ICIMOD Working Paper 2016/8

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FOR MOUNTAINS AND PEOPLE

A Framework for the Assessment of Cultural Ecosystem Services of Sacred Natural Sites in the Hindu Kush Himalayas

Based on fieldwork in the Kailash Sacred Landscape regions of India and Nepal

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The International Centre for Integrated Mountain Development (ICIMOD) is a regional knowledge development and learning centre serving the eight regional member countries of the Hindu Kush Himalayas (HKH) – Afghanistan, Bangladesh, Bhutan, China, India, Myanmar, Nepal, and Pakistan – based in Kathmandu, Nepal. Globalization and climate change are having an increasing influence on the stability of fragile mountain ecosystems and the livelihoods of mountain people. ICIMOD aims to assist mountain people to understand these changes, adapt to them, and make the most of new opportunities, while addressing upstream and downstream issues. ICIMOD supports regional transboundary programmes through partnerships with regional partner institutions, facilitates the exchange of experiences, and serves as a regional knowledge hub. It strengthens networking among regional and global centres of excellence. Overall, ICIMOD is working to develop economically- and environmentally-sound mountain ecosystems to improve the living standards of mountain populations and to sustain vital ecosystem services for the billions of people living downstream – now and in the future.

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A Framework for the Assessment of Cultural Ecosystem Services of Sacred Natural Sites in the Hindu Kush Himalayas

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Authors
Abhimanyu Pandey
Rajan Kotru
Nawraj Pradhan

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Amy Sellmyer (Editor)
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Acronyms and Abbreviations

CES	Cultural ecosystem services
DFID	Department for International Development, United Kingdom
ES	Ecosystem services
FGD	Focus group discussion
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
HKH	Hindu Kush Himalayas
ICI	India China Institute of The New School University, New York
ICIMOD	International Centre for Integrated Mountain Development
KSL	Kailash Sacred Landscape
KSLCDI	Kailash Sacred Landscape Conservation and Development Initiative
MEA	Millennium Ecosystem Assessment
N/A	Not applicable
WII	Wildlife Institute of India

Executive Summary

The ecosystem services (ES) framework, as adopted by the Millennium Ecosystem Assessment (MEA) by the United Nations, has emerged as a formal approach to describe and categorize the relationship between ecosystems and society. It is widely accepted within the international environmental science and policy communities. ES are defined as direct or indirect contributions of an ecological structure or function toward meeting a human need or want. The MEA classifies ES into four types, namely provisioning services, regulating services, supporting services, and cultural services. Cultural Ecosystem Services (CES) are defined as 'nonmaterial benefits people obtain from ecosystems'. There are many kinds of CES, such as ecosystems contributing to cultural identity, heritage values, spiritual services, inspiration, aesthetic appreciation of natural and cultivated landscapes, recreation and tourism.

The Hindu Kush Himalayan (HKH) region is one of the most ecologically and culturally diverse regions in the world. In the context of the HKH mountain range, one of the oldest and still most pervasive forms of CES exist in the form of 'sacred landscapes', with countless traditions of nature veneration and pilgrimages to sacred natural sites. Sacred natural sites provide an anchor for local communities' everyday religious practices, traditional ecological knowledge, and identity. In addition, they also embody traditional attitudes towards nature, which can be leveraged for promoting conservation and generating livelihoods for local communities. The Kailash Sacred Landscape (KSL) is a trans-boundary landscape shared by China, India, and Nepal. The landscape has countless sacred natural sites with layers of religious and symbolic meaning. These sites have an important role in defining the identity, historical legacy, and everyday religion of the landscape's communities, thus providing a rich source of CES.

Over the last few years, various attempts have been made to assess CES so as to aid their inclusion in land use planning, landscape planning, conservation, and development related projects. However, CES are particularly challenging to capture because they are often perceived as 'subjective' or intangible'. The framework presented in this document attempts to systematically capture and assess in largely non-monetary yet practicable terms the CES rendered by sacred natural sites and landscapes in the KSL. The framework was developed through a literature review and fieldwork in the Indian and Nepalese parts of the KSL. The framework will be of interest to social scientists, conservation practitioners, tourism practitioners, development practitioners, heritage-related institutions and businesses, and local NGOs that work to incentivize local communities to continue and strengthen their traditions of nature conservation for engendering sustainable local livelihoods and conservation strategies in the context globalization, migration, and climate change adaptation and mitigation.

Chapter 1: Cultural Ecosystem Services An Integral Part of the Ecosystem Services Framework

Ecosystem Services, Their Standard Classification, and Their Importance

The ES framework, as adopted by the MEA done by the United Nations, has emerged as a formal approach to describe and categorize the relationship between ecosystems and society, and it is widely accepted within the international environmental science and policy communities (Daniel et al. 2011). ES are defined as direct or indirect contributions of an ecological structure or function toward meeting a human need or want. Such services generate benefits that contribute to overall human wellbeing (De Groot et al. 2005). The MEA classifies ES into four types, namely provisioning services, regulating services, supporting services, and cultural services, briefly described by Brown et al. (2014) as follows:

- Supporting services: Services that are necessary for the production of all other ES including soil formation, photosynthesis, primary production, nutrient cycling and water cycling.
- Provisioning services: Products obtained from ecosystems, including food, fibre, fuel, genetic resources, bio-chemicals, natural medicines, pharmaceuticals, ornamental resources and fresh water.
- Regulating services: Benefits obtained from the regulation of ecosystem processes, including air quality regulation, climate regulation, water regulation, erosion regulation, water purification, disease regulation, pest regulation, pollination and natural hazard regulation.
- Cultural services: Non-material benefits people obtain from ecosystems through spiritual enrichment, cognitive development, reflection, recreation and aesthetic experiences, thereby taking account of the cultural values of the landscape.

As for the real world significance of these concepts, Brown et al. (2014) also emphasize the importance of ES for poverty reduction and socioeconomic development at the local and national level. ES work through modalities such as:

- Service delivery – delivering key functions such as pollination and water provisioning far more effectively than human-made alternatives.
- Risk-reduction – including disaster and climate risk reduction in key sectors (e.g., providing a diverse resource base that offers alternatives if one food crop fails).
- Direct financial value – through certain products and species that may be tradable (e.g., medicinal plants and animals; species attractive to tourists). National economic diversification —through habitat, species and genetic diversity that present options and alternatives (e.g., in tourism and forestry).
- Intrinsic and cultural value – related to identity, tradition, social cohesion, recreation, spirituality.

