CHAPTER 5

SOCIAL AND ECONOMIC INFLUENCES SHAPING PROTECTED AREAS

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CONTENTS

IUCN WCPA WORLD COMMISSION ON PROTECTED AREAS Convention on Biological Diversity

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TITLE PAGE PHOTO

The Great Barrier Reef Marine Park, Queensland Australia, a UNESCO World Heritage property and one of the great marine protected areas of the world

Source: © Great Barrier Reef Marine Park Authority

Extract, Chapter 5 (p. 139): "*… in Australia in 2014, the Australian Government and the Great Barrier Reef Marine Park Authority had made decisions regarding dredging spoil that posed a threat to the Great Barrier Reef—another iconic natural World Heritage Site. The Great Barrier Reef is threatened by several extractive industries, fossil fuel-related pollution sources, associated busy shipping lanes and plans for further coal exporting from Abbot Point. Such threats are being seen on a global scale. The roots of the problem take us back to the tensions about values, custodianship and possibly also changes in the character and interests of the state itself* ".

Introduction

This chapter explores trends in societal values, human rights and economics that have shaped how protected areas are understood, valued, managed and governed. The chapter highlights some of the contradictory social and economic trends that may define the future of protected area policymaking, governance and integrity.

The function of the chapter is to locate protected areas in a broader societal and policy context and give consideration to the role of public perception, values, norms and commitment to ensuring that conservation aims, including the effective use of protected areas, are supported by social, economic and political processes that may not at first appear to be germane to conservation policymaking. Within the different policy spheres and social trends, there is scope to shape public opinion, social cohesion, solidarity and political commitment and to anticipate problems arising from certain economic frames of reference that can potentially undermine the effectiveness of protected areas if not monitored and addressed.

Examining some historical trends may provide insights into what protected area policymakers, managers, conservationists, local custodians, traditional owners and civil society can anticipate in the years ahead. Understanding the past and how humans engage with nature gives us insights into issues that we may need to consider and prepare for in meeting future targets of conservation, landscape/seascape connectivity, upholding human rights and enabling a shared human commitment to sustain the planet for future generations. We are in a time of rapid global economic and social integration, with high-speed communications capacity and globalising cultural systems—factors that facilitate building public support and understanding. In contrast, we also live in a context of a high degree of human inequality combined with expanding commodification and consumption of natural resources, which create conditions for conflict and competition. These conditions mean that protected areas are sites of contestation and complex policy spaces.

The chapter concludes with some key considerations of threats and opportunities, and a call to consider the fundamental issue of human custodianship and our duty to the rest of the living world, which supports our health and wellbeing. As we move into an ever-accelerating world of changing technologies, global economic integration and land-use changes, we may also need to consider a refreshed human social compact to conserve biodiversity, enhance connectivity beyond political borders as well as prepare for new variables including climate instability, genetic modification in agriculture, new energy technologies and changes in the role of the state.

Trends and forecasting

Much of this book deals with the technical and managerial considerations for successful conservation in and beyond protected areas; however, other priorities in human organisation, culture, economics and politics ultimately create the conditions within which protected areas have arisen and will develop in the decades to come. Some of these trends are positive but others will cut against the efforts of biodiversity and ecosystem conservation. Understanding these trends goes outside the usual domain of professional skills training and biological sciences. Understanding the contexts of the trends that impact on protected areas requires looking into the social science toolbox.

The main aim of this chapter is to consider how to locate protected area management, policy and successful governance in the bigger context of human behaviour, values, economics and trends that may shape future plans and ways of working. This book describes in a number of chapters the changing dynamics of the relationship between humans and nature. The modern trend in favour of protected areas has accelerated dramatically, in part driven by the evidence of drivers of biodiversity loss, radical changes in land use across the globe and a growing awareness that if we do not react expeditiously and effectively we will experience consequences that are negative for life on Earth, including for our own species.

The scope of the chapter is broad and hence it is meant as an overview of some key issues. Any foray into political, social and economic theory comes with assumptions, epistemologies and theoretical models, which are open to debate and dispute. Here we try to look at some of the issues in broad and recognisable strokes, rather than presenting a specific materialist or positivist framework. For specialists, some of this may be insufficient. The goal is to introduce social, political and economic considerations for non-specialists and add to debates in more specialised constituencies.

The chapter starts with the premise that human society and political economy are never static. Given that we find ourselves in an era known as the Anthropocene, whatever conservation aims we set for ourselves will depend on the degree to which humans and our social, political and economic institutions take into account the need for conserving biodiversity and ecosystems. Some human systems, such as globalisation of commodity markets and capitalist macro-economic frameworks in national policymaking, may seem remote and self-driven, but they arise only in human culture, imagination and value systems. Shifting value systems and changes in the duties and scales of governance and custodianship in relation

to protected areas and other area-based conservation measures will impact on both the effectiveness and the availability of resources, including social and political support for protected areas.

A key concept in the discussion is 'custodianship': the belief that an individual or network of humans has feelings in relation to a particular territory, seascape or landscape, which lead her/him/them to conserve, protect and/or sustainably use the territory. In this chapter, we suggest that in our modern times, custodianship is an area of rapid change, contestation, changing scales and ambiguity, all of which will ultimately play a central role in the effectiveness of protected areas.

We consider the global historical shift from localised custodianship to increasing state authority and then the changing nature of the state within globalised economics, trade and natural resource extraction. In recent times, the legal custodianship duties of the state may be reoriented, even diverted, to facilitate degradation of the environment, poaching of wildlife and a further breakdown of ecosystem integrity, primarily driven by economic ideologies and the influence of private transnational interests that do not have an evolved nature-based value system or accountability to other scales of custodians.

Two noteworthy trends that are not explored in the chapter include changing human demographics and anthropogenic climate change (see Chapter 17). These can both be taken as frame conditions, in the sense that those working on protected areas have limited capacity to change human rates of reproduction or global greenhouse gas emissions. For protected areas, both of these trends will impact in complex ways on protected area policy and effectiveness.

Before delving into the issue of custodianship, it is worth giving some thought to how and why humans value nature, and how changing material and social conditions act on these value systems, which in turn shape where we put our attention, energy and resources. Human society has reached a point where it has exceeded natural variables as a primary driver of changes in biodiversity, ecosystems and even climatic systems. What we do next will shape the whole history of the planet, our species and many other species.

Anthropocence: Humans take charge

In 2000, biologist Eugene Stoermer and Nobel Prize-winning chemist Paul Crutzen published the term 'Anthropocene' in a newsletter of the International Geosphere-Biosphere Programme. The term was formally adopted by the Geological Society of London in 2008. This term acknowledged that our geological and climatic context is now less determined by natural trends than by human behaviour and human-driven changes to both the physical Earth (soil loss, pollution, extraction through mining and exploration) and our atmosphere (the most notable impact being the emission of greenhouse gases leading to global warming and climate instability, with impacts on ocean acidification and glacial melting and terrestrial impacts).

Adding up the full picture of what humans have been doing to the Earth and the atmosphere over the past century is distressing and can plunge one into a state of anxiety. As this chapter, and indeed this book, suggests, the drivers of the threats to our biodiversity, ecosystems, food sovereignty and climate stability derive from human behaviour and culture (Boyden 1987), so logically it is within our capacity to mitigate these dangerous trends, and through our intentions and mindful actions we are capable of adjusting the course of the planet towards a more sustainable one.

A useful point of departure is to consider the findings of the *Global Biodiversity Outlook 3 (GBO-3)* (see CBD Secretariat 2010). This UN document, submitted to the UN Convention on Biological Diversity's Fifteenth Subsidiary Body on Scientific, Technical and Technological Advice, reviewed the available science on biodiversity and ecosystem trends. This is just one of a number of important documents on biodiversity trends. What stood out in GBO-3 was that biodiversity is declining in all regions of the world and at an accelerating pace, and new problems such as alien species distribution are increasing, while the only apparently positive trend was the growth in protected area designation.

While some would argue that increasing protected areas has not slowed biodiversity loss, bringing into question whether protected areas are really a sufficient response to drivers of biodiversity loss, our point of departure is that protected areas are increasingly seen by state parties (signatories to the Convention on Biological Diversity) as important bulwarks against the impacts of such drivers (see Chapter 21). Reflecting on the GBO-3 report and the success of the Programme of Work on Protected Areas (PoWPA) under the Convention on Biological Diversity

Tierra del Fuego, de Agostini National Park, Cape Horn Biosphere Reserve, Chile
Source: Eduard Müller

(CBD), including the refreshed protected area Target 11 of the Strategic Plan for Biodiversity 2011–20 and the Aichi Biodiversity Targets (CBD 2011), this chapter is postulating that protected areas at this time are seen as a solution to other threats and risks. Furthermore, it appears that the global multilateral treaty system is having a more positive effect on this domain of state environmental planning than in many other domains—most notably, the poor performance in climate change negotiations.

If state parties are seeing protected areas as a solution to certain environmental challenges, it stands to reason that this perception is shared among many citizens and the electorate, at least where there are functional democratic regimes. Though protected area staff may sometimes feel they are struggling with great challenges and low political prestige, at least at the policy level there are progressive trends. Not only are terrestrial parks receiving increasing attention, we also are seeing greater interest in how the terrestrial model of protected areas can be transposed into the coastal and marine environments and adjusted to fit. The Tenth Conference of Parties (COP) of the CBD, which met in Nagoya, Japan, set new targets for both terrestrial and marine protection under Target 11 of the Aichi Biodiversity Targets, part of the CBD 2011–2020 strategic plan.

Values, norms and duties

Humans are part of the primate order and much time has been dedicated over the ages to understanding what motivates our primate and/or human behaviour, which is typically social in nature, and includes elements of cooperation, self-interest and altruism (for a robust discussion on the role of language in humans as an instrument for managing these tensions, see Dunbar 1996). Rather than simply acting instinctually, our conduct is shaped by social systems, affective and solidarity systems and also a general ability to understand and engage with ethics, as expressed through our cultures, languages and belief systems.

As our societies have become more complex, we have developed systems of hierarchies in our power relations, and class systems have emerged that mean there are differential systems in terms of ownership of resources, control of lands and the ability to influence decision-making. We thus find ourselves living in societies where we have the capacity for ethical reflection, we live in rule-governed systems and we are born into socially constructed systems of power that were not of our own making and produce substantially different results for those who have access to power and those who do not.

