ecological Society of America. This novel view of IUCN is also called “The Promise of Sydney” because it will be the focus of the 2014 World Parks Congress in Australia. IUCN’s novel view suggests that protected areas are an effective way to put Earth stewardship into action.

Keywords Capacity building • Climate change • Governance • Health • Indigenous peoples • Protected areas • Marine issues • World Parks Congress • Youth

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22.1 Introduction

Protected areas¹ have emerged as a cultural feature and perhaps the largest land resource allocation decision in human history. They are considered necessary, but not sufficient, tools to avert or reduce the rate of biodiversity loss. There is mounting evidence that they are effective in maintaining biodiversity, but biodiversity continues to be lost in spite of the rapidly growing number of protected areas. Today protected areas are, in reality, a suite of land/sea-based mechanisms to achieve nature conservation, and more properly should be known as “conservation areas” because protection alone has never been sufficient to achieve their intended objectives. In the face of global climate change, and more broadly global environmental change, they are not protected from large scale processes such as rising CO₂ concentration, ocean acidification, accumulation in other biogeochemical cycles, increased severity and variability of hydro meteorological events, and rising temperatures, among many other problems.

Over the last decade the term “Anthropocene” (Crutzen and Stoermer 2000), has gained acceptance and simultaneously generated debate around biodiversity conservation. It even has been proposed that we concentrate on processes and leave biodiversity as such as a casualty of triage in a world that does not give intrinsic

¹For the purpose of this paper protected areas will mean those fulfilling the International Union for Conservation of Nature definition of: 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 (http://www.iucn.org/about/work/programmes/gpap_home/pas_gpap/)

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value to its conservation. Instead conservation is conducted with an anthropocentric focus on “resource” scarcity that drives decision making processes.

To confront global environmental change, the Ecological Society of America (ESA) has launched the “Earth Stewardship” initiative (Chapin et al. 2011). This initiative provides a synergistic approach with the Global Protected Areas Program of the International Union for Conservation of Nature (IUCN) and its World Commission on Protected Areas. IUCN’s program supports countries and communities to designate and manage systems of protected areas on land and in the oceans. However, both the IUCN Global Protected Areas Program and the ESA Earth Stewardship initiative confront serious limitations of geographic biases. Not only geographic regions, but also cultural diversity needs to be better represented in both initiatives (Rozzi et al. 2012; Li et al. 2015, in this volume [Chap. 13]). In this chapter we present a concise overview of the current status of preparations for the IUCN VI World Parks Congress (WPC), which offer a timely option to orient protected areas toward novel modes of stewardship for the well-being of humans and biodiversity as a whole.

22.1.1 IUCN World Parks Congresses

A driving force highlighting the importance of protected areas and proposing policies regarding them, have been the various WPC organized by the IUCN with the leadership of the World Commission on Protected Areas and the IUCN Global Protected Areas Program, which have been recognized as harbingers of change: a unique, once-in-a-decade meeting in which protected area professionals come together to share their practices, discuss policy, and meet people from very different parts of the world, who are working towards a common goal and often face similar professional challenges. Each WPC also has created a groundswell of change by introducing new ideas, launching new commitments, and signaling important developments in policy. These Congresses stand out as a series of milestones in the development of the world’s protected area system (Phillips 2003; Dudley et al. 2005).

In 2003, the fifth WPC in Durban, South Africa, opened with a moving speech by Nelson Mandela and his call for more involvement of youth, and created the bulk of the text of the Convention on Biological Diversity’s (CBD) Program of Work on Protected Areas (POWPA) (CBD 2004), which remains a basic reference and key strategy statement for protected area development (Fig. 22.1). But many essential aspects did not get much attention in Durban. By their nature, global policies quickly become dated, as we learn more and as conditions change: yesterday’s preoccupations quickly fade away and new issues emerge into the mainstream.

