



ASIAN Philosophy of Protected Areas



Asian Philosophy of Protected Areas

Prepared by:

*Amran **Hamzah**
Dylan Jefri **Ong**
Dario **Pampang***

*Centre for Innovative Planning and Development (CiPD)
Faculty of Built Environment
Universiti Teknologi Malaysia
Skudai, Johor, Malaysia*

October 2013

Acknowledgement

This report has been prepared for the IUCN Biodiversity Conservation Programme, Asia, with the generous financial support of the Ministry of the Environment, Japan. The authors would like to thank both the above agencies for their continuous support through the duration of the research, especially to Scott Perkin, the Head of the IUCN Biodiversity Conservation Programme and Tanya Wattanakorn.

Many individuals provided assistance in the form of providing information, comments and suggestions and we are indebted to them. We would like to single out the exceptional contributions given by Nigel Crawhall, Les Clark, Lawal Marafa, Robert Blasiak in giving us constructive comments and suggestions to improve the report. Thanks too to the team from the Centre for Innovative Planning and Development (CIPD), Universiti Teknologi Malaysia for carrying out the fieldwork at Kinabalu Park, Sabah and the subsequent analysis. Sabah Parks kindly provided assistance during our fieldwork and we are grateful to its Director, Mr. Paul Basintal and Mr. Maipol Spait for their continuous help. Finally a big thank you to Yong Jia Yaik and Abdullah Lahat for their technical and editorial assistance.

Amran **Hamzah**
Dylan Jefri **Ong**
Dario **Pampanga**

Table of Contents

	<i>Page</i>
CHAPTER 1 INTRODUCTION	
1.1	Justification for Revisiting Asian Philosophy of Protected Areas 3
1.2	Objectives 5
1.3	Scope of Research and Flow of Report 6
1.4	Purpose of this Report 7
CHAPTER 2 ‘TRADITIONAL’ PROTECTED AREAS IN ASIA	
2.1	Introduction 9
2.2	Definitions and Evolution of Formal Protected Areas 9
2.2.1	Definitions of Protected Areas 10
2.2.2	Evolution of Formal Protected Areas 11
2.2.3	Sacred Natural Sites 18
2.3	Faith-Based Origin of Biodiversity Protection 19
2.4	Harmony Between Nature and Culture: the Asian Perspective 20
2.4.1	China 21
2.4.2	India 25
2.4.3	Japan 26
2.4.4	South Korea 28
2.4.5	Other Parts of Asia 32
2.5	The Contribution of Sacred Sites to Biodiversity Conservation 41
2.6	Shift in International Perception Towards Sacred Natural Sites 42
2.7	Japanese’ <i>Satoyama/Satoumi</i> Biodiversity Conservation Systems 45
2.7.1	The Concept of <i>Satoyama Landscape</i> 45
2.7.2	The <i>Satoumi</i> Landscape 47

2.7.3	The <i>Satoyama</i> Initiative in Biodiversity Conservation	48
2.8	Tagal System of Resource Management	50
2.9	Other Traditional Resource Management Approaches in Asia	51
2.10	Conclusion	53
CHAPTER 3 FROM KINABALU PARK TO THE ECOLINC: REFLECTIONS ON THE EVOLVING RELATIONSHIP BETWEEN PROTECTED AREAS AND LOCAL COMMUNITIES IN SABAH		
3.1	Introduction	55
3.2	Protected Areas in the Sabah Context	56
3.3	Sabah Parks	57
3.4	Section 2: Kinabalu Park	57
3.4.1	Evolving Relationship with Local Communities	59
3.5	Section 3: Crocker Range Park	65
3.5.1	Community Use Zones	66
3.6	Section 4: The Kinabalu ECOLINC	69
3.6.1	Community Consultation	70
3.6.2	The Corridor Plan	73
3.6.3	Local Response Towards Inclusive Approach by Sabah Parks	74
3.7	Discussion	77
CHAPTER 4 SYNTHESIS AND RECOMMENDATIONS		
4.1	Introduction	80
4.2	Synthesis of Main Findings	80
4.3	Concerns Regarding the Threat to Asia's Traditional Ecological Knowledge	84
4.4	Recommendations	91
4.5	Conclusion	99
CHAPTER 5 CONCLUSION		
5.1	Introduction	100
	References	103

List of Figures

<i>Figure</i>		<i>Page</i>
1	Animism as a Common Component in Asian Ethnic Spirituality	36
2	Traditional Indonesian Coastal Zone Management	52
3	Kinabalu Park and the Surrounding Communities	60
4	Settlements within and around the Crocker Range Park	65
5	The Proposed Ecological Linkage between Kinabalu Park and Crocker Range Park	73
6	Causes for Degradation of Sacred Groves in India	86
7	Long Lamai Penan Community Organizational Structure, Sarawak	91
8	Convergence between Formal and Traditional Protected Area Management Principles	92

List of Boxes

Box

1	Impact of Wilderness PAs on Indigenous Peoples	13
2	Traditional and Contemporary Chinese Values of Nature	23
3	Examples of Spiritual Beliefs and Practices Associated with Shifting Cultivation and Conservation Practices in India	26
4	Illustration of the Symbol of Shaso Gakkai Society, an Organization Committed to Sacred Sites in Japan	28
5	Key Elements of the United Nations Declaration on the Rights of Indigenous Peoples of Relevance to Sacred Natural Sites	44
6	Primary Characteristics of <i>Satoyama</i> and <i>Satoumi</i>	47
7	The Description and Objectives of the <i>Satoyama</i> Initiative Defined in January 2010 on its Paris Declaration	49
8	The Return to the Mountain	64
9	Bundu Tuhan Native Reserve	72
10	The Sabah Biodiversity Strategy 2012-2022	79
11	Recognition of Traditional Values	83

List of Tables

<i>Table</i>		<i>Page</i>
1	Summary of Evolution of Protected Areas	14
2	Modern Paradigm for Protected Areas	16
3	Religious/Spiritual Constructs Biodiversity and Human Interaction in Selected Asian Countries	37
4	Examples of Sacred Sites in Protected Areas in Asia with Different Government Strategies	87

Chapter 1:

INTRODUCTION

Most countries within Asia have a tradition of respecting nature which is deeply embedded within their cultures and religions, and many have a long history of setting aside areas for protection. In this light, Asia has witnessed significant growth in the number of protected areas (PAs) over the past 50 years. Internationally, the exponential increase in the number of PAs began from the establishment of Yellowstone National Park in the USA in 1872. Yellowstone is generally acknowledged as the forerunner of the ‘modern’ paradigm of PAs and this Western, or rather colonial model, has strongly influenced how PAs have been established, planned and managed around the world, including Asia. Coinciding with the last 50 years of PA growth has been a shift in perceptions and our understanding of the values attributed to PAs. Today, PAs are increasingly recognised for a broader suite of biodiversity, cultural, economic and social values.

Protected areas in Asia are most often designated by governments using specific legislation so as to provide the legal framework for their protection. Depending on the planning process adopted by a particular country (top down or bottom up/participatory), the local community may or may not be involved in the process of determining the geographical boundary of PAs or the scope as well as the extent of the protection measures. In the case of a top down approach, there is always a lack of integration with traditional land uses and activities within and surrounding PAs, which could lead to conflicts in terms of management effectiveness. As demonstrated in many cases of PAs in Asia, the encroachment by local communities into legally established PAs is a common occurrence, which is often due to necessity forced upon by poverty.

In fairness, most Asian governments have begun to recognise the rights of indigenous communities living within or around PAs to make a living in their traditional manner since the early 1980s. There are success stories in Nepal, the Philippines and Indonesia in terms of community-based approaches to protected area management. In

this light the 3rd. World Congress on National Parks held in Bali, Indonesia in 1982 was considered a watershed event, because for the first time, the role of traditional societies in Protected Areas was given formal recognition (Phillips, 2003; McNeeley, 2007). Since then governments in Asia have started to embrace inclusive PA management policies and governance in which concepts such as Community Conserved Areas (later changed to Indigenous and Community Conserved Areas (ICCAs) have been integrated in their protected area systems. At the supranational level, the 5th. World Parks Congress held in Durban, South Africa in 2003 and the Programme of Work on Protected Areas of the Convention on Biodiversity (CBD) accepted ICCAs as legitimate conservation sites that deserve support and, as appropriate, inclusion in national and international systems.

A quintessential aspect of ICCAs is that they often contain spiritual sites and sacred places, which are increasingly being recognised as ‘traditional protected areas’ that contain high biodiversity besides being essential refugia for endemic species (Wild and McCleod, 2008). However ‘buy in’ from the government, local communities and other stakeholders is crucial for ICCAs to be further integrated into the protected area system of Asian countries. As mentioned earlier, countries such as Nepal and Indonesia have fully embraced ICCAs in which Australia has arguably the best model. Conversely the government of Malaysia has yet to incorporate ICCAs into its protected area system despite reviewing its PA Master List in 2008. Nonetheless during the Workshop on Governance In Protected Areas in Asia, which was held in Akita, Japan in 2011, there was a consensus among the participants that non-compliance could be minimised if there is a high level of ‘buy in’ from the local community during the process of establishing formal PAs. Towards this end, PAs that recognise and overlap with ‘traditional protected areas’ may suffer less from non-compliance and encroachment. Such ‘buy in’, will in turn, facilitate management and enforcement as well as reduce the burden on park managers and rangers in this respect.

In addition there was a call, during the Akita Workshop, for the Asian Philosophy of Protected Areas to be researched and debated so as to provide an alternative and yet useful perspective of how formal protected area systems should be designated and managed. The support for discourse on the validity and potential contribution of the

Asian Philosophy of Protected Areas came about not in rejection of the so-called Western ideology and philosophy behind the establishment and management of PAs. Instead, it was based on the view that revisiting the traditional and ‘other’ values that Asians have for centuries attached to their surrounding environment, in the shape of coexistence and adaptive management, could add value and enhance the effectiveness of the management of PAs in Asia.

1.1 Justification For Revisiting Asian Philosophy of Protected Areas

During the Akita Workshop, there was a consensus among the participants that the social construction of nature from the perspective of Asia as well as the so called Asian values have not been fully incorporated into the ideology, philosophy and approaches that are currently used in the designation and management of PAs. Among the salient points that the participants articulated were as follows:

- Many of the PAs in South-East Asia were designated by governments in response to pressure from international donor agencies to protect sites containing rich but threatened biodiversity but the geographical boundary seldom takes consideration of traditional activities;
- There is a major difference between the social construction of nature from the Western perspective which is often associated with the wilderness, whereas Asian communities would regard humans and nature as sharing the same sphere in the form of a unitary whole;
- This distinction was illustrated in one of the many examples given during the paper presentations, in which the century old practice of calligraphy in caves and limestone hills in China to celebrate the cultural significance of nature through elegant prose would be



Calligraphy adorns natural sites all over China

Source: Sofield, 2009

interpreted as graffiti from the Western perspective (Hamzah, 2011);

- Another significant finding based on desk study of the PA legislations in several countries in Asia was that non-compliance and encroachment by local communities occurred because most PAs in Asia were designated using the ‘wilderness’ or ‘sanctuaries’ approach (Western or colonial concept) instead of the ‘sustainable use approach (man as nature as one) (Toyoda, 2011).
- Site planning and design based on the Buddhist philosophy of ‘Pure Land’ (Amitabha) was instrumental in protecting highly sensitive/precious buildings within iconic cultural sites (e.g. Hiraizumi) from receiving the full brunt of natural disasters namely the Tsunami and major earthquake that hit Japan in 2011.
- There were many scholars in Asia carrying out research related to the Asian Philosophy of Protected Areas but they were working independently in the absence of a common platform to engage with other researchers and to disseminate their research findings in a concerted manner beyond publications in journals and conference proceedings.

The sentiments expressed during the Akita Workshop resonate with the ‘other’ views on the need to revisit the Asian Philosophy of Protected Areas found in the literature. Among others, scholars at the Chinese University of Hong Kong and several universities in southern China have been focusing on the emerging discourse related to the Asian perspective of protected areas, where researchers have been carrying out ground breaking research related to the Dao/Confucius development philosophy (Marafa, 2003; Li, 2011). International collaborators have also been working with researchers in southern China and Hong Kong on this subject matter, especially the husband and wife pairing of Trevor Sofield and Sarah Li (Sofield and Li, 1988a; Sofield and Li, 1988b; Li, 2011). In essence, Sofield and Li (1988a) have argued that the IUCN interpretation of PAs “reflects Western, Judaeo-Christian, positivistic scientific values, which is a bio-centric perspective that is based on a binary between nature (wilderness) and humans (civilization)”. They further countered that “four fifths of the world and their value systems (Islam, Buddhism, Daoism, Hinduism, and Minorities animistic belief systems) see humans and nature as a unitary whole, and do not draw this distinction”. In India and Nepal, researchers focusing on the spiritual elements of protected areas have been very active in documenting and disseminating

their findings on the role and contribution of sacred natural sites especially sacred groves towards biodiversity conservation.

In the light of the above, the research on Asian Philosophy of Protected Areas is timely especially as it will be one of the major themes of the Asian Parks Congress 2013. Broader recognition of an Asian Philosophy of Protected Areas will better define and reinforce the relevance of PAs as part of the region's development and human well-being aspirations. In turn the Asian Philosophy of Protected Areas could have appropriate lessons for the rest of the world. In the wider perspective this research is intended to demonstrate that the State and policy makers are not the only custodians of the fragile landscape and seascape in Asia, and that governance should extend to the local scales to include local communities, religious groups and minorities practising shamanistic and animistic traditions. This report argues that while there is no single Pan Asian approach to biodiversity conservation, there are ample success stories from Asia in relation to traditional and community-based approaches, which should be celebrated and possibly replicated, to complement the approaches that many Asian countries have inherited.

1.2 Objectives

- To carry out a literature review of the traditional concepts of 'protected areas' in Asia especially the relationship between humans and the natural environment from the perspective of Buddhism, Hinduism, Islam, Taoism, Shintoism and Animistic beliefs etc.
- To review existing laws, policies and the governance of PAs in Asia to identify common ground and best practice in terms of the recognition of traditional and spiritual values, and to highlight how Asia's approaches differ from the colonial models inherited from the West.
- To recommend strategies and measures to further improve the effectiveness of the management of PAs in Asia through better partnerships in governance, expanding 'buy in' from local communities and the incorporation of traditional values and approaches to strengthen the relationship between conservation and human development.

1.3 Scope Of Research And Flow Of Report

The scope of the research is focused on the traditional development philosophies in Asia to tease out the basic principles and commonalities so as to offer an alternative to the so-called colonial approach in protected area management. It is acknowledged that Asia is a vast continent with a plural society, and therefore, this is not an attempt to undertake a comprehensive review of the development philosophy of each and every Asian country, ethnic group or religious grouping. Instead it is an exploratory research to stimulate interest and discourse among policy makers, conservationists, academics and the general public, that could pave the way for better governance and more inclusive biodiversity conservation strategies and policies in Asia. This chapter (Chapter One) presents the background, objectives and scope of the research.

The research is primarily based on literature review (Chapter Two) to capture the essence and principles, and although the researchers have tried to be as representative as possible, there is a lack of available literature on the traditional use of natural resources in certain countries and ethnic/religious groups in Asia. Overall there is abundant literature on Daoist, Japanese (Shintoism) and Indian philosophies but scarce written information on Malaysia and Indonesia. In the latter, traditional knowledge is basically confined to an oral tradition, and to overcome the problem of lack of information in the literature, semi-structured interviews were carried out with selected key informants who represented their particular ethnic/cultural grouping such as the Kelabit ethnic community in Sarawak and the Bugis artisanal fishing community in Makassar/Sulawesi (Indonesia).

In addition, this research does not attempt to ‘reinvent the wheel’ by duplicating the excellent work on the related subject of sacred natural places by the IUCN/WCPA Specialist Group on Cultural and Spiritual Values of Protected Areas (CSVPA). Instead it refers and direct readers to the numerous case studies published by CSVPA and related publications to highlight the interface between the Asian perspective of Protected Areas and sacred places. Essentially, this report uses the case studies extracted from the literature to draw the attention of readers to the rich ‘traditional ecological knowledge’ (Berkes, 2012) of Asia and the communities between them.

To avoid being sucked into romanticism, the authors subsequently conducted an actual case study in Malaysia to examine the changing role of sacred sites and traditional values in a contemporary society living around a PA in Sabah, Malaysia (Chapter 3). The aim of this case study is to investigate the relevance of ‘traditional protected areas’ in the modern world in shaping the management of formal PAs, and whether the traditional philosophy based on beliefs and taboos could further strengthen the effectiveness of the management of PAs in Sabah, with lessons for the rest of Asia.

In Chapter 4, the main findings from this research were synthesised to identify gaps and opportunities which were subsequently used to recommend strategies and measures to further improve the effectiveness of the management of PAs in Asia. Central to the recommendations is the incorporation of traditional Asian values and approaches to strengthen the relationship between conservation and human development. Finally Chapter 5 (Conclusions) reflects on the challenges in formulating a Pan Asian approach in biodiversity conservation.

1.4 Purpose Of This Report

This report recognizes the fact that Asia is too diverse with a plural and rapidly changing society to have a common development and conservation philosophy. It will not do justice to the heterogeneous communities in Asia to attempt a comprehensive review of each and every country’s philosophy which would probably end up in superficiality and ‘drown’ the readers in a sea of information.

Instead the research on the Asian Philosophy of Protected Areas seeks to identify the commonalities across the region in terms of the symbiotic relationship between humans and nature as well as the imbedded spiritual elements that make Asia’s perspective distinct from the colonial worldview. Rather than providing answers or a common philosophy, this publication will invite readers to rediscover the distinct ancient wisdom and traditional ecological knowledge of the various cultures and religions in Asia, and how they could be made relevant to contemporary approaches to resource management and biodiversity conservation in the face of the rapid rate of urbanization and modernization the region is experiencing. The report is specifically

prepared for the participants of the Asian Parks Congress to be held in Sendai, Japan in November 2012. For this reason it is presented in a user-friendly manner appropriate for readers ranging from government representatives to local community leaders.

Chapter 2:

‘TRADITIONAL’ PROTECTED AREAS IN ASIA

2.1 Introduction

Most Asian countries have entrenched traditions that feature embedded relationship between culture and the natural environment. Despite this, Asia had often moulded its perspective on conservation based on a colonial inheritance that could be considered an as ‘adopted paradigm’. However, and as highlighted in the previous chapter, there is an emerging movement that is challenging the accepted colonial construct of protected areas and biodiversity conservation as a whole. This movement is also calling for the incorporation of Asian values in the ideology, philosophy and approaches in the current framework of the designation and management of PAs.

This section offers a summary of the latent generally accepted concepts and Asian intricacies by focusing on the ‘traditional concepts’ of protected areas that emphasise synergy between man and the natural environment, notably from the context of various Asian faith-based cultures. The aim of this chapter is not to provide a country-by-country (or culture by culture) narrative of the Asian perspective of protected areas but to highlight the commonalities between them, which when taken together, would form the basis of an alternative to the colonial perspective.

2.2 Definitions And Evolution Of Formal Protected Areas

As mentioned earlier, sacred natural sites and spiritual places are essentially ‘traditional protected areas’ created by the beliefs and taboos of traditional communities. To better understand the philosophy embedded in Asia’s traditional approach to the protection of the natural environment, there is a need to revisit the definitions of formal protected areas and their evolution and gradual convergence with ‘traditional protected areas’.

2.2.1 Definitions Of Protected Areas

There are two dominant definitions of ‘protected areas’ forwarded by international organisations which deal with biodiversity conservation and the protection of the environment. The definition of ‘protected area’ given by IUCN is “*area of land and/or sea especially dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural resources, and managed through legal and other effective means*” (IUCN, 1994).

This IUCN definition for protected area was further refined after several years of negotiations with the new official definition being introduced during the IUCN World Conservation Congress in Barcelona in 2008. This refined definition was intended to apply to all types of protected areas: terrestrial, freshwater, coastal and marine areas, which now reads:

“a clearly defined geographical space, recognised, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values.” (IUCN, 2008).

The Convention on Biological Diversity (CBD) defines protected area in Article 2 of the Convention as a “*geographically defined area, which is designated or regulated and managed to achieve specific conservation objectives.*” (CBD, 1992).

The key elements in the definition of protected areas are the legality of the designation and the need for systematic management and governance structure. In this light, Philips (2003) has succinctly combined the key features of the two definitions of protected areas as having the following characteristics:

- a. To be area-based concepts that might be found anywhere;
- b. To require specific measures (dedication, designation, regulation) for the purposes of bio-diversity conservation (protection and maintenance);
- c. To require management, delivered through legal or other effective means; and
- d. By implication, to require that some kind of management authority is in place to secure conservation.

2.2.2 Evolution Of Formal Protected Areas

The concept of formal protected areas has its early beginnings in the 1800s. In the Western world, various forms of national parks were being created during this period. The Portuguese colonial government of Brazil had initiated the protection of Tijuca National Park in 1861; the Blue Mountains National Park of New South Wales was established in 1866; the Royal National Park in Australia in 1879; the Queen Victoria Niagara Falls Park in 1885 and the Algonquin National Park (later named Algonquin Provincial Park in 1893) were created by the Provincial Government of Ontario, Canada (Phillips, 2003). But it was the designation of Yosemite National Park in 1864, followed by Yellowstone National Park in 1872 by the US government that gave birth to the Western approach to nature conservation and concept of protected area.

Central to the early Western model of protected areas was the construct that nature should be preserved as ‘wilderness’, ‘primitive’, ‘untouched’ and ‘without inhabitants’ – as idealized by John Muir, one of the leaders of the national parks movement in the USA (Colchester, 2010). However the notion that the Western model of protected area was created out of wild and untouched areas is a fallacy given that the local inhabitants had to be removed and excluded from the park, more often than not, forcibly. The creation of Yosemite National Park involved a “bloody war of extermination of the Miwok people... and repeated forced eviction of the remnant Miwok settlements over the next 105 years” (Keller and Turek, 1998 in Colchester, 2010). In similar circumstances, the Yellowstone National Park was established during the ‘Indian wars’ waged to subdue Indian autonomy in the establishment of the ‘United States’. In upholding the concept of preserving the wilderness to be set aside for recreation, the indigenous people were thus excluded and banished from their ‘primitive and natural’ settlements (Keller and Turek, 1998 in Colchester, 2010).

Phillips (2003) opined that the US model of protected areas is basically for the purposes of conservation, protection and enjoyment by future generation and also added that “this model was, and remains a simple but powerful expression of a peoples’ concern to protect their heritage for all time”. However, the notion that ‘wilderness areas should be set aside for recreation to fulfil and emotional need for

wild places' (Colchester, 1994) have resulted in the eviction and displacement of indigenous communities all over the world including Asia. In the same light, the concern that the recreational purposes of protected areas might overwhelm the conservation justifications was expressed by Barros (2005), who countered that the Western perspective of protected areas (i.e. preservation and recreation), has created a tension between the two values and that they must be resolved in ways relevant to each case determined not only by the nature of park but likewise the political, economic and legal framework within which they operate.

Significantly, the US model of nature conservation and protected areas, which was essentially based on colonial values, was exported to all over the world and had been adopted by many countries including those in Asia. This 'wilderness' or 'sanctuary' approach to nature conservation continued to exclude the local inhabitants, which led Phillips (2003) to summarize that up to the 1970s, governments had largely ignored the rights and opinions of indigenous peoples. In this light, Colchester (2010:149) summarized the social impacts of the 'wilderness' approach to nature conservation on indigenous peoples:

BOX 1.

Impact of Wilderness PAs on Indigenous Peoples

- Denial of rights to land;
- Denial of use and access to natural resources;
- Denial of political rights and the validity of customary institutions;
- Disrupted kinship systems;
- Disorganized settlement patterns;
- Loss of informed social networks, fundamental to the local economy;
- Undermining of livelihoods, loss of property, no compensation;
- Poverty;
- Disruption of customary systems of environmental management;
- Enforce illegality = people become 'poachers', 'encroachers' and 'squatters' on their own land and are subject to petty tyrannies by park guards;
- Forced resettlement;
- Leadership systems destroyed;
- Symbolic ties to environment broken;
- Cultural identity weakened;
- Intensified pressure on natural resources outside the protected areas; and
- Popular unrest, resistance, incendiarism, social conflict, and ensuing repression.

Source: Colchester, 2010

In his review of the evolution of the concept of protected areas, Phillips (2003) highlighted that the 1st. World Conference On National Parks, held in the USA in 1962 mainly focused on scientific management, species protection and the exclusion of damaging development. Ecosystems protection was the main emphasis of 2nd. World Conference On National Parks, which was also held in the USA in 1972. Phillips (2003) argued that the 2nd. conference failed to address the connections between protected areas and development, and between protected areas and the surrounding environment. In addition there was little interest shown in local communities or indigenous peoples except as a threat to protected areas. The 3rd. World Parks Congress in Bali, Indonesia in 1982 was regarded as a watershed as it was the first Congress to link protected areas and development questions as well as acknowledging the key role of local and indigenous groups (Phillips, 2003). The

resolution included ‘the implementation of joint management arrangements between societies which have traditionally managed resources and protected area authorities’ to reflect the ‘the rights of traditional societies to social, economic, cultural and spiritual self-determination’ (www.iucn.org).

Among the factors that were forcing this change in emphasis and approach were the increasing cultural and social awareness and advances in human rights (Phillips, 2003; Colchester, 2010). The new emphasis on the role of indigenous communities and traditional knowledge was further exemplified in the 4th. World Congress On Protected Areas, held in Caracas, Venezuela in 1992. Among the related themes of the Congress were *People and Protected Areas* and *Partnerships for Protected Areas*, which were appropriate to capture the growing pressure for the rights of indigenous communities to be given better attention given that most protected areas were inhabited by them (Colchester, 2010).

The 5th. World Parks Congress held in Durban in 2003 came out with a consensus document called the Durban Accord which recognised a new paradigm for protected areas which celebrated the role of indigenous societies in nature conservation and pledged for their inclusion in the decision making process involved in PA management in an equitable manner. Phillips (2003) captured the shift from the ‘old paradigm’ to the ‘new paradigm’ in PA management, which has influenced recent developments and international commitment related to the inclusion of indigenous societies, notably the United Nations Declaration on The Rights of Traditional People (2007), and their position as rights-holders rather than stakeholders (**Table 2**).

