Introduction

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Conservation of biocultural diversity

The year 2010 was declared by the United Nations (UN) as the International Year of Biodiversity, indicating its now widely accepted vital importance. The conservation of biodiversity – the variability and diversity of living organisms on the planet – is fundamental to the health, resilience and sustainability of life on Earth. At a time when many species have been driven to extinction as a direct result of the actions of humankind, with many more similarly threatened, conservation of biodiversity is one of the challenges of our century.

Yet, while the importance of biodiversity and its conservation increasingly gathers momentum, attention is now being drawn to the importance of preserving 'biocultural' diversity, as confirmed for example by the 'Biocultural Diversity Journey' at the IUCN World Conservation Congress in Barcelona in 2008 (McIvor *et al*., 2009) and the publication in 2010 of *Biocultural Diversity Conservation: A Global Sourcebook* (Maffi and Woodley, 2010). The Convention on Biological Diversity also convened in 2010 the 'International Conference on Biological and Cultural Diversity: Diversity for Development – Development for Diversity', with the aim of advancing development of a programme of work on the subject (Convention on Biological Diversity, 2010).

The UNESCO Universal Declaration on Cultural Diversity (UNESCO, 2002) reaffirms that 'culture should be regarded as the set of distinctive spiritual, material, intellectual and emotional features of society or a social group, and that encompasses, in addition to art and literature, lifestyles, ways of living together, value systems, traditions and beliefs' (p. 12). Cultural diversity, the Declaration states,

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'is embodied in the uniqueness and plurality of the identities of the groups and societies making up humankind' (Art. 1, p. 13).

Not only does the concept of biocultural diversity combine cultural diversity, or the variety and richness of cultures in human societies with biological diversity, as shown in Chapter 1, but it recognises that the two should not be considered apart, since cultural diversity is profoundly interrelated with the diversity of the natural environment (Maffi and Woodley, 2010). Loh and Harmon (2005) define global biocultural diversity as the total sum of the world's differences, no matter what their origin. It comprises biological diversity at all its levels, cultural diversity in all its manifestations (including linguistic diversity), ranging from individual ideas to entire cultures; and, importantly, the interactions among all these'. It is, in sum, the diversity of life in all of its manifestations – biological, cultural and linguistic – which are interrelated (and likely co-evolved) within a complex socio-ecological adaptive system (Maffi and Woodley, 2010).

Accepting the biocultural view, thus, means that conservation efforts should not ignore the local human cultural context and should, moreover, only expect to achieve optimum results when undertaking an approach that involves and fully integrates cultural perspectives in nature conservation.

Old values for a new future

From the point of view of the largely positivist tradition of 'Western' thought and science, this new direction is in a sense a return to values that were gradually suppressed. As discussed in Chapter 1, the concept of 'nature' developed from the wider connotation of the Latin *natura*, and the anthropocentric interlinked cultural and natural view during the Renaissance, to a more material meaning during the scientific revolution.

Building on this inheritance, thinkers such as Claude Levi-Strauss began to explore the cultures of other societies, particularly indigenous peoples, no longer viewing them as 'savages' or 'brutes' as had been the case prior to Darwin. Meanwhile, the Western philosophical tradition began to re-engage with questions concerning the natural world and its values: the subdisciplines of environmental philosophy and environmental ethics were born, inspiring and encouraging nature conservation. More recently, the world's major faiths have also rediscovered ecological resonances in their traditional teachings.

While Western societies, religions and politics rediscovered the values of nature, ethnologists revealed that many indigenous peoples had retained an identity and culture which was inseparable from their natural environment. The spirituality and religions of such groups were found to almost invariably hold nature, or certain of its elements – such as a particular species, sites or landscape – to be sacred

or divine. Furthermore, indigenous and traditional peoples, living by spiritual value systems founded upon their precious natural environments, were found to have been living 'sustainably' for centuries, even millennia, before the term 'sustainable development' was even coined.