A broader range of issues is reflected in the Strategic Plan for Biodiversity 2011–2020 that was agreed at the tenth Conference of the Parties to the CBD in Nagoya, Japan in 2010 (CBD 2010). A new target for increasing protected areas to 17 % on landscapes and 10 % on seascapes is juxtaposed with objectives for many other



Fig. 22.1 Nelson Mandela delivered an inspiring speech calling for more involvement of communities and youth at the V World Parks Congress, Durban, South Africa 2003

critical issues for biodiversity conservation and sustainable development. CBD's Aichi Target 11 positions protected areas firmly within the broader goals of sustainability and community well-being through the next generation and beyond. This approach borrows from new insights from ecological sciences (Callicott 1997). To facilitate as broad a discussion as possible on a range of issues, we outline some core themes for IUCN, and discuss its implications for policy and conservation. These will be integrated into guiding principles, a plan for action and vision statement under development called *The Promise of Sydney* launched at the VI World Parks Congress in November 2014 (www.worldparkscongress.org).

22.2 Reaching Conservation Goals

In the decade since the last WPC, the science of conservation has advanced rapidly, but so too have the pressures on protected areas and the requirements for scaling-up responses. Critics have claimed that protected areas are not the most effective tool for conservation, citing their limited size and relative isolation, proposing, instead, less well-defined approaches for ecosystem management and regulations. We clearly need to look at the future. If the Aichi Targets are meant to be interim goals for 2020, what should IUCN ultimate goals for nature conservation look like?

What does a truly sustainable protected planet look like? What science is available to inform this question? To address these pressing questions and about a future beyond the Aichi Targets, we need to catalyze inter-institutional collaboration between IUCN and professional societies of ecologists to achieve a more effective integration of conservation science and protected area management is a priority for determining conservation goals and communicating them in appropriate terms to decision makers.

22.3 Responding to Climate Change

Protected areas are now viewed as potential instruments for mitigating climate change by securing carbon-rich habitats in new or enhanced protected areas, and by facilitating adaptation through the provision of ecosystem services and cultural benefits that enable society to cope with the consequences of climate change. But at the same time, climate change is being viewed increasingly as a major threat to protected areas and resources for biodiversity conservation are being selfishly diverted into climate change adaptation. Plant and animal ranges may shift outside the borders of these areas set aside for their survival, and the specter of ocean acidification hangs over many coastal and marine protected areas. There is an urgent need for understanding the critical role that protected area systems can play in climate change response strategies. People and societies throughout history have adapted with different levels of success, and the promotion of culturally diverse approaches enhances adaptive capacity for facing climate change impacts.

22.4 Healthy Parks Healthy People

Previous links between health benefits of parks and protected areas, tended to focus on ecosystem services such as providing medicines and fresh water. The 2010 International *Healthy Parks Healthy People* Congress in Melbourne, Australia, launched a movement that has spread around the world. The recent advent of the Healthy Parks Healthy People approach has established broader understanding of the diverse health benefits of nature. These include regulating disease, mitigating climate events such as floods, and providing natural pollination controls. They also include the bio-cultural benefits of nature for physical, mental, and spiritual health, through respecting cultural heritage and diversity, supporting livelihoods, and fostering social well-being to sustain life. Healthy Parks Healthy People addresses the interconnection of people and parks (ecosystems) for health co-benefits.

22.5 Supporting Human Life

Beyond health benefits, the last 10 years has seen an explosion of interest in other benefits of protected areas, from links with faith groups and sacred natural sites, to the role of parks in stabilizing soils and protecting coastlines (see Kerber 2015 in this volume [Chap. 25]). IUCN has identified three critical benefits:

- disaster risk reduction,
- provision of freshwater, and
- maintenance of food security.

Each of these benefits has multiple facets. Natural ecosystems in protected areas can mitigate natural disasters by stabilizing soils, protecting coastlines, providing spillover areas for floods, and preventing avalanches and landslip. Forests and wetlands supply downstream communities with pure water. Marine protected areas maintain fish stocks, and terrestrial reserves preserve wild crop varieties critical for agricultural breeding programs. The Economics of Ecosystems and Biodiversity (TEEB) studies have provided a baseline of information, and a variety of tools for measuring. Getting proper recognition for these wider values also is still a challenge amongst state governments and other beneficiaries of these ecosystem services. Most governments gain more benefits from protected areas than they invest, yet even the limited funding available continues to decline in many countries.