Table 1. Summary of Evolution of Protected Areas

Year	Milestones	Protected area constructs/recommendations
1872	Designating Yellowstone National Park as protected area (national park)	US National Park Service was created in 1916 “to conserve the scenery and natural historic objects and wildlife therein and provide for the enjoyment of the same in such a manner and by such means as will leave them unimpaired for the enjoyment of future generation” (Clout, 1972: 85)
1962	1 st . World Conference on National Parks,	<ul style="list-style-type: none"> • Park interpretation services • Scientific research-based management • Protected areas definition and standards

Year	Milestones	Protected area constructs/recommendations
	Seattle, USA	<ul style="list-style-type: none"> • Exclusion of damaging development • Inclusion of support for protected areas in aid programs • Marine protected areas • Species protection by protected areas
1968	Africa Convention on Nature and Natural Resources	<ul style="list-style-type: none"> • Conservation area – any protected natural resource area, whether it be a strict natural reserve, national park, or special reserve • Strict nature reserve – an area under State control which forbids hunting, fishing, and even reside, enter, traverse or camp • National park - area under state control, exclusively set aside for propagation, protection, conservation and management of vegetation and wild animals; hunting, killing and capture of animals, destruction & collection of plants are prohibited to enable the public to visit the park • Special reserve – other protected areas such as ‘game reserve’ where hunting, killing, capture of fauna is prohibited; human settlement and activities prohibited
1972	2 nd . World Conference on National Parks, Yellowstone and Grand Teton, USA ¹	<ul style="list-style-type: none"> • Conservation of representative ecosystem • Conservation of tropical forests • Conservation of North and sub-Polar ecosystems • Marine national parks and reserves • Establishment of Antarctica as World Park under UN administration • International parks • Regional systems of national parks and other protected areas • Conservation of world heritage • Wetlands conservation • Standards nomenclature for protected areas • Integrity of national parks and equivalent reserves • Usage of national parks • Detrimental effects of vehicles, boats and aircraft in National parks and other protected areas • Research on national park values • Planning national parks and other protected areas • Exchange of information • Technical and financial assistance for national parks • Training • Interpretation services for national parks • Education in national parks and other protected areas
1982	3 rd . World	Other than the standard topics, the following were included in

Year	Milestones	Protected area constructs/recommendations
	Congress on National Parks, Bali, Indonesia ²	the agenda <ul style="list-style-type: none"> • The role of protected areas in sustainable development • Protected areas and traditional societies • Conservation of wild genetic resources • Development assistance and protected areas
1992	4 th . World Congress on National Parks, Caracas, Venezuela	New emerging themes <ul style="list-style-type: none"> • Global change and protected areas • Global efforts to conserve biodiversity • People and protected areas • Financial support for protected areas • Protected areas and the sustainable use of natural resources • Partnership for protection areas • Ecological restoration
2003	5 th . World Parks Congress, Durban, South Africa	Seven vertical themes <ul style="list-style-type: none"> • Linkages in the landscapes/seascapes • Building support for protected areas • New ways of working together – Governance of protected areas • Developing the capacity to manage – Capacity building • Maintain protected areas for now and future – Management effectiveness • Building a secure financial future – Finance and resources • Building comprehensive protected are systems – Gaps in the system Three cross cutting themes <ul style="list-style-type: none"> • Marine protected areas • World heritage • Communities and equity • Durban Accord

Table 2. Modern Paradigm for Protected Areas.

As it was: protected areas were	As it is becoming: protected areas are
Planned and managed against people	Run with, for, and in some cases by local people
Run by central government	Run by many partners
Set aside for conservation	Run also with social and economic objectives
Paid for by taxpayer	Paid for from many sources
Managed by scientists and natural resource experts	Managed by multi-skilled individuals

As it was: protected areas were	As it is becoming: protected areas are
Managed without regard to local community	Managed to help meet needs of local people
Developed separately	Planned as part of national, regional and international systems
Managed as ‘islands’	Developed as ‘networks’ (strictly protected areas, buffered and linked by green corridors)
Established mainly for scenic protection	Often set up for scientific, economic and cultural reasons
Managed mainly for visitors and tourists	Managed with local people more in mind
Managed reactively within short timescale	Managed adaptively in long term perspective
About protection	Also about restoration and rehabilitation
Viewed primarily as a national asset	Viewed also as a community asset
Viewed only as a national concern	Viewed also as an international concern
Managed in a technocratic way	Managed with political considerations

Source: Phillips, 2003

Despite the growing international recognition for the rights of indigenous communities in the management of protected areas, Colchester (2010) reported that the actual implementation have been uneven, adding that while reform efforts were taking place in Asia, the colonial model of conservation was still being implemented by most governments. Upon reflection the sentiment expressed by the participants of the Akita Workshop in 2011, that Asia has a distinct approach towards the management of protected areas, was actually a call for more actions to be taken to realise the ‘new paradigm’ in protected area management, in which Asia is assumed to have a major role to play. Before Asia could make a significant contribution towards the ‘new paradigm’, it is argued that the various Asian development philosophies should be revisited and understood, with the intention of providing a sound theoretical basis for practical actions. The suggested starting point is a review of the existing body of knowledge on sacred sites as the main component of ‘traditional protected areas’.

2.2.3 Sacred Natural Sites

Sacred natural sites are basically known as areas of spiritual significance to people and indigenous communities, which are considered as the subset of sacred sites (Wild and McLeod, 2008). Essentially sacred sites may include natural sites such as forests with limited built-up areas with man-made structures (e.g. temples). These sites, which are considered as having some spiritual significance to some people, especially ethnic and indigenous peoples, are also called, interchangeably, as spiritual landscapes.



Buddhist Monastery in Nepal

Source: <http://www.vasudhaiva.com>

Sacred natural sites have also been defined as “areas of land or water having special significance...and spiritual meaning to indigenous peoples and animists who believed that things in nature have souls or consciousness, have practiced conservation of sacred sites considered to be home of gods, center of creation, or landscapes of legends and lore (Jeanrenaud, 2001).

In the physical form, sacred natural sites may include forests, water bodies, caves, and vegetation within and its proximities (Gottlieb and Natadetcha-Sponsel, 2004; Dudley, *et. al*, 2005; Wild and McLeod, 2008; Verschuuren, *et. al*, 2010). In addition sacred natural sites have spiritual attributes such as being considered holy, venerated or consecrated according to a particular religion or belief system, or set aside for spiritual purposes which were arguably established by indigenous people, ethnic folk religions and spiritualities or mainstream religion co-optation (Verschuuren, *et. al*, 2010).

In essence sacred natural places and spiritual landscapes have been created through traditional beliefs and taboos, and traditional societies in Asia believed that bad things would happen to them if such places are violated. This explains why sacred natural places and spiritual landscapes have long been considered as ‘traditional protected areas’. Most importantly, sacred natural sites include places that contain rich

biodiversity that sometimes exceed formal protected areas and lush forest reserves (Dudley *et. al*, 2010; Bernbaum, 2010), therefore making the ecological richness of sacred areas worth conserving and protecting. The preservation and protection of sacred natural sites are also intimately intertwined with livelihood and sources of “well-being” (Delgado *et. al*, 2010) which is typical in the Asian setting (Gottlieb and Natadetcha-Sponsel, 2004; Dudley *et. al*, 2005, 2010; Shengji, 2010; Godbole *et. al*, 2010; Sampang, 2010). This economic-related human interaction is fundamentally grounded on the lush biodiversity within and proximate locations of specific sacred natural sites.

2.3 Faith-Based Origin Of Biodiversity Protection

Long before it dawned on governments to institutionalise national parks or policies in defining areas worth protecting, societies including those in Asia were already involved in ‘traditional’ conservation efforts based on the identification and protection of sacred natural sites. According to her review of historical and ethnographic accounts, Allerton (2009a) wrote that Southeast Asian cultures have a common belief that the world inhabited by humans was intersected by a spiritual invisible dimension which she calls “spiritual landscape.” These spiritual and religious-based phenomena have evolved traditionally and are considered to be the fundamental pre-conditions which led to the conservation and protection of these areas. In many countries, sacred sites have been shown to have a major effect on conservation, ecology and environment due to the special precautions and restrictions associated with them.

Ramakrishnan (1996) pointed out that sacred places are closely linked to taboos and prohibitions, and the resulting limited human activity frequently encourage old growth vegetation, integrated nutrient cycling with high soil fertility, and the presence of many ecologically and socially valuable plant species. Dudley, *et. al*, (2005) and Higgens-Zogib (undated) have identified two broad approaches in which faiths can directly influence location-based protection and biodiversity conservation:

- a. Through the direct and often very effective protection afforded to wild species in sacred natural sites – groves, lakes and so on – and semi-natural habitats around religious buildings; and
- b. Through their profound impact on our attitude to protection of the natural world with their philosophy, teachings, investment choices, approaches to land they control and through religious-based management systems

In traditional societies oral stories and myths, especially in relation to their surrounding natural environment, are handed down from generation to generation, which created the awareness and recognition of the presence of sacred natural sites (Wild and McLeod, 2008). In this respect, mountains have always been special to humanity as spiritual symbols, and so are forests and trees which have spiritual relationships to the teachings and beliefs of Hinduism, Buddhism, Islam, Judaism and Animism. In essence, these sacred natural sites are supposed to contain ‘numina’ or spirits, deities or holy presence (Bryne, 2010), which are highly respected and protected by the community even though they do not have legal jurisdiction over them. It should be highlighted that there have been doubts among sections of the scientific community about the ecological value of sacred sites and their lack of legal protection mechanism, especially in light of increased visitation. However, the two most authoritative publications on the subject matter, *Sacred Natural Sites: Conserving Nature and Culture* (Verschuuren *et. al*, 2010) and *Sacred Species and Sites: Advances in Biocultural Conservation* (Pungetti *et. al*, 2012) provide ample evidence that i) sacred sites have been accepted by mainstream faiths; ii) they sometimes contain more biodiversity than formal protected areas; and iii) that their contribution towards biodiversity value warrants inclusion in national conservation strategies.

2.4 Harmony Between Nature And Culture: The Asian Perspective

In the Asian setting, nature and culture have been woven together naturally like a single tapestry which embodies the concept of cultural landscape. Essentially it

endogenously features an eternal relationship between the natural environment, humans and their culture. More often than not, Asian traditions and beliefs have been shaped by the merging of indigenous animism with mainstream religions such as Hinduism, Buddhism, Islam and Christianity which are evident in Thailand, India, Indonesia and the Philippines (Gottlieb and Natadetcha-Sponsel, 2004; Allerton, 2009b; Byrne, 2010; Sampang, 2010; Verschuuren *et. al*, 2010).

2.4.1 China

In ancient China, sorcery and primitive religion were endemic before the Eastern Chou Dynasty (Fan, 2006). As a symbol of power, nature was embodied by mountains and bodies of water. The function of gardens (enclosed areas) during the Zhou dynasty was more associated with religion and sacrifice and did not possess humanistic values or human attachments. Its religious features began to decline when the humanism movement was introduced by Confucius, during which nature began to have a humanistic philosophical meaning and independent aesthetic values of nature began to be revealed. Ethics and morality were among the values instilled by the humanism movement valuing both the philosophical and cultural perspectives.

During the Zhou dynasty, traditional culture was dominated by the “unique social class called *Shi* - the scholar” that had great influence on the ruling class in ancient Chinese society (Fan, 2006). Essentially this unique social class together with the ruling class generated and represented the Chinese culture, which combined the *oneness* of Confucius’ moral and ethical philosophies and Daoism’s regressive outlook on life and its romanticism. The system created by this ‘hybrid’ spawned ancient Chinese philosophies that gave birth to physical manifestations in the form of *Shanshui* (mountain and water) landscapes. The *Shanshui* landscapes are the quintessential representation of the traditional Chinese philosophy, *oneness with nature*, which requires humans to keep harmony and unity with nature (Zhou, 1999).

The Daoist concept of ‘leaving the world’ by wandering in nature while debating philosophical metaphysics (Dao Di Jing in Fan, 2006) formed distinct Daoist characteristics namely “the return to nature and a romantic escape from the world, rural ideal of life and the worship of primitive simplicity (Lin, 2001). The advent of

Buddhism, interestingly as a philosophy for Chinese scholars but as a religion for the common people, complemented Daoism given that Buddhism “as a religion declares the vanity of the world, offers a refuge from the pains and vicissitudes of this earthly life” (Lin, 2001:123). Daoists also believed that immortals have a special spirit and the places they inhabited must be special as well, so they were very strict with the natural setting where they would live and travel. In addition they have a finely honed ability to appreciate nature, including water, mountains, plants, and even clouds, as well as all the elements as a whole resulting in the birth of the concept *Fengshui* as a form of geomancy (Zhang, 1992).

Ma *et. al*, (2008) noted the deep influence of Confucianism and Daoism on the Chinese philosophy related to the preservation and protection of natural sites in China. Unlike the perspective of western practices, which is focused on preservation and recreation, Chinese moral philosophers believe in harmony between nature and humans, which has become a focal point in the conservation of sacred sites in China (Ma *et. al*, 2008)

BOX 2.*Traditional and Contemporary Chinese Values of Nature*

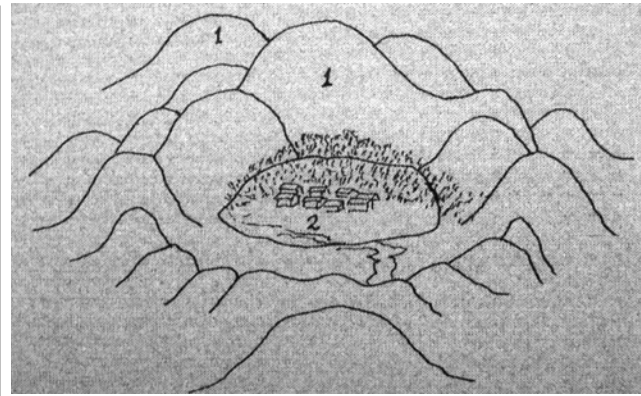
Values	Traditional	Contemporary
Philosophy	Ontology of Philosophy Confucianism Daoism	--
Aesthetics	Greatest beauty Objects of aesthetics To power moral cultivation	Visual pleasure Aesthetic consumption
Culture	Origins of landscape culture achievements Represents Chinese high culture Scholar's interests and personalities	Mass consumption
Morality	Symbols of great human morals	--
Economy	Agriculture	Object of capital Utilitarian Landscape commodification Tourism industry
Ecology	Based on <i>Fengshui</i> theory Pursuing long life as immortals	Physical and emotional health Wilderness
Life	Artistic way of life Settlement Extension of home Pleasant and enjoyable place Meaning of life	Place to escape from city life Settlement Extension of home Enjoyment and amusement Achieving instant sensuous delights
Politics	Connect to imperial power Retirement place for scholars	Capitalized for economy and politics Privilege of the elite class Symbol of wealth
Social	To balance the powers between serving society and retiring from society to eliminate social conflicts	To heal the illness of urbanization Escape from urban life

Source: Fang, 2012

However, in the context of harmony between humans and nature, the Daoism worldview considers the latter as being imperfect and sometimes imposing, therefore human intervention such as the erection of a pagoda is often required to achieve 'tezhi' (essence) (Sofield and Li (2007). In the same light, Ma *et. al*, (2008) argued that man-made pagodas, gardens, temples among others, consistent with valued heritage and cultural inheritance serve as a fusion with nature thereby creating

harmony, which in effect add to the sacredness of the natural site as places for meditation.

As an essential element of the Daoist philosophy, sacred (fengshui) forests in China are still regarded with respect. The animist Dai (T'ai) indigenous people of Yunan Province in China are still engaged in the protection of sacred forests through traditional practices for the protection of species and natural ecosystem (Shengjie, 2010). All ethnic groups in Yunan have established cultural value systems based on respect for the biological environment. According to Shengjie (2010) the traditional sacred forests or Holy Hill, known as *Nong* in the Dai language, are regarded as areas where gods reside. The Dai believe that the spirits of dead great and revered chieftains go to Holy Hills. The Yi, Hani, Yao, Bulang, Lahu, Jinuo, and Kemo people preserve forests in their surrounding mountains and have an extensive concept of holy trees and sacred forests, religious beliefs, including shamanism, adaptive Buddhism and even Catholic practices (Shengji, 2010; Jeanrenaud, 2001).



Schematic expression of a Fengshui landscape depicting mountain, vegetation and settlement

Source: Han, 2001 in Marafa, 2003



Fengshui forest in New Territories Hong Kong (Photo by: Amran Hamzah)

Fengshui forests are another form of sacred natural places which are still present in China (and parts of Hong Kong) despite being prohibited from 1949 to 1979 by the government during the Cultural Revolution. Chinese villages are located at sites with good qi (or vital energy) where there is a balance between yin and yang. Village Fengshui forests or *fengshuilin* are strategically sited to provide cosmological protection and to guard against storms and flooding as well as to conserve water for crop irrigation (Coggins *et. al.*, 2012). Many fengshui forests are located behind ancestral temples and earth god shrines. In Hong Kong, fengshui forests are still preserved in the New Territories although the former inhabitants have migrated to other parts of the island and even abroad. There are about 6000 fengshui forests in

Hong Kong and Mainland China and the network of fengshui forests still play an important role in biodiversity conservation (Marafa, 2003).

2.4.2 India

It is estimated that there are over 100, 000 sacred groves in India, which are believed to house a god(s) and named after deities (Godbole *et. al*, 2010).



A sacred grove in India

Source: Warriar, 2010

Sacred groves in India are considered sacred natural sites where the indigenous people worship gods or ancestors, and their abodes and the surrounding forests are traditionally protected. Sacred groves in India are also the manifestation of traditional conservation practices on biodiversity. It has become the foci of religious and cultural life of the ancient Hindu people. It was believed that sacred grove was said to be the origin of the temple which columns and pillars were originally trees. An example of sacred grove is the sacred hill of Sabarimala in Western Ghats which has become the interest of millions of pilgrimage every year. Gadgil and Chandran (1992) noted that “remnants of sacred groves ... are associated with the Mother Goddess or *Bhagavati* which have become the centers of folklore and part of the cultural tradition in Kerala”. India has a network of sacred groves that are well spread all over the country with large concentrations in the Western Ghat and Kerala (**Box 3**).

BOX 3.

Examples of Spiritual Beliefs and Practices Associated with Shifting Cultivation and Conservation Practices in India

- The tradition of maintaining a sacred grove for each village, with a variety of religious ceremonies performed within the groves during the year to propitiate natural elements before initiating slash-and-burn agriculture, is indicative of the sacredness attached to them by different ethnic groups of northeast India. While many of these traditions are eroding because of modern influences on these societies, many remain well-protected, for example the Mawsmi sacred grove in Cherrapunji and Mawphlong grove nearer to Shillong in Meghalaya, India.
- In the Garo hills or Meghalaya (India), the first two Garos (the tribal group inhabiting this area) to initiate shifting agriculture, locally called *jhum*, are believed to be the spiritual couple Bone Nirepa and Jane Nitepa. Their blessings as well as that of their deity, Misipa are sought for a good harvest.
- The Wanchos of Arunachal Pradesh (India), like many other ethnic groups in the region, traditionally sacrifice cocks, pigs, buffalos, and even the socially treasured domesticated gaur (*Bos frontalis*), known locally as *mithun*, to propitiate the spirits of nature on different occasions to sustain soil fertility and ensure good crop yields.
- The Baigas of Madhya Pradesh (India), who practise shifting cultivation, view the use of a plough to prepare their agricultural fields as tearing the breast of mother earth. They therefore prefer to directly sow seeds after clearing and burning secondary forest vegetation from their fields, without ploughing.
- For the Kanis, a hunter-gatherer society living in the Agasthyamalai hill region of the Western Ghat mountains in southern India, specific ecosystems, rock shelters, marshy swamps, and large trees with huge buttresses are considered abodes of their local spirits of worship, the mountains as a whole being the abode of the supreme God, Agasthyamuni, who is revered as an ancient sage of wisdom.
- The folk-music, festivals, and associated cultural and spiritual values of local communities living in the Nanda Devi cultural landscape (a UNESCO world heritage site located in the central Himalayan Garhwal mountain region in India) offers opportunities also for learning lessons on sustainable management of the larger Biosphere Reserve itself.

Source: Adapted from Parrotta and Trosper (2012).

2.4.3 Japan

Most Japanese Buddhists practice their religion with a blend of *Shintoism*. *Shinto* shrines or temples are places of worship and the dwellings of the *kami* or the Shinto gods. People visit shrines in order to pay respect to the *kami* or pray for good fortune to objects that represent *kami*. New born babies are traditionally brought to a shrine a few days after birth, and many couples hold their wedding ceremonies there. Shinto

shrines, which were built and traditionally located on sacred mountains, which are believed to be the dwelling of *kami*, hence the presence of divinity (Byrne, 2010), are also made locations for events like New Year celebration, *setsubun*, *shichigosan* and other festivals. Similarly, trees and stones have long been objects of deep devotion in Japan. At first there were no shrine buildings; instead a tree, forest, or a large boulder or a mountain, festooned with ropes, would be the focus of worship (<http://www.japan-guide.com>). Japan's ancient lowland grounds of Shinto temples are deliberately preserved to provide building materials for temples (Dudley *et. al*, 2010).

Shinto is traditionally based on the actual ritual practices and shrine traditions. Typically, it is considered to be indigenous, ancient tradition of the Japanese people. *Chinju no mori* are small forests surrounding *Shinto* shrines having sacred qualities with great historical connection that believed to provide some sacred protection to local people. *Chinju no mori* has been traditionally associated with conservation practices in Japan, some Shinto scholars see them crucial in the reestablishment of Japanese society based on a “harmonious relationship between human and nature” (Rots, 2012). Moreover, *Chinju no mori* acts as premier symbol that signifies continuity between the present and the ancestral or ancient period; a connection between the country, the land, its natural landscapes and the deities.

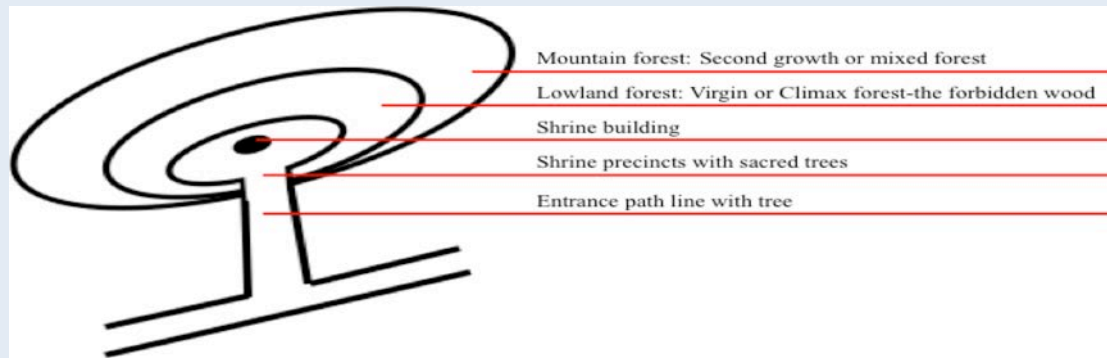
Meanwhile, forests or ‘sacred woods’ that surround Shinto shrines are traditionally meant to be revered as the habitat for the gods bringing consecrations to Japanese people. In addition the giant trees and pillars in the sacred woods are called *yorishiro* meaning ‘the place where the gods draw near’ (Tsukada, undated). The sacred woods were revered and worshipped as the dwelling of gods and also feared as awesome places. At the same time, the sacred woods became the centre of the community where they could offer performances in honour of the gods. In essence the sacred woods represent the Japanese view of nature based on the pantheistic belief that spirits reside in stones, plants, and trees. This belief system provides the rationale for the Japanese philosophy of harmony and co-existence with nature (Tsukada, undated).

In Japan there is a society dedicated to sacred sites called the Shaso Gakkai. The symbol of Shaso Gakkai illustrates the design concept of the sacred woods, in which the torii gate is the gateway into god's dwelling. The torii gate leads worshippers and

visitors to the shrine after beyond that, humans are not allowed to step into the ‘forbidden forest’ (Tsukada, undated) (**Box 4**).

BOX 4.

Illustration of the Symbol of Shaso Gakkai Society, an Organization Committed to Sacred Sites in Japan



Source: Japan: the Official Guide, Japan National Tourism Organization

2.4.4 South Korea

In South Korea, spiritual aspects of nature have a profound effect on the physical development of the country and the lives of its peoples. The Baekdu-daegan Mountain-system is a continuous range of mountains that extends through the Korean Peninsular. It houses the peninsular’s most diverse reserves of flora and fauna, and is the source of spiritual energy of the land. The Baekdu-daegan has been depicted as a crouching tiger, where the mountain range is drawn as the spine of the animal. The cities of Korea were built along the rivers and streams that flow from the Baekdu-daegan, imparting life to the populations through an endless supply of flawless freshwater (Baekdu-daegan.com).

The main spine of the Baekdu-daegan branches out into a complex system of mountain ranges, sub ranges and ridgelines. A route known as the Baekdu-daegan Trail links the mountains along



The Baekdu-daegan: A continuous range of interconnected mountains. (Photo by: Roger Shepherd, 2011)

the crest of the southern half of the spine. Along this Trail are hundreds of sacred sites of Korea's many faiths and beliefs, namely Shamanism, Spiritual-Nationalism, Daoism, Neo-Confucianism, Buddhism and Christianity.

The beginnings of Shamanism in Korea took root during the Bronze Age. Similar to many Shamanistic beliefs in Asia, the early Koreans believed that every landform, plant, animal and human being were revitalised by spirits. For this reason, special veneration was given to the natural elements in a forest, especially trees, which represents a natural outgrowth of their connection to the mountain-forests and its inhabitants (Baekdu-daegan.com).



Drawing depicting the Baekdu-daegan Mountain-system as the spine of a crouching tiger, the emblematic national animal of Korea.

Source: Baekdu-daegan.com

Buddhist monks sought enlightenment and wisdom in the mountain-forests, building their temples and shrines throughout the area. Confucian scholars visited the Baekdu-daegan to seek wisdom and Korean Christians set up prayer camps at the foot of the mountains, as a place to draw closer to God. The Baekdu-daegan mountain-forests has always been treated as sacred by people of all faiths.

Baekdu-Daegan Sacred Sites and Ecology.

The location of the Korean Peninsular makes it vulnerable to typhoons and monsoon rains. The result is the potential loss of fertile soil that is washed out to sea due to the steep topography of the Baekdu-daegan. Over time, the Koreans developed ingenious methods to prevent the nutrient-rich soil from flowing out into the sea. One method that the Koreans used is to plant native pine trees to shield their villages and farmland from winds and other natural



Native pine grown to shield villages from extreme weather. (Photo by: Roger Shepherd, 2011)

threats. This way, natural resources were used to resolve natural problems, preserving the balance of nature while ensuring the sustainability of the people.