Political leaders of the indigenous peoples' movement put the dimension of cultural rights on the global agenda, and suddenly, worldviews and cosmologies hitherto considered 'primitive' were seen to be in alignment with the most innovative environmental thinkers of 'global' society, and were recognised as an integral part of the search for new approaches to development, conservation and politics.

Some contemporary philosophies of nature closely connect with traditional value systems and worldviews. For example, there are indigenous traditions that believe natural elements to be manifestations of worldly spirits, including human spirits. Such beliefs, along with the consequent human identification with nature, lead smoothly to a form of 'biocentric egalitarianism' (Næss, 1973, 1989) similar to that promulgated by the contemporary American philosopher Paul Taylor. Taylor surpasses sentience-based environmental ethics to argue that each living thing is of equal inherent worth – and therefore of intrinsic value – by possessing a 'teleological centre of life', i.e. pursuing its own good in its own distinct manner (Taylor, 1986). His 'biocentric outlook' has four main parts which are very reminiscent of certain indigenous worldviews.

1. Humans are members of the community of life on the same terms which apply to non-humans.
2. The Earth's natural ecosystems are a complex web of interconnecting elements, each part interdependent on the others.
3. Each individual centre of life in its own way pursues its own good.
4. It is incorrect and prejudiced to claim human superiority in terms of inherent worth.

Taylor concludes that if we assume the biocentric outlook, we are already behaving as moral agents and are thus adopting a certain ultimate environmental moral attitude toward the natural world. He calls this attitude 'respect for nature'. In adopting an attitude of respect for nature, one is morally bound to promote and protect the good of all living things as individuals. Obligations to groups, species and ecosystems are derived from the interests of their individual constituents (Taylor, 1986).

However, many indigenous value systems go further than biocentric egalitarianism in that they believe the spirit world, and therefore values, permeates all parts of the natural world, not just those that are living. They often go beyond the life-centred to include non-living things – such as water, rocks, celestial bodies;

and natural phenomena – from mountains, rivers and the land itself, to thunder, seasons and winds.

The American twentieth-century conservationist Aldo Leopold, one of the influential figures in the early years of the United Nations Environment Programme (UNEP), similarly went beyond biocentrism in valuing nature. Searching for a 'Land Ethic', Leopold (1987) urged people to realise their symbiotic relationship with the earth and to push back the ethical 'frontier' in order to value the biotic community, or 'the land', in itself (see Chapter 1). For Leopold, we are equal members of this community, which comprises both the living and non-living elements of nature. However, Leopold valued the community, the ecosystem, first: individuals, be they a particular plant, species, site or landscape, are valuable only as they are parts of the community.

Therefore, the world's traditional and indigenous spiritualities and cultures have as much to teach us, and each other, about the values of nature, our place within it and the art of sustainable living as some of the most progressive environmental thinkers and conservationists at the global level. Moreover, the survival and diversity of these traditions are inseparably linked to the well-being of their environments, and their experience and knowledge in living sustainably, while caring successfully for nature, in most cases goes back to times immemorial. The conservation of biocultural diversity aims to protect and maintain this survival and richness.

Learning and gathering knowledge on those things held most sacred by traditional cultures – their venerated species and sites – and researching the effects, linkages and implications for nature conservation, is an important part of working on biocultural diversity. However, there is currently a gap in literature on sacred species and sites with regard to conservation efforts. It is hoped that this book will not only serve as a significant 'brick' in filling that gap, but that it will also serve to inspire a broad research agenda exploring sacred species and sites, and their potential for improved environmental and biocultural conservation. An account of the Parts and chapters of the book is given below.

Part I: From concepts to knowledge

Part I starts with *Sacred species and sites: dichotomies, concepts and new directions in biocultural diversity conservation*, a theoretical preamble to the topic of sacred species and sites, including key issues in biocultural diversity, by Gloria Pungetti. Dichotomies, from the ancient meaning of nature to the modern scientific thinking, are discussed, and definitions of keywords and concepts related to the themes of this book are provided. The state of the art in biocultural diversity is illustrated with an indication of the new research directions on sacred species and sites.