An ES approach provides a more comprehensive framework for assessing the many kinds of social benefits derived from restoration and enhancement initiatives, and a basis for comparing the breadth and balance of positive and negative impacts. This creates opportunities to recognize and protect a wider range of ES and to aid their recovery. In doing so, the ES approach recognizes the interest of an extended set of beneficiaries, many of whom may have previously been excluded from decision making (Everard 2012).

Sub-alpine ecosystem at village Halji, Humla District, Nepal.

Cultural Ecosystem Services and Their Importance

In the MEA, De Groot et al. (2005) defines CES as the "nonmaterial benefits people obtain from ecosystems." "To qualify as a service, ecosystem structures and functions must contribute to meeting human needs and wants, which necessarily includes intangible and subjective aspects because the selection of ecological structures and functions, and their particular characteristics, that are considered to benefit humans changes with knowledge, technical, social, and cultural development" (Daniel et al. 2011: 8813). However, CES usually depend on social constructs to a great extent, and in extreme cases (such as while distinguishing a sacred forest from a non-sacred forest), it may be impossible to identify relevant concrete features in the ecosystem that exhibit cultural value independent of the subject culture. Nonetheless, within a given socioecological context, some significant contribution from ecological structures and/or functions, however indirect, is required if cultural benefits are to be attributed as an ecosystem service (Daniel et al. 2011). De Groot et al. (2005) provide a tentative list of the forms of CES:

- Cultural identity (i.e., the current cultural linkage between humans and their environment)
- Heritage values (''memories'' in the landscape from past cultural ties)
- Spiritual services (sacred, religious, or other forms of spiritual inspiration derived from ecosystems)
- Inspiration (the use of natural motifs or artifacts in arts, folklore, and so on)
- Aesthetic appreciation of natural and cultivated landscapes
- Recreation and tourism

CES are important in a wide range of settings. In industrialized societies, CES are often valued over other services (Quétier et al. 2010, Tielbörger et al. 2010, Palomo and Montes 2011). There, the demand for CES is expected to grow further (Carpenter et al. 2009, Guo et al. 2010, Ingold and Zimmermann 2011), partly owing to increasing budget shares for recreation (Vandewalle et al. 2008). By contrast, in traditional societies, CES are essential for cultural identity and even survival (e.g., Le Maitre et al. 2007, Voora and Barg 2008, Brown and Neil 2011).

Several cultural landscapes across continents, such as sacred mountains and lakes, serve as important pilgrimage sites while simultaneously generating economic returns through supporting economic services such as tourism, hospitality, souvenir industry, handicrafts, etc. (Singh 2005; Raj and Morpeth 2007; Adler et al. 2013). Most CES are simultaneously experienced on a sensory level and appreciated at an intuitive level, often helping to raise public support for protecting ecosystems (Gobster et al. 2007). In many instances, the role of CES in sustaining traditional communities and in protecting the environment has been recognized nationally and internationally, as well as received active legal support (Temper 2013; Dudley et al. 2014). However, although CES are valued greatly by diverse stakeholders and score highly in assessments of public perceptions, they are sometimes sacrificed by decision makers for economic and ecological reasons (De Groot et al. 2005, Chan et al. 2011, Hendee 2011).

Role of Assessing the Non-monetary Values of Cultural Ecosystem Services

It is important to ascribe either a value or non-monetary significance to all services if they are to be allocated any worth in decision making (Everard 2012: 315). Economic valuation techniques for ES are often encouraged for environmental policy making (Rasul et al. 2011). However, models based on the dominant neoclassical economic paradigm of individual welfare optimization have proved to be inappropriate for the effective assessment of certain services. Many kinds of cultural ES are by their very nature hostile to quantification. Such ES require alternative assessment approaches (MEA 2005; Chan et al. 2011). The report on the economics of ecosystems and biodiversity (TEEB) acknowledges the plurality of ecosystem values and proposes a tiered approach for recognizing, demonstrating, and capturing the value of ES for policy making (TEEB 2010). Certain kinds of cultural ES, such as those of landscape aesthetics and recreation, often lend themselves to varied modes of quantification, and are of greater importance in modernized, developed countries. The values ingrained in cultural ES, especially among traditional communities such as those of the Hindu Kush Himalayan (HKH) region, are often non-monetary, non-quantifiable, and multi-layered. The major reasons for an inter-disciplinary assessment of CES are summarized as follows:

- CES are in general less directly linked to human wellbeing than provisioning and regulating services, but their potential for mediation is low (MEA 2005). In other words, locally degraded provisioning and regulating services may be substituted by socioeconomic means (e.g., drinking water from a polluted well can be replaced by bottled water), but the cultural values of an ecosystem or a landscape are irreplaceable (Plieninger et al. 2013). Guo et al.'s (2010) global analysis has stressed that, while societies become less dependent on provisioning and regulating services in the course of a country's economic development, their dependency on CES increases.
- Promotion of tourism and recreation, based on the existing features and traditions, is a preferred rural development option (Van Berkel and Verburg 2011). It enables income generation outside of agricultural production intensification and promotes the preservation of existing assets (Buijs et al. 2006; Marsden 1999). Tourism attractions are related to people's awareness and perceived importance of aesthetic beauty, cultural heritage, spirituality and inspiration (Brown 2006). Such characteristics are non-material benefits related to land management and therefore non-exclusive.

Trekkers approaching Limi valley, Humla District, Nepal.

Failure to provide enough incentives for the maintenance of cultural landscapes may result in their loss and/or degradation (Swinton et al. 2007). The assessment of CES provided by landscapes can contribute to understanding options for future development that retain tourism assets (Van Berkel and Verburg 2014).

- The importance of CES and values is not currently recognized in landscape planning and management. These fields could benefit from a better understanding of the ways in which societies manipulate ecosystems and then relate that to cultural, spiritual, and religious belief systems. MEA also states that the ecosystem approach implicitly recognizes the importance of a socio-ecological system approach, and that policy formulations should empower local people to participate in managing natural resources as part of a cultural landscape, integrating local knowledge and institutions (De Groot et al. 2005).