The Buddhist monk, Doseon-guksa established the philosophy of *Pungsu-jiri-seol* (Wind-water Wisdom-theory), which defined the thinking of the Korean people for more than a millenia. One of the key points of the philosophy is the promotion of prosperity through “national harmony with nature”. The monk left a lasting legacy as the subsequent dynasty of Goryeo (10th – 14th century A.D.) instructed that pine trees were planted along mountains around the capital, while prohibiting overcutting of forests near major settlements in the country (Baekdu-daegan.com).

In the mid 20th century, the *Sikmok-jeol* (tree-planting holiday) was inaugurated on April 5th, which is also the date of *Hansik*, a Neo-Confucian holiday where Koreans would visit and clean their forefathers’ tombs. The coinciding dates were deliberate, to encourage Koreans to clean and care for the surround forests in addition performing ancestral ceremonies. The movement gained strong support from the people, and by the year 2000, South Korea had become the only nation that reforested itself after World War 2 (Baekdu-daegan.com).



Koreans celebrate Sikmok-jeol by planting trees. (Photo by: Roger Shepherd, 2011)

Modern Korea is known for its high-technology exports and is one of the emerging economies of the world. Yet, the Koreans have also succeeded in forging a harmonious connection with the forest and mountain, combining ancient spirituality and modern recreation. Many communities in the Baekdu-daegan region have revived their traditional spiritual practices utilises the ecology around them for their own benefit in a sustainable way. Villagers throughout the mountains are maintaining their shrines and practicing their ancient rituals to improve social cohesion in their area. Koreans understand that these traditions are a way to maintain respect for the mountain-forests which leads to the sustainable care of the ecology.

Traditional Village Forests in Korea.

As in many parts of Asia, Korea has a network of well-preserved village forests. Not only are these village forests revered but they are also given specific names according to their characteristics and function (Hong and Kim, in Hong *et. al*, 2010):

- ***Seonghwangnim***

A forest that was preserved, as it was believed to protect the village and the welfare of the villagers. The rituals involved the building of an altar for the tutelary deity and a shrine within the forest. The trees commonly found in this type of village forest are the Zelkova tree and the hackberry tree.



The guardian-shrine of the tutelary forest (Seonghwangnim) of Seongnam-ri village in Wonju city. (Photo by: Roger Shepherd, 2011)

- ***Hoannim***

A type of forest found along rivers that acts as an embankment to protect the village from flooding. Willows and alder trees were the major type of trees found in a *Hoannim*.

- ***Eoburim***

Artificially created or natural forest consisting of zelkova and pine trees, which acts as a windbreak for villages along the coastal areas.

- ***Bangpungrim***

Found in coastal or windy places, a *Bangpungrim* is similar to an *Eoburim*, where the forests act as a windbreak against strong winds. The black pine is the major type of tree commonly found in this type of village forest.

- ***Bohaerim***

The *Bohaerim* is a forest designed to supplement geomantic (*Fengshui*) deficiencies of a village. This type of forest is equated to the modern ecologically restored or protected forest.

- ***Yeoksarim***

A *Yeoksarim* is a forest that is linked with historical or legendary significance. The defining characteristics of a *Yeoksarim* are old and large trees in the middle of the village.

2.4.5 Other Parts Of Asia

From the review of the literature, it is evident that commonalities exist between the smaller countries in Asia in relation to spiritual beliefs. Animist beliefs are still relevant to the lives of South-East Asian countries where Buddhism is the predominant mainstream religion. The Animist spirit called *phi* in Thailand, *neak-ta* in Cambodia, and *nats* in Burma (Thierry, 1993 cited in Byrne, 2010) has been ritually called upon to give protection to the forest in these South –East Asian countries. *Nats* or *neak ta* are often materialized in a rock or statue and some *neak ta* are believed to be dwelling in trees, body of water or at a confluence of waters. As a common ritual, monks would sanctify a bowl of water from which each of the village headmen drank, thus ritually binding them to protect the forest. Moreover, both Thai Buddhist monks and animists venerate fields, forest or swamps, mountains, caves, cliffs and waterfalls that are associated with the presence of *phi* which have been instrumental in preserving the natural values of certain landscapes (Byrne, 2010). Likewise another ritual, which is the ‘ordination’ of trees by a Buddhist monk has the effect of altering the community’s state of physical entities to the extent that it subsequently become hazardous for people to harm them. This ritual and associated prohibition is now considered as a successful conservation initiative, in Thailand (Byrne, 2010).

It is also common for mainstream Buddhism in Thailand to integrate elements of animism and Hinduism. For instance caves are often perceived as being dark and in the state of disorder but yet they could be quiet and peaceful hence conducive places used by monks and lay people for the purpose of meditation (Byrne, 2010; Gottlieb and Natadetcha-Sponsel, 2004). The Doi Tone cave in Thailand depicts the Wheel of Dharma (the Eightfold Noble Path) or the primary teachings of the Buddha. As an act of reverent to the holy cave, the areas in the vicinity of the cave are recognised as sacred landscapes and are afforded protection. Caves are just one context in which

Thai Buddhism is integrated with nature. Another is the famous *bodhi* tree (*Ficus religiosa*) that embraces the stone face of the Buddha in its root system. These are among many types of situations in which Buddhism and nature are integrated and in which the former helps to protect the latter. The association between holy cave/Bodhi trees and their protected surrounding forests had contributed to the creation of a traditional ‘system’ of sacred places throughout Thailand, which in turn, had also contributed to the conservation of biodiversity (Gottlieb and Natadetcha-Sponsel, 2004).

The people of Laos also revere the animist spirit of *phi* with benevolence and regarded as having property rights even before humans inhabited the earth (Thierry, 1993 cited in Byrne, 2010). As in the case of Japan, China and India, these dwellings of animistic spirits are revered, feared and protected by the local communities. In predominantly Muslim Southeast Asian countries like Malaysia and Indonesia, traces of animism and rituals/beliefs derived from Mahayana Buddhism used to be associated with mainstream Islam (Byrne, 2010) but Islamic reformers have practically reduced such ‘hybridisation’ with the exception of the isolated enclaves such as the Sasak community in Lombok, Indonesia (Telle, 2009).

In Indonesia, the minority Christian communities have assimilated elements of animism as part of their belief system. The Manggarai ethnic communities who inhabit the high mountains of Flores island in Indonesia regard the mountains as intrinsic to their being-in-the world; a ‘lived-in environment’, and one constituted and animated by kinship connection, ancestral journeys, and potent spiritual energies (Allerton, 2009b) manifested in the form of sacred mountains. Despite embracing Catholicism, Allerton (2009b) stated that most people in the Manggarai agricultural community still practise a form of animistic customs and tradition called *adat*.

In the predominantly Christian Philippines, sacred places even extend into the marine environments. The marine areas of Coron in Palawan, the Philippines have been traditionally protected by the Calamian Tagbanwa, a community of traditional animists, for fear of provoking the spirit of a giant, human-life octopus believed to live there. Meanwhile Paanyan or a sacred area in the sea is usually a coral reef formation separated from its main structure and is located in relatively deep waters.

The Calamian Tagbanwa was granted the status of ancestral waters according to the Indigenous People's Rights Act in 1997 in recognition for their continuing efforts in the protection and conservation of the sacred marine areas (Sampang, 2010).

In Malaysia, the relationship between human and nature is best summarised by Maxwell (1982:7, in Dove *et. al*, 2011) who wrote "The Malays always consider themselves as intruders when they enter the forest, and never forget their awe of and reverence for it". The forest is to be respected not because of the collection of huge trees but because it is believed to be inhabited by good as well as evil spirits with supernatural powers known as *semangat* or *Hantu Hutan* (Spirits of the Forest) (Dove, 2011). The local people seldom venture deep into the forest and would seek permission to do so by reciting "Hail! All hail! We crave permission to enter on this domain, And to tie our noose to these trees" (Maxwell, 1982: 8, in Dove *et. al*, 2011). This explains why until today, domestic tourists visiting national parks in Malaysia would often congregate around the visitor centre to have a picnic and few would venture along the challenging trails that lead into the deep forest. Once in the deep forest the more adventurous visitors would still remind each other not to be arrogant or disrespectful otherwise the spirits would make them lose their way back.

The natural environment also plays a crucial role in Bhutanese culture and society (Puntsho, 2009). Nature influences Bhutan in an inextricable way and has an influence on every aspect of their lives. As in the other societies in Asia, the Bhutanese people also use the natural environment and ecology to protect themselves against invaders, while having an influence in shaping their political and religious worldview.

Three modes or worldviews influence the Bhutanese people's perspective of nature. The earliest view was associated with shamanistic and animistic practices, in which the Bhutanese saw nature as a powerful force to be reckoned with. In relation to this, the environment was seen as the habitat of spirits, which the Bhutanese feared revered and therefore protected, which resulted in little or no adverse impact on the biophysical environment (Puntsho, 2009).

The second view of nature is that it is a force that could be tamed and controlled, a view brought about by the arrival of Buddhism. Taken from this perspective, the Buddhism-influenced worldview believed that nature could be and should be transformed and that its spiritual inhabitants should be tamed into guardian deities. This led to a change in the landscape in Bhutan as natural elements were adorned with prayer flags, prayer wheels, stupas and other monuments. The venerable view of nature in Buddhism also led to the identification of holy places and sacred sites, and it was this view that kept the ecology of Bhutan in an almost untouched condition (Puntsho, 2009). Finally, the modern-day Bhutan is built upon a western view of nature, one which is scientific and shuns any belief in the supernatural or superstitions. It is this view that presents new challenges to Bhutan as it is seen as the cause of spiritual decline and subsequent environmental degradation (Puntsho, 2009).

Mongolia possesses a delicate ecology, one that has been venerated by its people through the ages. Mongolian legends, stories, names and religion contain a wealth of wisdom regarding the relationship between man and nature (Odigon, 2000). The legend about a mountain goddess punishing those who cut down trees in her sacred forest is one of many such tales that resonate with the principles on forest conservation. In addition the sacred texts belonging to Mongolia's traditional religion designate places where development should and should not be carried out. The Mongols also believe that unnecessarily cutting down a tree shortens the tree cutter's life.

The capital of Mongolia, Ulaan Baatar, was founded on an especially powerful sacred site (Palmer and Finlay, 2003). The four mountains surrounding the city are revered as sacred mountains throughout Mongolia. The thunderbird *Han garid* is believed to reside in the southern mountain *Bogd Uul*, while the shaman *Songino* is said to have lived in the western mountain, *Songino Hairhan*. It is believed that the location of the city brings protection and blessings from the spiritual forces residing in the nearby mountains as well as the valley where the city itself sits on.

The above discussion has shown how a tradition of taboos, beliefs and prohibitions have shaped the development philosophies of the various ethnic and religious societies in Asia. Despite the arrival of mainstream religions, traces of animistic belief

systems are still evident in the contemporary religious practice all over Asia (**Figure 1 and Table 3**). Given this is not an attempt to provide an exhaustive review of the literature on sacred places in Asia, suffice to say that the above review has cemented the notion that the continuing legacy of Asia’s traditional beliefs has created a network of scared natural sites that have significant contribution to biodiversity conservation. It has been revealed that sacred sites can contain rich biodiversity occasionally exceeding formal protected areas and forest reserves (Dudley *et. al*, 2005). In this respect, the role of local custodians such as indigenous communities and faith organisations belonging to Islam, Buddhism, Hinduism, Christianity, Shintiosm and Animism are crucial to the maintenance of sacred natural sites (Verschuuren, *et. al*, 2010) as well as the preservation of traditional ecological knowledge (Berkes, 2012).

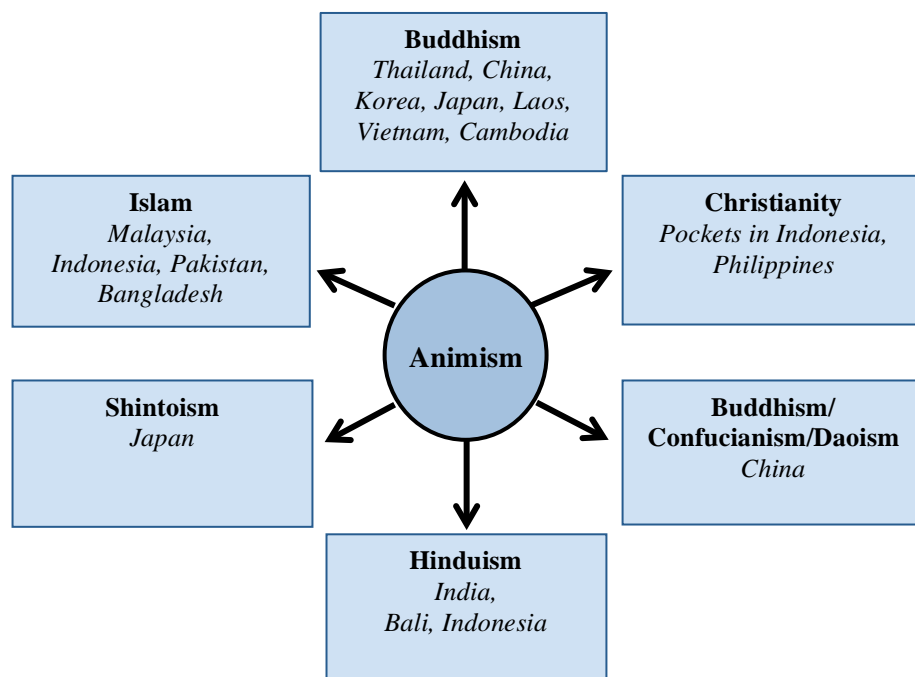


Figure 1. Animism as a Common Component in Asian Ethnic Spirituality

Table 3. Religious/Spiritual Constructs Biodiversity and Human Interaction in Selected Asian Countries

Location/ Country	Religious/spiritual construct	Traditional/ cultural practices/deities	Object of sacrality	Biodiversity	Human interaction
Northern Thailand (Thailand) ¹	Buddhism/ Animism/Hinduism	Buddha/Kaonga (water goddess of Hinduism), belief in the presence of spirits known as <i>phi</i>	Caves and its immediate surroundings	Bats (inside sns), grove of trees and lush forest, rich biodiversity; lush vegetation, sacred landscape has high biodiversity and is protected; surrounding forest is protected due to high biodiversity	Harvesting of guano sold as fertilizers, income shared by village people and temple, mutual relationship between bats and villagers; preservation and protection of neighbourhood forests and used as meditation area by lay people
Yunnan, China ²	Buddhism/ ethnic animism	<i>Feng Chan</i> (worship of plants, animals, mountain forest)	Sacred forest or Holy Hill where plants and animals are companions of gods and sacred beings living in god's garden	Rich in forest products such as timber, fodder, medicinal plants, fuel wood, rich genetic diversity	Rice cultivation, gathering, hunting, cultivation of forest resources, harvesting of non- timber products

Manggarai, Island of Flores, Indonesia ³	Animism/ Catholicism (highly syncretic)	Ritual practices such as <i>tura manuk</i> (chicken speech) through <i>adat</i> (custom/tradition) fusing Catholicism with animistic rituals through <i>buffalo mass*</i> , <i>wae aweng</i> , (sacrificial rituals), <i>hilir wakar</i> ritual (to collect souls together)	Hills, land and landscapes, mountain (energized landscape), water sources and rivers, <i>ata pale-sina</i> (“there are people here”), spirits live as close together with us <i>poti</i> (ancestral spirits, other spirits such as <i>darat</i> [beautiful, amoral spirits], <i>jing</i> [dwarves associated with rocks], <i>empo-dehong</i> [spirits who travel at night looking to take heads], <i>wakar data tu’a empo danong</i> [souls of ancestors), spider as a form taken by <i>mori de tama</i> (lord/owner of the land)	Lush forest, tree forest, wild animals, water bodies	Rice cultivation, wet-rice farming, animal hunting, gathering of medicinal plants, agricultural cultivation
---	--	---	---	--	---

Western Ghats, India ⁴	Animism/Hinduism	Indigenous people worship the gods or ancestors, their abodes and the surrounding forests; sacred groves are locations for religious and spiritual ceremonies, individual linkages with the guarding deities, and cultural practices like folk art forms	Sacred groves, forests	Non-timber forest products, surangi flowers, (mamea suriga), the endemic natural growth of palm trees (caryota urense)	Villagers are allowed to collect dead/fallen trees, non-timber products, honey, extraction of madi or juice of a palm (caryota urense); some groves grazing is permitted; collection surangi flowers and sold with seasonal lease; of some degraded areas the groves are leased for cultivation and other uses
Sasak, Island of Lombok, Indonesia ⁵	Animism /Islam with Hindu/Buddhist influence (highly syncretic)	Practice of <i>Waktu Telu</i> , a 'syncretic' form of Islam suffused with Hindu-Buddhist elements centered on sacred sites and the propitiation of ancestors, prefer to see <i>adat</i> and Islam as complementary and ideally mutually reinforcing resources that help people navigate safely through life and death, <i>roah kubur</i> (a ritual in response to almost any occurrence one wishes to celebrate, ameliorate, or sanctify)	Mountains, landscapes is 'living' and imbued with moral and sentient qualities, landscape communicates with human; <i>epen paer</i> (spirits who own the land)	Overgrown trees, tree forest, water bodies	Rice cultivation and agriculture, gathering of medicinal plants, fuel wood

Coron, Palawan, Philippines ⁶	Animism /Christianity	Sacred marine area and center of spirits. Giant octopus lives in the area; shaman and elders can enter by prayer addressing the spirits when in the area	Coastal sea, lake	Live groupers, fresh food fish, marine invertebrates such as octopus, sea cucumber, seashells	Fishing is allowed mainly for subsistence and small-scale trading of fish and invertebrates; fishing method during monsoons are hook and line, trident spears and gill net
--	-----------------------	--	-------------------	---	--

Sources: General information derived from Verschuuren, et. al, (eds), 2010

¹ Gottlieb and Natadetcha-Sponsel, 2004; ² Shengji, 2010; ³ Allerton, 2009b; ⁴ Godbole et. al, 2010; ⁵ Telle, 2009; ⁶ Sampang, 2010

*A Catholic sacred mass/ceremony officiated by a priest which features animist ritual that sacrifices a buffalo to please the spirits (Allerton, 2009b)

2.5 The Contribution Of Sacred Sites To Biodiversity Conservation

Through time, the natural amalgam of sacred natural sites and their richness in species and biodiversity have secured these areas to be protected by local custodians such as indigenous peoples and ethnic communities. Although sacred sites are fragmented and not planned according to (modern) scientific considerations and projections, there are considerable evidence in the literature as regards their tangible contribution to biodiversity conservation. Dudley *et. al*, (2009) conducted more than 100 scientific studies on sacred groves in Asia and Africa and reported that they are globally important in terms of biodiversity conservation. Some of the other significant findings by previous research are as follows:

- In the Jainta Hills of Northeast India, a sacred grove was found to contain 82 tree species, with another 3 sacred groves containing above average vascular plant diversity (Upadhaya *et. al*, 2003; Jamir and Pandey, 2003).
- Twenty five sacred groves in the Kodagu district in Karnataka, India were found to contain richer species of trees, birds and macrofungi in a smaller area of land relative to a formal protected area. A total of 722 species of angiosperms were found in a 1.4km² wide area filled with sacred groves, compared to a much larger national park that houses 960 species, but in an area 90km² wide (Bhagwat *et. al*, 2005; Rajendraprasad, 1995; Balasubramanian and Induchoodan, 1996).
- In the state of Meghalaya, also in India, 79 sacred groves recorded 133 plant species, of which 96 are endemic to the state. This represented 7.7 percent of all endemic species in the state (Tiwari *et. al*, 1998; Khan, 1997).
- Surveys on several Tibetan sacred sites in the province of Yunnan, China found high levels of species diversity (Anderson *et. al*, 2005).
- The sacred groves of the Yi people in Yunnan were found to house more species and endemic species than the surrounding nature reserves or forests (Liu *et. al*, 2000).
- Ten sacred sites in Oelolok, West Timor, Indonesia were found to be home to 189 plant species compared to only 46 species found outside the sacred areas (Soedjito and Purwanto, 2003).

- In Thailand, the Khao Cong Phran temple in the Doi Tone cave which has an estimated 100,000 bats, local villagers are allowed to harvest 'guano' to be sold as fertilizers, which shows that biodiversity conservation has also benefited the local community economically (Gottlieb and Natadetcha-Sponsel, 2004).
- Sacred forests in Hani, Bulang and Jinuo in Yunan, China are sources of water and medicinal orchids (Shengji, 2010).
- Some sacred groves in Western Ghats, India allow limited extraction of non-specific timber products, and the collection of Surangi flowers are permitted for livelihood with seasonal lease in other sites, others are used by ethnic villagers for the extraction of *madi* or the juice of the palm (*Caryota urens*), while open degraded areas are used to cultivate agricultural crops (Godbole, *et. al*, 2010).

2.6 Shift In International Perception Towards Sacred Natural Sites

Ever since the 3rd. Worlds Parks Congress in Bali in 1987, a more inclusive approach towards protected area management has evolved, which has included approaches such as co-management and community conserved areas (now ICCAs). Custodians of sacred natural sites, such as indigenous peoples and faith organisations, have essentially been recognised by various international agencies and organisations in terms of their intrinsic rights for productive interaction with biodiversity. This iconoclastic approach is divorced from the previous 'old paradigm' (Phillips, 2003) or western non-human interventionist policy (Ma, *et. al*, 2008). There are numerous international resolutions and declarations that recognise man-biodiversity interactions such as:

- WWF's Statement of Principles on Indigenous Peoples and Conservation (1996);
- IUCN's Beyond Fences - Seeking Social Responsibility in Conservation: A Resource Book (1997); and
- Durban Accord Action Plan (2003)

Among these, the Durban Accord Action Plan calls for a ‘major outcome’ to ensure the rights of indigenous peoples are recognised and guaranteed in relation to natural resources and biodiversity conservation (Colchester, 2010). Prior to that, the United Nations Declaration on the Rights of Indigenous Peoples (2008) (**Box 5**) had laid the foundation for a more inclusive approach towards development. This has helped bury the ‘old paradigm’ in protected area management, which regarded the opinions and rights of indigenous peoples were of little concern to any government in both developed and developing countries, since these indigenous peoples are not organized as political force; and that the government knew best and public opinion was something for officials to help shape not to be influenced (Phillips, 2003). Despite this, several countries in Asia have adopted traditional, spiritual and community-based approaches to resource management. In Nepal, community forestry has been institutionalized since the 1970s while in Indonesia the community-based approach has also been extensively used, such as at Gunung Rinjani.

Overall, however, actual implementation has generally been uneven (Colchester, 2010), but it is argued that the resolutions highlighted above have implicitly freed the ‘shackled mindset’ towards protected area management, which has allowed ground breaking research into sacred places and spiritual sites, especially the efforts of the IUCN/WCPA Specialist Group on Cultural and Spiritual Values of Protected Areas (CSVPA). To build on this momentum, this research on the Asian Philosophy of Protected Areas is fully justified.

Nonetheless, the Asian Philosophy of Protected Areas is not limited to taboos and beliefs associated with the diverse Asian communities. More importantly the Asian Philosophy of Protected Areas should also revisit traditional and contemporary Asian models for environmental/resource management such as *Satoyama* and the Tagal System etc. which are discussed in the following section.

BOX 5.

Key elements of the United Nations Declaration on the Rights of Indigenous Peoples of relevance to sacred natural sites

Article 11

1. Indigenous peoples have the right to practice and revitalize their cultural traditions and customs. This includes the right to maintain, protect and develop the past, present and future manifestations of their cultures, such as archaeological and historical sites, artifacts, designs, ceremonies, technologies and visual and performing arts and literature.

2. States shall provide redress through effective mechanisms, which may include restitution, developed in conjunction with indigenous peoples, with respect to their cultural, intellectual, religious and spiritual property taken without their free, prior and informed consent or in violation of their laws, traditions and customs.

Article 12

1. Indigenous peoples have the right to manifest, practice, develop and teach their spiritual and religious traditions, customs and ceremonies; the right to maintain, protect, and have access in privacy to their religious and cultural sites; the right to the use and control of their ceremonial objects; and the right to the repatriation of their human remains ...

Article 25

Indigenous people have the right to maintain and strengthen their distinctive spiritual relationship with their traditionally owned or otherwise occupied and used land, territories, waters and coastal seas and other resources and to uphold their responsibilities to future generations in this regard.

Article 26

1. Indigenous peoples have the right to the lands, territories and resources which they have traditionally owned, occupied or otherwise used or acquired.

2. Indigenous peoples have the right to own, use, develop and control the lands, territories and resources that they possess by reason of traditional ownership or other traditional occupation or use, as well as those which they have otherwise acquired.

3. States shall give legal recognition and protection to these lands, territories and resources. Such recognition shall be conducted with due respect to the customs, traditions and land tenure system of the indigenous peoples concerned.

Article 29

1. Indigenous people 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 people for such conservation and protection, without discrimination ...

Article 32

1. Indigenous peoples have the right to determine and develop priorities and strategies for the development or use of their lands or territories and other resources.

2. States shall consult and cooperate in good faith with the indigenous peoples concerned through their own representative institutions in order to obtain their free and informed consent prior to the approval of any project affecting lands or territories and other resources, particularly in connection with the development, utilization or exploitation of mineral, water or other resources.

3. States shall provide effective mechanisms for just and fair redress for any such activities, and appropriate measures shall be taken to mitigate adverse environmental, economic, social, cultural or spiritual impact.

Article 34

Indigenous peoples have the right to promote, develop and maintain their institutional structures and their distinctive customs, spirituality, traditions, procedures, practices and, in the cases where they exist, juridical systems or customs, in accordance with international human rights standards.”

Source: Wild and Mcleod, 2008, (box 1 and 2) p16-17.

2.7 Japanese' *Satoyama/Satoumi* Biodiversity Conservation Systems

2.7.1 The Concept of *Satoyama* Landscape

Satoyama is an ancient Japanese concept of traditional land management methods and practices for the effective use and maintenance of resource landscapes for Japanese people (Cetinkaya *et al.*, 2012) dating back to the 17th century (United Nations University, 2010). Corollarily, “it is a term for landscapes that comprise a mosaic of different ecosystem types including secondary forests, agricultural lands, irrigation ponds and grasslands, along with human settlements” (Japan *Satoyama Satoumi* Assessment, 2010). Accordingly, *Satoyama* landscapes as illustrated in Figure 3, which are mostly found in the rural and semi-urban areas in Japan, were established through time by natural processes of continued interaction between humans and the natural environment; hence, if properly maintained, the relationship could be mutually beneficial (JSSA, 2010).