22.6 Reconciling Development Challenges and Meeting Human Aspirations

Sustainable development² is about increasing human well-being without compromising nature or future development prospects. While governments struggle to maintain food and water security, and ensure jobs and sustainable livelihoods, they often are faced with hard choices and trade-offs. Research is needed on the intersection between protected areas, and the many development goals and challenges facing national governments. The mission of the United Nations Development Program (UNDP) and the World Bank, is to support countries to achieve sustainable development, while maintaining key ecosystem services and promoting climate resilient natural and human communities. The UNDP, World Bank, Conservation International, and the IUCN's Business and Biodiversity Program, offer solutions

²Sustainable development is used as it is the formal wording in UN and other multilateral agreements. The broader context should be sustainability as development is a means towards reaching human aspirations without compromising the future.

and tools for protecting areas that can be integrated in development planning and economic decision-making, and provide sector-specific experience and guidance in managing the intersection between protected areas and development. Protected areas need to be viewed as part of the national economy, and to be incorporated into national development strategies and frameworks.

22.7 Enhancing Diversity and Quality of Governance

Two trends emerged directly from the WPC of 2003: the increasing recognition of indigenous peoples' and community-conserved territories and areas (ICCAs) by governments, and a rapid increase in self-declared protected areas by indigenous peoples or local communities, most notably in Australia where over 20 million hectares have been declared as Indigenous Protected Areas in little more than a decade. The movement is gaining momentum and the ICCA Consortium, recently established, is providing global policy guidance. However, wider issues of governance still remain under-developed. The governance element of the CBD POWPA remains poorly implemented compared with other parts of the Program, with many governments lagging behind in applying good governance principles to existing or new protected areas, or in recognizing ICCAs, rights of communities, or privately protected areas (PPAs). The global policy focus on ICCAs needs to be complemented by a focus on shared governance and PPAs. Aichi Target 11 can only be achieved realistically with the contribution of all the different governance types and other effective area-based conservation measures.

22.8 Respecting Indigenous and Traditional Knowledge and Culture

Representatives of indigenous people came to the WPC 2003 with the specific aim of eliminating protected areas from their countries: two groups who frequently want the same result, protection of natural ecosystems, had drifted dangerously apart. People wanting to eliminate any remaining blocks on unrestrained development have been happy to encourage such divisions. In the years since Durban, important steps have been taken towards healing the rifts between some indigenous peoples' groups and protected area authorities. This is demonstrated by an increased number of collaboratively managed protected areas, indigenous protected areas (Australia), self-declared protected areas, officially recognized ICCAs, and other partnerships between local communities and protected areas. Adoption of the UN Declaration on the Rights of Indigenous Peoples; development of agreements such as the *Akwe Kon* guidelines, facilitated by the CBD; better understanding of issues of governance

quality within protected areas; and the wider application of Free, Prior and Informed Consent, together helped to build safeguards and new attitudes. But there is still a long way to go: governments who treat minorities badly are unlikely to make an exception within their protected area management. More examples of successful collaborations are needed to build skills and confidence, and attitudes need to change within many government departments and NGOs.

22.9 Inspiring a New Generation

Young people represent a living and breathing force of great potential whose voices must be heard, stories told, and experiences shared. This new generation must be inspired to connect with nature (see Berchez et al. 2015, in this volume [Chap. 23]). Three strategies are necessary:

- Connecting a new generation to nature by focusing on exciting and inclusive ways of inviting people, who have not had outdoor opportunities, to connect with nature in safe but transformative ways.
- Investing in children by addressing the challenges of connecting school age children with nature in a world where nature is increasingly scarce, exploring the benefits of, and examining innovative ways, in which they can experience nature through exposure to parks.
- Empowering inspired young people by developing forums in which they can engage in collective actions, networking, co-learning, experience-sharing, and capacity-building/raising to inspire people across all generations to connect and engage together for Parks, People and Planet.