Following that, *Spiritual values and conservation*, a personal account by Gonzalo Oviedo, builds on the discussion between natural, cultural and ethical values in conservation, drawing on examples from both local experiences with indigenous peoples of South America and global conservation efforts. After elaborating on the sometimes tragic tensions between colonial and native traditions regarding sacred nature, we learn of optimistic recent developments, also illustrated in the rest of this book. The author finally calls for the conservation community to consider new approaches to integrate biocultural diversity and spiritual values in development efforts.

In *Protected areas and sacred nature: a convergence of beliefs*, Nigel Dudley and Liza Higgins-Zogib present us with the findings of their research, looking into links between protected areas and sacred lands and waters. As the authors explain, the two principal reasons for designating a protected area are either to preserve its biodiversity or because it is considered sacred. The two different reasons have much more in common than might be apparent initially.

In Chapter 4, *Ancient knowledge, the sacred and biocultural diversity*, Federico Cinquepalmi and Gloria Pungetti delve into the heritage of Italy, and the links between the sacred, the natural sites and their landscape. They contemplate the spiritual role of waters in various ancient traditions and the interactions and connections between Christian and Pagan sites. The authors stress the crucial importance of the traditional sacred sites of Europe for its modern societies in order to fully understand the relationship between communities, their cultures and spiritualities, and the features of their natural environment.

Part II: Sacred landscapes

Ecological and spiritual values of landscape: a reciprocal heritage and custody is the first of four chapters looking at spirituality and natural landscapes. Gloria Pungetti, Father Peter Hughes and Oliver Rackham examine the case of the Casentino forested landscape in Italy, tracing the harmonious development of its natural, cultural and spiritual heritages. We learn how a monastic order has quietly taken the lead as custodian of the local site and species, with the local communities following suit. This shared sense of responsibility, the authors argue, allows a holistic view of the landscape to be promoted, advancing an integrated, biocultural approach to sustainable development in the area.

Edwin Bernbaum, in *Sacred mountains and national parks: spiritual and cultural values as a foundation for environmental conservation*, focuses on mountainous landscapes. He echoes the call for conservation programmes to include the spiritual values of sacred sites and species in furthering their work. Without this integration, he warns, conservation efforts may lose the support of local communities

and stakeholders. His examples from around the world demonstrate, furthermore, that this applies equally to indigenous, as well as contemporary, secular societies.

Within the context of such a modern society, in the next chapter, *The history of English churchyard landscapes illustrated by Rivenhall, Essex*, Nigel Cooper traces the historical origins and developments of English churchyards. He contemplates their original selection, their expansion and recent approaches to churchyard care. Importantly, he highlights the recent recognition of the exceptional biodiversity value of the churchyard landscape, relating to their spiritual value and their ongoing relevance to contemporary society.

Another case from Great Britain is presented in Chapter 8, *Exmoor dreaming*. Paul Sharman draws on Norberg-Schultz's theory of Genius Loci to argue for sacred site and species status at Dunkery Beacon, the highest point on Exmoor – an upland region of south-west England. Sharman calls it 'an ordinary place ritually made extraordinary' and describes how even in a secular context a landscape, or site, and its species can be considered sacred.

Part III: The bond between sacred sites and people

From the 'old' world of Exmoor and England, we then travel with Elizabeth Reichel to the 'new', in a case study of two indigenous Amazonian populations, *The landscape in the cosmoscape, and sacred sites and species among the Tanimuka and Yukuna Amerindian tribes (north-west Amazon)*. With an interest in the 'anthropology of landscape', the author investigates how these indigenous peoples maintain rainforest landscapes and biodiversity through the implementation of shamanic cosmologies in sacred sites and species. She looks at the importance of gender, shamanism, patrilinearity and cosmology in this context, compares this landscape's conservation with that of an adjacent park and concludes by suggesting changes in official conservation management and participatory practices with indigenous peoples.