The inherent social character of human society and our ability to develop shared systems of belief create a foundation for individual and collective value systems, which in turn shape what things we protect, conserve, promote, study and defend. Where there is intense disputation of power or inequality of control over resources, we can anticipate that values will also be disputed and there may be less social consensus about what is valuable, including what should be conserved and protected.

During the Summit for Sustainability in Africa (24–25 May 2012), the chairperson of the Theme on Indigenous and Local Communities, Equity, and Protected Areas (TILCEPA) was able to pose to Pavan Sukhdev, the lead author of The Economics of Ecosystems and Biodiversity (TEEB 2010) initiative, a question about whether valuation was accelerating the commodification of nature and hence facilitating its non-renewable extraction to enter into capital markets. Sukhdev's reply was that valuation should not be confused with commodification or even capital valuation. He recounted how in his work in India, he could work with rural villagers with limited to no literacy or experience with capital markets, who were highly reliant on natural resources for subsistence, and who had their own system of valuation that helped guide them in their conservation activities. According to Sukhdev, the problem is not whether nature has a value; it is how that value (and whose valuation) is represented in national policymaking.

In this section, we give some thought to how humans value nature, why we value nature and how this impacts on the decisions we make and the priorities we establish for ourselves and our political and social systems. An initial dichotomy can be made between those things we see as having 'intrinsic' value and those considered to have 'extrinsic' value (for a further discussion on valuation and the intrinsic value of nature, see Phillips 2003; Chapter 6). Something with intrinsic value has a value in and of itself. Whether nature has an intrinsic value, or at least whether human society adheres to such a principle, is central to where we locate our conservation duties within our social, political and economic systems.

Contemporary environmental ethicists have argued that humans tend to see nature as having an intrinsic value. Sandler (2012) quotes Soulé (1985) as holding that 'biotic diversity has intrinsic value'. This view is also held by influential ethicists Rolston (1986) and Callicott (1989). The intrinsic value of nature has been enshrined in recent UN instruments including the 1982 World Charter for Nature and the 2000 Earth Charter.

Typical expressions of humans valuing the intrinsic qualities of nature or a natural resource (species, landscape, ecosystem) include sacred natural sites; legislative or state actions to conserve species, water systems or landscapes primarily due to their aesthetic qualities; and spiritual associations or intrinsic values in sustaining life (for examples, see Chapters 3 and 4). Modern protected areas are in part an expression of an intrinsic value system being applied to a landscape, seascape, ecosystem, geological formation or territory necessary for species conservation.

In his book *Tread Lightly on the Earth*, Sri Lankabhimanya Christopher Weeramantry, Vice-President of the International Court of Justice, develops an argument that all of the major world religions contain specific scriptural obligations for followers to value, respect and protect nature. He argues that before our modern age, the intrinsic value of nature was a foundation of religious and legal systems (Weeramantry 2009). The scriptural obligations range from conservation of specific species and landscape obligations to more general approaches to understanding our human duties within an abundant but fragile natural world.

Weeramantry suggests that duties to the Earth were normal in all cultures but became marginalised during the phase of modern colonial economic development and industrialisation. Natural law, which once included laws regarding the intrinsic values of nature and concomitant duties, was distorted to facilitate a shift to extrinsic valuation, where nature was subordinated to other priorities, notably to favour overuse of resources by the powerful at the expense of the poor. The sacred aspect of nature also creates a relationship between intrinsic and instrumental approaches to nature, as well as evidently providing a greater external point of reference beyond short-term interests (Weeramantry 2009).

Extrinsic value posits that the value of something is relational. For the purposes of this discussion, the evident line of thinking is that nature, an ecosystem or a species has a value because it serves some purpose that is valued by humans. Typically, for human society, nature is often seen to have an instrumental value. Water is essential to human life, hence conservation of water and water catchments, including forests or other characteristics of the water system, all have instrumental value. Most societies appear to have clear rules on water conservation and rights of access, and sometimes rights of ownership and control.

The 2004 Addis Ababa Principles and Guidelines for the Sustainable Use of Biodiversity (AAPG), which were adopted by the seventh COP of the CBD, speak directly

to the principle that where a community is reliant on a natural resource or landscape that supports such resources, it is understood that they will be the natural custodians of such a resource. The AAPG create a multilateral principle regarding custodianship within the logic of instrumental value. This principle was greatly elaborated on by Nobel Economics Prize winner, the late Dr Elinor Ostrom (1990; Ostrom et al. 1994, 2010).

The notion that we need protected areas is a value judgment in and of itself. Though this book provides numerous examples of different types of conserved landscapes and seascapes throughout recorded history and across all cultures, our modern problems create the context in which protected areas are established, designed, governed and measured. At the root of this modern heritage is a strange mix of altruism and power play; an interest in conserving nature while in some cases also using conservation legislation to undermine the custodianship powers and duties of one group of people in favour of a dominant group.

Bogd Khan Uul, in Mongolia, was established as a nature reserve in 1778, giving it the apparent crown of the first 'modern' protected area—that is, a state-proclaimed territory dedicated for the primary purpose of nature conservation. Yellowstone National Park was gazetted as the first national park in 1872 and is usually considered the first of its kind as a dedicated estate for wilderness conservation.

Some of the most iconic national parks were established as part of the global experience of colonisation, conquest and displacement following violent conflict with indigenous people (Colchester 2004a, 2004b). Yellowstone National Park was proclaimed over the top of Arapaho lands, known by the indigenous peoples as Héetíhco'oo. The Arapaho were displaced as part of the cycle of conquest and proclamation of this protected area. Kruger National Park was established by colonial authorities in South Africa in 1898, securing its claim as the first African modern protected area. Kruger, like Yellowstone, involved displacement of the local peoples who had occupied the territory for centuries. This colonial form of protection was often associated with ethnic and power struggles between indigenous peoples and settler populations. It was also rationalised based on sudden biodiversity declines associated with colonial occupation, particularly clearing of land for agriculture and pastoralism, massive hunting impacts without regulatory controls, and concerns of 'civilising' landscapes while sustaining what would be considered selected 'pristine' landscapes (see, for example, Crosby 1986; Beinart and Coates 1995; MacKenzie 1997).

Contrary to some colonial settler beliefs that they were the ones who invented conservation, the idea of limiting human resource use in specifically defined territories to protect biodiversity and ecosystem services, either permanently or temporarily, seems to have been an ancient practice and common to most cultures and civilisations. A few such examples include the Polynesian system of tapu (or taboo) to control access to marine resources.

In Hawai'i, the management system of freshwater rights and other natural resources derives directly from the traditional Hawai'ian land tenure system and is wholly unique among resource management systems used across the United States. First developed in the 1400s by the high island chief Mā'ilikūkahi, the ahupua'a system divided the land area into sustainable ecosystems that extended from the top of the individual watershed out to the fringing reef. The resources were regulated by a strict kapu system, akin to the Polynesian tapu system. After foreign contact in the 18th century, Hawai'ian mō'ī (kings) established a sovereign nation-state so as to contend with the world's emerging globalisation. Recognising the importance of natural resource management to the wellbeing of their people, the mō'ī codified pre-contact practices into law and subsequently into land titles. Those codifications, deeply embedded in law, land tenure and custom, have survived socioeconomic changes and continue today.

India is covered with a network of sacred groves and forests, as well as other sacred natural sites associated with indigenous and local people's belief systems and Hindu religious customs. Africa is similarly criss-crossed with locally managed sacred natural forests, springs, lakes, mountains and other specific conserved sites. Nomadic peoples such as the M'bororo of West Africa have specific indigenous terminology for protected areas, 'haddaade', originally used for territories set apart by local chiefs for conservation, but now used in reference to national parks (IPACC 2012).

These traditional systems of biodiversity and ecosystem conservation are not unique to indigenous peoples. Various forms of community-based conservation are found in most societies that rely on natural resources. Where colonialism and ensuing 'modernisation' have not dislocated the relationship between traditional systems of governance and access regimes, there are interesting examples of a state system growing up organically around a local custodianship system. Finland offers some examples of this flow from local custodianship into new models of synergistic forms of governance and landscape/riparian/lacustrine conserved spaces (Box 5.1).

Box 5.1. Natural resource governance systems in present-day Finland

Finland has at least three major non-state regulatory systems that predate the Finnish state and function in parallel with the modern state system. These custodian-based institutions have the force of administrative law and in some cases there is further supportive national legislation. These include the kalastuskunta (a site-specific administrative regulatory body for fishing rights and other types of hydrology governance), the paliskunta (the northern reindeer herding administrative regulatory bodies) and the yhteismetsä (a modern private collective forest administrative regulatory body, which allowed small private forest territories to be aggregated into commonage managed by the non-state regulatory body). These exist in parallel with municipalities and are specific to older Finnish usage systems. The Finnish regulatory bodies were so strong that when the private sector started damming rivers in the 1960s, they were obliged by local moral suasion to ensure that salmon spawning could continue in parallel and also do fish stock breeding to keep the fishing systems functional.

A court decision of 1642 makes specific reference to the customary law, the kalastuskunta regulations and municipal territorial delineation. In 1902, several years before Finnish national independence, the Vesioikeuslaki (water rights law) formalised state recognition of these customary water regulatory bodies.

Finland had been under the influence of two neighbouring empires, Sweden and Russia. Due to its self-managing autonomy, it managed to sustain its customary natural resource institutions into the current era. The modern Finnish state was proclaimed in 1917. The non-state regulatory systems stayed in place, run by local communities, and the administrative laws and recognition of these systems emerged organically, without the state assuming greater authority. In parallel, the state did develop a protected area network, run by the Metsähallitus (literally 'forest government').

Source: Personal communication from Jorma Leinonen of Paltamo, Kainuu, as interpreted by his son Tuomo Leinonen. See also Vesitalous (2010).

Visitor facilities, Linnansaari National Park, Finland, managed by *Metsähallitus*.
Source: Graeme L. Worboys

Europe became a powerful colonising force from the 16th century onwards, and along with the acceleration of the European mercantilist economic system into the Industrial Revolution, this meant the Western world experienced a dramatic shift away from the intrinsic and spiritual values of nature conservation. This shift saw a new set of values emerge, in which nature's value was not only extrinsic but also focused on the wealth that could be extracted from the resources provided by the natural world. This process of economic and cultural shift was the primary driver of a cycle of biological loss, extreme pollution and social upheaval, extending out of the European context into a global network of colonial resource extraction.