22.10 Marine Protected Areas

Oceans and coasts face a wide range of threats, some of which are similar to threats facing land ecosystems (e.g. invasive alien species, pollution, habitat loss, exploration for mineral resources), while some others are specific to marine habitats (e.g., ocean acidification and warming, land-based run-off, unsustainable and/or illegal fishing, and dredging/sea dumping). Although the ocean is a critical source of food and livelihoods for millions in coastal communities, many fish stocks have collapsed, or are collapsing. Cooperation with the fisheries sector to ensure sustainability needs improvement and overfishing and illegal fishing still remain major threats in many marine areas. Because the sea is traditionally and legally viewed as a commons, privately protected areas are much less relevant than in terrestrial environments. This means that policy priorities must continue to focus on persuading those with decision-making power – communities, nations, and international organizations – of

the need for urgent and increasingly ambitious action, and providing the tools and advice to manage marine protected areas effectively under rapidly changing conditions. The recent trend of establishing very large marine protected areas (MPAs) that encompass whole ecosystems, and community-based MPAs that support local livelihoods, are two approaches that will help us meet our marine conservation goals (see Berchez et al. 2015, in this volume [Chap. 23]; Nevill 2009).

22.11 Capacity Development

The pace at which new protected areas have been established often has outstripped the ability to manage them effectively; there simply is not enough well-trained staff available, particularly as management needs and priorities change rapidly. IUCN's WCPA has a history of providing technical advice through its Best Practice Protected Area Guidelines series, provision of experts, and individualized training sessions. However, it is no longer sufficient. Field rangers often miss out on training, through lack of basic educational opportunities, inability to read English, French, or Spanish, and lack of access to materials. IUCN works to fill this gap through the development of online training materials based around minimum competency standards, an accreditation system for courses offered on protected areas in tertiary educational establishments, and through focused teaching. There remain many gaps and priorities ensuring that the curriculum is comprehensive and is adopted by the premier educational and training institutions, for preparing a new generation of qualified and competent professionals.

22.12 World Heritage

World Heritage represents in many ways the best of the best and particularly the sovereign decisions of countries to make special efforts in their conservation. The task by IUCN World Heritage Program keeps growing as more sites are added to the list, and as the World Heritage Committee grows in political importance (and as a result becomes increasingly politicized itself). World Heritage Sites, which cover more than 10 % of all protected areas globally, also need to change their role to provide leadership to global efforts on protected areas. Another major aim is to bring natural World Heritage designation closer, philosophically and in practice, to the conservation of the greater number of cultural sites on the World Heritage list. Both face similar challenges in terms of development, the need to maintain naturalness or authenticity, and their role in educating present and future generations about our common heritage.

22.13 A New Social Compact for Effective and Just Conservation

Protected areas will only work, and continue to work in the future, if they are supported by a broad range of people; the pressures against conservation are too great for protected areas to survive in the hands of a few enthusiasts. A New Social Compact is required to bring together people from very different backgrounds, to work together from a common understanding about values, challenges, and opportunities. An inspirational platform must be created so that diverse rights holders, stakeholders, and interest groups can dialogue and commit to building solidarity in human networks and shared understandings of the intrinsic and functional value of nature.

22.14 Conclusion

Protected Areas can contribute much to Earth Stewardship. As such, “The Promise of Sydney” formalized at the 2014 World Parks Congress in Australia, should guide transformative change over the next generation. Under IUCN’s new orientation, protected areas teach that value is far more than economic. They themselves can be understood as Earth stewardship in action (Abecasis et al. 2013; see Berchez et al. 2015; Chapin et al. 2015, in this volume [Chaps. 12 and 23]). Protected areas are related integrally to human well-being, not only physical but also cultural. They contribute to justice by protecting traditional and cultural knowledge of indigenous people and are constant reminders that nature and culture are World Heritages. Additionally, a biocultural ethic introduces an ecosocial justice perspective that affirms that “unsustainable practices that are detrimental to the life of other human and other-than-human beings need to be sanctioned and/or remedied”. These perspectives shall be incorporated in a “new social compact” emerging from the WPC. Complementarily, the worldviews, forms of knowledge, values, and ecological practices of cultures that are sustainable should be respected, and eventually adapted through intercultural exchanges (Rozzi 2013, p. 10).