The Challenge of Conceptualizing and Assessing Cultural Ecosystem Services

Extensive reviews of literature on CES by Daniel et al. (2011) and Milcu et al. (2013) show that while the importance of CES has consistently been recognized, these services are often characterized as being "subjective", "intangible" and difficult to quantify in biophysical or monetary terms, thus retarding their integration into the ES framework. At the same time, there is a plausible argument that subjectivity and intangibility, to varying degrees, are very much present in the definition, conceptualization, and selection of all ES. CES are interconnected to other ES, such as supporting and regulating services, and cannot be treated independently (De Groot et al. 2005). Besides, there can be an overlap among cultural ES categories (e.g., aesthetics frequently contribute to recreational experiences), as well as between cultural and other services (e.g., the aesthetic and nutritional aspects of food preferences). Such intertwinements simultaneously indicate the importance of CES and pose a challenge in their identification, assessment, and management (Daniel et al. 2011: 8813).

A Humli woman sings 'Nyelu' - a traditional Tibetan pilgrimage song - near Lake Seliman, Humla District, Nepal.

Villages nestled in the lush green environs of the Mahakali valley.

Chapter 2: Cultural Ecosystem Services in the Hindu Kush Himalayas

The Hindu Kush Himalayas and Their Ecosystem Services

Mountains cover about one quarter of the world's land surface and provide a direct life-support base for about 12 percent of the world's population, as well as essential goods and services to more than half of humankind (UN Secretary General's Report on Sustainable Mountain Development 2011)[1]. The Hindu Kush Himalayan (HKH) region is one of most assorted mountains systems in the world. It embraces 4.3 million sq. km. of land with several parallel mountain ranges, such as the Karakoram, the Hengduan Mountains, the Himalayas, the Hindu Kush, and the Tibetan Plateau, all comprising diverse landscapes of mountains, plateaus, river valleys, and adjoining foothills (Wu et al. 2013). The HKH region is endowed with a rich variety of gene pools and species, and ecosystems of global importance. It is a storehouse of biological diversity and a priority region in many global conservation agendas (Brooks et al. 2006). The region has many unique ecosystems that play a critical role in protecting the environment and in providing livelihoods in much of Asia and beyond (Erikson et al. 2009). The HKH is also home to all or part of four global biodiversity hotspots and several endangered species and thus an important component of the global ecosystem (Chettri et al. 2008). The countries of the HKH have set aside more than 39% of their most biologically rich terrain for protected area management; in total, the HKH houses 488 protected areas, 29 Ramsar Sites, 13 UNESCO Heritage Sites, and 330 Important Bird Areas (Chettri et al. 2008). The goods and services provided by the ecosystems of the HKH region provide livelihoods to large numbers of people and shape their ways of life. They include more than 210 million people of diverse ethnic and sociocultural groups who inhabit the HKH region, as well as 1.3 billion people who live in the downstream areas linked to the HKH region (Wu et al. 2013: 4).

Cultural Ecosystem Services in the Hindu Kush Himalayas

In addition to hosting a high bio-geo diversity, mountains vie with the tropics for the status of being the most bio-culturally diverse regions in the world (Stepp et al. 2005). In other words, the high linguistic diversity of mountainous regions is closely and positively related to these regions' high biodiversity. In general, linguistic diversity is regarded as a good proxy indicator of cultural diversity because of the complex interdependent relationships between a given language and a specific culture. Thus mountains are also among the richest regions in the world in terms of cultural diversity. The HKH region presents some of the roughest geo-climatic conditions in the world, encompassing, among others, the barren wilds of the Tibetan Plateau and the Himalayas, the cold semi-arid zones of northern Pakistan and Afghanistan, and the sweltering rainforests of northeastern India and Myanmar. This, however, has seemingly not hampered vast migrations, interactions, and evolutions of human communities in the HKH region over the course of several millennia. The HKH region is host to several hundred languages and dialects from the Iranian, Tibeto-Burman, Indo-European, Burushaski, Mon-Khmer, Munda, and Mongolic language families (www.ethnologue.com). The associated cultural groups resident in the region present a bewildering and dynamic assemblage of peoples shaped by several millennia of migration, trade, pilgrimage, conquest, and various religious, artistic, and political movements (Gansser et al. 1988).

The most outstanding form of CES to be found in the HKH region is its huge heritage of sacred natural sites. Sacred natural sites (SNSs) are areas of land or water having special spiritual significance to peoples and communities (Jeanrenaud and Oviedo 2007). They can encompass "complete territories, extensive landscapes and can also be

[1] Accessed from http://www.un.org/esa/dsd/resources/res_pdfs/ga-66/SG%20report_Sustainable%20Mountain%20Development.pdf, in July, 2015.

as small as a single rock or tree" (Verschuuren et al. 2010: pp. 1-2). As the highest and most dramatic features of landforms, mountainous landscapes have an extraordinary power to evoke the sacred. The German scholar of religions Rudolf Otto defines 'the sacred' as an inscrutable mystery that attracts and repels us with intense feelings of wonder and awe (Bernbaum 1997). Countless sacred mountains, lakes, caves, rocks, meadows, forests, and other sacralized features of the landscape dot the HKH region. Everyday religious practices of communities across the region embrace animism or animistic elements, often with positive implications for ecosystem/species conservation (Negi 2010; Spoon 2014). In several instances, the CES of these natural sites have been recognized and cherished over generations not just by small local communities but also by much broader regional, national, and even transnational stakeholders, through the medium of pilgrimage (Eck 2012). Such sites, marked by their remoteness, retention of natural aesthetics and biodiversity, and the associated richness of historical and cultural interpretations, are also increasingly gaining currency among non-religious visitors (Singh 2005; Adler et al. 2013). Meanwhile, the diverse natural landscapes of the HKH region within which these sacred natural sites are nested have inspired a rich proliferation of depiction in folklore, art, and legend (Gansser et al. 1987; Charak and Billawaria 1998; Azad 2013), and more contemporary forms of cultural production, such as cinema (Lutgendorf 2005; Damai 2008) and novels and travelogues. In addition, tourism in protected areas, mountaineering, and trekking along heritage cultural routes have emerged as a vital means of income augmentation across the HKH region (Sabir et al. 2014; Stone and Nyaupane 2015).

Hanera sacred grove, near Gangolihaat. District Pithoragarh, Uttarakhand, India.