As Europe moved into the peak of its industrialisation phase, rapid technological changes and major shifts in demographics and human density, so some of its most profound value systems also changed. Once the seat of powerful religious doctrines and religious power, Europe began to move away from its religious convictions into a rising interest in science and the secularising of the state and society. This transition did not happen overnight, and writers such as B. Alan Wallace (Wallace and Hodel 2008) have suggested that Western science never gave up some of its Judaeo-Christian epistemology and references.

In 1967, Professor Lynn Townsend White, Jr, published a seminal article in Science, wherein he argued that certain doctrinal issues in medieval Christian thought set the stage for an anthropocentrism in Judaeo-Christian societies, which, when combined with the Industrial Revolution, led to our modern ecological crisis. At the heart of White's argument was the notion that Christians had been encouraged to see themselves not as custodians of God's creation, but as having God-given dominion over nature (White 1967). This dominion mindset

reduced the societal perception that Christianity obliged its followers to respect the intrinsic value of nature as God's creation, and to replace this with a notion of the right to exploit.

White's critique came in the 1960s, at a time when the global environmental crisis was becoming clear, and led to a deeper debate in religious circles about what the Scriptures were saying about the value of nature and religious obligations to defend this value. Religious philosophers such as Thomas Berry (1999, 2006) have re-examined Christian Scriptures and come to a different conclusion, emphasising the sacred character of God's creation and the human duty to act as stewards of creation, as well as giving attention to issues of equity, compassion and justness in natural resource governance. More than just posing a particular challenge to the Christian churches about their role in conservation and custodianship of nature, we can see that White's critique may also apply more widely to Western values that are also present in the secular and scientific elements of society. That is, the dominion thinking of medieval Christian thought, buffered by colonial supremacy and conquest, emerging as a secular capitalist political economy may have facilitated a chain of evolving ethical justifications for the terrible treatment of nature, biodiversity and ecosystems as well as the rights of traditional custodians by technologically 'modern' societies.

Weeramantry (2009) concludes that to restore a global legal framework for nature conservation requires jurists and environmental advocates to restore a universal framework of respect for nature in both law and religion, putting 'nature' back into natural law and then applying this in an evolving jurisprudence. One of the interesting aspects of his work is that it suggests that the way into a new paradigm of renewed custodianship of the Earth may involve a convergence of spiritual (that is, intrinsic) values and legal norms and interpretations of natural law that also speak to the extrinsic value of sustainability.

In terms of considering the future of protected areas, the societal value placed on nature conservation, as expressed in religion, national identity, political leadership, the media and so forth, will invariably determine where nature conservation fits within national priorities. The clearer the sense of national custodianship and duty, the easier it is for conservationists to shape resource allocation to ensure effective conservation. Where there is a countervailing ideology that we have no accountability for how we abuse nature, other species or ecosystems, it will be a constant struggle to assert protected areas as a national priority.

Contested custodianship and the duties of the state

Whose job is conservation? The answer to this question has shifted over time and will be critical to changing the current trajectory of biodiversity loss and climate destabilisation. The issue includes our understanding of duty, commitment, capacity and the likelihood of cooperation. In a global study by the University of Queensland on protected area management effectiveness, Hockings has noted that three of the top seven significant variables relate to social policy and the cohesion of intention between professional managers and the society in which the protected area is located (IUCN TILCEPA 2010:9).

In this section we consider how custodianship has changed according to changing economic and political contexts. This reflection then takes us back to a new generation of rights that involves the reassertion of custodianship by sub-national groups as well as the need to rethink the human social compact necessary for protected areas and conservation to be effective in our modern context.

It is beyond the scope of this chapter to discuss the entire planet's history of natural resource management, conservation and protected area custodianship. Instead, a general pattern is proposed here to allow us to jump from early indigenous systems of direct dependency on natural resources and cultural systems of custodianship, to consider the rise of larger entities of power, particularly the emergence of the modern state, which has to some degree usurped the role of custodianship over wildlife, lands and natural resources.

The heuristic pattern is described here as a historical flow from local custodianship embedded in cultural systems of knowledge and governance and accompanying customary land tenure—biocultural systems—which were transformed over the past century due to the emergence of newly organised systems of nation-state authority and the multilateral principle of state sovereignty. Other chapters of this book provide us with more detail on patterns of protected area and natural resource governance at supra-community levels in ancient times—for example, the legislative framework of the Mauryan Empire in 300 BCE India. Evidently, we did not jump from autonomous hunter-gatherer systems of natural resource management directly into the modern nation-state. Nonetheless, it can be argued that the expansion of European power through colonisation created dynamics that ruptured customary tenure systems of indigenous and local peoples, and replaced these in most cases with a centralised state with the

primary function of extracting wealth for use in Europe (during colonialism) and later for national elites and global partners (in the postcolonial context). There is a major body of literature on understanding postcolonial economies in the global system (see, for example, Ralston Saul 2005; Shivji 2009; Amin-Khan 2012).

From at least the 18th century through to the 20th century, there was an intensification of the pattern of local custodianship being displaced or modified by consolidation of colonial and metropolitan states. In Europe and in territories occupied by Europe, there was a newly imposed centralised state administration, which became the global norm. This pattern was most pronounced where there was full European colonisation, which undermined many subordinated systems of natural resource governance, customary use and previously autonomous political systems. The same pattern, however, is also apparent in societies that were only lightly colonised or sustained their own autonomy. The pattern in both colonised and uncolonised polities reinforces the argument that the important 19th and 20th-century surge in the designation of modern protected areas is closely associated with the consolidation of the authority of the nation-state and its role as the primary custodian of nature conservation. Other factors, including the evident decline in biodiversity and increase in human population, were significant, but for our purposes the interesting element is to understand where the power resided in terms of territorial custodianship and then to consider what the current trends indicate.

Important variables in this assessment of trends are the role and character of the state itself. The state is a product of particular ordering of human society. It arises from historical, economic, geographic and cultural contexts. It is shaped by forces internal to it and by the external context. This chapter argues that the rise of modern state sovereignty, particularly in the colonial and postcolonial contexts, caused a breakdown of local custodianship and a centralisation of decision-making. Though this likely contributed to protected area policymaking and standardisation, it also created new challenges of accountability, particularly when the state became associated with economic globalisation and globalised demands for resource extraction.

Despite arguing that there is a visible trend in terms of custodianship authority, the historical flow of authority and duty is neither linear nor unidirectional. It is often punctuated by assertions by non-state actors and rights-holders as well as other disputes over paradigms of political economy. While the function, duties and character of the modern state change, so the power and responsibility of custodianship remain contested.

When colonisation and industrialisation combined to create a global economic and political hegemony, there was also for the first time a new global ethic of redefining nature as a resource to be exploited and converted into economic profit without consideration for the sustainability of people or ecosystems. We shifted from a localised paradigm that combined intrinsic and instrumental values to a nakedly extrinsic and consumptive paradigm freed from all sacred associations and aimed at subjugating nature and extracting its value.

This paradigm of human dominion over nature is arguably still the dominant paradigm on the planet, particularly in the Western world. There are other significant paradigms about the relationship between humanity and nature, such as the Japanese concept of *satoyama* and *satoumi*, whereby harmony is achieved by sustaining a relationship between nature and human use. The 2013 Asia Parks Congress spent time exploring whether there is a distinct ethic in Asia regarding human relationships with nature and landscapes (APC 2013). This congress also triggered a reverse effect, of trying to distinguish between pristine and romantic landscapes, soon shaped into protected areas, and the more general approach to unsustainable degradation of natural resources and ecosystems. The colonial era associated extraction of labour and natural resources with increased national power, national esteem and economic growth, regardless of the natural consequences or human suffering this entailed. This trend impacted on the colonising countries and at the same time on distant lands, ruled by people who never set eyes on those territories. This disjunction between users and consumers of natural resources and the usual system of local use and local custodianship also manifested as a major shift in the ideology of our human relationship with nature.

The colonial land-use patterns are characterised by radical disconnections between older ecosystem-based natural resource management and the power of centralised authorities to create exclusive-use reserves without reference to either the characteristics of the ecosystem or the pre-existing governance models that sustained these areas. We have the colonial model meshing with postcolonial contexts where state elites see protected areas as important for tourism and international funding. These mixed colonial–postcolonial models have generated new patterns of protected areas, particularly in Africa, that have complicated relationships with local custodians and rights-holders (see Anderson and Grove 1995; Nelson and Hossack 2003).

Looking at conservation and protected areas through the lens of colonial political economy can leave the impression that at least early protected areas were a result

of a mix of altruism and conquest. As other chapters of this book explore, the severity of the biodiversity crisis in the 19th and 20th centuries was the trigger for the Western, and eventually global, conservation movements. The rise of consciousness about our impact on the world manifested most clearly with the idea of setting aside territories for conservation, expressed as the modern tradition of protected areas. The overall relationship between the power to exploit unsustainably and the countertrend to assert the intrinsic value of nature and its psycho-social importance for humanity shifted from a highly contested space into a general direction of finding harmony between different cultural perspectives on landscape and seascape conservation within a rights-based approach to governance.

The issue of who is qualified and who is mandated to conserve is still contested in many countries. Debates around co-management, private management, indigenous management and other forms of cooperation with traditional and new custodians continue. The research on successful sustainable land and natural resource management continues to point in favour of combining professionalised conservation with good governance and an enabling environment for indigenous peoples and other local custodians. The resistance to such evidence of efficacy derives not from a science argument, but may find its origins in the legacy of early power struggles, racism, corruption and/or bureaucratic centralisation of power. The state and the civil society, in combination, provide the framework that will either facilitate or impede conservation that is embedded successfully in the human landscapes, economies and governance systems that can support conservation aims.

One of the most important theorists and empirical researchers on the issue of natural resource custodianship is Elinor Ostrom. Ostrom studied different indigenous and local systems of sustainable natural resource governance regimes. She emphasised that sustainability requires some kind of human governance system that permits exclusion of outsiders from resource use, supported by a local monitoring and decision-making system to protect sustainable biodiversity levels and ecosystem functions. Local governance systems were typically rule-governed but also quite flexible to cope with seasonal or sudden changes in the configuration of biodiversity abundance and human needs (Ostrom and Hess 2007; Ostrom et al. 1994, 2010).

Ostrom showed that a community could efficiently manage collective-pool resources when certain variables were in place. Contrary to other researchers who believed the commons or other collective actions were inevitably doomed to fail, Ostrom found evidence of diverse communities in which common resources were successfully and sustainability managed over the long term. Her contribution to the 2011 Sharing Power conference in Whakatane, New Zealand, presented three different fishing communities along the Baja California coastline who showed different degrees of marine conservation directly related to the capacity of the community to control and govern its common-pool resources. Influenced by a commitment to ethnography and understanding the role cultural values played in developing cooperative management regimes at the local level, Ostrom unsettled the dominant belief that common resources could not be managed by a local citizenship and instead needed to be managed by the state or privatised.