The conceptual history of the term *satoyama* (literally means ‘village mountain’) is ostensibly unclear. The definition of *Satoyama* has remained ambiguous on which Kawai (1995, p17 in Knight, 2010) has noted as blurred ‘either conceptually or in terms of how it is defined within a physical environment’. Knight (2010) has translated the description of *satoyama* from the Daijirin dictionary (Matsumura, 2002, p1030), as ‘the woods close to the village which was a source of such resources as fuel-wood and edible wild plants, and with which people traditionally had a high level of interaction’ which has become a common and widely accepted definition. *Sato* means rural village (IUCN, 2010) or a Japanese agricultural or mountain settlement and *yama* means mountain/woodland/grassland (Global Workshop on *Satoyama Initiative*, 2010 cited in Cetinkaya, 2012).

For over fifty years, *Satoyama* landscapes have suffered physical losses due to rapid urbanization resulting in the changes in land use. In the same vein that continued rural depopulation has weakened the base of human interaction (through resource utilization *cum* environmental management) resulting in sustained degradation of the landscapes (JSSA, 2010). Of late, the re-introduction of the concept of *satoyama* as a

model of sustainable resource management and biodiversity conservation approach based on traditional methods of agriculture, have gained wide acceptance during the 2010 Conference of Parties to the Convention on Biological Diversity.

Satoyama was used to support traditional agricultural practices as a source of fodder, leaves, and other biological component as fertilizer that supported traditional sustainable agriculture in the rural areas in Japan (International Union for Conservation of Nature, IUCN, 2010). For specifics, human interaction with *satoyama* has enhanced its productivity for food, compost, and wood and fuel wood. In woodland area, select trees were cut periodically for wood or charcoal retaining the roots and stumps to re-grow as secondary growth tree forest. Dead branches and decomposing leaves provide as compost material for agriculture thereby creating a conducive environment for herbs and fungi growth used for human consumption and medicine (Takeuchi, 2003).

With the introduction of ecological and conservation studies in the 1970s, the concept and physiognomies of *Satoyama* landscapes have transformed expansively to include urbanites whose place of residence is far distant from the rural areas. The contemporary concept of *Satoyama* has come to the fore when the cultural and religious dimension of *Satoyama* landscapes has become apparent in the light of eco-tourism promotions and social phenomenon which have extolled the healing and spiritual qualities of *Satoyama* (JSSA, 2010).

The productive function of *Satoyama* is rapidly declining, slowly giving up as natural biodiversity conservation agent, as well provider of edible products suited for human consumption and other utilities. The rapid decline can be attributed to modern socio-economic conditions such as population increase, economic growth, ageing and depopulation of rural areas (Knight, 2010; Global Workshop on *Satoyama* Initiative 2010a, 2010b as cited in Cetinkaya, 2012); thus fewer rural settlers are available to



A satoyama agricultural landscape: a village in Kumano Mountains, Mie Prefecture (Photo by: Winnifred Bird in Knight, 2010).

make use and manage the Satoyama landscapes. The rapid urbanization of Japan has created a physical drawback of Satoyama, which can be seen on the arbitrary conversion of woodland areas to other uses, such as housing projects and golf courses, among others.

The construct of natural systems that harness human interaction in a distinctly *Satoyama* concept, has of late been extended to *Satoumi*, having a coastal ecosystems features, but functions similarly like *Satoyama* in terms of its use and prolonged interactive mechanisms ((Duraiappah and Nakamura, 2012). On the other hand, Yanagi (2008) has indicated that *Satoumi* landscape refers to the coastal areas where human interaction has resulted in a higher degree of productivity and biodiversity. Hence, both types of ecosystem landscapes are focused on the relationship between ecosystem services and human well-being.

2.7.2 The *Satoumi* Landscape

JSSA (2010) defines *Satoumi* as the “spatial structure of coastal areas and the use and management of fisheries resources along those areas,” which focuses on the enhancement of the biological productivity and its ecological biodiversity through human intervention. The concept of *Satoumi* landscape came into existence in the early of 1990s, through the effort of the coastal dwellers to appreciate the interaction between the people and the sea in the coastal areas of the Seto Inland Sea in Japan. Hence, JSSA (2010) has defined the landscapes of *Satoyama* and *Satoumi* as “dynamic mosaic of managed socio-ecological systems producing a bundle of ecosystem services for human well-being” with features enumerated in **Box 6**.

BOX 6.

Primary Characteristics of Satoyama and Satoumi

1. Satoyama is a mosaic of both terrestrial and aquatic ecosystems comprised of woodlands, plantation, grasslands, farmlands, pasture, irrigation ponds and canals, with an emphasis on the terrestrial ecosystems.
2. Satoumi is a mosaic of both terrestrial and aquatic ecosystems comprised of seashore, rocky shore, tidal flats, coral reefs, and seaweed/grass beds, with an emphasis on the aquatic ecosystems.
3. Satoyama and satoumi landscapes are managed with a mix of traditional knowledge and modern science (reflective of the socio-ecological contexts).
4. Biodiversity is a key element for the resiliency and functioning of satoyama and satoumi landscapes.

Source: JSSA, 2010, p. 13

The Japanese' renewed interest in the revival of these traditional landscapes is basically anchored on three major 'crises' that has to be addressed with dispatch (Ministry of the Environment, Japan, 2007). These crises, according to Duraiappah and Nakamura (2012) are the primary 'push' factors that triggered the growing interest in the movement for revivalism; these crises are (a) the loss of biodiversity, wetlands and forests caused by economic development and overexploitation of natural resources, (b) the natural changes in biodiversity and rural landscapes (*Satoyama*) caused by abandonment (due to rural depopulation) and underutilization, and (c) the introduction of invasive species, which has further caused a loss of native species within the Japanese landscape. Meanwhile, the critical pull factors are (a) the growing appreciation of the Japanese people of the country's cultural heritage associated with *Satoyama* and *Satoumi* landscapes, and (b) the increasing demand for eco-tourism has been a driving factor for revival of *satoyama* and *satoumi* (Duraiappah and Nakamura, 2012).

2.7.3 The *Satoyama* Initiatives In Biodiversity Conservation

The concept of *Satoyama* is considered as being synonymous with nature and biodiversity conservation. According to IUCN (2010) "*Satoyama* has been attracting much increased attention... as a new focus for conservation because this kind of land use has been shown to provide important ecosystem services such as watershed protection, conservation of genetic resources (including threatened species), pollination, carbon sequestration, and maintaining cultural values" (IUCN, 2010).

The *Satoyama* Initiative for the revitalization of *Satoyama* ecosystems has employed a three-pronged approach for rebuilding and maintaining these landscapes through "an international platform for sharing knowledge and experiences in terms of biodiversity conservation, sustainable community, environmental and landscape management issues" (Cetinkaya et al., 2012), in support to CBDs three-pronged approach on biodiversity conservation which are: slowing the escalating losses of biodiversity worldwide, with the dual impacts of retaining and enhancing the biodiversity found in human-influenced natural Environments, while promoting the sustainable use of natural resources (Ministry of the Environment of Japan et al., 2010). The *Satoyama* Initiative can be best described as a community-based model of sustainable and efficient use of natural resources (Knight, 2010) which promotes the sustainable use of biodiversity as models of sustainable natural resource management based on the benefits of living in harmony with nature (Ministry of the Environment, n.d.). The IUCN (2010) has echoed this framework by stating that "(t) he *Satoyama* Initiative seeks to highlight the important roles of socio-ecological landscapes (i.e. *Satoyama* landscapes) which provide biodiversity conservation, ecological processes, and maintaining and enhancing

various ecosystem services that contribute to human well-being”. Similarly, Knight (2010) emphasized that these *Satoyama* are indeed an illustration of mutual synchronicity which has a harmonious relationship with nature, and a revitalized model trusted with a fresh and innovative approach to the sustainable use of natural resources. Hence, it is evident that *Satoyama Initiative* strives to establish and connect lands for agricultural cultivation with protected areas which would highlight the sustainable use of these areas for biodiversity conservation. Box 2 provides the description and objective of the Satoyama Initiative defined in January 2010 on its Paris Declaration (IUCN, 2010).

BOX 7.

The Description and Objective of the Satoyama Initiative Defined in January 2010 on its Paris Declaration

- Measures are urgently needed to support and, when necessary, revitalize or rebuild socio-ecological production landscapes including through broader global recognition of their value and by addressing the issues identified above. The *Satoyama Initiative* has been developed to respond to these needs. Its overall objective is to promote and support socio-ecological production landscapes to maintain their contribution to human well-being and three objectives of the Convention on Biological Diversity.
- The *Satoyama Initiative* recognizes the importance of other ongoing initiatives dealing with socio-ecological production landscapes and seeks to provide a platform for cooperation and support.
- The Initiative can also be considered as a tool, consistent with the Ecosystem Approach, for the implementation of the proposed post-2010 Strategic Plan of the Convention, in particular the 2020 targets relating to sustainable management of all areas under agriculture, aquaculture and forestry; the reduction below critical ecosystem loads of pollution from excess nutrients (nitrogen and phosphorous) and other sources; the management of multiple pressures on vulnerable ecosystems impacted by climate change and ocean acidification; the improvement of status of crop and livestock genetic diversity in agricultural ecosystems and of wild relatives; the raising of awareness of the role of biodiversity; the safeguarding or restoration of terrestrial, freshwater and marine ecosystems that provide critical services, and contribute to local livelihoods; the guarantee for all of adequate and equitable access to essential ecosystem services; the protection of traditional knowledge, innovations and practices, as well as the rights of the indigenous and local communities; and the increase of capacity (human resources and financing) for implementing the Convention.

Source: IUCN Information Paper on Satoyama Initiative, 2010

2.8 Tagal System Of Resource Management

In Sabah, Malaysia the Tagal (or prohibition) community based fisheries system is another Asian novel approach in resource management that involves the local community. The Tagal System refers to communally shared and accepted observances, rules and protocols in the management, conservation and sharing of benefits from natural resources such as the rivers and forests. The system is primarily used today in the form of a smart partnership between the state government and local communities, with the aim of protecting, rehabilitating, conserving and managing riverine fishery resources in the state ('*Tagal Bawang*') (Mohd. Isa and Wong, 2007). According to the Sabah Fisheries Department the Tagal system has increased from a mere 10 in 2000 to 193 rivers involving 447 villages in 2012. In addition the use of the Tagal system has been expanded into other rural activities such as the sea cucumber industry and community based ecotourism.



Native communities are responsible for the enforcement of the Tagal System in Sabah. (Photo by: Dept. of Fisheries Sabah, 2012)



'Buka Tagal': A whole day of fishing by the local community. (Photo by: Rosalia Clement, 2009)

The responsibilities for the protection of the Tagal System rivers are given to the Tagal Committees, which are made up of elected representatives from the local communities. The enforcement of the laws is conducted through the imposition of native customary laws, which are backed by the Native Court (Department of Fisheries Sabah, 2012).

The Tagal System prohibits fishing activities throughout the year, the purpose of which is to allow the supply of fish to breed and replenish, allowing future generations to enjoy the rich bounty of the rivers. Once or twice a year, the Tagal will be lifted (*'buka tagal'*), allowing the community a whole day of fishing. The Department of Fisheries will then weigh the amount of fish that was caught, as a form of inventory/stocktaking. Most of the fish is then preserved with pangi (seed of the *kapayang* tree) and equally distributed to the whole community (Scholz, 2009).

In 2011, the Tagal System was declared as one of the 10-point call for action of the Asian Wetland Symposium. Specifically, the call was for research and planning processes to include the integration of cultural and heritage values, traditional ecological knowledge, traditional landscape approaches such as the *Satoyama* Initiative described above, in the conservation and sustainable use of forests and wetlands (Borneo Post, 2011).

2.9 Other Traditional Resource Management Approaches In Asia

Besides the *Satoyama* and *Tagal* systems there are other traditional resource management approaches in Asia that resonate with the contemporary principles of Adaptive Management (Holling, 1986). In Indonesia, the traditional *subak* system in Bali was initially managed by resource manage-priests as a sophisticated system for the management of irrigation water resources (Lansing 1991, in Berkes, 2012). Essentially the *subak* was part of a water temple system which was integrated with the *tambak* system for the combined production of rice, fish and downstream products. This ingenious and sustainable system lasted for centuries as a success story in combining livelihood activities with conservation before they were taken over by extensive conversion of the coastal wetlands and lagoons into modern fish farms (Berkes, 2012).

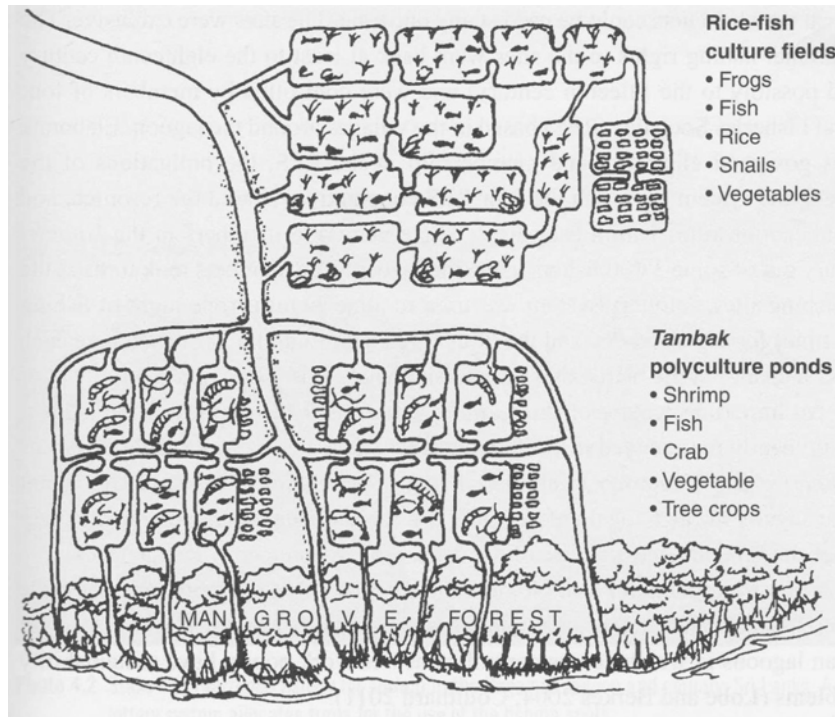


FIGURE 2. Traditional Indonesian Coastal Zone Management.

Source: Berkes (2012), modified from Costa-Pierce (1988)

Also in Indonesia, the system of rotating mixed garden with tree plantation called the *kebun-talun* is a form of traditional agro forestry which had been able to maintain high biodiversity similar to the original tropical ecosystem (Christianity *et. al*, 1986, in Berkes, 2012). Similarly, the Ifugao rice terraces in the Philippines in another showcase of Asia’s distinct relationship between humans and nature, and was inscribed into UNESCO’s World Heritage List in 1995. However the magnificent cultural landscape suffered the same fate as most traditional resource management systems in Asia due to overpopulation/depopulation, deforestation, neglect and apathy, which resulted in its inclusion into UNESCO’s World Heritage in Danger List in 2001. Since being removed from the Danger List in 2012, the government is making a concerted effort for the continuous preservation and



Ifugao rice terraces in the Philippines

Source: <http://worldheritage.routes.travel>

rehabilitation of the 2000 year old terrace through a 10-year Cordillera Terraces Master Plan (Evangelista, 2012).

In Sri Lanka, the *kattudel* fishery is considered to be one of the best examples of contemporary lagoon management (Amarasinghe et. al, 1997, in Berkes, 2012). This stake-net traditional fishery system has been given protection under the Sri Lanka Fisheries Ordinance, which limits membership, and hence maintains the limited-access nature of the system. However, large-scale commercial fishery and marine ecotourism are operating in the same (and limited) area as *kattudel* fishery and pose a serious threat to the latter's sustainability. Conflict between community based fishery and marine ecotourism is also prevalent in many coastal areas of Asia. In Sulawesi, Indonesia the local fishers are rediscovering their rotational fishing practice by relying on oral tradition to painstakingly record them. This is carried out to seek a balance between community-based fishery and marine ecotourism, and to ensure a better distribution of economic benefits (pers. comm. Armin Sahari, Nature Conservancy-Indonesia Marine Programme, 2013).

2.10 Conclusion

Drawn from the various country experiences that stem from its peoples' inherent and traditional relationship with the natural environment, the Asian perspective of 'protected area' can be considered as the foremost expression of its innate passion with nature that has evolved over a long period of time. The basic values that honed Asia's inseparable connection with nature are its peoples' deep sense of spirituality (oneness with spiritual beings) and traditional cultural practices (traditionally intertwined with animism), which have brought forth the concept of protecting natural landscapes and sites which are called 'sacred natural sites' in the contemporary setting.

In contrast to the colonial concept of protected areas, natural areas in Asia are not pristine or untouched wilderness. Instead they are the product of continuous human adaptation as exemplified by the Ifugao Rice Terraces in the Philippines. This living cultural landscape which epitomizes the absolute blending of the physical, socio-

cultural, economic, religious, and political environment was transformed by more than 2000 years of human adaptation to be now celebrated as a World Heritage Site (albeit facing many threats).

This chapter has discussed how the ‘new paradigm’ in protected area management (Phillips, 2003) has also embraced the rights and active involvement of local/indigenous communities. McNeely (2007) further argued that protected areas “are expression of culture and serve as models of the relationship between people and the rest of nature”. In essence it is argued that the ‘new paradigm’ has reached a point of convergence with the traditional Asian philosophy of harmony between humans and nature (Dudley and Higgins-Zogib, 2012). The renewed interest in sacred places, spiritual sites and traditional Asian resource management concepts such as *Satoyama* is a reflection of this convergence, with the potential of elevating Asia’s folk beliefs and taboos into mainstream approaches and practice. With this countenance, there is a need for the Asian philosophy on protected areas and resource management to be given due space in the universal conduct of (re)defining the principles on protected areas.

Chapter 3:

FROM KINABALU PARK TO THE ECOLINC: REFLECTIONS ON THE EVOLVING RELATIONSHIP BETWEEN PROTECTED AREAS AND LOCAL COMMUNITIES IN SABAH

3.1 Introduction

This chapter provides an overview of the evolving relationship between a protected area management authority in Sabah, i.e. Sabah Parks and the local indigenous communities who reside within and around two of the state parks under its control. As a case study towards the development of an Asian Philosophy of Protected Areas , the narrative will, firstly, highlight the previous as well as emerging innovative approaches taken by Sabah Parks to strengthen mutually-beneficial ties with these communities. Secondly, it will present the main findings of a survey carried out to assess the response of the local communities towards the latterly inclusive management approach adopted by Sabah Parks. Finally it will provide some lessons to be learned in terms of the relevance of sacred places and spiritual values as well as co-management approaches. This paper, however, will not cover the issues relating to native land tenure in the state, which are complex and have been covered by a number of previous authors (Doolittle, 2007; Toh and Grace, 2010; Cooke and Vaz, 2011; Long *et. al*, 2003).

Following a general chronological order, the narrative will begin with the first state park to be established in Sabah, i.e. Kinabalu Park, followed by its largest terrestrial state park, i.e. Crocker Range Park. The narrative will finally cover a new landscape level initiative led by Sabah Parks, dubbed the Kinabalu ECOLINC, which aims to create a ‘people-friendly’ ecological linkage between the two parks.

3.2 Protected Areas In The Sabah Context

Sabah is located at the northern portion of the island of Borneo. Formerly a British Crown Colony known as North Borneo, Sabah, together with Sarawak, Singapore and Malaya united in 1963 to form the Federation of Malaysia. However, Sabah (and Sarawak) retained a higher degree of government and legislative autonomy compared to states in West Malaysia. This includes provisions for separate laws for land, forests and government.

Sabah possesses a stunning diversity of natural ecosystems, habitats and species in both its terrestrial, aquatic and marine realms. The state also boasts a highly diverse indigenous population with about 32 ethnic and sub-ethnic indigenous groups that make up close to 60 percent of the state's population.

Sabah has a long history of setting aside important natural areas for the conservation of its rich and unique biodiversity. Today, a variety of categories of protected areas form a crucial and visible part of nature conservation in the state. These protected areas have been established under various state legislations, under different management agencies, with specific rationales and purposes.

The Master List of Sabah's Protected Areas recognises 93 named protected areas covering about 1,174,398 ha of land, estimated to represent about 15.95 percent of Sabah's land area (Payne, 2006). The majority of these areas, which are all owned by government and managed by a specified government authority, are a kind of "reserve" legislated or gazetted under either the Land Ordinance 1930 (as reserve for conservation purposes), Parks Enactment 1984 (as a Park), Wildlife Conservation Enactment 1997 (as Wildlife Sanctuary), or Forest Enactment 1968 and its subsequent amendments (as Forest Reserve). These protected areas are managed by three different entities, i.e. the Sabah Forestry Department, Sabah Parks and the Sabah Wildlife Department.

3.3 Sabah Parks

In the Sabah context, a “state park” means an area declared as such under the Parks Enactment 1984. Sabah’s state parks fall under the administration of the Board of Trustees of Sabah Parks, a statutory body under the Ministry of Tourism, Culture and Environment.

The basic purpose of Sabah’s state parks system is “*to preserve for all time areas which contain significant geographical, geological, biological or historical features as a national heritage for the benefit, education and enjoyment of (mankind).*” In effect, the main objective of the Sabah Parks system is primarily for total habitat protection (of its significant and unique ecosystems) followed by scientific research and nature education. Recreation and tourism are regarded as a tertiary objective. (Lamri *et. al*, 1991).

At present, seven state parks have been established in Sabah, equating to just over 3.6 percent of the state’s total area. Three are terrestrial parks (Kinabalu Park, Crocker Range Park and Tawau Hills Park) while four are marine parks (Pulau Tiga Park, Tunku Abdul Rahman Park, Turtle Islands Park and Tun Sakaran Marine Park). Five of these (Kinabalu Park, Crocker Range Park, Tawau Hills Park, Pulau Tiga Park and Tunku Abdul Rahman Park) correspond to IUCN Category II protected areas (National Parks). Turtle Islands Park corresponds to IUCN Category IV protected areas (Habitat/Species Management Area) whereas Tun Sakaran Marine Park corresponds to IUCN Category V (Protected Landscape/Seascape) (Payne, 2006). Sabah’s network of state parks has been recognised as among the best-managed network of protected areas in the region (Nais, 1996).

3.4 Section 2: Kinabalu Park

Rising to 4,095m a.s.l (above sea level) on the northern tip of the Crocker Range, Mt. Kinabalu is the highest peak between the Himalayas and the mountains of New Guinea. While many proposals were put forward during the colonial period to gazette the mountain as a protected area, serious efforts only began in the early 1960s when a landmark scientific expedition to the mountain was conducted in 1961-1963 by a

team from Oxford University under the leadership of the esteemed Professor E.J.H. Corner (Corner, 1964). Kinabalu National Park was subsequently gazetted in 1964 under the National Parks Ordinance No.5 of 1962. Two decades later, the park was renamed Kinabalu Park when the Parks Enactment No. 6 of 1984 came into force.

In retrospect, the establishment of Kinabalu Park in 1964 was a visionary move by the Sabah government, as it came about at a time when large scale commercial agriculture was beginning to take root on the adjacent hills of Ranau and Kundasang, eventually causing the loss of vast areas of forests there.



Mt. Kinabalu is the highest mountain in South-East Asia (4,095m above sea level).

(Photo by: Amran Hamzah)

Kinabalu Park is now Sabah's flagship park and arguably the jewel in Malaysia's protected area network. Kinabalu Park became the first natural area in Malaysia to be inscribed as a World Heritage Site in 2000 on the basis of its exceptional levels of biological diversity and rates of endemic species.

While biodiversity protection, research and education has always been the focus of park management, significant effort has also been put in to develop (carefully-planned) recreation and tourism. As a result, Kinabalu Park has become a mainstay in the state's booming tourism industry. Scores of tourists, both local and international, visit the park each year, either to climb the mountain or partake in less strenuous activities elsewhere in the park and its surrounding highlands.

3.4.1 Evolving Relationship With Local Communities

Kinabalu Park is surrounded by human settlements on all sides, with a total of 45 villages situated around its boundaries (Figure 3). These communities, which have a combined population of over 15,000 people, are made up of the Dusun ethnic sub-group who have occupied the area for generations.

The general land use pattern associated with these rural, agrarian communities is shifting cultivation for hill rice, tapioca, sweet potato, interspersed with cash crops including small vegetable farms and fruit orchards. Pressure for new farmland is deemed to be increasing in tandem with a rising population as well as an increasing dependence on the cash economy.



Typical environment of villages situated around Kinabalu Park's boundaries. (Photo by: Amran Hamzah)

The Dusuns living around the mountain regard Kinabalu as sacred as they believe it to be the perpetual resting place of the spirits of their ancestors. Thus the forests around the mountain have remained largely undisturbed through the millennia – there were no human settlements or farms within the park's boundaries when it was established. There have however, been a few minor incidences involving the encroachment of the park's boundaries in the past from shifting cultivation carried out by the surrounding communities. However, these occurred in only a few areas where there was discrepancy between the provisional boundary markings and the new, properly surveyed boundary markings (Nais, 1996).

Though no longer a basic necessity, hunting and collection of forest products is still carried out by some members of the community. However, no special privileges for access to the park or its resources were granted to the local communities when it was gazetted. Thus hunting and collection of forest resources became an illegal activity; one that the park's management authority considered to be a minor, though difficult problem to curb. This is because hunting is a deeply ingrained habitual practice and homemade shotguns are widely available (Nais, 1996). In addition, because of the size of the park and the fact that hunters enter at night, these incidences are difficult to detect.

Although uncompromising in upholding the law, Sabah Parks has always strived to maintain a cordial relationship with the local communities surrounding Kinabalu Park. Amicable solutions gained through persuasion, rather than confrontation, are the preferred method in dealing with disputes. In addition, the park authorities have continuously sought to develop new avenues to strengthen its relationship with the local communities. In the early days, a mobile awareness unit was established to conduct slide shows and dialogue sessions in the surrounding villages to spread awareness on the importance of the conserving the park, particularly on the benefits that conservation brought to the communities. The unit's focus, however, eventually shifted to the younger generation (school children) as it



FIGURE 3. Kinabalu Park and the Surrounding Communities

Source: Nais, 1996

was felt that the message was not getting through to the older members of the community (Nais, 1996).