The Need to Assess Cultural Ecosystem Services in the Hindu Kush Himalayan Region

Due to a variety of factors ranging from difficulty of access to a markedly high sensitivity to natural disasters and climate change, the HKH region is one of the poorest regions in the world. Many areas in the region are plagued by food and livelihood insecurity (Rasul 2014). Widespread poverty, along with the growing demand for resources and the strong profit motive of commercial enterprises, combined with inadequate incentives for sustainable management, has led to unsustainable use of resources and environmental degradation in the HKH region (Rasul 2014). But the multi-disciplinary data required to systematically tackle these interrelated problems is missing. The influential Fourth Assessment Report of the IPCC (2007) identified the HKH region as a data deficit area. The ES paradigm provides a robust conceptual means to not just fill this data gap, but also to do so in a way that addresses contemporary discourses on climate change adaptation and landscape approaches to conservation and development (Braat and de Groot 2012; Minang et al. 2015). Other factors that limit the understanding of the value of natural resources in the HKH include inaccessibility, fragility, marginality, and physical and economic vulnerability of mountains, as well as the inadequate attention paid to the subject of valuating ES (Jodha 1992, 2000, 2004). The local communities in these fragile areas have limited livelihood options, and often receive little benefit from development activities. Although some of the provisioning services such as food are relatively easy to assess in monetary terms, others, such as regulating, supporting, and CES of certain kinds, which do not have a direct market value, pose a greater challenge (Rasul 2014). ES are also vulnerable to natural disasters such as landslides, floods, and the impacts of climate change.

CES are thus vital to the identity of the HKH communities and provide a basis for augmenting their livelihoods, but so far their assessment in the HKH has been sporadic and lacking in systematic conceptualization and application. By their very nature, cultural ES resist being assessed in narrow monetary terms. There are particular kinds of non-monetary values that one needs to take into account while developing a framework for assessing CES in the HKH region. Methods developed and deployed in industrialized countries of Europe do not encompass such non-monetary values. However, some concepts and methods do exist within the social sciences and the contemporary discourse of landscape conservation. These can be usefully harnessed to develop a methodology to assess CES of the HKH region. The next chapter discusses some of the efforts made in the direction of assessing CES of sacred natural sites under KSLCDI.

The supremely holy waters of Lake Manasarovar. Pulan County, Tibetan Autonomous Region, China.

Chapter 3: The Development of a Framework for the Assessment of Cultural Ecosystem Services in the Kailash Sacred Landscape

The Kailash Sacred Landscape Conservation and Development Initiative: A Brief Introduction

In 2010, the governments of China, India, and Nepal delineated the KSL, a region located at the western tri-juncture of these countries, better defined by contiguous ecosystems and historic cultural linkages than by administrative boundaries[2]. KSLCDI was launched under the stewardship of ICIMOD. The initiative is being implemented with partner institutions in three countries, including ministries, state agencies, scientific institutions, NGOs and the private sector. ICIMOD's role in the initiative is to build synergy among the different institutions and provide stewardship; to ensure uniform approaches in long-term socio-ecological monitoring; and to devise livelihood-enhancing intervention strategies at the local and landscape level.

Map showing the Kailash Sacred Landscape (ICIMOD 2015)

[2] Accessed from http://www.icimod.org/?q=9121 in July 2015

Mt Kailas/Kang Rinpoche. Pulan County, Tibetan Autonomous Region, China.

KSLCDI aims to achieve the long-term conservation of ecosystems, encourage sustainable development, enhance the resilience of communities in the landscape, and safeguard and promote its cultural heritage[3]. It is grounded in the landscape approach, which recognizes the critical links between nature, culture, and community for long-term sustainability of conservation. Landscape in this context encompasses a mosaic of lands, from cultivated lands to wilderness that spread over a large geographical area that has been shaped and influenced by human interaction over time. This approach recognizes that stewardship lies with people and that an inclusive, participatory, and democratic process is necessary for successful conservation (Mitchell et al. 2005: 233). Ultimately KSLCDI aims to create a holistic approach that combines empirical, scientific knowledge with indigenous knowledge, with a sensitivity towards socio-cultural and economic equity in conservation, development, and livelihood-related interventions that can be replicated all across the HKH region. KSLCDI is the first transboundary conservation and development programme in the HKH region to overtly acknowledge the importance of CES in the preservation and management of bio-cultural diversity.

A key activity in KSLCDI has been to develop a framework for the assessment of the non-monetary values of cultural ES, especially SNSs and cultural routes that crisscross and connect seemingly disparate sacred locations, including both sacred natural sites and built sites. In the context of KSL, SNSs do not just mean purely natural sites vested with cultural/religious significance, such as sacred mountains, water bodies, caves, springs, etc. They also imply sites that have been sacralized due to their association with some other, often built cultural site, such as a temple or a monastery. Pilgrimage routes often link such otherwise disparate sites into multi-layered sacred landscapes that are venerated locally, nationally, or regionally. As mentioned before, the non-monetary values of CES present some of the most compelling reasons for conserving ecosystems, though defining such values in concrete terms remains a challenge (Chan et al. 2012). The values that conform least to economic assumptions—variously lumped together with/as cultural services—have proven elusive in part because assessment is complicated by the properties of intangibility and incommensurability, which has in turn led to their exclusion from economic assessment. Full characterization of services must address non-material values using different social scientific methods, because many ES co-produce 'cultural' benefits (ibid).

[3] Accessed from http://www.icimod.org/?q=9457 in July 2015

Existing Literature on Assessment of Cultural Ecosystem Services in the Kailash Sacred Landscape: Strengths and Gaps