This work has important implications for protected areas and speaks to a shift in thinking on what constitutes effective long-term conservation. Whereas a state agency can be granted the powers to fully exclude human access to natural resources in a particular territory, this may not deliver the intended results. Some landscapes thrive in part due to human management and traditional systems of resource use, including, for example, traditional livestock herding, which may stimulate rather than impede biodiversity. The famous examples of Zimbabwe's Campfire program and Namibia's community conservancies are evidence that a well-planned, equitable benefit-sharing agreement, which strengthens community custodianship, may provide the best biodiversity results feasible in landscapes that would otherwise be overexploited.

The approach that conservation is only possible if it breaks down traditional or customary rights of indigenous and local custodians may contribute to biodiversity loss rather than restoration. Ignorance of how customary commons management operates and the complex systems of knowledge, reciprocity, moral obligations and customary sanctions that sustain it, including the right to exclude users who have no rights in the landscape, may be one of the factors impeding landscape and seascape conservation. On the other side of the argument, we may find that simply asserting that a community has traditional rights claims to a territory, without working through how changes in human demographics, power distribution, human and animal density and other land-use changes in the area will cause substantive changes in sustainability, would be naive and will not ensure sustainability. There are likely no formulaic answers, but whatever options are pursued need to be informed by a full understanding of how protected areas fit into pre-

existing governance norms, custodianship and cultural systems, which may not necessarily be understood by the national protected area authority.

Our conclusion at this point is that protected areas are inherent to most human cultures (see Chapter 4), but how they are coded into human cultural, social and political systems varies substantially. This cultural, spiritual and religious heritage of landscape and seascape conservation provides a framework for understanding the modern idea of protected areas and for developing shared systems of values to promote their sustainability and success. At the same time, we can recognise tensions between indigenous peoples and local communities who have had historical custodianship relationships with lands and seas in their territories, and the shifting of power to state authorities, sometimes within the colonial/postcolonial framework, sometimes within the framework of undemocratic or unrepresentative states, and the potential for a clash between human rights and conservation aims.

As we enter the 21st century, the pendulum appears to be swinging back from an exclusionary approach to protected areas to a better integration of local custodianship and support from a state-based duty to conserve. This was the clear message in the design of the CBD in 1992, in the IUCN World Parks Congress of 2003 and in the PoWPA (see Chapter 8). This conservation trend has been influenced and shaped by renewed assertions by local custodians of nature that they have rights and a role to play in conservation. This is clearly expressed in the 2007 UN Declaration on the Rights of Indigenous Peoples (UNDRIP). These trends are explored in the next section of this chapter, looking at changing norms in international human rights policy that impact on protected areas.

Human rights, indigenous rights and custodianship in the 21st century

The United Nations was formed after World War II, in an attempt to govern conflicts between states and to try to ensure global peace and sustainability. Its birth came after two devastating world wars, after the earlier body the League of Nations, at a time when colonialism was fading and the winds of change were sweeping across the countries of the global 'South'. Many new states were entering into the multilateral system and bringing in fresh ideas about human rights, fundamental freedoms, equality and global governance norms.

The UN system was built on an important dichotomy that has remained pertinent to this day. The United Nations was established on the principle of state sovereignty. In theory at least, all states are equal at the United Nations: they are sovereign, and they can choose to associate with specific treaties, agreements and actions. In December 1948, the United Nations adopted the Universal Declaration on Human Rights. This declaration set out the counterbalancing principle to state sovereignty—namely, that human rights are universal and they trump the sovereignty of the state at the United Nations. The idea was and remains that no state may violate the fundamental rights of its citizens or non-citizens under its watch. Should this happen, there are mechanisms and principles that allow other states to take actions to protect the rights of such people or at least to place substantial moral pressure on the state party to comply with international norms and standards.

These principles were elaborated in subsequent decades with specific attention to the rights of constituencies that struggled to be recognised under the rubric of 'universal' human rights (Box 5.2). In the 1960s, two other important documents came out of the United Nations: one, the International Covenant on Civil and Political Rights, and the second, the International Covenant on Economic, Social and Cultural Rights. These two covenants are referred to respectively as 'first-generation' and 'second-generation' rights.

First-generation rights are considered to restrain the behaviour of the state in relation to human beings. They affirm the rights of people to freedom of assembly, free political choices and the right not to be harmed, tortured or otherwise have their quality of life unfairly or unduly impacted on by the state and its representatives. First-generation rights include rights associated with access to justice, and proper conduct of the courts, police and security services. A state may not impede the enjoyment of such first-generation rights.

Second-generation rights are considered positive rights—these highlight what the state is responsible for ensuring, including the positive recognition of the rights to linguistic and cultural diversity, the right to a livelihood, health, housing and certain standards of living, and the right to engage in the economic life of the country. Second-generation rights emphasise the equality of citizens and access to state services and guarantees of duties.

In the 1970s a 'third generation' of rights began to be asserted, commonly associated with environmental and developmental rights (see Harris 2013). These were articulated in documents such as the Stockholm

Declaration of 1972 and elaborated into their most developed multilateral form at the 1992 UN Conference on the Environment and Development (UNCED, or Earth Summit) held in Rio de Janeiro, Brazil. At UNCED, civil society, scientists, churches, indigenous peoples and others lobbied states to adopt three major pieces of multilateral legislation on the environment, known as the Rio Declarations: the UN Framework Convention on Climate Change, the UN Convention on Biological Diversity (CBD) and the UN Convention to Combat Desertification.

Although third-generation rights have had less elaboration and commitment than first and second-generation rights at the United Nations, there is a clear trend to their expansion and use, from national courts through to multilateral norms and standards. This trend towards all three generations of rights is apparent in the UNDRIP, which was adopted in 2007. Africa was one of the more progressive regions as it included first and second-generation rights into its regional treaty, and also incorporated such rights as collective rights of self-determination into the African Charter of Human and Peoples' Rights.

In an interrelated and parallel process, indigenous peoples engaged with the United Nations to assert their human rights, and to elaborate a framework of rights that spoke to their specific experience of being dependent on natural resources, having being colonised by states that did not arise from their own cultures, and to assert their collective right to survival through self-determination.

There is much to say about the long struggle for the recognition of indigenous people's rights. The notable point here is that indigenous peoples have not only asserted their cultural distinctiveness, they also called into question whether the official state party represents their interests. They have asserted that they have their own forms of governance, closely associated with landscape and seascape custodianship, which need to be considered in a legal and a moral sense.

Indigenous people's claims are based on the aggregation of the instruments we have already cited: the Universal Declaration of Human Rights, the two covenants dealing with civil and political rights and with economic, social and cultural rights, and then third-generation rights associated with the environment and development. Their arguments and assertions speak to the heart of the original UN dichotomy between the sovereignty of the state and the rights of people living within that state-governed territory. As the United Nations is only composed of state parties, it was not surprising that the passage of the first major international instrument to recognise indigenous people's rights was an arduous negotiation requiring 25 years from initiation to adoption (Charters and Stavenhagen 2009). Two key articles in the UNDRIP are relevant to protected areas:

> Article 3
>
> Indigenous peoples have the right to self-determination. By virtue of that right they freely determine their political status and freely pursue their economic, social and cultural development. (UN 2007:4)

Box 5.2 United Nations' human rights instruments

The UN system has different types of instruments with different degrees of obligations to implement and adjust national legislation.

A declaration is a normative instrument and does not require ratification or adjustment of national laws. A convention is a binding instrument and once ratified requires that the state adjusts national legislation and reports back to the United Nations on implementation.

Though it may appear that a non-binding instrument is weaker, this is not always the case as the Universal Declaration on Human Rights is one of the most influential normative instruments and is regularly used in national court processes and in international law, despite it not requiring ratification.

Major human rights instruments under the UN system include:

- Universal Declaration on Human Rights
- International Convention on the Elimination of All Forms of Racial Discrimination
- International Covenant on Civil and Political Rights
- International Covenant on Economic, Social and Cultural Rights
- Convention on the Elimination of All Forms of Discrimination against Women
- Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment
- Convention on the Rights of the Child
- International Convention on the Protection of the Rights of All Migrant Workers and Members of their Families
- International Convention for the Protection of All Persons from Enforced Disappearance
- Convention on the Rights of Persons with Disabilities
- Declaration on the Rights of Indigenous Peoples.

> Article 29
>
> Indigenous peoples have the right to the conservation and protection of the environment and the productive capacity of their lands or territories and resources. States shall establish and implement assistance programmes for indigenous peoples for such conservation and protection, without discrimination. (UN 2007:11)

Within this formulation is the idea of revitalising and affirming custodianship. Indigenous rights, in distinction to minority rights, assume that the identity and sustainability of a people are associated with their territory. This builds on the contemporary understanding that languages and cultures are very closely aligned to the landscapes and ecosystems where they flourished initially (Nettle and Romaine 2000).

Not only did indigenous peoples succeed in getting the United Nations to adopt the UNDRIP in 2007, but also they had a transformational impact on how the United Nations operates, asserting the right of non-state actors to be at the negotiation table to make moral and legal claims, and to provide information, advice and reports on multilateral norms and standards. This last point is likely a trend we will see continue into the coming decades. The idea that states can make decisions between themselves without consulting the constituencies impacted by those decisions is becoming less acceptable.

The process of getting the United Nations to agree to the declaration was accompanied by a much broader mobilisation of indigenous peoples within different multilateral institutions and treaty mechanisms, including the CBD and within the IUCN. In 2003, the IUCN hosted the fifth World Parks Congress (WPC 5), a decadal event and influential policy and practitioner forum.