The park's community engagement efforts soon took on a more innovative approach, by involving the local communities in conservation/tourism initiatives. Two examples of such collaborative initiatives are the *Rafflesia* Conservation Incentive Scheme and the *Projek Etnobotani Kinabalu* (PEK) (Kinabalu Ethnobotanical Project).

In the *Rafflesia* Conservation Incentive Scheme, Sabah Parks works with selected local communities to establish and market rafflesia tourism on land belonging to the respective communities. While the landowners benefit from charging entrance fees to the *Rafflesia* sites, this project has also contributed to *Rafflesia* conservation and helped reduce tourism pressure on Kinabalu Park (Nais, 1996).

The PEK is a local community-based project facilitated by Sabah Parks with the help of a number of partner research organisations to document the traditional uses of native plants in the area. Apart from the benefits of this project to conservation, it was also able to increase interest in the communities' own cultural heritage and consequently encourage the preservation of this culture (Nais, 1993).

More of such collaborative initiatives with the surrounding local communities are planned or underway. These include in-depth research into, and promotion of the communities' bio-cultural heritage, the development of local homestays and cottage industries as well as the creation of communal forests and protection of community water catchments.

Finally, the positive impacts that Kinabalu Park has had on the local economy and livelihoods of the local communities, and conversely, the value that these local communities have brought to the park cannot be overlooked. Sabah Parks has made it a point to hire, as far as possible, people from the surrounding communities, so much so that the bulk of its workforce is derived from these communities. Villagers from all corners of the park's boundaries contribute to the smooth running of the park, as permanent staff (rangers, field personnel, etc.) as well as temporary workers or as workers to the various activities and facilities resulting from the presence of the park

(e.g. as Mount Kinabalu traditional guides and porters, workers at the cafeteria, restaurants and lodgings). The myriad of resorts, homestays, eateries have mushroomed across the areas adjacent to the Park in Ranau and Kundasang are testament to the business and employment opportunities that have arisen as a result of tourism generated by the park.

The Dusun porters in particular, who exhibit tremendous strength and spirit in carrying heavy loads up and down the mountain each day, have become somewhat synonymous with the park and a tourist attraction unto themselves. In recognition of their contributions, Sabah Tourism, Culture and Environment Minister Datuk Masidi Manjun presented the Minister's Special Award to the porters of Mount Kinabalu at the Sabah Tourism Award 2011 (Borneo Post, 2011). Describing the porters as unseen and unsung heroes, Masidi said "*they represent the strength and courage of the human spirit to do what is necessary to bring pride, honour and respect for the mountain.*"

The most recent development in the relationship between the park authorities the local communities is probably also the most inspiring and heart-warming to have transpired thus far. To the local communities, the park is probably most significant as a source of cultural identity and spirituality, with Mount Kinabalu being a sacred place for the Dusuns of the region. Unfortunately, their access to the mountain to perform religious rites became limited when Kinabalu Park was gazetted.



*Local porters carrying heavy loads up and down Mount Kinabalu.
(Photo by: Amran Hamzah)*

Restrictions governing access to Mt. Kinabalu, coupled with the increasing cost of climbing permits and growing tourist numbers meant that access to the mountain had become out of reach of the local community, apart from those who worked as porters or guides.

In March 2010, in a dialogue session held as part of the Kinabalu ECOLINC study (See Section 4), Dusun elders expressed their frustration and sorrow about the loss of their ancestral link with the mountain to Sabah Parks and the study team. In their own words, they stated (GDF website):

"... we do not want the mountain back. It is a heritage for the world, and for that, we are proud and happy to share this mountain with everyone. We would like to have one day to return to the mountain. Every year, each year, we want to have one day just for our communities to make a pilgrimage to the mountain. A day when no one else will be allowed to climb the mountain. A day just for our people."

Their pleas to be allowed to return to the mountain and re-establish their connection with the sacred place did not go unheeded. Sabah Parks agreed to the request, and *Kakapan id Gayo Ngaran* (Community Day) was born (**Box 8**).

BOX 8.*The Return to the Mountain*

On 3 December 2010, the Dusun communities from the villages of Bundu Tuhan and Kiau conducted a pilgrimage to Mount Kinabalu. About 100 community members set off early in the morning, after the *monolob* (a ritual to seek permission from the spirit world to grant safe passage for the pilgrimage) was completed. The event, referred to in the Dusun language as *Kakakapan id Gayo Ngaran* (Return to Kinabalu), was a special occasion for the villagers as it was the first time in nearly 50 years, since Mount Kinabalu and its surrounding area was gazetted as a Park in 1964, that they were granted free access to the mountain, a site held sacred to them for millennia.

The first Community Day and *Kakakapan id Gayo Ngaran* was held on 2-3 December 2010, in conjunction with the 10th anniversary celebrations of Kinabalu Park's World Heritage status. Amidst the activities featured during the anniversary celebrations, which was attended by 7,000 people from all walks of life, the Community Day and *Kakakapan id Gayo Ngaran* stood out as a collaborative effort between park management and Dusun communities, which inspired many community members and Sabahans in general.

As co-hosts, community members worked together to ensure the success of Community Day 2010, which comprised of activities held at the Kinabalu Park premises. Themed "Living with Natural Resources", Community Day activities aimed to enable greater participation from a wide spectrum of communities to share and revitalize their cultural knowledge with activities such as cultural performances, living demonstrations of craft-making, and community markets selling forest vegetables and displaying objects of cultural significance, as well as having community members describe customs and practices of the past.

Kakakapan id Gayo Ngaran, which refers to the pilgrimage itself, was a more private affair attended by community members, park officials, selected members of the press and close associates. Now two years into practice, *Kakakapan id Gayo Ngaran* has already become an occasion that galvanises unity amongst the Dusun communities in the region, now charged with reviving an increasingly vanishing understanding amongst the younger generation. It is about re-awakening their spiritual connection with the mountain and revitalising a deep cultural knowledge of what Mount Kinabalu, and all the forests that surround it, represents to them.

Source: GDF website



The Bobolian (shaman), Lunsin Koroh, age 85, conducting the monolob ritual, seeking safe journey for those participating in the pilgrimage. (Photo by: Helen Brunt)



Local community slaughtering white chicken as sacrifice during 2nd. Kakakapan id Gayo Ngaran (Photo by: Amran Hamzah)

3.5 Section 3: Crocker Range Park

Spanning an area of 139,919 ha, the Crocker Range Park is the largest terrestrial state park in Sabah. The park contains the largest remaining patch of hill tropical forest on the west coast of the state, which harbours a high diversity of plants and animals including a number of rare, endemic and endangered species. The park also forms an important catchment area from which the headwaters of five major rivers originate, thus ensuring a continued supply of water to both rural and urban populations in the West Coast and interior.

When the park was gazetted in 1984, small settlements in two areas – Ulu Papar and Ulu Senagang, in which an estimated total of around 200 villagers reside – were included within the park’s boundary (**Figure 4**). In addition, customary lands (consisting of cultivated areas and forest) claimed by a number of other communities living around the park also fell within its boundary. These communities, made up of Kadazan, Dusun and Murut ethnic groups had occupied this remote area for generations and relied on the farms and forests within and adjacent to the CRP for their livelihoods (PACOS, 2008).

The Parks Enactment however, prohibited any human modification of natural landscapes and extraction of natural resources within the park. As a consequence, farming, hunting, fishing and

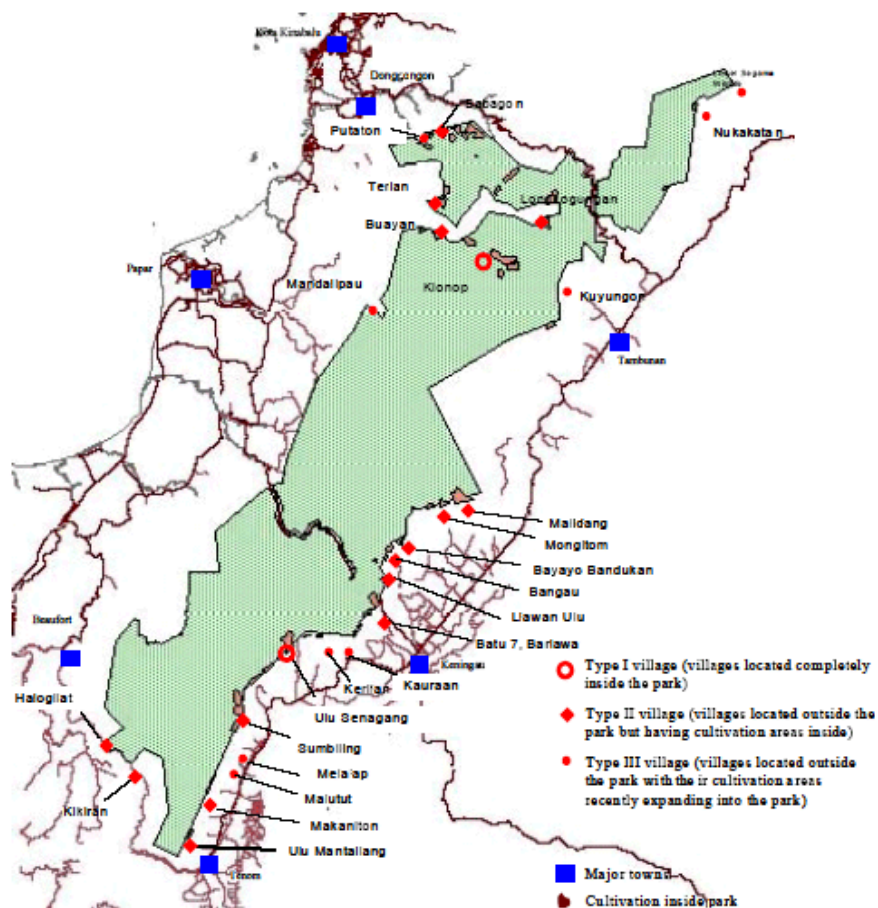


FIGURE 4. Settlements within and around the Crocker Range Park

Source: BBEC website

gathering of forest products, all of which are subsistence activities that the local communities had carried out here for generations, were now technically illegal (Toh and Vaz, 2012). The legal prohibitions to access to these resources subsequently became a long-standing source of contention for the local communities, who vehemently opposed the park and the park authorities.

Although constrained by the rigid provisions of the Parks Enactment, Sabah Parks was sympathetic to the predicament of these communities (Toh and Vaz, 2012). The park authority tried to maintain a ‘soft’ approach by allowing the villages to remain within and close to the park’s boundaries and access resources close to their settlements. Essentially, communities were allowed to continue to assert their customary claims to the land by staying inside and continue using the said areas within the Park, but without legally recognised tenure and the power to manage these lands. One quandary was that as long as these villages were ‘illegal settlements’, the government could not provide them with infrastructure and facilities such as roads, schools and health clinics.

This situation of unresolved tension continued for some years, until more conciliatory approaches emerged in conjunction with the development of the Crocker Range Management Plan.

3.5.1 Community Use Zones

The Crocker Range Park Management Plan (2006) was prepared by Sabah Parks in 2006 following a five-year study and consultative process supported by BBEC I¹. The plan introduced the concept of Community Use Zones (CUZ), i.e. areas within the park to be set aside specifically for continued local community use. These CUZs are intended to be collaboratively managed by Sabah Parks and the local communities living in these areas. On paper, the CUZs would legalise community access to resource areas within the Park and provide avenues for local community participation.

¹ The Bornean Biodiversity and Ecosystems Conservation (BBEC) Programme is a joint technical cooperation between the Sabah State Government, Malaysian Federal Government and Japan International Cooperation Agency (JICA) under Japan’s Official Development Assistance (ODA). The BBEC Programme assists the development of an integrated and durable system for biodiversity and ecosystem conservation in Sabah. BBEC I was composed of four components, (1) Research and Education, (2) Park Management, (3) Habitat Management, and (4) Public Awareness. The Park Management component, implemented by a working group led by Sabah Parks resulted in the preparation of the Crocker Range Park Management Plan.

The legal framework for the establishment of the CUZs was approved by the State Legislative Assembly in a 2007 amendment to the Parks Enactment. Following this amendment, Sabah Parks was now able to zone sections of the park as CUZ for co-management.

Two pilot sites were selected for initial implementation: the proposed Buayan-Kionop CUZ consisting of the villages Kg. Buayan and Kg. Kionop; and the proposed Senagang-Mongool CUZ consisting of the villages Kg. Ulu

Senagang and Kg. Mongool Baru. The respective settlements in these two areas are situated within well within the park's boundaries. In these areas, the CUZs will be delineated based on a comprehensive community consultation process to accommodate community subsistence needs ranging from hill and wet rice agriculture, subsistence hunting and freshwater fishing, and the gathering of key forest products (PACOS, 2008).

Apart from delineating the CUZ boundaries, the next critical step is for a CUZ Management Agreement to be developed by Sabah Parks with the respective communities involved. This agreement will lay out the mechanism for governing the CUZ in a way that will balance community livelihood needs with the biodiversity conservation priorities of the Park (Toh and Vaz, 2012).

Of the two pilot sites, significantly greater progress has been made in the proposed Buayan-Kionop CUZ, where the relationship between the community and Sabah Parks is now sufficiently matured to enable the negotiation of a Buayan-Kionop CUZ Management Agreement. This is largely because the groundwork here had already been laid by a Darwin Initiative participatory documentation project which has been active in the proposed Buayan-Kionop CUZ for almost ten years. This project, carried



A three-dimensional model representing resource use in the proposed Buayan-Kionop CUZ produced by the local community

Source: Vaz, 2012

out by PACOS Trust, Sabah Parks and the Buayan-Kionop community, included a comprehensive landscape-level study of subsistence activities within the area, including swidden cultivation, hunting, freshwater fishing and harvesting forest products (Wong *et. al*, 2009). In addition to capturing the intricacies of traditional resource management, the project also improved knowledge of the historic and archaeological sites which makes this a truly distinctive cultural landscape and part of the area's bio-cultural diversity heritage.

With much time and resources now sown in these studies and consultations, the local people have high hopes that they will have customary claims recognised and be given a role in managing the Buayan-Kionop CUZ in collaboration with Sabah Parks. If the two parties can agree on the practical aspects of this collaborative management, CUZ has the opportunity to create a win-win situation where the communities obtain user and access rights to their customary land while the park authorities will have gained a valuable partner in the local communities in managing and protecting the park.

This decision to 'integrate' local communities in park management is a milestone in protected area management policy in Sabah and is in line with international policy shifts² which acknowledge the potential of Indigenous and Community-Conserved Areas (ICCAs) as a legitimate form of governance in IUCN Category V and VI protected areas that integrate local community resource needs with biodiversity conservation priorities (Vaz, 2012).

In addition, the Crocker Range Park forms the core zone of the area that has recently been nominated as a UNESCO Man and Biosphere (MAB) site by the Sabah Government. As community participation is an important criteria for selection, the success of implementing the CUZ will be an important factor in the successful listing of the proposed Crocker Range Biosphere Reserve.

² ICCAs are defined by the IUCN as “*natural and/or modified ecosystems containing significant biodiversity values, ecological services and cultural values voluntarily conserved by indigenous peoples and local communities, both sedentary and mobile, through customary laws or other effective means*”. In 2004, ICCAs were recognised as a legitimate governance category by the World Commission on Protected Areas (WCPA), which acknowledges local communities as resource managers for biodiversity areas within national protected area systems.

3.6 Section 4: The Kinabalu ECOLINC

There is a growing realisation across the world that protected areas alone are not adequate to safeguard biodiversity, which must be managed as part of the wider landscape (NRE, 2009). Being at the forefront of applied biodiversity conservation, it is envisaged that the next major phase in conservation efforts in Sabah will center on this so-called “landscape approach”. This includes the establishment of wildlife corridors to link key habitats and incorporating biodiversity considerations into the design and management of the matrix of farms, plantations and human settlements present across the landscape.

In tune with this new approach, Sabah Parks commissioned the “*Study on the Establishment of Ecological Linkages connecting the Kinabalu Park and Crocker Range Park*” in 2010. A local environmental firm, ERE Consulting Group Sdn. Bhd. was appointed to undertake this study over a 15-month period.

The objective of the study was to develop a plan to facilitate ecological connectivity between the two most important protected highland areas in Sabah. Although residing on the same range, the two parks are physically separated from each other by a 10km wide (at the closest point) matrix of human settlements and farms with intermittent forest cover. The concern was that in the long-term, both parks could become completely isolated from each other – hence affecting their ecological integrity and resilience.

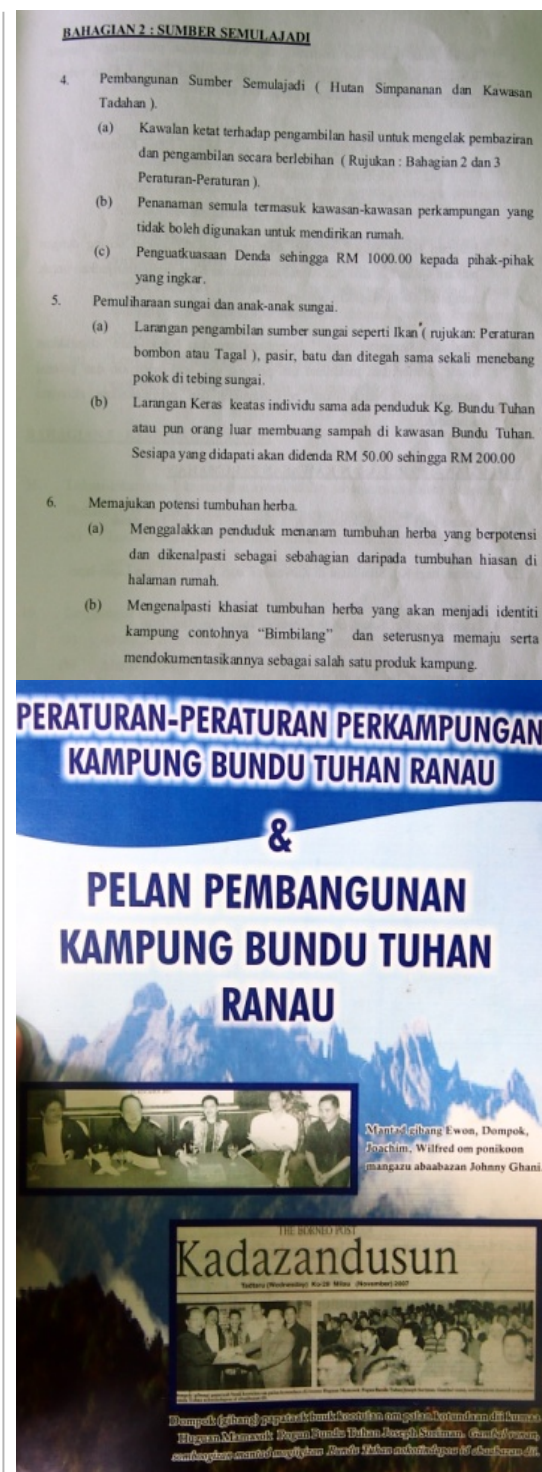
Thirty-one settlements, with a total population of just over 11,000, presently reside within the connecting region. These communities, which are made up of indigenous peoples from the Dusun ethnic sub-group, have a strong connection with, and maintain customary tenure over much of the land in the region. These communities maintain a composite of agrarian and domestic economies where households rely of subsistence activities to varying degrees, including hill rice farming, supplemented with hunting, fishing and the harvesting of forest products. This traditional way of life is the source of the communities’ identity, cultural beliefs and norms. (ERE Consulting Group, 2011).

3.6.1 Community Consultation

While there were some concerns that agriculture expansion and hunting posed a threat to the integrity of the envisioned corridor, Sabah Parks was adamant from the outset that the local communities should not be coerced into accepting any plans for the linkage, nor should they lose the land and forest resources that they still depend on.

Building on this stance, the study team endeavoured to ensure that the local communities would be involved in the design of the proposed corridor from the outset, and not merely treated as bystanders to be informed about the plans at the very end, with limited scope for input. In this light, consultation with the local community was given high priority. This consultation would essentially serve two key functions – to appreciate the needs and aspirations of the local communities, as well as to communicate the need for a corridor to link the parks (the concept of ecological connectivity being relatively new to both conservation professionals and laymen alike).

Apart from surveys to develop a baseline of the socio-economic profile of the region, over 25 stakeholder discussions were held throughout the study (Randolph Jeremiah, pers. comm.). This included initial briefings at the village level, discussions at three district offices involved together with the respective village committee heads, discussions with individual committees of the villages near the proposed core area, larger stakeholder workshops with community, NGO and government representatives, community mapping



Formulation of Local Law Based on Customary Rights and Native Reserve Enactment by local community

Source: Kampung Bundu Tuhan Development Plan, 2012

workshops, as well as a four briefings on the proposed options for the corridor.

The various discussions were also used as the launch pad for more intensive data collection activities, to present research results and preliminary ideas to the communities for feedback, and for open dialogue on issues such as human-wildlife conflicts. Community mapping techniques were utilised to determine the locations of community resources areas for each settlement cluster (ERE Consulting Group, 2011).

It soon became clear from the discussions that the issue of land rights is highly sensitive as the local communities had been largely unsuccessful in securing legal tenure for native land and there is a strong perception that land (for agriculture) is already limited (ERE Consulting Group, 2011). Years of unresolved conflict over land had affected the relationship between the communities and the government significantly. Therefore, it was obvious that the key challenge for the study (and the success of the project in the implementation period to follow) lied in gaining back the trust and confidence of the local communities, particularly by ensuing that amicable solutions would be reached in relation to their longstanding land claims.

On the other hand, the communities were already aware of the need to conserve the remaining forests surrounding their villages, being vital catchments that provide them with clean water as well as a sustainable source of important non-timber forest products. In particular, two areas, the Bundu Tuhan Native Reserves (**Box 9**) and Kiau Nuluh Community Forest was already being actively managed by the local communities for the purposes of conservation and the sustainable utilise of forest resources, prior to the study.

BOX 9.

Bundu Tuhan Native Reserve

Bundu Tuhan is a Kadazandusun village in the district of Ranau. With a population of about 3,600 people, Bundu Tuhan comprises several hamlets spread over hills and valleys at the southern foothills of Mount Kinabalu. Bundu Tuhan is exceptional among Sabah's settlements in that it possesses a sizeable Native Reserve of 3,210 acres. Roughly 60 percent of this area has been voluntarily set aside by the community as a protected forest. The proposal to establish a Native Reserve using provisions in the Sabah Land Ordinance 1930 was first mooted by the community in 1961 as a means of securing the long term needs of the community for the ecosystem services provided by the forest as well as to retain a sufficient area under communal management to prevent internal conflict arising from competition for Native Titles. This is remarkable as this move took place at a time when the notion of community conserved areas had not yet entered our vernacular. The move was not prompted by NGOs or interest groups although more educated and well-connected community members certainly played a key role.

Village leaders, with the support of the District Officer submitted their application for a Native Reserve in 1966 and followed the process unstintingly until the Reserve was finally gazetted in 1983. Since that time, the district has experienced dramatic changes and forested areas have given way to commercial vegetable farming and tourism development. Nevertheless, as a result of this visionary action, Bundu Tuhan retains a pleasant forested setting which attracts visitors to its homestays, and enjoys an abundant supply of clean water for its households and farms. The Native Reserve is completely community managed according to collectively recognised rules and regulations. Entry into the Reserve is prohibited without the permission of the community leaders.

The Bundu Tuhan Native Reserves provides a compelling example of the desire for communities to conserve forest, as well as their determination to sustain its wise use in perpetuity despite pressures and obstacles faced. Together with the adjacent Tenompok Forest Reserve, Bundu Tuhan Native Reserve remains the most significant block of upland montane forest remaining as a link between the Kinabalu Park and Crocker Range Park and will be a core area Kinabalu Ecolinc.

Source: Toh and Vaz, 2012



*Kampung Bundu Tuhan
Native Reserve (Photo
by: Randolph Jeremiah)*

3.6.2 The Corridor Plan

Following the discussions and outputs of various other study components, it was proposed that a network of Community Conserved Areas (CCAs) be established to form the corridor. Nine CCAs, in which the local communities would be afforded management use rights over forests within their respective traditional territories were proposed based on traditional village boundaries (ERE Consulting Group, 2011).

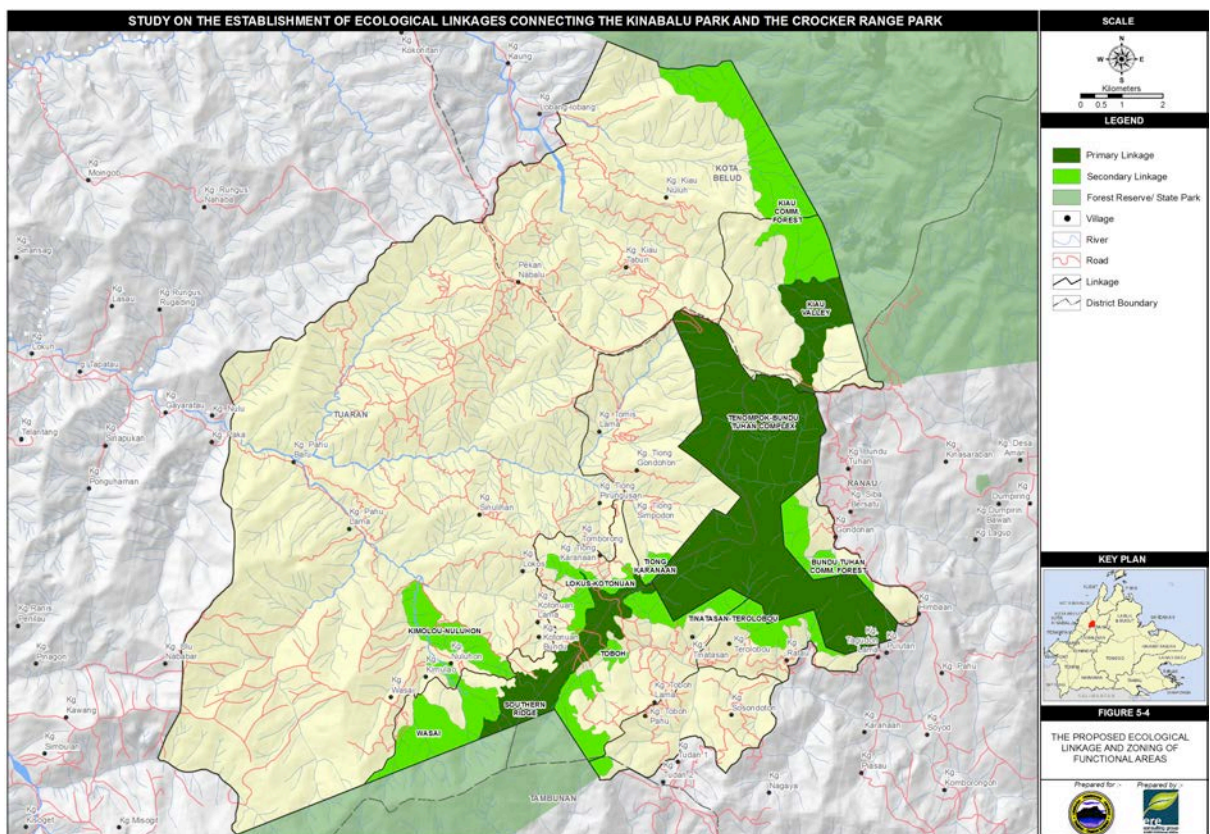


FIGURE 5. *The Proposed Ecological Linkage between Kinabalu Park and Crocker Range Park*

Source: ERE Consulting Group, 2009

The CCAs were proposed to be gazetted as Native Reserves under Section 78 of the Land Ordinance. By law, Native Reserves are common use areas established for the benefit of a resident community and managed through the appointment of trustees. Each CCA would have its own Board of Trustees, comprised of village elders and a representative from the government.