The literature on KSL describes SNSs and associated conservation-friendly traditional practices in detail. However, it lacks a coherent framework identifying the indicators that help in assessing the presence and robustness of cultural ES. This is not very different from the assessments of the non-monetary values of CES done in other parts of the HKH region. The literature review shows that except for well-known sites such as Mt Kailash, the diverse SNSs in the KSL began to receive academic attention only recently. In the Chinese region, there is very scarce documentation available on the traditional indigenous systems of nature conservation, which are believed to have weakened significantly during the Cultural Revolution (Xu et al. 2006), and later due to the influence of 'modern culture' (IGNSSR 2011: 46). In India and Nepal, research done so far is sufficient to highlight broad trends among the SNSs therein. In the Buddhist region of Humla in Nepal, monasteries such as Halji and Yalbang have established sacred forests where the cutting of green shoots is prohibited (TU 2011). Hunting has been effectively brought down in certain villages through monastic intervention (Zomer and Oli 2011). The animist Shauka tribes, which inhabit the northern parts of India and the western fringes of Nepal, practice a mix of Hinduism and animism and have several kinds of SNSs. These include sacred forests named 'serongs' where resource extraction and entry is allowed only during the annual festival in honour of the resident deity'; 'bugyals' (sacred high-altitude meadows) where a highly regulated annual harvesting of the sacred flower 'Brahma kamal' (Saussurea oblavatta) takes place in honour of certain local sacred mountains, and other bugyals where only the sacred yak (Bos mutus grunniens) and its crossbreeds Jhuppus and Jomos are allowed to graze (Negi 2010a; Negi 2010c). Among the 'pahadi' (hill-residing) Hindus inhabiting southern KSL, SNSs, especially sacred forests and lakes, are customarily owned by the Hindu upper castes. Lower castes, menstruating women and women in parturition are partly or completely barred from entry into such sacred sites because they are considered to have a 'polluting' effect. Certain scholars tend to see an instrumental logic underlying such practices, namely the reduction of resource extraction and threats to the site's biodiversity due to more open access (Bhatta 2003; Negi 2010a; Negi 2010b). However, on the basis of studies on the SNSs of KSL India and KSL Nepal, Pandey et al. (2016) argue that such exclusionary practices reify traditional forms of social marginalization. They posit that a comprehensive approach to understand the interface between religion and ecology in this region must situate beliefs and practices within (a) local and regional and historical contexts, (b) the sheer diversity of theological traditions, beliefs and practices, (c) the intersections with issues of gender, class, caste and community, and (d) their hybridization with other religions and practices in and from the subcontinent.

Field Methodology for Developing the Framework

In order to develop a framework for the assessment of the of CES of SNSs in the KSL, the research team decided to first conduct pilot studies aimed at documenting various social, cultural, and economic features of SNSs .. The 'Principles for the recording of monuments, buildings, and group of sites' provided by the International Council on Monuments and Sites[4], and the framework for inventorying SNSs by Otegui-Acha et al. (2010) provided a good set of guidelines for the purpose of devising an open ended data collection templete. Six field visits were conducted in three regions that represented the socio-ecological configurations of broader segments of landscapes inside KSL India and KSL Nepal: (a) the Ramganga catchment, KSL India; (b) the Himkhola catchment, KSL India, and (c) the upper Karnali catchment, district Humla (KSL Nepal). KSL China was left out of these preliminary studies due to logistic difficulties and geopolitical sensitivities. The template was tested during these field trips so as to evolve (a) a method to identify the most appropriate way to delineate the study area for the assessment of the CES of SNSs, and (b) a list of indicators and sets of questions to validate and measure the presence and robustness of these CES. Key informant interviews, group discussions, photographic documentation, and GPS recordings of sites were the primary methods used.

[4] Accessed from http://www.icomos.org/charters/archives-e.pdf in July, 2015.

Illustration: **Template used for data collection in preliminary studies**

Name of the site (native and other denominations)

Bio-physical aspects of the site

- Location and size
- Site ecosystem type/uniqueness
- If present, nature, form, dimensions, and symbolism of shrine/built structures within the SNS

Cultural significance

- Importance of site for indigenous and traditional communities
- Social role and meaning
- Taboos and restrictive practices associated with the site
- Social stratification and its impact on access to the site, especially for women and members of marginalized groups, such as the lower castes
- Changing meaning and value of the site for the local community, in the context of changing socioeconomic conditions
- Impact of the above on the condition of the site, including its protection
- Relationship of this site to other sites venerated by the community and to the Mt Kailash pilgrimage

Protection status

- Current authority (local, regional, national, nested) governing the site
- Historic evolution of governance of the site
- If within a protected area, presence or absence of legal recognition and special protection systems for the site
- Relationship to national and international categories (such as Biodiversity Heritage Site in India, National Heritage Site in Nepal, UNESCO cultural landscape, UNESCO World Heritage Site, etc.)
- Relationship of the site to other sites in terms of customary as well as state protection systems

Current situation

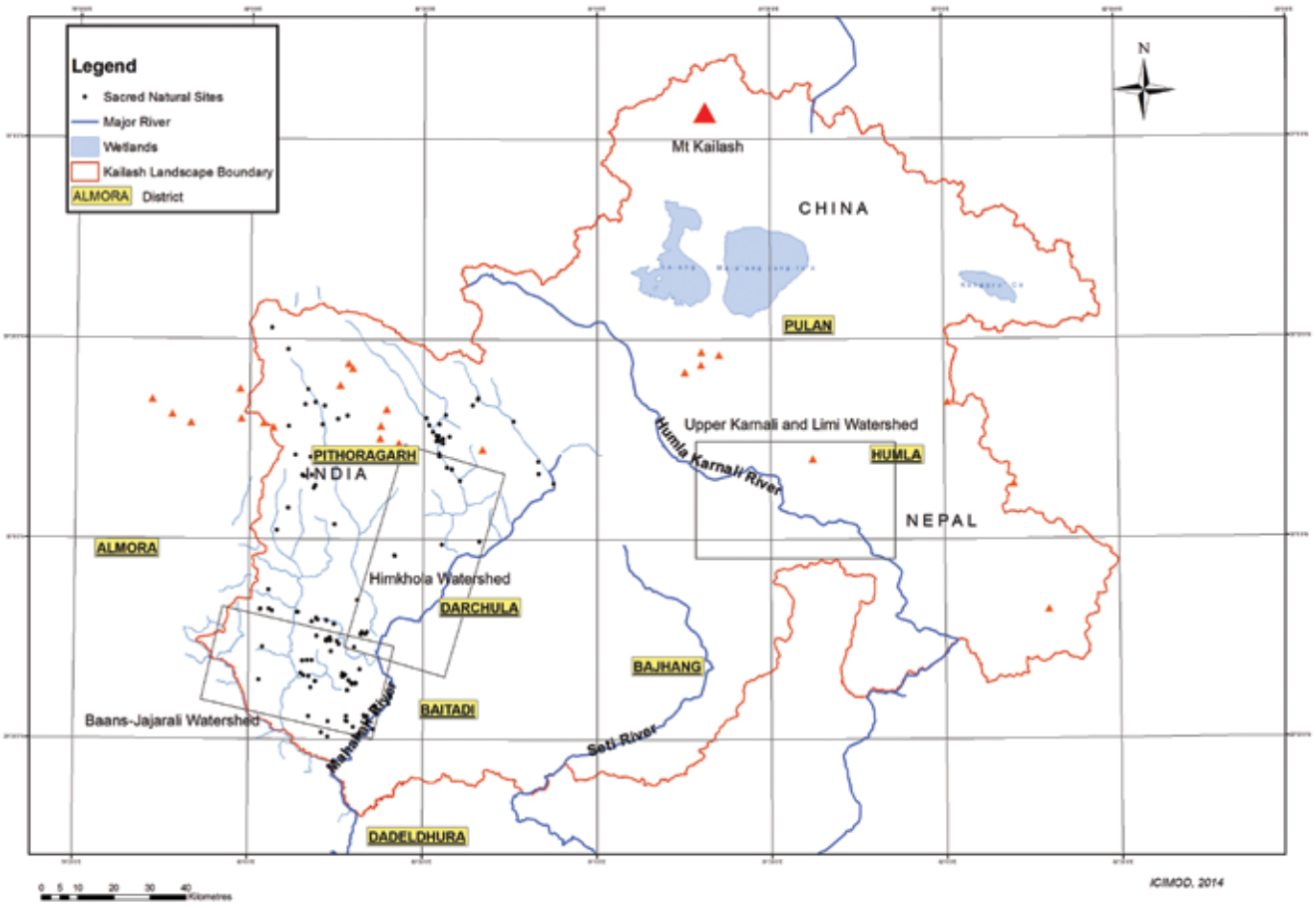
- Strengths, weaknesses, opportunities, threats
- Government and NGO involvement
- Financial support, if any