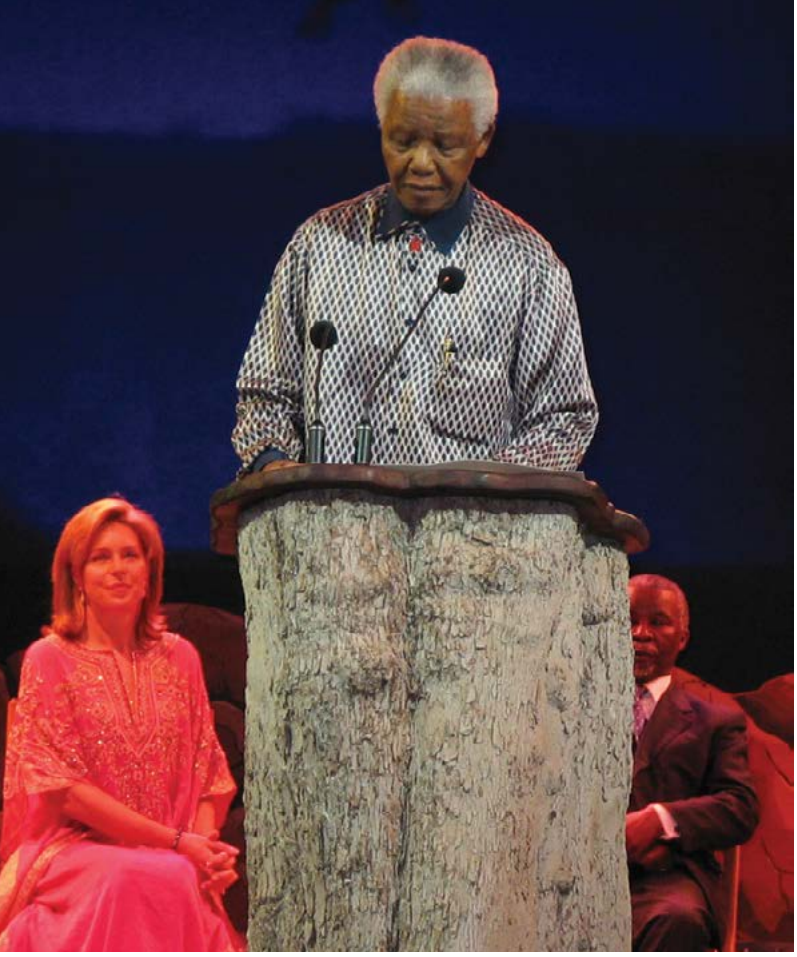
WPC 5 was distinguished by its serious engagement on the questions of rights-holders, governance and how to understand protected areas as being within human landscapes—their cultural relevance, the economic landscape and the political landscape. WPC 5 helped contextualise protected areas in a way that had previously been resisted or deflected but which was mirroring the growing global attention to both the fragility of the planet and the need to reconcile human rights and conservation.

WPC 5 was held in Durban, South Africa, and had as its patron Nelson Mandela, the image of emancipation and human rights. The South African National Parks service itself was busy addressing the legacy of the colonial heritage of its estate, and the democratic government was working with many constituencies to reconcile South Africa's commitment to biodiversity and its challenges of redressing human rights violations and addressing systemic poverty. In many ways, South Africa served as a reference point for WPC 5: sitting between East and West, North and South, between the industrialised First World and the postcolonial Third World, with South Africa representing the new generation of 'emerging' economies.

During the first decade of the 21st century, a series of events combined to enhance and affirm the rights of indigenous peoples and local communities as stakeholders, rights-holders and knowledge-holders in relation to protected areas. In summary, we saw a progressive evolution of the new paradigm, including the 2003 WPC 5 and its landmark 'Durban Accord', the conversion of the WPC 5 outcomes into the CBD's PoWPA in 2004, the adoption of the UNDRIP in 2007, and the adoption of the declaration as a standards reference by the IUCN World Conservation Congress in Barcelona in 2008. Though some may have perceived the rights versus conservation dynamic as antagonistic, it is also possible to look at the same processes and see the relationship between the affirmation of human diversity and biological diversity as complementary. Within this nexus was also the coming wave of socio-ecological 'resilience' thinking and greater attention to the interface between human cultural diversity and natural biological diversity (Kassam 2009; Maffi and Woodley 2010).

There were other complementary instruments and decisions adopted in the multilateral systems—most notably, the CBD's Articles 8j and 10c, which affirmed the importance of indigenous people's knowledge systems and customary use rights. COP 7 of the CBD adopted the Addis Ababa Principles and Guidelines for the Sustainable Use of Biodiversity (CBD Secretariat 2004), which emphasised the importance of sustainable use and the role of local and traditional custodians and knowledge-holders. The UN Educational, Scientific and Cultural Organisation (UNESCO) elaborated new work on intangible heritage and indigenous knowledge systems, including linking this to climate change adaptation and mitigation.

Throughout the multilateral system we were witnessing an effort to reconcile a number of competing interests: the rights of local custodians, the role of the state, the rising urgency for effective conservation, and the challenges of poverty and changing land-use patterns, including surging human populations and rapid urbanisation.



Nelson Mandela, Durban, World Parks Congress 2003
Source: Gary Tabor

These trends of asserting human rights and the rights of custodians in a manner complementary to protected areas and conservation targets did not appear overnight. They evolved over the life of the UN system, enhanced by dialogues inside the IUCN, gradually picking up momentum and representing a reordering of power and a need to redress the impacts of colonisation both on the environment and on indigenous peoples and local communities.

It is likely that this rights-based approach to conservation is not going to wither away but will persevere as an enduring feature of protected area and conservation policy, planning and practices in the decades ahead. This does not mean that tensions between human rights and nature conservation have been resolved. There are daily accounts of conflict and even violence in this domain. What we are seeing is a trend to more participation (see Chapter 14), and more attention to governance to ensure that indigenous peoples and local communities are supported to be primary actors in territorial conservation, active partners in protected areas or at least part of the process so there is a sharing of a vision of conservation and landscape/seascape management.

The IUCN has been a major platform for dialogue, contestation and innovation in this area. The Theme on Indigenous Peoples, Local Communities, Equity and Protected Areas (TILCEPA), a joint initiative of the World Commission on Protected Areas (WCPA) and the Commission on Environmental, Economic and Social Policy (CEESP), has served as an advisory body and catalytic agent in the IUCN's processes.

TILCEPA has emphasised the need to link a series of tools and approaches together, including protected area management effectiveness, with the social assessment of protected areas, and the elaboration of governance practices for both protected areas and larger connectivity landscapes and seascapes (IUCN TILCEPA 2010). TILCEPA has encouraged synergies between local marine and terrestrial custodians and the state-driven protected area system.

TILCEPA, CEESP and WCPA with their partners have published a series of reports and publications dealing with the main themes of rights, governance, social assessment and the renowned guidelines on protected area management and governance types.

In 2011, CEESP hosted an influential and landmark conference on Sharing Power in conservation. The global conference was hosted by the Ngāti Awa *iwi* (tribe) in Whakatane, New Zealand/Aotearoa. The Maori tribal authority is itself a case study of colonisation, dispossession, treaties, territorial claims, redress and restoration. As the *iwi* has regained its territorial rights and authority, it has emphasised the need to balance human use with environmental conservation. Members of the iwi have formal and non-formal qualifications in conservation and have entered into contractual relations with the national government to conserve coastal and marine territory—notably, a set of islands, Rurima, Moutoki and Tokata, which are unpopulated nature reserves. The sites were under national conservation authority, but with the land restitution process, from 2011 the Ngāti Awa iwi now manages the islands as a nature reserve and conducts alien species eradication according to both traditional Maori knowledge and scientific principles (Wikipedia 2014).

The 2011 Sharing Power conference emphasised the rights, duties and value systems of indigenous peoples and local communities as custodians of nature and as competent conservationists. It signalled the need for a frank discussion about power within the conservation sector, including examining the relationship between state conservation and the rights and roles of indigenous peoples and local communities.

The trend we are seeing in relation to social policy and the role of local custodians has two distinct elements: a greater assertion and recognition of human rights in relation to conservation; and growing confidence

that sustainability and conservation success require cooperation between professional conservationists and local custodians. These two trends interact with each other around the issues of land tenure, authority and co-management as well as the challenge of science and other knowledge systems (traditional, local, indigenous, spiritual) being accepted within one decision-making process.

The issue of multiple knowledge streams and how to find relationships between different forms of knowledge, data and evidence for conservation management and monitoring has been gaining attention in the CBD and the Intergovernmental Platform on Biodiversity and Ecosystem Services. We also see this in terms of the growth of 'citizen science'—that is, participation in scientific projects by un-credentialed volunteers—and the application of indigenous knowledge in conservation science. Government authorities seem to be slowly recognising the importance of diverse knowledge systems and associated skills, such as traditional tracking and observation competencies. With connectivity conservation, the need to recognise knowledge diversity is even more acute as part of negotiating new social compacts for connectivity landscapes and seascapes, where tenure systems are diverse and much larger social alliances and cohesion are required.

Not everyone appreciates the diversity of human understanding of nature. There are still challenges in harmonising very different approaches to knowledge and values associated with biodiversity, and landscape and seascape management. A scientific approach compared with a culturally based sense of spiritual and ancestral duties to lands, waters and species can focus on different variables, evidence and models. The challenge is not simply to understand that there are different knowledge and value systems available, but also that there is a power dynamic that influences how the holders of the knowledge are respected and treated in their intercultural engagement.

> [I]ndigenous peoples must first and foremost control their own information. It has also become clear over the years that the knowledge base of indigenous peoples is vital, dynamic and evolving. Merely 'collecting' and 'documenting' indigenous environmental knowledge is in fact counterproductive. These knowledge systems have been under serious attack for centuries and the social systems that support them have been seriously undermined … It is not a question of recovery and recording indigenous knowledge, it is one of respect and revitalisation. (Brooke and Kemp 1995:27)

Custodians of local territories have been asserting their role in conservation and governance in combination with multilateral mechanisms that uphold human rights, due process and fundamental freedoms. As leaders or partners in conservation, custodians from outside the civil service, representing diverse constituencies, bring with them diverse values, knowledge and skills. Each such assertion and partnership require an interactive and intercultural process of mediation (Rambaldi et al. 2007; Crawhall 2008).

The newest conceptual addition to protected area multilateral agreements is that of Indigenous Peoples' and Community Conserved Territories and Areas (ICCAs), which received a surge of interest in the past decade and were formalised in the CBD PoWPA in 2010 at the CBD COP 10 in Nagoya (see Chapter 8). This makes it a recent multilateral policy term, but in practice it recognises this age-old global human pattern of managing landscapes and seascapes according to intergenerational responsibilities and belief systems, according to specific governance systems along with concomitant rights and duties. The recognition of ICCAs and the introduction of the Target 11 language on 'other effective area-based conservation measures' suggest an important trend of greater synergies between state-based protected areas, customary conservation measures (including sacred natural sites, indigenous peoples and local community conserved areas) and private conservation estates.