IUCN’s new orientation aims to better integrate cultural diversity and, at the same time, to achieve ecojustice. The discourse and action in protected areas for the next 25 years should be fully integrated into the broader aim of sustainability at all levels, making this an enhanced cultural feature. Perhaps more importantly, it should be prioritized as an integral part of planning and resource allocation in the international community, such as the Sustainable Development Goals. Less than that would certainly not allow societies around the world to meet their legitimate aspirations in the IUCN vision of a “just world that values and conserves nature.”

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References

- Abecasis RC, Schmidt L, Longnecker N et al (2013) Ocean & coastal management implications of community and stakeholder perceptions of the marine environment and its conservation for MPA management in a small Azorean island. *Ocean Coast Manag* 84:208–219
- Berchez F, Mansilla A, Ghilardi-Lopes N et al (2015) Ecology and education in marine protected areas: insights from Brazil and South America. In: Rozzi R, Pickett STA, Callicott JB et al (eds) *Earth stewardship: linking ecology and ethics in theory and practice*. Springer, Dordrecht, pp 351–366
- CBD [Convention on Biological Diversity] (2004) Conference of the parties decision VII/28. Paragraph 8. <http://www.cbd.int/convention/results/?id=7765&l0=PA>
- CBD [Convention on Biological Diversity] (2010) Conference of the parties decision X/2. Strategic plan for biodiversity 2011–2020. <http://www.cbd.int/decision/cop/?id=12268>
- Callicott JB (1997) Conservation values and ethics. In: Meffe GK, Carroll CR (eds) *Principles of conservation biology*. Sinauer Associates, Sunderland, MA, pp 24–49
- Chapin FS, Pickett STA, Power ME et al (2011) Earth stewardship: a strategy for social-ecological transformation to reverse planetary degradation. *J Environ Stud Sci* 1:44–53
- Chapin FS, Pickett STA, Power ME et al (2015) Earth stewardship: an initiative by the Ecological Society of America to foster engagement to sustain planet earth. In: Rozzi R, Pickett STA, Callicott JB et al (eds) *Earth stewardship: linking ecology and ethics in theory and practice*. Springer, Dordrecht, pp 173–194
- Crutzen PJ, Stoermer EF (2000) The “Anthropocene”. *Glob Chang Newslett* 41:17–18
- Dudley N, Higgins-Zogib L, Mansourian S (eds) (2005) *Beyond belief: linking faiths and protected areas to support biodiversity conservation*. WWF International, Gland
- Kerber G (2015) Stewardship, integrity of creation and climate justice – religious ethics insights. In: Rozzi R, Pickett STA, Callicott JB et al (eds) *Earth stewardship: linking ecology and ethics in theory and practice*. Springer, Dordrecht, pp 383–393
- Li B, Parr S, Rozzi R (2015) Geographical and thematic distribution of publications generated at the International Long-Term Ecological Research Network (ILTER) sites. In: Rozzi R, Pickett STA, Callicott JB et al (eds) *Earth stewardship: linking ecology and ethics in theory and practice*. Springer, Dordrecht, pp 195–216
- Nevill JC (2009) *Overfishing, uncertainty, and ocean governance: Lord Perry’s question revisited*. Dissertation, University of Tasmania, p 406
- Phillips A (2003) Turning ideas on their heads: a new paradigm for protected areas. *George Wright Forum* 20:8–32
- Rozzi R (2013) Biocultural ethics: from biocultural homogenization toward biocultural conservation. In: Rozzi R, Pickett STA, Palmer C et al (eds) *Linking ecology and ethics for a changing world: values, philosophy, and action*. Springer, Dordrecht/Heidelberg/New York/London, pp 9–32
- Rozzi R, Armesto JJ, Gutiérrez J et al (2012) Integrating ecology and environmental ethics: Earth stewardship in the southern end of the Americas. *BioScience* 62(3):226–236