References

- Books, journal articles audio-visual materials, etc.

The sacred Panchachuli massif. Pithoragarh district, Uttarakhand, India.

Map showing the locations of the sites of preliminary studies (ICIMOD, 2015)



A post adorned with bells and sacred cloth marking a grove sacred to the Shaukas. Pithoragarh district, Uttarakhand, India.

Chapter 4: A Framework for the Assessment of the Cultural Ecosystem Services of Sacred Natural Sites and Landscapes in the Kailash Sacred Landscape

From the fieldwork and literature review conducted in 2014 and 2015, nine indicators emerged as measures that could potentially help in gauging the CES associated with SNSs in the KSL. An indicator uses measures, i.e., actual

Indicators for CES at the sacred natural sites of KSL, with examples from KSL

S. No.	Indicator	Examples from the KSL
1	Presence of beliefs ascribing cultural significance to natural sites (ranging from a single tree/ rock to a forest, cave, lake, pond, mountain, water body, etc.)	The categories of beliefs governing sacred natural sites, as provided by Edwin Bernbaum (1997), C.S. Negi (2010b), and Diana Eck (2012) find much resonance in many kinds of sites (sacred mountains, groves, meadows, lakes, rivers, and shrines) spread across the KSL. Negi's categories are useful in understanding the way belief systems often regulate human-nature interactions and mitigate harmful degrees of resource extraction in SNSs. See Annexure 1.
2	Degrees of prevalence of such beliefs across age, gender, caste, and other relevant social stratification groups	Certain SNSs are more prominent than others as they are known and venerated by community members across several axes (age, gender, social stratification). For example, in the Himkhola watershed (KSL India), the Tilthin sacred grove and its associated cultural significance is known to all members of the custodian Shauka tribes. However, in the same watershed, the Yuncu sacred grove containing ancestral stele of the Shaukas is hardly known except to a few elders in the watershed. This is because the importance of the latter site diminished after the 1970s when a flashflood hit the area and cut it off for many years.
3	Impact of the site's cultural significance on developmental activities	The Hanera sacred grove, a deodar (Cedrus deodara) forest near village Gangolihaat (Ramganga catchment, KSL India) is considered central to the everyday religious life of the Bora community that lives next to the grove. About ten years back, a road was planned that would cut right through the sacred grove. But fierce protests from the Boras caused the road constructors to bypass the Hanera grove.
4	Influence of the site in enabling community bonding	• In the Himkhola watershed (KSL India), the Tilthin sacred grove is the site of the annual Shangthang and Karthik Purnima festivals, two major festivals for the custodian Shauka tribes. Over the last two or three decades, these festivals have assumed a critical importance for the Shauka communities, as even members of the community who have migrated far and wide are expected to come and attend the rituals and festivities of at least one of these two annual events. Thus the sacred grove serves as a base for communal bonding among the Shaukas in the face of widespread outward migration, and helps maintain the Shauka identity among Shauka migrants. • Another example is the Yalbang monastery in district Humla (KSL Nepal). Although the monastery is not an SNS as such, the current abbot of the monastery, the IInd Pema Riksal Rinpoche, is a popular figure who actively promotes conservation. This has led to significant reduction in the incidence of green felling as well as hunting in the Lama community villages of the upper Karnali catchment (district Humla, KSL Nepal).