Economic trends impacting on the state, communities and protected areas

It is not possible to think about the future of protected areas without giving sufficient attention to economic trends. For decades, the environmental and conservation sector has been grappling with the evident contradictions between the political pressures to grow economies and the need to conserve our natural heritage and ecosystems.

The main argument presented here is that we are not achieving the balance between economics and sustainability. As noted earlier, this is an issue of values and priorities—not an immutable force in the universe. As such, communications around both economics and conservation remain critical in this generation.

There are different interpretations of what is driving biodiversity loss and the role of our current economic models. According to some writers, one key element is that macro-economics is the dominant national tool for economic planning and measurement. The growth-

oriented and production-based tools for guiding macro-economic policy may distort the picture of our increasing vulnerability and inequality. The bias in such policy instruments may indeed be driving a predisposition to facilitating the spread of extractive industries at the expense of healthy landscapes, seascapes and ecosystems.

Recently, a number of major projects have considered in some detail the relationship between nature and economics: prominent have been The Economics of Ecosystems and Biodiversity (TEEB), the UN Environment Programme (UNEP) Green Economy Initiative (GEI), and the international framework of the System of Environmental-Economic Accounts.

The UNEP GEI, despite criticisms regarding its logic and design (see IPACC 2011), does successfully argue that governments do not understand, evaluate or work with the true value of nature, ecosystem services and natural resources in relation to sustaining human wellbeing, health and nutrition. The failure to calculate the real value of nature in human life is leading to accelerating erosion of ecosystem capacity and with that a growth in human poverty and social disintegration. According to GBO-3, protected areas are apparently the main global policy tool for conservation, yet in practice, protected areas are subject to the same macro-economic trends as other landscapes, and hence we see a growth in mining and extractive industries being permitted in protected areas, including the iconic World Heritage sites (see IUCN 2011, 2013). Though the protected area estate may be growing, we can anticipate that if the current trend continues, the effectiveness of protected areas will continually decrease.

How we should respond to the problem of macro-economic policy that excludes conservation, sustainability and effective landscape/seascape planning is a hotly contested issue. One of the trending responses has been to concentrate on how the environment, ecosystems and nature are to be 'valued'. According to the TEEB and the GEI, the argument is that nature has a number of values that can be understood by national economic policymakers. These may be in terms of their commodity value and longevity; it may involve measuring the value of an ecosystem service, such as the availability of drinking water and its replacement value if damaged or destroyed; or it may consider how alternative industrial and energy pathways could generate new forms of wealth that are not so destructive to the natural environment—for example, the use of solar energy.

The critics of the 'valuation' approach emphasise that putting a commodity value on nature just encourages the private sector and the macro-economists to accelerate the extraction of the good (that is, shift it from its natural state into a commodity of capital value) or it may lead to its privatisation. In the case of the former, this could degrade nature at an ever-accelerating pace, thus increasing poverty and vulnerability; in the latter, it makes some people very wealthy but overall it impoverishes those who are not the owners and they in turn must extract more from a smaller pool of natural resources, creating a downward ecological and human spiral.

The capitalist model of economic organisation has emerged as the dominant system in the 21st century. The wealth and power gap between former colonising and colonised countries has been transformed; though inequalities are greater on a global scale, there are more countries from the global South that are emerging as politically and economically important. Countries such as China, Brazil, India and South Africa have entered the ranks of middle-income countries with their own industrial production bases, and the ability to exploit natural resources and labour markets for their own national territories and in other distant countries. These trends have transformed power relations and energy consumption, greenhouse gas emissions and the demand for raw materials for trade and production. Poorer African countries have found it is in their political interest to engage with both Asia and the West as economic partners and markets for raw resources. Africa increasingly navigates its options in selling to emerging Asian economies from which they also secure advantageous loan and infrastructure cooperation while still maintaining their economic ties to the West, either to the former European colonisers in Europe or to North America and Australia. The current crisis of ivory and rhino-horn poaching, which is driven by Asian consumers unsustainably extracting from African client states, raises interesting issues about where nature fits in such South–South economic relations. The growing capacity and need for fossil fuel extraction have also opened up new opportunities for globalisation of the extraction and commodification of new fossil fuel sources including in sensitive marine environments.

The 20th century was defined by sharp disputes over economic and political theories. The sharpest distinction was between the capitalist 'free-market' Western countries and the alliance of Second World socialist countries, most notably the Soviet Union and the Peoples' Republic of China. Africa, Asia and Latin America all found themselves on a continuum between these polar opposite views of how human political economy should be organised and the role of the state in relation to provision of comfort, wealth and justice.

The interesting aspect, in relation to environmental conservation and sustainability, is that despite the bitter and sometimes violent opposition between these two world views of political economy, both tended to see the environment from an instrumentalist and utilitarian perspective. Capitalists and communists generally considered that any extraction from nature that could contribute to production would help grow an affluent society. The socialist economies are sometimes particularly singled out for their assault on local custodianship to force natural resources into the control of the centralised and planned economy (for a discussion on socialism and the coherence of the peasant economy in Tanzania, see Hyden 1980).

In the capitalist language, production and growth are associated with private initiative, reward and a generally more affluent society from top to bottom. From the socialist and communist perspective, the growth of national production represented an opportunity of wellbeing for the proletariat, who were now the owners of production. Production in the socialist economy was not to be driven by individual benefit, but was intended to achieve a more just and balanced society. In neither case did the environment fare particularly well, nor did the socialist superpowers use their revolutionary model to protect biodiversity and ecosystems; perhaps the best-captured experience of socialist environmental devastation was found at Lake Baikal (for an overview of Soviet environmental issues, see Josephson et al. 2013). The only positive legacy to come out of the experience was that those countries that freed themselves from Soviet occupation and control often emphasised greater attention to environmental conservation. The protection of the local environment and the role of the environmental movement to unite people in the Baltic States were both elements of the transformation process and points of national pride in the post-Soviet period of independence (see, for example, Högselius 2008).

By the close of the 20th century, this great tension between political economic paths was over. The Soviet Union had collapsed and swung into an aggressive form of private capital accumulation and the People's Republic of China, though nominally still communist and steered by the Chinese Communist Party, in practice enthusiastically espoused personal enrichment and the private sector.

Capitalism, growth models and sustainability

To understand more about Western economic theory and the tenacity of an approach to economics that places us on a collision course with the capacity of the planet to sustain us, we turn to one of the classics in considering the assumptions and principles of capitalism in the United States. In his landmark book on capitalism, *The Affluent Society*, John Kenneth Galbraith (1998) provides a summary of capitalism's promises and premises on achieving universal comfort for the Western world. Galbraith's book not only describes the rise of wealth in the Western world and examines its ideological heritage, but also challenges the dominant belief that capitalism is a universal law that governments must recognise and facilitate and not block with regulatory measures.

Galbraith's main argument is that Western civilisation adopted the premise that a society's success was measured by the production of goods, which permitted both income generation and consumption. The cycle of production, income, consumption and further production created, it was believed, a virtuous cycle that created an affluent society, in which universal and trans-historical poverty began to give way to a general shift upwards in wealth. Galbraith challenges this belief, and questions whether such a reductionist view of happiness and wellbeing is adequate for either the individual or the society. He nonetheless espouses the view that capitalism offered (at least to the Western world) a level of economic security and broadly based distribution of resources; that it provided an attractive model of political economy despite its counter-ideologies. Galbraith noted nonetheless that poverty had not been eradicated, and in contrast with earlier systems, the idea that poverty was a problem became a central feature of Western economic and political thinking (Galbraith 1998:238–41).

According to orthodox capitalists, growth in production could be unlimited and was guided by an 'invisible hand' of self-interest, driving the individual to combat threats of scarcity through noble economic pursuit. The marriage of personal interest and the dynamics of supply and demand should, in theory, create an ever-expanding model of economic growth and distribution of wealth. Galbraith's summary returned to the influence of Adam Smith, an 18th-century Scottish philosopher and pioneer of political economy theory who focused on aggregated wealth deriving from a classically liberal model of a capitalist economy (Galbraith 1998:21).

> Every individual … generally, indeed, neither intends to promote the public interest, nor knows how much he is promoting it.

Box 5.3 Macro-economics and environmental decision-making

Macro-economics is the study of the large design and performance of an economy. This can be at national, regional or even global levels. Macro-economics focuses on aggregated information from the whole economy and is influential in national policymaking. Macro-economic policymaking focuses on aggregated indicators such as GDP or the sum of national transactions in goods and services. There has been increasing attention to growth indicators in national economies as well as the scale of trade, consumption and investment.

The set of macro-economic policies is a powerful instrument for change and includes fiscal, monetary and financial policies, income policies, trade policy and the overall balance-of-payments posture. It also includes policies affecting prices of goods that have economy-wide implications (basic foodstuffs, energy, and so on).

Macro-economic policies affect the rate of economic activity and investment dynamics, usage rates of natural resources, relations between real and financial sectors, asset composition of investment portfolios, income distribution and a country's insertion in the international economy. Macro-economic policies play a critical role in structural or economy-wide transformations. From the environmental and sustainability perspectives, they play a role of paramount importance as they determine the aggregate amount of resources allocated for conservation and environmental stewardship. In summary, they affect production strategies and the resource management capabilities of all economic agents, from the largest corporations to the smallest subsistence farmer.

Macro-economics is important because sustainable development is not a notion restricted to individual economic sectors. It is concerned with the aggregate relations of modern economies expressed in the dynamics of income, savings, investment and employment. The fundamental issues of fairness in access to opportunities, the preservation of livelihoods and equitable income distribution are core components of sustainable development. And if we don't bring macro-economics to the discussion of sustainability, we will fail in the endeavour to make this a better world.

CEESP macro-economic specialist Alejandro Nadal has provided a critique of how macro-economic policy shapes sectoral decision-making. His argument is that national governments subsume all sectoral decisions—including in agriculture, energy and conservation—to the larger indicators. The larger indicators do not account for the sustainability of the resources, only their scales of extraction, production and sale. The dangers for the environment are evident, in that ecosystems and biodiversity, including water security, may be destroyed in a quest to increase mining production and exports.

Conservationists, and particularly those interested in community custodianship and the benefits of sustainable use, need to be better informed on what constitutes macro-economic policy and how to influence this level of policymaking. Today the priorities of macro-economic policies, such as price stability and balanced budgets, continue to dominate sector-level and environmental policies. This is why there is insufficient allocation for protected areas, whether they have a community-based management approach or not, and this is why there is little support for small-scale agriculture. In fact, these macro-economic priorities have shaped a style of agricultural policy that in many cases compromises the long-term survivability of protected areas. Macro-economic policies should be subordinated to the overarching priorities of sustainable development, environmental integrity, fairness and economic justice.