In addition, capacity building of government agencies and the local communities was given high priority in the plan. For local communities, the focus is on developing skills required to manage bio-cultural resources, understanding legal and policy frameworks for conservation and developing partnerships across a range of stakeholders. For government agencies, emphasis was on capacity building to develop the in-house skills required for successful local community engagement (e.g. interpersonal skills, social and group dynamics, emphatic listening and conflict resolution) and facilitating community-based conservation (e.g. participatory action research, ethno-ecological approaches and human rights).

The name “Kinabalu ECOLINC” was coined for the project, to describe an *“Ecological linkage aimed at conserving the State’s heritage through the empowerment of its indigenous communities”* (ERE Consulting Group, 2011). If successful, the Kinabalu ECOLINC will help to enhance goodwill between the State Government and local communities and in the long-term lead to a sustainable and robust local economy while adding to the resilience of critical species and ecosystems within Kinabalu Park and Crocker Range Park.

3.6.3 Local Response Towards Inclusive Approach by Sabah Parks

During the 2nd. Community Day held between 1st. - 2nd. December 2012, semi-structured interviews were carried out with the local communities who participated in the event. The key informants selected included the headmen of the various villages, representatives from the Youth Rangers (established by Sabah Parks), cultural performers, and shaman. The aim of the interviews was to investigate the local response towards the recent initiatives taken by Sabah Parks to involve the local community in the management aspects such as the Youth Ranger scheme, Kinabalu Ethnobotanical Project (PEK), Community Conserved Area and the Community Day programme. In turn, the findings are expected to reveal the level of ‘buy in’ among the local communities towards Sabah Park’s inclusive approach and programmes.

Overall, there was a consensus among the village headmen that the inclusive approach currently being adopted by Sabah Parks has abated their ‘antagonistic attitude’ towards the agency. The village headmen recalled that the local communities around

the Mt. Kinabalu area were originally wary when Sabah Parks gazetted the area as a National Park in 1964, for fear that “we would not be allowed to practise our rituals and traditions on the mountain”. In addition, the communities were initially uneasy about the fact that the area would no longer belong to them and “were afraid that their relationship with the mountain would be severed”. The village headmen also recalled the conflicting views regarding the importance of Mt. Kinabalu to the local community (sacred place to bury the dead), which differs from the official stance of Sabah Parks (preserving and conserving the mountain ecosystems).

The village headmen pointed out that over time, the villagers began to accept that Mt. Kinabalu had become a protected area (Kinabalu Park), especially “since its inscription into UNESCO’s World Heritage List in 2000”. By then the local communities could see that the Park was well managed and their traditional lifestyles were largely unchanged by the gazettement. There was a strong agreement in their views that the creation of *Kakakapan id Gayo Ngaran* (Community Day) by Sabah Parks was “the tipping point”, which finally



Among activities held during Community Day 2013 (Photo by: Amran Hamzah)

convinced the village elders that the management is “very sensitive to local aspirations and needs”. As a testimony to the success of *Kakakapan id Gayo Ngaran*, 13 villages participated in the second event, which was held in 2012 as compared to only 2 villages during the inaugural event in 2011.

The interviews with the village headmen and elders also revealed their support and enthusiasm for the programmes and activities organised by Sabah Parks such as the *Rafflesia* Conservation Incentive Scheme and the *Projek Etnobotani Kinabalu* (PEK) (Kinabalu Ethnobotanical Project). Interestingly, the village headmen admitted that they were still unhappy about being officially excluded from the Park despite the regular dialogues and educational programmes carried by Sabah Parks. But they agreed that the Community Day programme “totally changed our previously negative perception of Sabah Parks”.

The male youths who were interviewed revealed their pride in being appointed as Youth Rangers. Given that high performing Youth Rangers would be absorbed by Sabah Parks as full time rangers, this opportunity was appreciated by the respondents as it “created a career path” for them. The shaman was a bit bemused by the proceedings which contained, among others, a prayer recital by the shaman and non-stop cultural performances by the participating villages. This led the shaman to comment that “the youths present today are more interested in their cultural performance and not bothered with the spiritual message I am trying to convey”.

Despite this the 2nd. Community Day was a big success in getting ‘buy in’ from the local communities. The local cultural troupes took months to prepare for their performances and the overwhelming feedback from the female youths was “we want more and will be back next year!” Granted that it would be challenging to design a programme that could educate the local youths about their culture and tradition in an attractive and effective way but suffice to say that Community Day is indeed a ‘masterstroke’ by Sabah Parks to ensure ‘buy in’ from local communities.

3.7 Discussion

The various laws governing protected areas in Sabah have traditionally necessitated strict habitat protection. Generally mute on the role of communities in conservation, the view reflected in most of these laws is that it is the state's responsibility and prerogative to manage land and resources as it deems fit for the benefit of the state and its population. Where local people are mentioned, it usually has to do with regulating behavior, such as awarding licenses for access, or imposing fines and penalties for breaking laws. Despite this, most laws have specific sections that provide their respective agencies the mandate and latitude to work with local partners toward conservation goals or sustainably managing land and other natural resources (Vaz, 2012).

While operating within the ambit of these laws, the various protected area management authorities have adopted increasingly diverse and innovative approaches to strike a balance between strict protection and allowances for sustainable use by local indigenous communities. As a result, a number of promising symbiotic relationships have emerged between the various agencies and respective local communities, in tandem with a growing realisation that stronger ties with the local communities can also help towards meeting conservation goals.

The case study presented above provide a few examples of approaches that one agency has taken in order to enhance these ties: In the flagship Kinabalu Park, Sabah Parks has sought to alleviate poverty through prioritising the appointment of locals in park-related jobs and stimulating private ecotourism ventures, to renew pride in native culture through an ethnobotany project, and recently, to help the local communities re-establish spiritual links with their sacred mountain. In the Crocker Range Park, the protected area legislation itself was amended to enable local communities to continue occupying their traditional lands within the park boundaries. Finally, in the planned Kinabalu ECOLINC, a new form of protected area is envisioned for the establishment of an ecological corridor, to be controlled and managed by the communities themselves.

While promising, the above examples are just the proverbial ‘tip of the iceberg’ of the vast potential that Sabah possesses with regards to enhancing and institutionalizing community participation in safeguarding biodiversity areas. In carrying out the Sabah Indigenous and Community-Conserved Area (ICCA) Review³ in 2011, Sabah became the first state in Malaysia to document indigenous and community-conserved areas and to grapple with the potentials and challenges of incorporating local participation as part of its biodiversity conservation system (Cooke and Vaz, 2011).

The review showed that Sabah contains many exceptional examples of working (though not yet officially recognised) ICCAs in which ethnic communities have had long associations with their living environments and continue to actively govern these areas and the corresponding natural resources through traditional laws or Adat⁴.

For conventional protected areas, the notion of governance is a concept which offers elements of flexibility, as it is focused on the practical day-to-day management of a particular area, and is less tied to tenure or titled ownership. As shown in the concept of CUZs in Crocker Range Park, it is possible for an area to be located within a designated state park or forest reserve but governed by community managers in accordance with mutually acceptable agreements between the community and the protected area management authority. Such a concept could be useful in negotiating progressive strategies in cases where the imposition of protected boundaries has created conflict with local people (Vaz, 2012).

One final note, the Sabah Biodiversity Strategy 2012-2022, a new 10-year strategy that charts Sabah’s commitment to the conservation and sustainable use of its biological diversity, sets the course for further expansion of the role of local communities in protected areas. The strategy, which was formulated based on the CBD’s Strategic Plan for Biodiversity 2011-2020 and Aichi Biodiversity Targets⁵,

³ The Sabah Review of ICCAs was an output of a project entitled Traditional Ecological Knowledge in Sabah: A Consolidation of Issues and Experiences related to Biodiversity Conservation and Sustainable Resource Management (2009 – 2010), which is a collaborative initiative between the Global Diversity Foundation and the Bornean Biodiversity and Ecosystems Conservation Phase II Programme (BBEC II), funded by the Japan International Cooperation Agency (JICA).

⁴ *ICCAs are a new concept in Sabah and have yet to be officially recognised as a legitimate part of the state’s protected area network.*

⁵ Target 18 deals specifically with indigenous people: “By 2020, the traditional knowledge, innovations and practices of indigenous and local communities relevant for the conservation and sustainable use of biodiversity,

acknowledges that local communities in Sabah have “*long engaged in community-based natural resource management (CBNRM)*” and gives due prominence to strengthening links between conservation and local communities. This new strategy details four key actions to be undertaken in working towards this objective (**Box 10**).

With this strategy in place, coupled with the experience gained from past initiatives by Sabah Parks and other protected area management authorities, Sabah holds tremendous potential to become an outstanding example to Asia (and the world) of a place where humans can truly live in harmony with nature, or with biodiversity and protected areas, to be exact.

BOX 10.

The Sabah Biodiversity Strategy 2012-2022

The Sabah Biodiversity Strategy 2012-2022 charts Sabah’s commitment and contributions to fulfill the pledge made by Malaysia to implement the CBD. The document puts emphasis on engaging the people of Sabah – i.e. harnessing the collective reach, creativity and commitment of all stakeholders to safeguard the state’s biodiversity. In relation to local indigenous communities, emphasis is given towards supporting community-based conservation and collaborating with indigenous peoples within protected areas and forest reserves. Four specific actions are detailed in the strategy towards this end, as follows:

Action 1.11: We will support the establishment of an ICCA Network which would be a peer support group and resource base for capacity building and knowledge sharing among communities that seek to more effectively manage their conservation areas.

Action 1.12: We will expand programmes which engage local communities in playing conservation roles and develop training programmes to support them in this role.

Action 1.13: We will encourage innovative partnerships that promote biodiversity conservation in conjunction with resident communities, particularly those with an interest in protecting areas of significance within Parks, Forest Reserves and Sanctuaries. We will continue working with indigenous communities on Community Use Zones in Parks, and community and amenity zones in commercial FRs.

Action 1.14: We will engage indigenous communities in programmes to restore degraded natural areas and will jointly learn from research initiatives and pilot projects. We will document the progress with these partnerships in order to provide useful models (e.g. the Kelawat Model) for these strategies and approaches to be employed elsewhere in Sabah, and as models for collaborative approaches for biodiversity conservation elsewhere in the region.

Source: Sabah Biodiversity Strategy 2012-2022

and their customary use of biological resources, are respected, subject to national legislation and relevant international obligations, and fully integrated and reflected in the implementation of the Convention with the full and effective participation of indigenous and local communities, at all relevant levels”.

Chapter 4:

SYNTHESIS AND RECOMMENDATIONS

4.1 Introduction

The Asian Philosophy of Protected Areas seeks to recognise and leverage on the traditional values and ecological knowledge that have influenced Asia's ancient wisdom in human-environment relationships in the shape of co-existence and adaptive management of the environment. The Asian Philosophy of Protected Areas is fully supportive of the notion that Asia's perspective based on harmony and the symbiotic relationship between humans and nature has been successful in biodiversity conservation, and hence should be incorporated into formal protected area management. This chapter will synthesize the main findings presented in the earlier chapters to recommend strategies and measures to further improve the effectiveness of the management of PAs in Asia, through better partnerships in governance, expanding 'buy in' from local communities and the incorporation of traditional values to strengthen the relationship between conservation and human development.

4.2 Synthesis Of Main Findings

Both the review of the Asian 'traditional' protected areas/ecological knowledge and the case study of Kinabalu Park/Crocker Range in Sabah have highlighted several key points in relation to the Asian Philosophy of Protected Areas which are as follows:

- **Asia has a long tradition of respect, harmony and synergy between humans and nature.**

This has brought about sustainable ways of adapting to the environment that have shaped Asia's distinct cultural landscapes in which many have been recognised and celebrated as UNESCO's World Heritage Sites (Zhou, 1999; Ma *et. al*, (2008). The distinction between 'wilderness' and habitable or built up areas does not exist in Asian philosophies and resource transformation for the sake of livelihood had taken place through the millennia albeit being restricted by beliefs, taboos and

prohibitions borne out of respect for the spiritual forces of Asia's worldview and cosmology.

- **Asia's traditional values and long tradition of ecological adaptation by humans to their diverse environments, as opposed to Man's dominion over nature, supports contemporary approaches in protected area management such as Resilience Planning and Adaptive Management.**

Asia's belief systems based on taboos and prohibitions have created a variety of sacred natural sites such as sacred groves, sacred woods and sacred coral reef formations that have significant value in terms of biodiversity conservation, equivalent or even surpassing that of formal protected areas in certain locations (Verschuuren *et. al*, 2010; Dudley *et. al*, 2010; Wild and McLeod, 2010). Asia's long tradition of ensuring harmony between human intervention and nature, both for livelihood purposes and to create *tezhi* (essence) (Sofield, 2009), has now been acknowledged as being *adaptive* in its approach (in the face of uncertainties in socio-ecological conditions) which is consistent with the contemporary concepts of adaptive management and resilience planning (Holling, 1986; Berkes, 2012).

Contemporary thinking in biodiversity conservation is looking beyond post-positivist approaches by exploring alternative approaches such as complexity theory, systems thinking and evolutionary approaches, which could be grouped under the umbrella of Adaptive Management and Resilience Planning (Holling, 1978; Holling *et. al*, 1998. as argued by Berkes (2012:281) Adaptive Management "is a good match for traditional ecological knowledge, and a potential bridge between Western and indigenous ways of knowing in the area of ecology and mainstream resource management". This potential further endorses the notion that the Western approaches in biodiversity conservation should be more receptive and accommodating towards other perspectives, not as a replacement but as a complement. As practical examples, the 2000 year old Ifugao rice terraces in the Philippines and those in Bali, Indonesia were quintessentially created through a form of adaptive management process

- **The 'wilderness' or 'island' approach to protected area management is alien to Asia's holistic approach based on harmony between humans and nature.**

Ironically the ‘wilderness’ or ‘sanctuary’ approach modelled after Yoshimite National Park and Yellowstone National Park in the USA (Toyoda, 2011) are still being used by many countries in Asia despite the transformation in the management approaches of formal protected areas into more inclusive models (Phillips, 2003; McNeeley, 2007). As a result protected areas that exclude the local/indigenous peoples are likely to suffer continuing conflicts and non-compliance as cultural and social awareness as well as acknowledgement of human rights intensify.

- **Asia’s indigenous and traditional knowledge have made significant contribution to modern conservation principles and practice in terms of the stewardship of biodiversity and development ethics.**

There are ample evidence in the literature as regards the role and contribution of traditional ecological knowledge in environmental monitoring and assessment, ensuring sustainable development, dealing with disasters and modern crises and nurturing environmental ethics (Berkes, 2012). As an example, site planning based on the Buddhist cosmology of Amitabha (Pure Land) had managed to limit the damage to precious artefacts stored in the temples at the Hiraizumi World Heritage Site during the Great Japanese Tsunami in 2011 (briefing during site visit, 2011). In terms of ethics, the traditional belief that nature is pulsating with life, soul and spirit that require humans to treat it with *respect*, is the foundation for the Asian approach of harmonizing humans with nature (Sofield and Li 1988a; Sofield and Li, 1988b; Berkes, 2012).

- **Asia’s traditional ecological knowledge have the potential of enriching existing approaches and complementing the principles of protected area management in the region.**

While it is accepted that combining the formal or colonial approach with Asia’s traditional approach to protected areas management would be a challenge given their different worldviews (Berkes, 2012), the varied and alternative approaches from Asia have the potential of complementing the mainstream approaches to ensure ‘buy in’ from the local communities (as in Sabah Parks case study in previous chapter). For decades protected area managers in many parts of Asia have struggled with encroachment (poverty induced) and non-compliance because of the

exclusion of local/indigenous communities but success stories in community forestry (especially in Nepal) and co-management auger well for the inclusion of Asia into the ‘new paradigm’ in protected area management (Phillips, 2003).

BOX 11.

Recognition of Traditional Values

- Recognises the diversity of the world’s cultures and spiritualities as part of vitality of humankind and that of the planet;
- Values all forms of spirituality as they connect to nature;
- Recognises that spirituality is different from religion, but that it is equally valuable;
- Considers all religions as having the same value;
- Considers traditional spiritualities as being equal to religions in value;
- Considers also that non-religions, secular spirituality is equally as valuable as religious spirituality;
- Promotes ecumenism;
- Promotes dialogue among all faiths, religions and forms of spirituality, as well as with the secular world, around common values and approaches towards improving human living in a sustainable planet;
- Recognises that there are multiple dynamics and changes in all forms of spirituality, as they are not static (as broadly cultures are not), and that ancient values are likely to encounter and adopt new spiritual values;
- Uses a right-based approach, which implies respecting the rights of all peoples and individuals to their own beliefs and spiritual values and practices, as long as they do not harm others, as well as the universal rights of citizens to a healthy environment and to sustainable development;
- Promotes equity in conservation approaches and supports especially the vulnerable of disadvantaged groups, whose cultures and spiritual values tend to be ignored or discriminated;
- Promotes the integration of scientific knowledge and technical tools with traditional management systems based on local values; and
- Takes an enabling approach to communities and people, with a view to strengthening local actions, institutions and processes, including communities linked through spiritual traditions.

Source: Oviedo, 2012

- **‘Traditional’ protected areas in Asia such as sacred natural places have an essential role in biodiversity conservation and should be given equal protection as formal protected areas**

As illustrated in Chapter 2, sacred natural places in Asia such as sacred woods, sacred groves and coral reef formations contain high biodiversity and act as a refugia for endemic species and medicinal plants (Bhagwat *et. al*, 2005; Rajendraprasad, 1995; Balasubramanian and Induchoodan, 1996; Liu *et. al*, 2000; Soedjito and Purwanto, 2003). In Japan the concept of sacred forests is being

revitalised through the efforts of Prof. Akira Miyawaki, from Yokohama University who has been leading an intensive tree planting programme to create sacred forests for the 21st century under the slogan "hometown forests with hometown trees" (Tsukada, undated). Village forests in Korea and sacred groves in India are still revered but the lack of legal protection has exposed them to constant threats in the form of encroachment and neglect. The only exception is in Sri Lanka, where several sacred groves such as Yagirala and Kalugala have been given PA status (Ramakrishnan, in Parrotta and Trostler, 2011). Sacred sites may or may not be included in the formal protected area system of countries in Asia according to the appropriateness of the situation. What is more important is for sacred sites to be protected along a network or corridor, and not to be left fragmented, so as to be more effective in relation biodiversity conservation.

4.3 Concerns Regarding The Threats To Asia's Traditional Ecological Knowledge

In this so-called 'Asian Century', the region is undergoing rapid modernization and transformation that have brought about substantial shifts in its value systems and worldview especially among the younger generation. In this light, the role of traditional ecological knowledge and traditional beliefs, taboos and prohibitions are being challenged and potentially altered by the creation of a homogenized society of world citizens. Some of the concerns that may affect the relevance and contribution of traditional ecological knowledge are as follows:

- **Rapid urbanization, depopulation of rural areas and the decreasing emotional attachment to traditional beliefs and taboos which are perceived as being backward.**

Rapid urbanization since the 1970s, coupled with the depopulation of rural areas have resulted in 'dysfunctional rural communities' all over Asia especially in Japan. For community based approaches like Satoyama to work, the presence of dynamic rural communities is essential thus explaining why the Satoyama Initiative is more popular abroad than in its birthplace Japan, where the outmigration of youths to the cities have been phenomenal (pers. comm. Robert

Blasiak, Satoyama Initiative, 2013). Moreover the worldview and outlook of rural youths have also changed drastically. For instance the youths interviewed during Community Day at Kinabalu Park, Sabah (Chapter 3) admitted their lack of understanding of the spiritual significance of the event, stating “*we do not understand/not interested in what the shaman is saying in his prayer recital and the main reason for our presence is to participate in the cultural performance and have a good time*”.

- **The power of the Internet and social media in creating a ‘homogenous’ global community will little appreciation of traditional values and traditions.**

As school curriculum and syllabus of many countries such in Asia become more exam-oriented, the region’s long and distinct traditions have been relatively ignored. This problem is compounded by the powerful role of the Internet and social media in glamorising Western consumptive lifestyles within a hyper-connected ‘global village’ (McLuhan, 1964). As a result, the youths of Asia are becoming more ignorant of their own culture let alone comprehend the role of deities and spirits as well as the need to appease and revere them (e.g. in the form of sacred sites). As a consequent, the appreciation of traditional values and traditions has alarmingly diminished and Asia’s age old wisdom in resource management have been almost totally erased from the memory of the younger generation in favour of a ‘homogenised’ Western consumptive lifestyle.

- **Contemporary interpretation by various mainstream religions in Asia gradually erasing the role of traditional beliefs and taboos as part of Asia’s ancient wisdom in human-environment relationships**

In Malaysia, Islamic reformers have succeeded in erasing its Malay-Muslim’s past associations with either animistic or Hinduisim/Buddism rituals and beliefs. Consequently spiritual healing and cleansing rituals linked with Hinduism and ‘folk Islam’ such as *main puteri and mandi safar* (Last Wednesday of Safar, Aakhri Charshamba in Persian and Rebo Wekasan in Javanese) have long been banned especially in the Muslim states in the east coast. Likewise folk performing arts such as the *wayang kulit*, which is based on the Ramayana epic has been ‘sanitized’ with non-Hindu characters. The same process is also happening in Indonesia although there are still pockets of communities where animistic beliefs

are thinly intertwined with contemporary Islam such as the Sasak community in Lombok (Telle, 2009). Christianity is also trying to remove animistic rituals such as making offerings and sacrifices to the mountain gods but as evident during Community Day at Kinabalu Park, the mainly Catholic *Kadazan Dusun* community were still slaughtering white chickens before they trek up the mountain to pay respect to the spirit of their ancestors, *Akinabalu*. In India it is reported that contemporary interpretations of Hinduism have replaced the folk deities inside scared groves with more temple buildings being built hence reducing their biodiversity value (Malhotra, 2001; Deb and Springate-Baginski, 2007; Khan et. al, 2008).

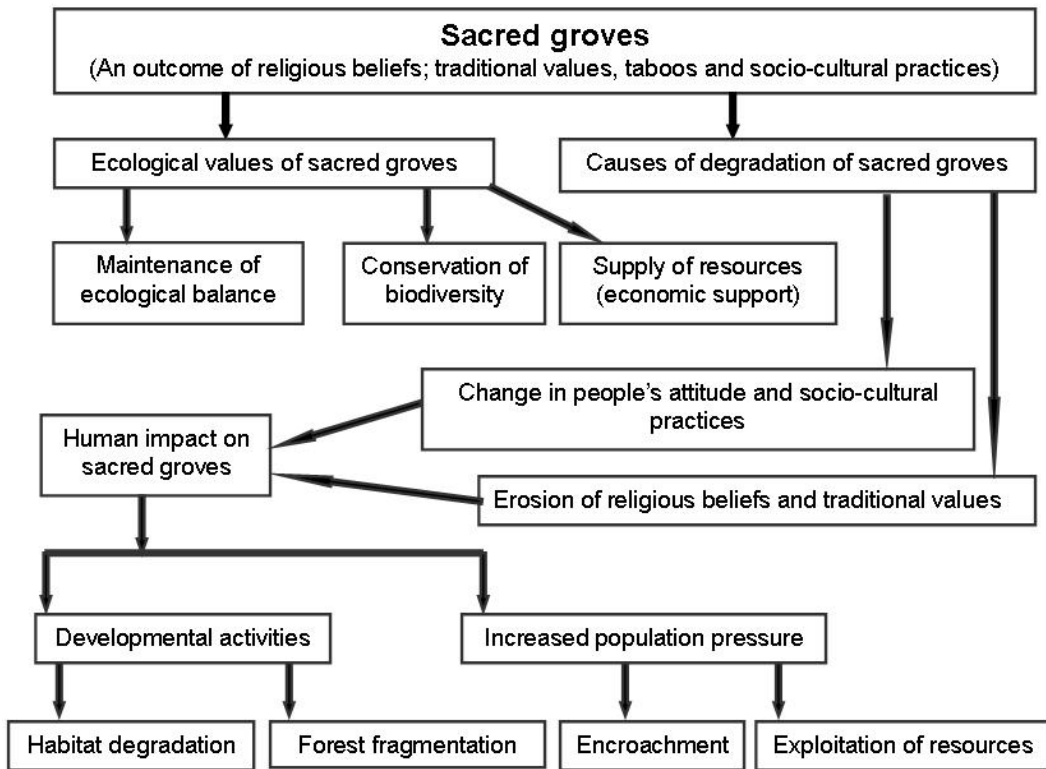


FIGURE 6. Causes for Degradation of Sacred Groves in India

Source: Modified from Khumbongmayum et al. 2004 in Khan et. al, 2008

- **Sacred natural areas created by beliefs and taboos are not legally protected, and are susceptible to encroachment and modern developments.**

Sacred natural sites are faced with threats such as encroachment, urban development and commercial forestry etc. because they are not protected by any form of legislation. There are also sacred sites which have been abandoned by rural

communities who have migrated to urban areas thus making them vulnerable to real estate development. In Hong Kong, *fengshui* forests are still intact but the villages around them have largely been abandoned, and the former inhabitants only return once a year to celebrate Chinese New Year (Marafa, 2003). Interestingly there have been cases where the local community had appealed to the government to gazette areas considered sacred to them as formal national parks to keep out encroachment by commercial logging activities, as in the case of the Kelabit sacred area in the Sarawak highlands, Malaysia (pers. comm Gerawat Gala, President of RURUM Kelabit Sarawak, 2013). It is interesting to note that this particular sacred area revered by the Kebalit community, which contains burial sites and remnants of traditional longhouses, has indeed been gazetted as the Pulong Tau National Park by the Sarawak State Government. In the same context, there are several examples in the region where sacred places overlap with formal protected areas (Dudley and Higgins-Zogib, 2012) but the truth of the matter is that more and more sacred sites are being encroached upon or removed due to their lack of legal protection (**Table 4**).