5	Presence of pilgrimage and/or tourism at the site	The Patal Bhuvaneshwar caves, the Haat Kalika temple cum sacred grove, and the sacred environs of Narayan Ashram in the Ramganga catchment (KSL India), and the Limi valley in Humla (with several parts considered sacred in different ways) are all important pilgrimage centres as well as existing or potential tourism sites. All the sites mentioned from the Ramganga catchment have spawned various small-scale ancillary businesses (such as shops, eating places, lodges, souvenir shops, etc.) that augment the incomes of local communities.
6	Presence of local self-organization or management structure for the site	• The Patal Bhuvaneshwar caves are governed by a state-registered local governing council, with representation from all sections (including underprivileged groups like women and Dalits) and covering activities such as site management, revenue management, and charity. • Certain sites which are distant from centres of habitation, such as the Chhipla Kedar lake and meadows in KSL India, and the sacred meadows near Mt Api (KSL Nepal), are governed by customary forms of community organization that regulate access and resource extraction from a distance.
7	The site's influence on local custodian community's perceptions of natural disasters, mishaps, and climate change	• An Annual General Meeting convened by the Shauka tribes of KSL India in 2013 attributed the destruction wreaked by the June flashfloods in Uttarakhand to a laxity in observing the access-related taboos in the sacred high-altitude meadows of the Shaukas. The blame was laid on the increasing incidence in recent years of Dalits and menstruating women (held as 'polluting elements' by the Sanskritized Shaukas) collecting Yarsagumba (Ophiocordyceps sinensis) in such meadows, especially in Chhipla Kedar. This case shows the persistence of certain regressive social norms associated with sacred natural sites even in this day and age. • Halji valley, situated in Limi valley (Humla district, KSL Nepal), houses the 11th century AD Rinchenling monastery. For the last seven years, this village inhabited by the Lama community has been repeatedly threatened by GLOFs from a valley right above the village. Village elders seemed ambivalent about the cause of the GLOFs – for them it could be either a misunderstanding between the local gods and local community, or something beyond the reach of the local gods. Besides, the villagers of Halji have learned something about glacial science from the several teams of glaciologists and journalists who have visited the area to understand the GLOF phenomenon. This case shows that the community is willing to consider perspectives from the global discourse of climate change alongside traditional local narratives.
8	Presence of transboundary linkages at the site	Numerous sites in KSL show transboundary linkages. These can be: • Mirror sites with mythical and ritual linkages or similarities, such as Patal Bhuvaneshwar (KSL India) and Patal Bhuvaneshwar (KSL Nepal), Lateshwarnath (KSL India) and Latinath (KSL Nepal), Asureshwar (KSL India) and Gwalekh Kedar (KSL Nepal) • Sites in one country connected importantly to sites in another country by traditional pilgrimage routes. Examples include the Halji Gumba and Til Gumba (KSL Nepal), connected to the Tholing Gumba (KSL China) by the 'Chikhor' route (Outer circumambulation route) of Mt Kailash • Sites whose human and non-human elements are derived from another country. Examples include the Narayan Ashram in KSL India, where the priest has for generations been a Brahmin family from the Terai of far western Nepal • Sites from where holy sites across the international border can be seen and venerated. Examples include the Garbyang village in KSL India, which venerates as its village deity Mt Namjung, visible across the border in KSL Nepal; the Lapcha La pass in KSL Nepal from where one can view and worship Mt Kailash and Lake Manasarovar while being in Nepal.
9	Presence of healthy ecosystems/ species at the site due to regulation of human-nature interface through belief systems	Some studies (such as Negi 2010; IGNSSR 2010; TU 2010) have indicated that CES at a site also have a positive complementary effect on the regulating and supporting services at that site. An ongoing study at the GBPIHED, Almora, under KSLCDI is attempting to do a comparative analysis of the ES derived from sacred natural sites in KSL India vis-à-vis those derived from state protected forests.

empirical findings from observations or monitoring, to communicate something of interest. They are purpose and audience specific (Brown et al. 2014). The following table enlists the aforementioned indicators, with examples for the KSL.
The methodology for ascertaining the presence and strength of these indicators is divided into three parts:

Part 1: **Identification of Site, and the Local, National, and Regional Networks of Which it is a Part**

The KSL demonstrates a profusion of SNSs (such as sacred groves associated with temples and monasteries, sacred springs, and sacred mountains) at the local level in any given area of this transboundary landscape (Snelling, 1990; Negi 2010a; GBPIHED 2010; TU 2010). The best way to substantively bring out the CES associated with SNSs is to investigate the values of an SNS at the individual site level, and its tangible and intangible connections at broader levels of sacred geographies (for e.g., the site's relationship to other local sacred and cultural sites, and to national and regional networks and patterns of pilgrimage and mythscapes, if any). The first step is thus to identify one or more sites where a CES assessment is to be conducted. This can be done through a literature review and interaction with experts in the culture and history of the region, supported by a preliminary reconnaissance of the area with knowledgeable local community members.

Part 2: **The Process for Collecting Data**

Once the site(s) has been identified, the next step is to identify the values of the site for the local community; the various beliefs and practices associated with it; the larger pilgrimage and mythic landscapes of which the site is a part; the degree of prevalence of such beliefs and values, and their impact on community decisions regarding the site. Nine such generic aspects of SNSs were identified in the KSL from the fieldwork (conducted in parts of KSL India and KSL Nepal) and literature review conducted in 2014 and 2015. Testing the strength of these indicators at a site can assist in gauging the CES associated with SNSs in the KSL.

The methods for data collection are FGDs, key informant interviews, and a rapid assessment survey. Detailed formats for semi-structured questionnaires have been developed to document the manner in which the presence and nature of each of the nine indicators is tested through the FGD(s). Table 1 of Annexure 2 provides the format under which the FGDs need to be conducted. The number of FGDs would depend on the size of the site, the number of sites, the demographics of the surrounding community, and its social stratification. Once the FGD(s) has been conducted, depending on the size of the local community, a rapid assessment survey might need to be done to ascertain the degrees to which 'indicator 2' and 'indicator 3' are prevalent in the different groups within the community (categorized according to gender, age, and sociocultural characteristics). Table 2 of Annexure 2 provides the format under which the rapid assessment needs to be done. In some cases, where the community is not very large, the degrees of 'indicator 2' and 'indicator 3' can be gauged within the FGDs. Alongside these methodical interactions with the community, photography and GPS is required for first-hand documentation.
A secondary study of the region based on literature review and interviews with experts in the region (and GIS research, if the means are available) needs to be conducted both prior to and following the field studies, in order to triangulate the data collected from the field.

Part 3: **Analysis and Presentation of the Findings**

The first step in the analysis and presentation of the findings is to give a detailed introduction of the assessment in the following terms:

(a) The rationale for undertaking the assessment of the CES of a particular site(s)
(b) The broader landscape in which the assessment was undertaken; a brief note on its ecosystems, political economy, demographic composition, culture, and religion; and the local communities' relationship with the landscape (especially traditions of nature veneration, pilgrimage, and SNSs, if present)
(c) A brief note on the social and economic opportunities and challenges faced by the local communities
(d) The factors and process involved in the identification of the site(s). It would be good to have a GIS map of the site that also shows some relevant/revealing aspects of the surrounding landscape.

Conducting an FGD for CES assessment of Gwallek Kedar sacred forest. District Baitadi, Nepal.

(e) A brief introduction of the researchers; the time period in which the assessment took place, and the sites that were studied.

The second step is to provide a detailed overview of the findings related to the site(s). This includes filling in the details regarding the presence/absence of each of the nine indicators for the site(s) in a prescribed format, through the FGDs and rapid assessment survey (if required), as well as providing any relevant information gathered from secondary studies. Table 3 of Annexure 2 provides the format for presenting the detailed findings. The third step is to rank the site in terms of its significance for a particular constituency, such as conservation practitioners, tourism practitioners, administrators, etc. This step allows one to see whether a site would be, for example, better left alone to the community, or could be developed as a cultural/eco-tourism site, or could be leveraged by the government/ conservation practitioners for community support for nature conservation. This ranking involves looking at the qualitative and quantitative weightage of each of the nine indicators at the site, as found through the CES assessment. All SNSs would by default have 'indicator 1' present. As a general rule, the greater the number of indicators at the site (in addition to 'indicator 1'), the greater would be its significance. The kinds of indicators that have a greater presence at the site would determine which constituency it holds the highest significance for. The following example gives an idea of how the significance and potential of an SNS for different kinds of uses can be assessed through this ranking.