Source: Nadal (2011)

> By preferring the support of domestic to that of foreign industry he intends only his own security; and by directing that industry in such a manner as its produce may be of the greatest value, he intends only his own gain, and he is in this, as in many other cases, led by an invisible hand to promote an end which was no part of his intention. (Smith 1904:265)

In Smith's writing, the idea that the aggregation of individual interest generated a pattern for the economy was a novel observation. The idea of the 'invisible hand' soon rose to mythic proportions, particularly in the United States, and continues to inform global macro-economic ideology. Smith, however, did not say that the state did not have a role in mediating social vulnerability, rights or conservation of nature; this was a later extrapolation.

The ideology of the invisible hand—that there is logic to capitalism that is outside the realm of human intervention, and thus needs to be facilitated rather than blocked—has a very direct impact on contemporary decision-making about whether to subject protected areas to the same kinds of economic forces (see also Box 5.3).

The modern interpretation of Smith's invisible hand and the theory that the only economic indicators worth knowing about are ones that demonstrate production or more generally growth of gross domestic product (GDP) can be seen as being in diametric opposition to Ostrom's studies of successful management of natural resources

through systems of common-pool resources. Ostrom has shown that social cooperation and attention to ecosystem capacity, negotiated rules and shared knowledge systems determine successful sustainability. The capitalist creed in its crude form has no such concept of sustainability or even valuation of natural resources other than as commodities or capital. This has major implications for policymaking and the future of protected areas. It equally has an impact on whether decision-makers see landscape and seascape conservation as cooperative actions or subsumed in models of dominion, extraction and commodification. The history of protected areas suggests that we are caught on the horns of this particular dilemma.

Another trend in past decades has been the rise of support for the privatisation of property.

'In every civilized society property rights must be carefully safeguarded; ordinarily and in the great majority of cases, human rights and property rights are fundamentally and in the long run, identical' (Roosevelt 1910:8).

Traditional systems of land and sea management relied on a mixture of family duties and rights over a specific territory or resource, and larger collective control, duties and governance systems, usually finely tuned to ecological trends and the abundance of resources. The degree of exclusion in the governance system—that is, the degree to which one defined human group had exclusive rights, or the conditions for access through reciprocal access—was related to the abundance of the resources, the capacity of the ecosystem to regenerate and the human population pressures on the territory. This is evident in nomadic pastoralist societies, where vast rangelands were rule-governed to ensure sustainability of plant biodiversity, water resources, livestock, wildlife and human populations.

As capitalism became more firmly established in the Western world, the idea of privatising land and resources, and legalising ownership to the exclusion of other users, became normalised and emerged as a dominant theme in Western constitutional law, and from there the trend spread globally to all corners of the planet (for a particular and controversial perspective on property, see de Soto 2000). The collapse of the Soviet Union and the American influence in the reconstruction of Eastern Europe provided an additional boost for the promotion of the privatisation agenda on a global scale. Privatisation is ideologically directly associated with the economic principles of capitalism that wealth and wellbeing are to be measured by production outputs, growth in consumption and trade, and the reduction of a regulatory environment to protect other human values, and in some cases, the wellbeing of nature and ecosystem services.

Privatisation has implications for the future of protected areas. First and foremost, the privatisation of land for industrial production and resource extraction poses major threats to the environment, and the trend is for greater penetration by extractive industries into protected areas than we have previously witnessed. This pattern has even acquired its own acronym: PADDD—protected area downgrading, downsizing and degazettement (WWF 2014). The logic of PADDD is being driven by a macro-economic perspective that views any activity that involves production and commodification as inherently of higher value than any public benefit and resource that will not generate the same indicators.

The other aspect of privatisation has been a concomitant rise in private protected areas. Different parts of the planet have seen various models of land privatisation for the purposes of conservation or at least tourism benefits associated with conservation (effective or otherwise). Further, there have been joint ventures where people of wealth have supported private protected area acquisitions in third countries, particularly as a 'North–South' partnership. There are non-governmental agencies, private foundations and private philanthropists who all support projects to privatise land and bring it into the privately managed conservation estate.

The other pattern is that privatisation of lands and resources poses a direct threat to existing protected areas and other area-based conservation efforts. Africa has experienced a sudden and dramatic process of land privatisation and alienation, leaving indigenous peoples, local communities and conservationists with increasingly fragmented landscapes, where the traditional systems of transhumance and seasonal migrations have been interrupted, placing greater population pressures on smaller areas of available communal lands.

The privatisation trend has not been without resistance: indigenous peoples in some parts of the globe have been highly critical of privatisation, demonstrating how it is inherently insensitive to nature's needs. They call for a socially just compact within humanity, between peoples, and between humans and other species. In 2010 there was a global gathering of civil society in Cochabamba, Bolivia, for the World People's Conference on Climate Change and the Rights of Mother Earth. The Cochabamba Declaration and other efforts by civil society assert that the current economic model is not sustainable, that it is leading to catastrophic climate instability, and that we need to reconsider a more equitable model of 'living

well' with nature and with each other. Gaia Foundation and its indigenous peoples' alliances around the planet have promoted 'Earth jurisprudence' and the rights of Mother Earth, arguing that there are traditional legal systems that recognise the Earth as a living entity and that privatisation and exploitation of natural resources need to be balanced with the rights of the Earth itself—rights that should constrain our rights and actions.

The privatisation trend is accompanied by a parallel process of strengthening multilateral laws and agreements applying to private intellectual property rights. The patenting of life forms and natural genetic material, including seeds, has become a major area of legal contestation. One of the most important pieces of multilateral treaty legislation in recent years has been the Nagoya Protocol on the Access and Benefit Sharing of Genetic Resources (ABS Protocol), adopted by the tenth Conference of Parties to the CBD in Nagoya, Japan. The relevance of the ABS Protocol to protected areas remains to be understood and explored.

Indian civil society has reacted strongly to the threats of seed patenting, legalistic promotion of genetically modified organisms and the privatisation of traditional knowledge. Dr Vandana Shiva has become a global spokesperson for the struggle against what has become known as 'bio-piracy', against genetically modified organisms, the privatisation of life forms and efforts to dispossess the poor of their biocultural heritage. The International Association for the Study of the Commons has hosted a series of global conferences to bring together diverse civil society groups interested in defending common-property natural resource regimes and resilience strategies.

In his summary of the threats to ecosystems and protected areas in Africa, Leo Niskanen, the IUCN's regional expert for East and southern Africa, highlighted that changes in biotechnologies, genetically modified organism (GMO) seed modification and the promotion of biofuels all introduce the potential to penetrate previously hostile biomes and ecosystems for conversion to agricultural uses that were not previously viable (IUCN 2014).

One initiative that struck a global chord of interest was the emergence of the Bhutanese Gross National Happiness (GNH) Index. The term was coined in 1972 by Bhutan's former king Jigme Singye Wangchuk and was subsequently elaborated as a measurement for quantifying the happiness of citizens rather than relying on economic indicators to determine the relative success of a national political economy. The GNH from its inception drew attention to the relationship between nature and human wellbeing, arguing for a strong commitment to conservation as a context for human happiness and sustainability.

The GNH was proffered by Bhutan during the United Nations' preparations of the Millennium Development Goals. At the time, Western economists found it difficult to accommodate a subjective notion of happiness and were more interested in measuring dollar-based incomes and other indicators of basic development. Psychologists found the GNH to be a useful and valid concept and it has remained in global public discourse, particularly in those countries that are finding growth in material wealth does not translate into satisfaction or sustainability.

There is a fulsome literature on economic trends and the relationship between capitalism, globalisation and the use or conservation of natural resources. The issue that will most likely need monitoring, and which is anchored in these economic models, priorities and policy frameworks, has to do with the regulatory system in relation to extractive industries—notably, mining and fossil fuel extraction—which pose direct threats to biodiversity and ecosystems, and increasingly are seen to be violating the boundaries of World Heritage sites and protected areas. Beyond the regulatory policy issues, there is a larger political and conceptual discussion about what matters to humans, what we require to live well and how these issues can be part of macro-economic policy and decision-making.

Extractive industries and protected area effectiveness

The first part of this chapter and various chapters of the book show increasing policy support for protected areas supported by multilateral agreements, norms and targets, increasing professionalism, increasing understanding of the social compacts required for successful conservation, as well as the assertion of both human rights and custodianship duties to achieve conservation objectives. In the section on capitalist economics, we have noted that there is a sharp tension over what value nature has within national economic planning. There are economic trends likely to pose a major challenge to protected areas. A key challenge is the surge of globalised extractive industries and the inability or unwillingness of nation-states to constrain destructive activities in and around protected areas and other fragile landscapes and seascapes.

It is axiomatic that politics and economics have complex and intimate impacts on each other. The global extractive industries have ceased to have strong national roots and have moved into a sphere of autonomy that

the multilateral system struggles to regulate. The state is the primary agency that has regulatory powers over multinationals within their national territory. Some individual states may be showing patterns of reducing their own sovereignty to facilitate access by extractive, mining and fossil fuel industries to resources, which pose a direct threat to the environment in general and protected areas in particular.

Currently, this is expressed as the increased power of multinational extractive industries to penetrate increasingly remote territories and fragile ecosystems, at times regardless of national environmental policies. The state now finds itself with a high degree of authority with regards to protected areas, but is also caught between custodian and customary-use rights claims by local communities and indigenous peoples on the one hand, and the rising influence of privatisation of lands and resources, changing land-use pressures and the power of global extractive industries on the other.

This chapter does not explore the biophysical or social consequences of extractive industries. That literature is available. The trend of interest here is the surprising willingness of an increasing number of countries to proclaim protected areas, to establish UNESCO World Heritage sites and then also grant access to these sites or the general ecosystem for extractive industries, including mining and fossil fuel extraction.

Addressing root causes of this substantial threat to protected areas involves finding connections between different policy tools. This chapter attempts to show that regulatory measures that will protect landscapes and seascapes are likely to be shaped by a consideration of human rights, the assertion of the rights-holders and stewards of locally conserved areas, engagement on valuation and economic policies, and the use of the multilateral system to create norms and standards that shape national policy and behaviours.