Table 4. *Examples of Sacred Sites in Protected Areas in Asia with Different Governance Strategies.*

Category	Country	Protected Area	Notes
Ia	Sri Lanka	Yala National Park	Significant to Buddhist and Hindus and requiring high levels of protection for faith reasons
Ib	Mongolia	Bogd Khan Mountain	Significant to Buddhism and previously to shamanism. Officially designated as a sacred mountain by the state, although evidence exists of a 'wilderness area' declaration dating from 1294
III	Cambodia	Phnom Prich Wildlife Sanctuary	A small area of forest within the wildlife sanctuary is considered a Spirit Forest; beliefs passed down through generations dictate that

Category	Country	Protected Area	Notes
			the area should be completely untouched
V	China	Xishuangbanna National Park	Landscape with several sacred sites (groves and mountains) for Daoists, which have long been managed by the community and are part of an important and biologically rich cultural landscape
World Heritage Site	Japan	Itsukushima Island Shrine	Important of Shinto, Buddhism and Hinduism. The island is in the Seto inland sea and has been a holy place of Shinto for centuries. It also contains large areas of protected forests
Co-managed	Papua New Guinea	Madang Lagoon	Wildlife management area under customary co-management, including sacred areas where the sea spirits are thought to reside; surveys show these are richer in biodiversity than other places (personal communication from Martin Palmer, 2006)

Source: Adapted from Dudley and Higgins-Zogib, 2012

▪ **The influx of domestic tourists to national parks in Asia and the adverse impact of their inappropriate behaviour.**

To be fair the (eco)tourism zone for most national parks constitute less than 10% of the total area so that potential impacts could potentially be contained and minimized. Nonetheless the influx of domestic tourists into national parks in Asia in the past two decades could have serious implications not only in terms of congestion, overcrowding and potential damage to trails etc. but due to their

incompatible behaviour which stemmed from their social construction of nature as a ‘giant playground’. For instance, a survey of the motivation of tourists going to Royal Belum State Park in Malaysia revealed that while international tourists were attracted by the natural environment, abundance of Rafflesia flowers, and lifestyle of the indigenous people, most of the domestic tourists went there “to have a good time with friends” (NCIA, 2011).

Consequently inappropriate behaviour more associated with mass tourists (noisy, gawking at indigenous people, polluting the environment, stepping on corals, taking back corals as souvenirs) are quite common in Asia’s terrestrial and marine parks. This is not helped by the response from the related agencies. Under pressure to boost visitor arrivals to national parks, incompatible activities such as elephant rides in wildlife sanctuaries and fish feeding in marine parks as well as the lack of visitor management are common in many parts of Asia. Ultimately the lack of interpretation and visitor education have perpetuated the social construction of national parks in Asia not as a place ‘to be close to nature’, the ‘wilderness’ and ‘tranquillity’ but as a ‘giant playground’. Incompatible tourist behaviour extends to the superficial interpretation of Asian values (the need for human treatment to create essence/ *tezhi*) which has resulted in the ‘disneyfication’ of caves in China through the use of bright lighting (Sofield, 2009).



New pontoon jetties provided at Royal Belum State Park to boost visitation (Photo by: Amran Hamzah)



'Disneyfication' in Yaolin Cave, China

Source (Sofield, 2009)

To put things into perspective, domestic tourist arrivals to the state of Sabah, Malaysia was recorded at 1.93 million in 2012, an almost fourfold increase from 579,092 just a decade ago (Sabah Tourism Board, 2013). Of this, Kinabalu Park received 215,083 domestic tourists in 2012, double the number of 121, 151 tourists in 2011. In China, a total of 80% of all domestic trips are made to national parks (Qiu, 2006). In 2011, the country registered 2,747 forest parks, of which 757 are national forest parks. The forest parks received 468 million domestic tourists in the same year (Xu, 2013). This translates to more than 170,000 visitors per park, therefore placing immense pressure on the environment and carrying capacity threshold limits.

- **Inadequacy of local governance structure and capacity to be integrated effectively with the mainstream institutional framework to form an effective co-management model.**

Towards the setting up of effective co-management models for protected area management in Asia, the lack of local capacity and weak institutional set up at the community level have been identified as among the main barriers that are holding back the integration of local communities into the decision making process. The exploitative role of local elites is frequently cited as main weakness of the local institutional set up (Tosun, 2000). However, a critical review of the success of community forestry in Nepal revealed that heterogonous communities where there was a slightly uneven distribution of power and wealth performed better than homogenous communities because of the presence of residents with slightly more capital and know how (hence local elite) to take advantage of any given opportunity (Varughese and Ostrom, 2001). Despite this an overwhelming monopoly by local elites would likely be detrimental in the long term.

Contrary to common perception, an effective and participatory institutional set up has been observed to operate in closely knit and isolated communities. For instance, the indigenous Penan community in Long Lamai, Sarawak has a local organization in which consensus must be obtained from the four key groups before a decision on village development or the rotation of short tenures for agricultural production etc. is taken. The four groups represent the elders, women, youths and the church while the headman's role is only as a facilitator (pers.comm. Long

Lamai Village Headman, 2013). However, the village is keen to embrace community based tourism, and once they begin to receive visitors, their impending relationship with outsiders may require sophisticated means for conflict resolution and so forth, hence capacity building is imperative.

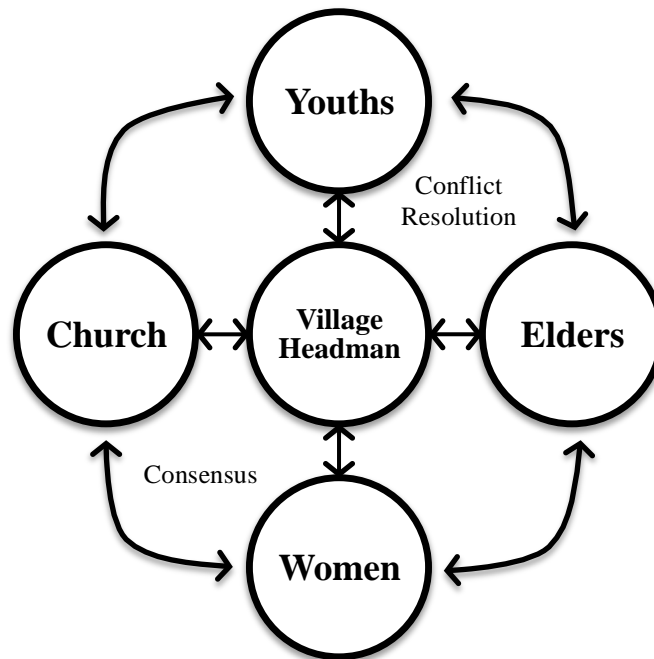


FIGURE 7. Long Lamai Penan Community Organizational Structure, Sarawak

4.4 Recommendations

The following recommendations are put forward to build on the potential of using traditional ecological knowledge based on the resource management philosophies in Asia to complement contemporary (and mainly Western approaches) to biodiversity conservation. For decades biodiversity conservation and protected area management in many Asian countries have adopted the ‘wilderness’ or ‘sanctuary’ approach imported from the West, in which the local and indigenous people were mostly excluded from formal protected areas and the decision making process. It could be argued that this approach betrays Asia’s long tradition of co-existence between humans and nature (wilderness is actually home) which created serious management challenges caused by encroachment and non-compliance (Toyoda, 2011).

Central to this line of argument is that Asia’s traditional approaches are now considered as being compatible with contemporary Western approaches such as Adaptive Management (Hollings, 1978). In addition, Asia’s ‘rediscovery’ of traditional approaches resonate well with progress in other parts of the world in relation to complementing mainstream approaches with traditional ecological knowledge, which led Berkes (2012: 261) to marvel at the “extraordinary similarity of basic designs shared by different cultures in comparable ecosystems worldwide, coupled with remarkable diversity in practice even in adjacent areas”. Towards this end this chapter recommends the following:

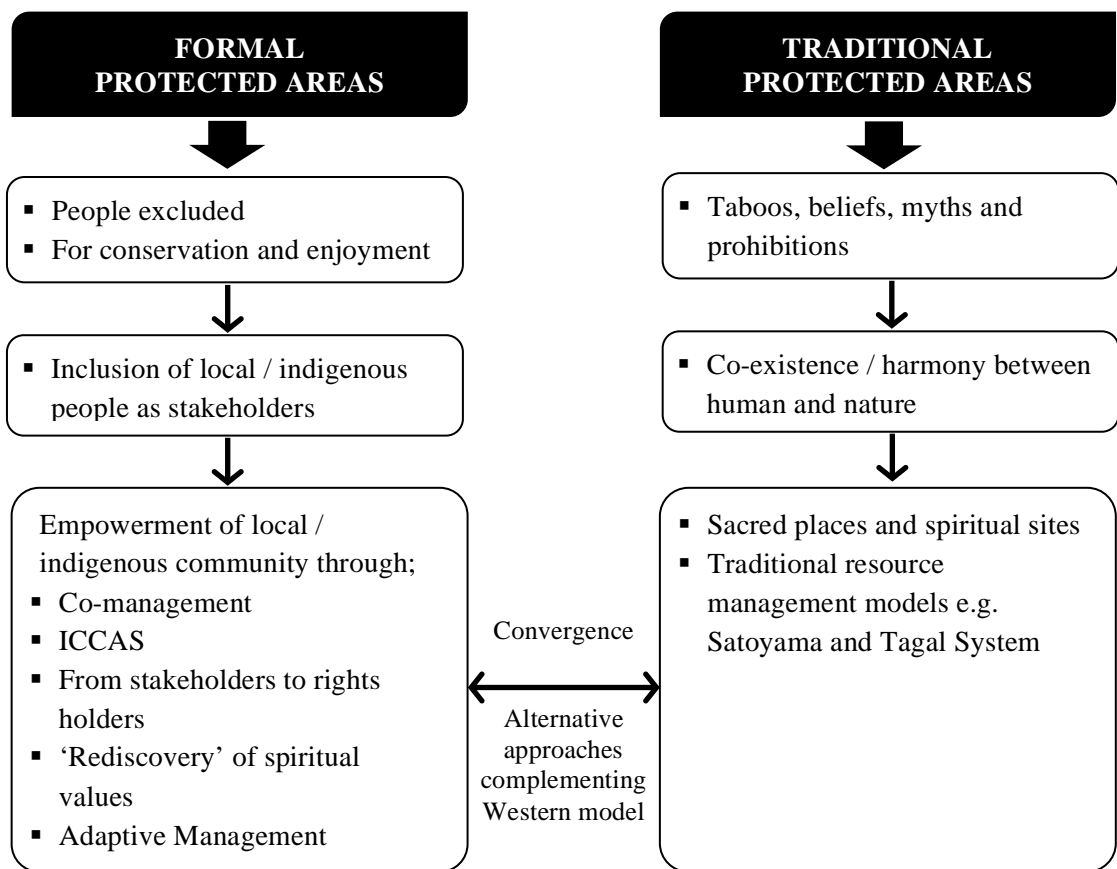


FIGURE 8. *Convergence between Formal and Traditional Protected Area Management Principles*

- **To recognise the contribution of Asia’s traditional ecological knowledge in complementing mainstream approaches in biodiversity conservation towards achieving the Aichi Targets**

Central to the above recommendation is the adoption of co-management concepts and approaches which are gradually taking place in many countries in Asia.

Inclusive policies and management strategies are equally essential and Asians could learn from each other e.g. from the long experience of countries such as Nepal in relation to community forestry. While approaches that empower local and indigenous communities such as ICCAs have been accepted by many governments, the official endorsement in the form of inclusion in the Protected Area Master List is still lacking in the region. In addition sacred natural sites should be given formal recognition either as a part, extension or additional category of formal protected areas whenever appropriate.

- **To adopt a more participatory approach by having an institutional and governance framework with clear channels of communication that include local and indigenous people in the decision making process**

‘Buy in’ from the local and indigenous community is crucial and a top down approach has often resulted in conflicts in the past, hence it should make way for participatory approaches that empower them. Towards this end the recognition of the rights of the indigenous community and respect for them as joint custodians should be translated into tangible actions such as the official endorsement of ICCAs, expansion of volunteer/youth ranger schemes, setting/scaling up local associations to become social enterprises to enhance local livelihood and hosting regular community events to celebrate the cultural traditions of the indigenous community.

- **To enhance the capacity of the local and indigenous communities to be effective joint custodians of protected areas**

Capacity building is essential in preparing the indigenous community to play an essential role in joint management given the complexity of the issues related to protected area management, especially in dealing with other stakeholders such as plantation/mining companies etc. The main apprehension among park managers in officially endorsing ICCAs is the real or perceived lack of capacity in the part of the local and indigenous communities to handle local rivalry, petty jealousies and exploitative local elites (pers. comm. Nais, 2013). It is therefore crucial to i) identify ‘local champions’ among the local community; ii) to set up a local council/trustee/cooperative; iii) to recognise and strengthen local rules iv) to

regularly organise training courses using adult learning methods (andragogy) such as role playing, technical visit and hands on learning.

Many indigenous communities organise themselves effectively around a structure appropriate to their worldview, values and social dynamics which are often participatory in nature. To facilitate joint management between the related government agencies and the local/indigenous community the challenge lies in the setting up of clear channels of communication between the local/indigenous organisational structure and the different levels of government. Within the organisational structure of local and indigenous communities, however, the presence of local elites are often regarded as being exploitative (Tosun, 2000). On the contrary it is argued that this assumption is rather simplistic, and that most local elites were initially 'local champions' (Hatton, 1995; Hamzah and Khalifah, 2009) who were passionate about galvanizing the rest of the community to improve their livelihood and socio-economic condition. The main reason why some of the 'local champions' later became exploitative and manipulative was due to the fact that the organic and local-champion driven set up did not evolve into a broader based organisation with should include a mechanism for check and balance (e.g. local cooperative) (Moern *et. al*, 2008).

Suffice to say that although the role of a 'local champion' is essential in the formative years of any form of co-management, it is crucial for a more representative local organisation to be established after a gestation period of around 5 years (Moern *et. al*, 2009), otherwise local elites would surface. Finally capacity building should be carried out on a regular basis and should also include the training of park managers and the local community in interpretation skills and visitor management techniques at destinations where Community Based Tourism has been fully embraced by the locals.

- **To educate the youths in Asia to be aware, appreciate and rediscover the region's ancient wisdom and traditional ecological knowledge as having the potential of complementing Western approaches in tackling contemporary environmental issues such as global warming, climate change and natural disasters etc.**

There is a dire need to introduce innovative ways and means of reconnecting with the youths in Asia for them to be proud of the region's ancient wisdom in resource management together with the growing acceptance of Asia's huge reservoir in traditional ecological knowledge in confronting contemporary global challenges such as climate change and disaster prevention. Subjects that increase the awareness of youths regarding their rich traditions and cultural heritage should be incorporated in the school and university curriculum. This is being done in Bali where schoolchildren are being taught to be aware and to love their cultural heritage, although the motive for doing so might be to preserve the island's unique Hindu rituals as part of its Unique Selling Proposition (USP) to attract more tourists.

In addition, the innovative use of the Internet and social media could further enhance awareness but the message should not romanticize the past but to celebrate success stories, and more importantly, the need to learn from Asia's ingenious adaptive relationship between humans and nature. Ultimately the youths of today (and tomorrow) need to be reminded of man's role as stewards (*khalifah* in Islam) in protecting nature which is a common belief among the mainstream religions in Asia. It is in this context that led WWF Malaysia to publish an online reference book in 2012, entitled '*Islam, Pemuliharaan Hidupan Liar & Anda*' (Islam, Wildlife Conservation & You) in collaboration with the Institute of Islamic Understanding Malaysia (IKIM), which is a novel attempt in using religion to nurture environmental consciousness and stewardship in wildlife protection.

- **To intensify and integrate research related to the wealth of traditional ecological knowledge in Asia to be stored in an online repository for common reference**

While the related subject matter has been gaining interest from scholars from all parts of Asia, research has largely been fragmented and uncoordinated. Ground breaking research on sacred groves are being conducted in many parts of India while universities in Hong Kong and southern China have been focusing on the Taoist worldview of relationships between humans and nature. The community forestry concept and practice have long been investigated by researchers in Nepal. Likewise there are active scholars in Japan, Korea and South-East Asia but also

relatively ‘marginalised’ researchers in Bhutan, Mongolia and so forth who deserve better recognition for their work on the subject matter.

To build on this momentum relevant researchers and institutions in Asia should form a consortium to facilitate networking and exchange and dissemination of research findings on the Asian Philosophy of Protected Areas. Among the earliest attempts in creating an online repository in Asia is the Traditional Knowledge Digital Library, which was established by the Indian government in 2009, to build on the ‘people biodiversity registers’ created by the Indian Biological Diversity Bill 2000 (Hansen and Van Vleet, 2007 in Ramakrishnan, 2011). In years to come, the growing body of work and knowledge on the subject matter should be expanded to include the role of Asia’s traditional ecological knowledge in complementing contemporary approaches such as Resilience Planning and Adaptive Management and the collective output could be deposited in an online repository with unlimited access so as to reach out to the lay public and youths of Asia.

- **To harness traditional ecological knowledge with the use of technology by leveraging on Asia’s growing technological prowess**

Among the many uses of IT to complement traditional knowledge is the use of the Geographical Information System (GIS) to enhance activities such as cultural mapping. For example, the Sarawak Museum Department (Malaysia) has been carrying out the painstaking task of excavating and recording sacred sites since 2011, comprising burial mounds created during the headhunters days, which were shaped in the form of crocodiles to ward off enemies. In this light, the use of powerful remote sensing technology, satellite tracking and GIS could significantly assist this operation. Conversely oral history have been proven to be useful in complementing the scientific prediction and forecasting of natural disasters (Berkes, 2012).

In Singapore, the use of technology is being pushed to its limit in the form of the bold and innovative Gardens by the Bay project. Spanning 101 hectares, Gardens by the Bay is home to over a quarter of a million rare plants. The entire park

comprises three gardens; Bay South, Bay East and Bay Central which are dominated by futuristic-looking supertrees and vertical gardens measuring up to 16 storeys, all linked by suspended walkways. The supertrees are not just aesthetic features but they also collect rainwater, generate solar power and act as venting ducts for the park's conservatory. The Conservatories, featuring the (man made and climate control) Cloud Forest and Flower Dome, are another key feature, offering visitors reprieve from the tropical heat. While the Gardens by the Bay project is a mammoth man-made spectacle and does not qualify as a protected area in the strictest sense of the word, it does provide a (scary?) glimpse of the future of protected areas in Asia. As Asian youths are gradually losing touch with their ancient traditions and wisdom, theme parks that mimic nature such as Gardens by the Bay might be more attractive to them compared to the real forests where there are leeches, mosquitoes and dangerous animals. Hence it would not be unrealistic to envisage the proliferation of similar projects in the near future, leveraging on Asia's growing technological prowess and financial might. Suffice to say that the scientific and ethical issues and debates surrounding the creation of Gardens by the Bay (and future copycats) should not be ignored no matter how surreal it may appear. Singapore's recent attempt in using high tech to mimic nature should not be ignored given that it is a quintessentially Asian phenomenon and hence should be included in future discourse in the context of biodiversity conservation.



Mimicking nature at Gardens by the Bay, Singapore. (Photos by: Amran Hamzah)

- **To reinvigorate interest in Asia’s traditional ecological knowledge as part of the ‘new paradigm’ in resource management and biodiversity conservation**

Ever since the publication of the seminal book, *Topophilia* by Tuan in 1974, there has been a dearth in books on the subject on environmental perception, attitudes and values by writers from Asia. Programmes in geography, urban and regional planning and landscape planning etc. offered by universities in Asia have mainly imported Western concepts and approaches. Likewise, most planning agencies in Asia are still entrenched in colonial philosophies and concepts as manifested in their design layout and standards.

As the Western approach to development and resource management is proving to be increasingly ineffective in tackling issues such as climate change and disaster prevention, it is timely for scholars and practitioners in Asia to revisit its huge reservoir of traditional ecological knowledge and extract the principles to be applied in contemporary planning. The revival of *Satoyama* outside of Japan is a success story that should be emulated. Getting faith-based organisations to collaborate with government agencies and NGOs is also imperative. In Malaysia for instance, WWF Malaysia is working with the Institute of Islamic Understanding Malaysia (IKIM) and the Ma’Daerah Community Heritage Association (MEKAR), a community-based organisation championing turtle conservation in Kemaman, Terengganu. Together they had organised a one-day workshop (and more in the future) on turtle conservation which was attended by local *Imams* and religious speakers. This approach resonates with the efforts by the Evangelical Alliance in Papua New Guinea by training pastors in forest management and biodiversity conservation (Palmer and Finlay, 2003). The academic fraternity has a crucial role to play by encouraging research focusing on the ‘Asian Way’ and organising conferences to disseminate exciting and thought provoking findings related to the subject matter. Finally planning agencies should get out of their ‘comfort zone’ to be more inclusive and innovative in their approach based on Asia’s development perspectives.

4.5 Conclusion

This chapter has synthesised the main findings from the literature review and case study to formulate recommendations aimed at elevating the Asian Philosophy of Protected Areas not as a fossilised and romanticised image of Asia's glorious past but as a potentially powerful driver in the search for new solutions to contemporary resource management and biodiversity conservation issues. Some of the recommendations may be controversial or even too idealistic given that most countries may be reluctant to move out of their 'comfort zone' created by decades of overdependence on colonial approaches to resource management. It is, however, hoped that the recommendations could at least stimulate serious discourse among Asian countries that could lead to a rediscovery of our ancient wisdom, so that we could learn from them as we face current and future challenges that require bold and innovative approaches in managing our environment.

Chapter 5:

CONCLUSIONS

5.1 Introduction

The journey to discover/rediscover the Asian Philosophy of Protected Areas began at the Akita Workshop in 2009 where several of the participants mooted the idea, albeit in jest, that Asia has an alternative approach to biodiversity conservation and protected area management. It was not until this research on the ‘Asian alternative’ was officially commissioned by IUCN, that the researchers began to realise the daunting task ahead of them. Not only is Asia physically huge and complicated with diversity but the ‘Asian alternative’ is embedded in age old philosophies that deserve a big team of experts from different specialisations to spend years researching each and every philosophy to do justice to the subject matter. The initial literature review had opened up the Pandora box and well meaning colleagues and acquaintances kept sending invaluable materials from another society or country in Asia. On many occasions, the researchers were about to ‘drown in a sea of information’ and yet the question “have we included this country?” kept banging on their conscience.

It is through this research that the authors discovered that there is a growing body of knowledge on the Asian approaches to biodiversity conservation and sustainable development. The IUCN CSVPA have for years been producing novel publications on sacred natural sites and their contribution to biodiversity conservation. Likewise the Satoyama Initiative has also been championing one of Asia’s distinct approaches to resource management. In addition, scholars in universities in Hong Kong and southern China as well as in research institutions in India and Nepal have also been focusing on Asia’s ancient wisdom and traditional ecological knowledge and their contribution towards biodiversity conservation. Despite this, previous efforts have largely been fragmented and the research findings have not been widely disseminated beyond the specialised journals.

In reviewing the so-called Western approach to protected area management, the researchers realised halfway through the research that it would be too simplistic to take a 'Western vs. Asian' discourse. In fairness, the 'Western' models adopted or inherited by many Asian countries were essentially colonial models of protected area management. The Western model has evolved since the 1980s to be more inclusive and co-management models such as ICCAs have been incorporated in many PAs in the Western world. In this light Australia is leading the way as exemplified by the success of ICCAs such as Kakadu National Park. Even in the Western world, there are 2 distinct approaches, namely the 'new world' approach (USA/Australia and New Zealand) characterised by state ownership of large tracks of land and the 'old world' approach (UK and much of Europe) involving land under private ownership and conservation is carried out through planning regulations (pers. comm. , Les Clark).

In Asia, there are various models of protected area management that it would not be possible to declare that there is a Pan Asian model of PA management. For instance, Japan's system is more akin to the 'old world' Western approach in which private land also constitute protected areas in the form of *quasi parks*.

What is more important is for the policy makers in Asia to rediscover and celebrate Asia's ancient wisdom and traditional knowledge by realigning the governance, strategies and mechanisms for PA management in their own countries so as to be more inclusive and effective. In this respect, the Protected Areas management Effectiveness Review (University of Queensland, 2010) revealed that conservation is more effective if conservation is integrated with local norms, values and community rights. This could be achieved by formal recognition of sacred natural sites which will assist in empowering the local and indigenous communities as joint-custodians of protected areas. Subsequently this approach could be scaled up once governments and policy makers in Asia fully embrace ICCAs as an effective approach towards co-management.

This, however, will require a fundamental shift in the governance of protected areas in Asia, by complementing the formal PA system inherited from the West with customary and spiritual practices covering the whole landscape and seascape. The empowerment of the local and indigenous communities is imperative for this

paradigm shift to take place in Asia and so is learning from Asian (and non-Asian) countries that have made a head start in community-based resource management. In addition, the landscape/seascape approach (as facilitated by IUCN Category V) would often require a multilateral/transboundary approach. Last but not least, the inclusive governance model should include faith groups within Asia so as to leverage on the ecologically sustainable tenets of each major religion in Asia as well as the animistic beliefs such as the powerful notion of *khalifah* (custodian) in Islam and Satoyama in Japan. By marrying science and religion, ethical based conservation could complement scientific knowledge in providing some of the solutions for the contemporary problems such as the threat to biodiversity due to climate change etc. By integrating science, faith and culture, will create new opportunities for social cohesion by emphasising the harmony between environmental values with religious duty and ethics, which will help foster connectivity and resilience.