In Chapter 10, *Sacred natural sites in zones of armed conflicts: the Sierra Nevada de Santa Marta in Colombia*, Guillermo Rodriguez-Navarro describes how indigenous peoples of that region believe in equilibrium between humans and nature, which is vulnerable to human irresponsibility. However, as he points out, this balance refers not only to natural resource management, but also to the spiritual and moral balance of the human individual and, by extension, that of the group to which people belong.

We then move to *Struggles to protect Puketapu, a sacred hill in Aotearoa*, which chronicles the efforts of the Maori group of Ngati Hinemanu in New Zealand to protect the sacred hill of Puketapu. The author, Joseph Selwyn Te Rito, is a member

of that group and so, as readers, we are treated to an insider's explanation of the spiritual and cultural values traditionally held by the Ngati Hinemanu.

Part III finishes with a return to Italian ancient beliefs and traditions, with Grazia Francescato and Daniela Talamo's chapter, *The Roman goddess Care: a therapy for the planet*. Taking the goddess *Dea Cura* as a starting point, the authors look at the history and status of links between conservation, spirituality and indigenous traditions. Sharing personal experiences and insights, the authors conclude by calling for spiritual values to be included in the mission, vision and policy statements of global conservation organisations and institutions.

Part IV: Sacred species

Although sacred species hold conservation significance, many are endangered. In this context, Anna McIvor and Gloria Pungetti present a pilot study on the conservation status of sacred species, in *The conservation status of sacred species: a preliminary study*, exploring whether being considered sacred is a protector from threats. Their review of the literature reveals interesting examples from around the world and highlights the need for further research in this area. In concluding that sacredness alone is not enough to protect a sacred species, the authors show that in the contemporary world an integrated, holistic approach is required, as no one set of values will be enough on its own to achieve ideal conservation outcomes.

Chapter 14, *The role of taboos and traditional beliefs in aquatic conservation in Madagascar*, examines the role of ancestor worship and the complex system of taboos in Madagascar, called *fady*, in relation to natural species and their conservation. The two authors, Mijasoa Andriamarovololona and Julia Jones, share their wealth of knowledge and insight into this subject and call for an improved cultural understanding in the quest for solutions to the numerous challenges faced by efforts to conserve Madagascar's aquatic species and their natural environments.

Water is still addressed by Willam Douros in Chapter 15, *Sacred species of national marine sanctuaries of the United States' West Coast*. Here, we encounter both modern and traditional spiritual values of North America regarding a host of different species, and their interaction and correlation with legally protected marine and freshwater sanctuaries.

Chapter 16, *Integrating biocultural values in nature conservation: perceptions of culturally significant sites and species in adaptive management*, by Bas Verschuuren, investigates the role of sacred species and their sites in newly emerging biocultural approaches to conservation and ecosystem management, something that has until recently been largely ignored. Speaking practically and concretely, Verschuuren explains how investigating the sacred dimensions of species and sites for various

peoples could help to develop new approaches to adaptive management, indicators and participatory monitoring.

Part V: Sacred animals

Mere Roberts takes us back to New Zealand in Chapter 17, *Genealogy of the sacred: Maori beliefs concerning lizards*. For Mere Roberts, indigenous knowledge, 'developed over long periods of time and involving close intimacy between peoples and place', should not be ignored if we want to develop conservation programmes that include local people. We should be inspired by the proverbial Maori description of themselves as a people who 'walk backwards, so that the past is in front of them and constantly guides future actions and decision'.

The first Asian perspective is presented by Wang Nan, Lucy Garrett and Philip McGowan, who describe *Pheasant conservation, sacred groves and local culture in Sichuan, China* in Chapter 18. Their work confirms once again the inseparability of people and nature as we learn of the specific case of natural, cultural and spiritual coincidence in western Sichuan. The authors quite rightly point out that, since China's forests can be considered a result of natural and cultural actions, their safe management and conservation for the future should similarly include cultural values and practices.