In October 2013, at the WILD 10 Congress in Salamanca, Spain, a diverse coalition of interests gathered to generate a resolution on mining and extractive industries in relation to conserved and protected areas. The resolution entitled 'Resolution 12: Building a Global Alliance to assert "No-Go Areas" for Mining and other Extractive Industries and destructive activities threatening World Heritage Sites, and Protected Areas, including Indigenous Peoples' and Local Community Conserved Areas and Territories (ICCAs) and Sacred Natural Sites and Territories' was supported by the Indigenous Peoples of Africa Coordinating Committee (IPACC), the African Biodiversity Network, the Gaia Foundation, the WCPA and the CEESP.

The resolution called for a halt to mining and destructive industrial extraction in protected areas, World Heritage sites, indigenous people's territories and sacred natural sites. The resolution has no legal weight or binding force and was adopted in a forum outside both the UN and the IUCN systems. It does, however, indicate the degree of concern that both conservationists and custodians share about the impacts of mining and extractive industries.

Some indigenous peoples have expressed their concerns that extractive industries and mining are moving into ever more remote rural areas. Where indigenous peoples do not have secure tenure, they are faced with eviction and dire consequences of the impacts. During the Indigenous and Community Lands and Seas Forum at WILD 10, Aboubacar Albachir, the Vice-Sultan of Aïr in northern Niger, recounted the traumas of radioactive pollution from uranium mining on desert communities in that country, and how the massive profits from mining do not go into infrastructure or services within the indigenous territory. The Australian delegate from the Kimberley, Wayne Bergman, explained that they felt they had little choice but to negotiate with the mines directly. Either they negotiated or their lands would be taken without consent and without them being able to influence the impacts. These constituencies may be seen as marginal compared with international mining corporations, and yet we know that human rights and specifically indigenous peoples' capacity to represent themselves, use national and international law, and assert their custodianship role are on the rise rather than on the wane.

It is perhaps surprising, considering how multilateral environmental agreements have flourished since 1992, that we have very few relating to extractive industries or their relationship with protected areas or other conserved territories.

The IUCN has a number of site and ecosystem-specific resolutions on mining and extractive industries from its various congresses. The key global resolution on mining and protected areas came from the IUCN's second World Conservation Congress, in Amman, Jordan, in 2000. Resolution 2.82, 'Protection and conservation of biological diversity of protected areas from the negative impacts of mining and exploration', called for the IUCN and its members to uphold the exclusion of mining from protected area Categories I–IV. The resolution asked member states to use legislation and policy to protect and conserve the biological diversity of these protected areas from the negative impacts of mining and exploration.

Since Amman in 2000, the problem has apparently worsened, with new and more destructive forms of extraction, particularly in the fossil fuel industry, and more penetration into remote and sensitive ecosystems, iconic World Heritage sites and protected areas.

The IUCN is challenged by its expert role in advising the UNESCO World Heritage Committee and the sudden spread of mining contracts and extractive industry permits within World Heritage properties. For example, the United Republic of Tanzania has authorised uranium mining in the Selous Game Reserve, a World Heritage site. As the IUCN prepared for the Sixth World Parks Congress, in Australia in 2014, the Australian Government and the Great Barrier Reef Marine Park Authority had made decisions regarding dredging spoil that posed a threat to the Great Barrier Reef—another iconic natural World Heritage property. The Great Barrier Reef is threatened by several extractive industries, fossil fuel-related pollution sources, associated busy shipping lanes and plans for further coal exporting from Abbot Point. Such threats are being seen on a global scale. The roots of the problem take us back to the tensions about values, custodianship and possibly also changes in the character and interests of the state itself.

During the Sixth World Parks Congress in Australia and the subsequent multilateral meetings, this surge in threats to the environment and protected areas was debated by a broad range of actors and rights-holders. It is less evident that effective coalitions are ready to be formed between groups with different understandings of economics, custodianship and the place of nature in human culture and political economy.

Conclusion

The message of this chapter is that nothing is certain and at the same time we can see a flow of events from cause to effect that shapes our interest in protected areas, their use as conservation instruments and the threats posed to them. Economics, politics and society are the products of complex dynamics but they all originate in the human mind. If we intend conservation of life to be effective, and protected areas are a cornerstone of that strategy, it will continually require both understanding and influencing human values, priorities and decision-making.

Some trends we know are likely to continue; other shifts in values, economics, politics, demographics and climate will shape the future of protected areas. Ignoring the political economy is unlikely to benefit those interested in protected areas; forewarning is key to mitigating the impacts of different trends and shifts in values. Ignoring social constituencies and potential allies is also unwise. The 'fortress' approach to conservation not only poses moral dilemmas; this chapter suggests that it also poses strategic weaknesses as it weakens the sense of custodianship of the people whom one is counting on to support protected areas.

We can see a pattern of shifting scales of custodianship and responsibility for landscape and ecosystem conservation over recent centuries and decades. It is likely that the issue of power and custodianship will remain acutely important. If we consider that ecosystems function at different scales, it is significant that the custodianship and governance of ecosystems, in the context of the Anthropocene, should ideally be aligned to create positive synergies and cohesion. The rights, duties and capacity of each scale of ecosystem governance need to be well attended to and the different scales should not work against each other.

At the May 2013 World Indigenous Network conference in Darwin, Australia, Ashley Iserfoff, the Deputy Grand Chief of the Grand Council of the Cree (*Eeyou Istchee*), made a presentation on how the Cree tribal authority in northern Quebec could not find a suitable national or provincial legislative policy framework to permit a joint land and sea protected area connection. Existing legislation did not facilitate this Cree initiative to improve terrestrial–marine connectivity. With a sense of duty and custodianship, the Cree were able to craft an innovative legal framework, drawing ultimately on their own sense of duty and responsibility. Thus far we have not seen many such holistic approaches to landscape and seascape governance. The rising interest in social and ecological connectivity suggests that this might be the new agenda.

This chapter has argued that the colonial and centralised states, intentionally or otherwise, reduced the authority and powers of local custodians of nature and their powers to govern and respond to environmental changes. The environment progressively became seen as the domain of a centralised state with new scales of planning, landscape and seascape interests and varying degrees of conflict and convergence with the older systems. More recently, state systems have become increasingly integrated into globalised commodity markets where national custodianship is less certain, and new threats are driven by foreign profit motives and commodity markets, sometimes determined by companies on the other side of the planet. This has left landscape and seascape custodianship in complex patterns that mix *de facto* local custodianship with *de jure* national legal authority of the state, and the ambiguous relationship between

transnational commercial interests and national elites. Within this shifting political economy, we also see some degree of ambiguity about the value of nature (intrinsic versus local sustainable use dependency versus utilitarian and commodifying) and what constitutes a human duty in relation to nature and ecosystem integrity.

Most cultures and most religions seem to ascribe value to nature. If this has slipped from human consciousness, it may be a temporary aberration. Perhaps our sudden shift into industrialisation and capitalism created psychological and economic conditions that led us away from both our spiritual insights and the role that nature plays in our wellbeing, health and survival. The current crisis of biodiversity loss, surging human population, breakdown of ecosystem integrity and the rapid destabilisation of our climate will have consequences that may cause humanity to revisit our obligations to the living world. In a traditional system, there were rights, responsibilities, social mores and norms to guide the equitable and sustainable use of nature. These were rule-governed but flexible, and still exist in many rural areas of the world. It is evident that many indigenous, local and spiritually governed territories retain their older forms of governance to this day, along with innovations and transformations. These human constituencies are becoming more engaged in protected area discussions, governance, management and policymaking.

As the world continues to change, whatever future sustainability we hope to achieve will demand reconciliation between human stewardship of the environment and other interests, including wealth aggregation, macro-economics, international politics and the changing nature of the state. What is certain is there is no way back to an earlier way of living; whatever is possible will come from coping with the changing context and finding sufficient will to adjust our impact on the Earth, waters and atmosphere.

The growing international attention to connectivity and larger scales of landscape and seascape management and conservation is not only of scientific interest; it also has major social, political and economic implications. Connectivity conservation landscapes and seascapes by definition take us out of the framework of state-controlled territories, and into complex multi-tenured landscapes, where governance is negotiated with different types of owners and users of lands, waters and natural resources (see Chapter 27). As Worboys et al. (2010) stress, connectivity is not a new technical process of conservation; each case involves substantial engagement with society and interest groups, leading to a new form of social compact that marries diverse interests, cultures and values within an overall paradigm of cooperation.

Another message of this chapter is that just as humans are the drivers of climate change and biodiversity loss, we are also capable of being good custodians. Political economy and the policies that shape both the economy and nature conservation arise in human hearts and minds. They are not separate from our human will, even if they are shaped by systems into which we are born—cultural, economic, social, political and environmental systems that form the foundation for our actions. Conservation and sustainability are a matter of human values, human will and an enabling policy environment.

Simply increasing the number or territorial extent of protected areas is unlikely to achieve the stated aims of conservation. This is particularly true if economic trends that are undermining the effectiveness of protected areas continue to gain momentum at the same time as we are increasing their physical extent. If indeed we are building a bridge of sustainability on one side of the river, while chopping it down at an ever greater rate on the other side, the forecast is for a sudden collapse underneath us and a plunge into a substantially different context.

The synchronisation of scales of governance and scales of ecosystems speaks to a human understanding of both science and value systems. Success hinges on issues of shared duties, allied responsibilities, checks and balances, accountability, authority and responsibility.

For protected area staff, this may all seem daunting or out of reach. With all of the other challenges of professionalising and upgrading conservation capacity, this chapter suggests that sustainable protected areas, in the broad sense of the term, also require an interaction with those who understand and are competent in other disciplines and areas of expertise that may at first seem remote to wildlife management. Not least amongst these is the ability to develop alliances and solidarity with communities, social movements, economists, influence-makers, those in industry and those engaged in legislation and multilateral treaty systems.

The IUCN's Sixth World Parks Congress in 2014 explored the idea of a new social compact—a rethinking of how we work together in different economic, political, cultural and social contexts to ensure custodianship. Sustainability and a custodian-based constituency to support protected areas and other area-based conservation and sustainable use regimes will require solidarity and cooperation, rights and the sharing of benefits, costs and duties. A new social compact to protect the fragility of the Earth and the natural resource base would involve a substantial paradigm shift in which protected areas and connectivity landscapes and seascapes will play a major role.

Masters of Ceremonies presenting at the opening ceremony of the Sixth IUCN World Parks Congress, Olympic Park, Sydney Australia, November 2014. The idea of a new social compact was discussed at the Congress.

Source: Graeme L. Worboys

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