References

- Allerton, C. (2009a).** *Introduction: Spiritual Landscapes of Southeast Asia.* Anthropological Forum. Taylor and Francis. 19(3): 235-251
- Allerton, C. (2009b).** *Static Crosses and Working Spirits: Anti-Syncretism and Agricultural Animism in Catholic West Flores.* Anthropological Forum: A Journal of Social Anthropology and Comparative Sociology. 19(3): 271-287
- Anderson, D. M., Salick, J., Moseley, R. K., and Xiaokun, O. (2005).** *Conserving the sacred medicine mountains: A vegetation analysis of Tibetan sacred sites in Northwest Yunnan.* Biodiversity and Conservation, vol 14, 3065-3091.
- Balasubramanian, K., and Induchoodan, N. C. (1996).** *Plant diversity in sacred groves of Kerala.* Evergreen, vol 36, 3-4.
- Barros, A. (2005).** *Evaluating the efficiency of a small hotel chain with a Malmquist productivity index,* International Journal of Tourism Research. 7(3), 173-184.
- BBEC website.** *Addressing land use issues with community participation in Crocker Range Park: Participatory Protected Area Management.* Bornean Biodiversity & Ecosystems Conservation Programme Phase II (BBEC II) in Sabah, Malaysia. <http://www.bbec.sabah.gov.my/phase2/ipam.php> (Accessed 26 January 2013)
- Berkes, F. (2012).** *Sacred Ecology.* Third Edition. Taylor and Francis.
- Bernbaum, E. (2010).** *Sacred Mountains and Global Changes: Impacts and Responses.* Sacred Natural Sites: Conserving Nature and Culture (Verschuuren, B., Wild, R., McNeely, J.A., and Oviedo, G. (eds). Earthscan. 33-41

- Bhagwat, S. A., Kushalappa, C. G., Williams, P. H., and Brown (2005).** *The role of informal protected areas in maintaining biodiversity in the Western Ghats of India.* Ecology and Society, vol 10, no. 1
- Borneo Post (21 November 2011) Mt Kinabalu Porters Honoured.**
<http://www.theborneopost.com/2011/11/21/mt-kinabalu-porters-honored/>
(Accessed 2 February 2013)
- Borrini-Feyerabend, Grazia, Ashish Kothari, and Gonzalo Oviedo (2004).** *Indigenous and Local Communities and Protected Areas: Towards Equity and Enhanced Conservation.* IUCN and WCPA.
- Byrne, D. (2010).** *'The Enchanted Earth: Numinous Sacred Sites'*. Sacred Natural Sites: Conserving Nature and Culture (Verschuuren, B., Wild, R., McNeely, J.A., and Oviedo, G. (eds). Earthscan. 53-61.
- CBD (1992).** *Convention on Biological Diversity.* United Nations Environment Program (UNEP).
- Callicott, J.B. (1982).** *Traditional American Indian and Western European attitudes toward nature: An Overview.* Environmental Ethics 4: 293-318
- Cetinkaya, G., Koji Nakamura, K., Kambu, A., Daisuke, A. and Daisuke, U. (2012).** *Traditional knowledge and landscape management: evaluation and measurement of traditional knowledge on edible wild plants and mushrooms in the satoyama ecosystems in the Noto Peninsula, Japan.* Journal of Environmental Planning and Management, 55:2, 141-160
- Christianty, L., O.S. Abdoellah, G.G. Marten, and J. Iskandar. (1986).** *Traditional agroforestry in West Java: the pekarangan (homegarden) and kebun-talun (annual-perennial rotation) cropping systems.* In Traditional Agriculture in Southeast Asia (G.G. Marten, ed.). Boulder, CO:Westview, 132-58

- Clout, H. (1972).** *Rural Geography: An introductory survey*. Oxford. Pergamon. 85.
- Coggins, C., Chevrier, J., Dwyer, M., Longway, L., Xu, M., Tiso, P., Li, Z. (2012).** *Village Fengshui Forests of Southern China: Culture, History, and Conservation Status*. ASIANetwork Exchange, Vol. 19(2), 52-67
- Colchester, M. (1994).** *Salvaging nature: indigenous peoples, protected areas and biodiversity conservation*. Discussion Paper no. 55. Geneva, UNRISD.
- Colchester, M. (2004).** *Conservation Policy and Indigenous Peoples*, Cultural Survival Quarterly. Cambridge, Ma. Vol. 28: 17-22
- Colchester, M. (2010)** in Roe and Elliott (2010) (eds.). *Conservation Policy and Indigenous Peoples*, in The Earthscan Reader in Poverty and Biodiversity Conservation, Earthscan: London, 147-155
- Corner, E. J. H. (1964).** *A discussion on the results of the Royal Society expedition to North Borneo, 1961*. Proc. Roy. Soc. London. Ser. B. Biol. Sci.
- Corner, E.J.H. (1964).** *Royal Society Expedition to North Borneo, 1961: Reports*. Linnean Society. London.
- Costa-Pierce, B.A. (1988).** *Traditional fisheries and dualism in Indonesia*. Naga 11(2): 34
- Delgado, F., Escobar, C., Verschuuren, B., and Hiemstra, W. (2010).** 'Sacred Natural Sites, Biodiversity and Well-being: The Role of Sacred Sites in Indigenous Development in COMPAS Network'. Sacred Natural Sites: Conserving Nature and Culture (Verschuuren, B., Wild, R., McNeely, J.A., and Oviedo, G. (eds). Earthscan. 188-197.
- Department of Fisheries Sabah (2012).** *The Tagal Initiative*. <http://www.fishdept.sabah.gov.my/tagal.asp> (Accessed 19 July 2013).

- Doolittle, Amity A. (2007).** *Native land tenure, conservation, and development in a pseudo-democracy: Sabah, Malaysia.* *Journal of Peasant Studies*, 34:3, 474 – 497
- Dudley, N., Stolton, S., Belokurov, A., Krueger, L., Lopoukhine, N., Mackinnon, K. (2009).** *Natural solutions: Protected areas helping people cope with climate change.* IUCN-WCPA, TNC, UNDP, WCS, the World Bank, and WWF, Gland, Switzerland, Washington, DC, and New York, USA.
- Dudley, N., Bhagwat, S., Higgins-Zogib, L., Lassen, B., Verschuuren, B., and Wild, R. (2010).** 'Conservation of Biodiversity in Sacred Natural Sites in Asia and Africa: A Review of the Scientific Literature'. *Sacred Natural Sites: Conserving Nature and Culture* (Verschuuren, B., Wild, R., McNeely, J.A., and Oviedo, G. (eds). Earthscan. 19-32.
- Dudley, N., Higgins-Zogib, L. and Mansourian, S. (2005).** *Beyond Belief, Linking Faiths and Protected Areas to Support Biodiversity Conservation.* WWF/ARC, Gland, Switzerland.
- Duncan, J. S. (1980).** The Superorganic in American Culture and Geography. *Annals of the Association of American Geographers*. 70: 181-198.
- The Durban Action Plan (2003).** The Vth World Parks Congress (WPC). Durban South Africa.
- Duraiappah, Nakamura, Takeuchi, Watanabe and Nishi (eds) (2012).** *Satoyama–satoumi ecosystems and human well-being: Socio-ecological production landscapes of Japan*, United Nations University Press, 2012, ISBN 978-92-808-1210-7.
- Duraiappah, A. K. and Nakamura, K. (2012).** *The Japan Satoyama Satoumi Assessment: Objectives, focus and approach*, in Duraiappah, Nakamura, Takeuchi, Watanabe and Nishi (eds), *Satoyama–satoumi ecosystems and human*

well-being: Socio-ecological production landscapes of Japan, United Nations University Press, 2012, ISBN 978-92-808-1210-7.

ERE Consulting Group (2011). *Study on the Establishment of Ecological Linkages Connecting the Kinabalu Park and Crocker Range Park*. Final Report (Volume II: Main Report).

Fan, F. (2006). *The Chinese View of Nature: Tourism in China's Scenic and Historic Interest Areas* (phd. thesis). Queensland University of Technology

Fang, T. (2012). *Yin Yang: A new perspective on culture*. Management and Organization Review. The International Association for Chinese Management Research. Vol. 8(1): 25-50.

Gadjil, M. and Chandran, M. (1992). Sacred Groves. India International Center Quarterly. 19(1-2): 183-187

Godbole, A., Sarnaik, J., and Punde, S. (2010). 'Culture-based Conservation of Sacred Groves: Experiences from North Western Ghats, India'. Sacred Natural Sites: Conserving Nature and Culture (Verschuuren, B., Wild, R., McNeely, J.A., and Oviedo, G. (eds). Earthscan. 219-227.

Gottlieb, R. and Natadecha-Sponsel, N. (2004). 'Illuminating Darkness: The Monk-Cave-Bat-Ecosystem Complex in Thailand'. This Sacred Earth: Religion, Nature, Environment, Roger S. Gottlieb (ed). New York, NY: Routledge. 134-144.

Hamzah, A. (2011). *Managing Impact of Visitors to Protected Areas in Malaysia: Success Stories & New Challenges*. Paper presented at the International Workshop on Governance in Asian Protected Areas – Exploring Governance in Protected Areas in Asia and Developing Collaborative Partnerships Among Asian Countries, Akita International University, Japan, 8-11 January 2011.

- Hamzah, A. (2012).** *Ecotourism Asia: Issues and prospects*. Paper presented during the 3rd FEALAC Conference on Nature-based Tourism and Ecotourism, Barrangquilla, Colombia. 23-25 August 2012.
- Higgins-Zogib, L. (nd).** *Sacred sites and protected areas: An interplay of place-views*. WWF International, Gland, Switzerland.
- Hong, S. K., Kim, J. E., (2011).** *Traditional village forest in Korea*, in Hong, S.K., Kim, J. E., Wu, J., and Nakagoshi, N., (eds.) *Landscape Ecology in Asian Cultures*. Springer.
- Huber T. (ed). (1999).** *Sacred Spaces and Powerful Places in Tibetan Culture: A Collection of Essays*. Library of Tibetan Works and Archives, Dharamsala, India.
- IUCN (2010).** *IUCN Information Paper: Enhancing sustainable use of biodiversity through the Satoyama Initiative*. Convention on Biological Diversity. Nagoya, Japan. 18-29 October 2010.
- IUCN (1994).** *Guidelines for protected area management categories*. IUCN, Gland, Switzerland and Cambridge, UK.
- IUCN (2008).** *Guidelines for applying protected area management categories*. IUCN, Gland, Switzerland and Cambridge, UK.
- IUCN (1997).** *Beyond Fences: Seeking Social Sustainability in Conservation*. Vol. 1. IUCN, Gland, Switzerland and Cambridge, UK. v+ 129pp.
- Jamir, S. A. and Pandey, H. N. (2003).** *Vascular plant diversity in the sacred groves of Jaintia Hills in northeast India*. *Biodiversity and Conservation* 12 (7): 1497-1510.
- Japan National Tourism Organisation (2013).** *Japan: the Official Guide*. <http://www.jnto.go.jp/eng> (Accessed 23 January 2013).

- Japan Satoyama Satoumi Assessment (JSSA) (2010).** *Satoyama-Satoumi Ecosystems and Human Well-being: Socio-ecological Production Landscapes of Japan – Summary for Decision Makers*, United Nations University, Tokyo, Japan, 2010.
- Jeanrenaud, S. (2001).** *An International Initiative for the Protection of Sacred Natural Sites and Other Places on Indigenous and Traditional Peoples with Importance for Biodeiversity Conservation* (a concept paper). WWF International, Switzerland.
- Keller, R. H., and Turek, M. F. (1998).** *American Indians and National Parks*. University of Arizona Press. Tuscon, USA. in **Colchester, M. (2010)** in Roe and Elliott (2010) (eds.) *Conservation Policy and Indigenous Peoples*, in The Earthscan Reader in Poverty and Biodiversity Conservation, Earthscan: London, 147-155
- Khumbongmayum, A.D., Khan, M.L. and Tripathi, R.S. (2004).** *Sacred groves of Manipur: ideal centres for biodiversity conservation*. *Current Science* 87(4): 430- 433
- Knight, C., (2010).** *The Discourse of “Encultured Nature” in Japan: The Concept of Satoyama and its Role in 21st-Century Nature Conservation*. *Asian Studies Review*, 34:4,
- Kubin, W. (1990).** *Nature Perspectives in Chinese Literature*. Shanghai: Shanghai People Press
- Lamri Ali, Datuk and Paul Basintal (1994).** *The Sabah Parks Model for the management of the State Parks*. Paper presented at the National Marine Advisory Council Meeting. November 1995.
- Lamri, A., Sidek, A. R., and Nais, J. (1991).** *The Management and Development of State Parks in Sabah*. Paper presented at the International Symposium on National Parks and Protected Areas, Kuala Lumpur, 1990.

- Lansing, J.S. (1991).** *Priests and Programmers*. Princeton, New Jersey: Princeton University Press.
- Latif Khan, M. (1997).** *Effectiveness of the protected area network in biodiversity conservation: A case study of Meghalaya state*. *Biodiversity and Conservation*, Vol. 6, 297-308.
- Lin, Y. (2001).** *The Importance of Living*. Beijing: Foreign Language Teaching and Research Press
- Liu, A., Pei, S., and Chen, S. (2000).** *Yi nationality's sacred groves and biodiversity conservation in Chuxiong, Yunnan*. *Ying Yong Sheng Tai Xue Bao (Journal of Applied Ecology)*, Vol. 11(4), 489-492.
- Long, B., Jenriques, J., Anderson, H.S., Gausset, Q. and Egay, K. (2003).** Land tenure in relation to Crocker Range National Park. In: *ASEAN Review of Biodiversity and Environmental Conservation (ARBEC)*. January-March 2003.
- Ma, X-L, Ryan, C., and Bao, J-G. (2008).** *Chinese national parks: Differences, resource use, and tourism production portfolio*. *Tourism Management* (2008), doi: 10.1016/j.tourman.2008.04006.
- Majid Cooke, F. & Vaz, J. (2011).** *The Sabah ICCA Review: A Review of Indigenous Peoples and Community Conserved Areas in Sabah*. Report submitted to the Japan International Cooperation Agency (JICA) as part of the project Traditional Ecological Knowledge in Sabah, under the Bornean Biodiversity and Ecosystems Conservation Phase II Programme. Global Diversity Foundation. Kota Kinabalu.
- Marafa, L. M. (2003).** *Integrating Natural and Cultural Heritage: the advantage of feng shui landscape resources*. *International Journal of Heritage Studies*. Vol 9. No. 4: 307-323

- Mason, D. A. (2011).** *The Korean Forest-Culture of the Baekdu-daegan*. Retrieved http://issuu.com/hikekorea/docs/kfs_booklet_final_standard_size (Accessed 26 July 2013).
- Matsumura, A. (ed). (2002).** *Daijirin*, 2nd edition (Tokyo: Sanseido).
- McNeeley, J. A. (2007).** *A new paradigm for managing protected areas in the 21st century*. IUCN-The World Conservation Union. Gland, Switzerland. 12 pages.
- Ministry of the Environment (n.d.).** The 3rd National Biodiversity Strategy and Action Plan. <http://www.cbd.int/doc/meetings/nbsap/nbsapcbw-seasi-01/other/nbsapcbw-seasi-01-jp-nbsap-en>
- Ministry of the Environment of Japan, United Nations University Institute of Advanced Studies, Creative Commons Attribution-Noncommercial Share, 2010.**
- Mohd. Isa, M., and Wong, J. (2007).** *Successful involvement of local communities in conservation programmes for Malaysian mahseer in River Kinabatangan of Sabah*. In Tietze, U., Siar, S. V., Marmulla, G., and van Anrooy, Ra. (2007) *Credit and Microfinance Needs in Inland Capture Fisheries Development and Conservation in Asia*. Food & Agriculture Organisation. Rome, Italy.
- Moore, C. A. (ed). (1967).** *The Chinese Mind: Essentials of Chinese Philosophy and Culture*. Honolulu: East-West Center Press, University of Hawaii Press.
- Nais, J. (1993).** *Projek Ethnobotani Kinabalu*. Paper presented at the 2nd International Congress of Ethnobiology, Mexico City, Mexico, September 1993.
- Nais, J. (1996).** *Kinabalu Park and the Surrounding Indigenous Communities*. Working Papers No. 17. South-south Cooperation Programme on Environmentally Sound Socio-Economic Development in the Humid Tropics.

- NRE (2009).** *Managing biodiversity in the landscape. Reference document for planners, decision-makers and practitioners.* Ministry of Natural Resources & Environment (NRE). Putrajaya.
- O'Hare, D. (1997).** *Tourism and small coastal settlements: a cultural landscape approach for Urban Design* (phd. thesis). Oxford Brookes University
- PACOS (2008).** *Securing Indigenous Peoples' Rights in Conservation. Reviewing and Promoting Progress in Sabah, Malaysia.* A contribution to the World Conservation Congress, October 2008. Partners of Community Organisations (PACOS).
- Parrotta, J. A., Trospen, R. L., (2012).** *Traditional Forest-Related Knowledge: Sustaining Communities, Ecosystems and Biocultural Diversity.* Springer, Dordrecht, NL. Pg. 335.
- Payne, J. (2006).** *Protected Areas in Sabah: Proposed Ecosystem Connections & Extensions.* WWF-Malaysia Report.
- Pepper, D.M. (1984).** *The Roots of Modern Environmentalism.* London: Croom Helm
- Phillips, A. (2003).** *Turning ideas on their head: the new paradigm for protected areas.* 21 pages
- Pungetti, G. (2012).** *Sacred species and sites: dichotomies, concepts and new direction in biocultural diversity conservation.* Sacred Species and Sites (Pungetti, G.; Oviedo, G. and Hooke, D. eds). Cambridge. 13-27.
- Rajendraprasad, M. (1995).** *The Floristic, Structural and Functional Analysis of Sacred Groves of Kerala.* Ph. D Thesis, University of Kerala, Thiruvananthapuram, Kerala.
- Ramakrishnan P. S. (1996).** *Conserving the sacred: from species to landscapes.* Nat. Resour. 32: 11–19.

Rots, A. (2012). <http://blogg.ulo.no/prosjecter/plurel/contents/shintos-sacred-forests>

Sabah Biodiversity Strategy 2012-2022. A document developed for the Natural Resource Office (NRO), Chief Minister's Department under the Bornean Biodiversity & Ecosystems Conservation Programme Phase II, a joint programme of the Sabah State Government, Universiti Malaysia Sabah, and Japan International Cooperation Agency.

Sampang, A. G. (2010). *'Towards a Sustainable Management and Enhanced Protection of Sacred Marine Areas at Palawan's Coron Ancestral Domain, Philippines'*. Sacred Natural Sites: Conserving Nature and Culture (Verschuuren, B., Wild, R., McNeely, J.A., and Oviedo, G. (eds). Earthscan. p254-262.

Sauer, C. (1925). *The Morphology of Landscape*. University of California Publications in Geography. 2:19-54.

Scholz, H. (2009). The Tagal System in Sabah: Lessons to be learned from local communities. http://www.flyingdusun.com/004_Features/046_bukatagal.htm (Accessed 18 July 2013)

Shengji, P. (2010). *'The Road to the Future? The Biocultural Values of the Holy Hill Forests of Yunnan Province, China'*. Sacred Natural Sites: Conserving Nature and Culture (Verschuuren, B., Wild, R., McNeely, J.A., and Oviedo, G. (eds). Earthscan. 98-106.

Soedjito, H. and Purwanto, Y., (2003). *Sacred Sites of West Timor: Treasuries of Biodiversity and Cultural Heritage*. In "The Importance of Sacred Natural Sites for Biodiversity Conservation", Proceedings of the International Workshop held in Kunming and Xishuangbanna Biosphere Reserve, People's Republic of China, 17 – 20 February 2003, UNESCO, Paris: 71-80.

- Sofield, T., and Li, S. (2007).** *Indigenous minorities of China and effects of tourism.* In R. Butler and T. Hinch (eds) *Tourism and Indigenous Peoples: Issues and Implications* (pp. 265-280). Oxford: Butterworth-Heinemann.
- Sofield T. H. B. (2009).** *New Paradigms and Resilience for Responsible and Sustainable Tourism in Developing Countries.* Keynote Address presented at 1st World Ecotourism Conference 2009, Vientiane Lao PDR, 15-17 July 2009
- Sofield T. H. B. and Li F. M. S. (1998a).** *Tourism Development and Cultural Policies in China.* *Annals of Tourism Research.* 25(2): 362-392.
- Sofield T. H. B. and Li F. M. S. (1998b).** *Historical Methodology and Sustainability: An 800-year-old festival from China.* *Journal of Sustainable Tourism.* 6(4): 267-291.
- Spiro, M. E. (1967).** *Burmese supernaturalism: A study in the explanation and reduction of suffering.* Englewood Cliffs, NJ: Prentice-Hall.
- Studley, J. (2010).** *'Uncovering the Intangible Values of Earth Care: Using Cognition to Reveal the Eco-spiritual Domains and Sacred Values of the Peoples of Eastern Kham'.* *Sacred Natural Sites: Conserving Nature and Culture* (Verschuuren, B., Wild, R., McNeely, J.A., and Oviedo, G. (eds). Earthscan. 107-118.
- Takeuchi, K. (2003).** *Satoyama landscapes as managed nature,* in K. Takeuchi, R.D. Brown, I. Washitani, A. Tsunekawa and M. Yokohari (eds), *Satoyama: The traditional rural landscape in Japan.* Tokyo, New York: Springer. pp. 9–16
- Telle, K. (2009).** *Spirited Places and Ritual Dynamics among Sasak Muslim on Lombok.* *Anthropological Forum: A Journal of Social Anthropology and Comparative Sociology.* 19(3): 289-306
- Sabah Parks (2006).** *The Crocker Range Park Management Plan: Bornean biodiversity ecosystems and conservation programme in Sabah, Malaysia.* JICA.

- Thierry, S. (1993).** *Earth spirits in Southeast Asia*, in Bonnefoy, Y. (ed) *Asian Mythology*, University of Chicago Press, Chicago, pp144–150.
- Tiwari., B.K. Barik., S.K. and Tripathi., R.S. (1998).** *Sacred Groves of Meghalaya*. In: (Ramakrishnan, P.S. *et al* Ed.) *Conserving The Sacred for Biodiversity Management* p. 253-262, UNESCO, Oxford IBH, New Delhi.
- Toh, S.M. and Grace, K.T. (2010).** *Case Sudy: Sabah forest ownership: Case Study from Malaysia*. Global Forestry Services Inc. November 2010.
- Toh, S.M. and Vaz, J. (2012).** *The Development of Community Forestry in Malaysia*. The Centre for People and Forests (RECOFTC)
- Tsukada, K. (undated).** *Forests of Japan’s Holy Heartland: 100,000 sacred woods remain in Japan*. Japan National Tourism Organization.
http://www.jnto.go.jp/eng/indepth/cultural/kie/forests/kie_forests_02.html
(Accessed 23 January 2013)
- United Nations Declaration on The Rights of Indigenous Peoples (2007).** United Nations. New York, USA.
- United Nations University Institute of Advanced Studies .(nd).** *Satoyama conservation in Southeast Asia and Japan*. <http://www.ias.unu.edu/>
- United Nations University (2010).** *The Satoyama Initiative: Rebuilding ties between humans and natural environment*. Retrieved from <http://onlinelearning.unu.edu/en/the-satoyama-initiative/> (Accessed 23 January 2013).
- Upadhaya, K., Pandey, H.N., Law, P.S. & Tripathi, R.S. (2003).** *Tree diversity in sacred groves of the Jaintia hills in Meghalaya, northeast India*. *Biodiversity and Conservation* 12 (3): 583-597.

- Vaz, J. (2012).** *An Analysis of International Law, National Legislations, Judgements and Institutions and they Interrelate with Territories and Areas Conserved by Indigenous Peoples and Local Communities*. Report No.15. Malaysia. Published by Natural Justice in Bangalore and Kalpavris in Pune and Delhi.
- Verschuuren, B., Wild, R., McNeely, J.A., and Oviedo, G. (eds). (2010).** *Sacred Natural Sites: Conserving Nature and Culture*. Earthscan.
- Wild, R and McLeod, C. (eds). (2008).** *Sacred Natural Sites: Guidelines for Protected Area Managers*. Gland, Switzerland: IUCN
- Wong, J., Agama, A., Murphy, A., Martin, G., Nais, J., Lakim, M. and Miki, Y. (2009).** *Application of Ethnobiological Methods to Assess Community Resource Use Patterns in the Crocker Range Park in Sabah, Malaysian Borneo*. Paper presented at The International Society of Ethnobiology, 1st Asian Congress of Ethnobiology, October 21-28, 2009. Taichung, (Taiwan) Providence University.
- Xu, F. G. (1996).** *Elaboration and Promotion of Traditional Chinese Humanity*. Beijing: Broadcasting and TV Publishing.
- Yanagi, T. (2008).** *Sato-Umi' – A New Concept for Sustainable Fisheries*, in K. Tsukamoto, T. Kawamura, T. Takeuchi, T.D. Beard, Jr. and M.J. Kaiser (eds), *Fisheries for Global Welfare and Environment*, 5th World Fisheries Congress. Tokyo: TERRAPUB, pp. 351–358.
- Zhou, M. (1999).** *Exceeding and Transcending*. Chengdu: Sichuan People's Publisher

Websites

BBEC website. *Addressing land use issues with community participation in Crocker Range Park: Participatory Protected Area Management*. Bornean Biodiversity & Ecosystems Conservation Programme Phase II (BBEC II) in Sabah, Malaysia.
<http://www.bbec.sabah.gov.my/phase2/ipam.php> (Accessed 26 January 2013)

GDF website. *Dusun Communities of Kinabalu Plan to Return to their Sacred Site -*

Kakakapan id Gayo Ngaran 2011. Global Diversity Foundation (GDF).
<http://www.global-diversity.org/news/southeast-asia/dusun-communities-kinabalu-plan-return-sacred-site> (Accessed 29 January 2013)

<http://satoyama-initiative.org/en/about-2/>

<http://www.japan-guide.com/>

www.flyingdusun.com/004_Features/046_bukatagal.htm

<http://www.theborneopost.com/2011/07/21/%E2%80%98tagal-system%E2%80%99-part-of-declaration>

http://cmsdata.iucn.org/downloads/pag_011.pdf (Accessed 23 January 2013)

<http://dx.doi.org/10.1080/03066150701802793> (Accessed 23 January 2013)

<http://naturaljustice.org/wp-content/uploads/pdf/ICCALegalReviewMALAYSIA.pdf>
(Accessed 27 January 2013)

<http://satoyama-initiative.org/en/>

<http://www.arbec.com.my/pdf/art5janmar03.pdf> (Accessed 20 January 2013)

<http://www.japan-guide.com>

[http://www.nre.gov.my/Biodiversity/BioD%20Knowledge/Guideline - Managing Biodiversity in the Landscape.pdf](http://www.nre.gov.my/Biodiversity/BioD%20Knowledge/Guideline%20Managing%20Biodiversity%20in%20the%20Landscape.pdf) (Accessed 2 December 2011)