Moving further north, Robert Smith then recounts *The bear cult among the different ethnic groups of Russia*. Remarkably, despite numerous political and religious shifts, the ancient veneration, respect and fear of the bear is still intact across Russia and even beyond its borders. The relationship that people and societies in this part of the world have with this enigmatic land mammal is complex, with a whole host of taboos and a rich mythological tradition.

Links between taboos and nature are further explored in Chapter 20, as we return to Madagascar. Kate Mannle and Richard Ladle take us deeper into the world of *fady* with *Specific-species taboos and biodiversity conservation in Northern Madagascar*. We are also introduced to the complex concept of *tsiny*, a spirit type distinct to animals with particularly interesting consequences for nature conservation.

Part VI: Sacred groves and plants

After the animal kingdom, we turn to that of the plants and its own sacred species and sites. Della Hooke examines England's ancient beliefs in sacred trees, in *The sacred tree in the belief and mythology of England*. Despite the anti-pagan efforts of Christianity at various points in history to suppress what it perceived as tree worship, the iconic role of trees is still alive and visible in various cultural and natural examples across the country today. The worship of trees and forests was

certainly not unique to Britain and we witness this today in two other contrasting examples from India and Kenya (Chapters 22 and 23, respectively).

In *Sacred groves and biodiversity conservation: a case study from the Western Ghats, India*, Shonil Bhagwat recommends that the profile of sacred sites be raised in international fora, in order to attract the funding that will be required for their conservation. As he explains, such sites cover a highly substantial surface of the Earth, and are therefore of enormous potential for maintaining biodiversity.

Alison Ormsby seconds this statement in *Cultural and conservation values of sacred forests in Ghana*, with a research carried out in two case studies of Monkey sanctuaries in Africa. Although these are officially protected sites, the majority are culturally protected lands vulnerable to the changing values and practices of the people living around them. The results of her investigation outline the need for additional research in evaluating the role that sacred groves play.

A final case also comes from Africa: *Sacred species of Kenyan sacred sites*, by Jacob Mhando Nyangila. In Kenya, as elsewhere, sacred sites are becoming more vulnerable to destruction as their cultural significance gradually wanes due to societal and demographic changes. Partnership is a must in their preservation, as demonstrated by the example of collaboration between communities and the National Musems of Kenya in conservation of the Kayas. Stakeholders working together are surely crucial anywhere on the planet where biocultural conservation is concerned.

Part VII: Implementation, case studies and conclusions

The concluding chapters provide examples for the implementation of the theory illustrated before, integrating the spiritual value of species to their sites. Gloria Pungetti and Shonil Bhagwat edit a series of case studies, summarised in eight boxes, on holy animals and holy plants. *Sacred species and biocultural diversity: applying the principles* presents study areas from Pan-Europe, Africa, the Middle East and Asia, with worldwide cases from Fauna & Flora International.

Sacred sites, sacred landscapes and biocultural diversity: applying the principles, edited by Gloria Pungetti and Federico Cinquepalmi, proposes case studies on holy landscapes and their peoples, including holy ancient mountains, divided in six boxes. Study areas from Europe, Asia and North America are completed by additional worldwide examples on sacred natural sites and landscapes in technologically developed countries.

The editors of the book, Gloria Pungetti, Gonzalo Oviedo and Della Hooke, wrap up the discussion in *Conclusions: the journey to biocultural conservation*. Natural and spiritual life, traditional ecological knowledge, and lessons from the field are discussed. Several approaches to biocultural conservation for sacred species and

sites are proposed: (a) know-how, empowerment and participation, (b) evolution; (c) ethics; (d) sustainability; (e) biocultural conservation; and (f) advancement – the consideration of future directions.

After contemplating the agenda that lies ahead, the volume closes with spiritual accounts on nature and culture from a number of ancient traditions in Chapter 28: *Epilogue: a spiritual circle*.

The above chapters show an undeniable paradigm shift in nature conservation, with a new agenda put forward by the organisations promoting such a paradigm. Their recent advances are delineated in this publication, which aims to provide a background for future studies.

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