Ranking the sites along suitable indicators and parameters (as defined by the objective of the assessment) can help researchers in mapping the relative values that the local custodian communities place on the different sacred natural sites, sacred ecosystems, and the broader landscape. On a pragmatic level, it can thus convey an idea of the kinds of sites that have the best potential for conservation and income-generation related activities. It can also provide a sense of the

Illustration: **Ranking of a site in terms of its value for leveraging conservation and/or development/income generation**

For tourism practitioners aiming to work with local communities for developing forms of community-based heritage tourism and eco-tourism:

(a) A site would be significant enough to be ranked if it has strong Indicators 2 and 9 in addition to Indicator 1.

(b) The presence one or more from among Indicators indicators 4, 5, 6, 7, and 8 would be a bonus.

(c) The presence of strong Indicators indicators and 3 can be beneficial if the community is open to having visitors at the site and yet wishes to limit commercial/developmental activities at the site to protect its sanctity/pristine natural character. However, the nature of Indicator 2, 3, and 5 can possibly also have limiting effects on tourism, because sometimes communities tend to restrict outsiders from visiting landscapes and sacred sites that they (communities) value greatly.

(d) Thus while a sacred landscape or a SNS may be strongly valued by the community, and may also be a pilgrimage site for them, the community may not want to have extensive tourism and/or attendant infrastructure developed at the site. In this case, Site 1, a pilgrimage site for the local community with, say, the presence of Indicators 1, 2, 4, 5, 6, and 9 would rank higher than Site 2, another pilgrimage site for the local community with the same indicators, if in the case of Site 1 the community allows visitors (tourists/pilgrims) from outside to visit the site (a positive presence of Indicators 2, 3, and 5 for tourism), and in the case of Site 2, wants to keep the site exclusively for the community's cultural/religious use (a negative presence of Indicators 2, 3, and 5 for tourism). Site 2 can still have a high ranking. Visitors can be made aware of this site while they visit the landscape even if they are barred from it, as it would nonetheless enhance the understanding of the culture in which the landscape is imbedded.

(e) Furthermore, if Site 1 and Site 3 have the same set of indicators present, and both even have the positive presence of Indicators 2, 3, and 5 for tourism, Site 1 will rank higher than Site 3 if at Site 1, Indicator 9 is stronger than in Site 3, indicating a relatively unspoiled place with greater natural wealth.

But if conservationists were to use the framework, they might give different weightage to the same indicators, with a view to leveraging local traditions of nature veneration towards the larger goal of nature conservation. For conservationists:

(a) A site would need to have strong Indicators 1, 2, and 9 to be considered significant.

(b) The presence of strong Indicators 3 and/or 7 would help them to garner support from local communities for nature conservation by giving them instances and beliefs from the local context with which to bolster the conservation agenda.

(c) The presence of strong Indicators 4 and 5 can act in both positive and negative ways for conservationists. High numbers of visitors, whether from members of the local community or tourists/pilgrims from outside, can have potentially adverse effects on the site's natural wealth. At the same time, these Indicators also show the importance a sacred natural landscape or site has in the local culture and economy, and how it can be used to leverage support for nature conservation in general.

(d) However, the presence of a strong Indicator 6 will usually mean good news for conservationists, as then the local community is already engaged in thinking about managing the site. This can provide conservationists a readymade entry point for engaging the local community in better site management practices. There usually would be some degree of Indicator 6 present at sites that also show Indicators 4 and/or 5, i.e., sites that get visitors either from within the community or tourists/pilgrims from outside. The presence of a strong Indicator 6 will likely directly contribute to a strong Indicator 9, i.e., a healthy ecosystem owing to the cultural significance of the natural site.

(e) Site 1, with Indicators 1, 2, 5, 6, and 9, would rank higher than Site 2 with the same set of indicators if Site 1 has better Indicators 6 and 9.

(f) The presence of Indicator 8 can help in gaining the communities support for conservation, especially if the community has significant transboundary presence.

interface between nature and religion in contemporary times, giving a bottom-up and systematic understanding of the potential of combined natural and cultural capital to contribute to an effectively multi-functional landscape for planners.

Who Can Use the Framework

The framework largely entails qualitative data collection and analysis. Thus some experience and/or training in the use of qualitative research techniques would be very useful for persons interested in using the framework. The framework was developed through fieldwork in KSL India and KSL Nepal, and a literature review encompassing the whole of KSL. However, the framework can provide a standardized, robust method for the assessment, presentation, and ranking of the CES of individual SNSs as well as sacred landscapes anywhere in the HKH region. The framework can at best provide a 'snapshot' of the CES of a SNSs or a network of such sites at a particular moment in time. Recorded values can change over a period of a few years as a result of a host of factors. These can include increasing connectivity, migration into and out of the region, media penetration, education and other effects of globalization, as well as government policies. Thus the assessment needs to be repeated periodically (say once every four years) in order to gauge and keep abreast of the changes in the given socio-ecological system. Periodic assessment of the CES of sacred sites and landscapes could be a crucial component for long-term socio-ecological monitoring of landscapes such as the KSL, which are tremendously rich in SNSs and ecosystems. The framework will be of interest to social scientists, conservation practitioners, tourism practitioners, development practitioners, heritage-related institutions and businesses, and local NGOs – basically any individual or organization interested in incentivizing local communities to continue and strengthen their traditions of nature conservation for engendering sustainable local livelihoods and conservation strategies in the context globalization, migration, and climate change adaptation and mitigation.

Advantages of the Framework

(a) The framework is based on lessons gathered from intensive fieldwork in the KSL and on a wide-ranging literature review on the region. It provides a solid basis for the assessment of the CES of the multi-faceted SNSs in the region. This framework was tested on a limited scale in Baitadi district, KSL Nepal, in February 2016. The findings of that study are presented in Annexure 3.

(b) Through the indicators, the framework provides a basis for capturing the kinds of non-monetary CES that are often labelled 'intangible', 'non-quantifiable', and 'subjective'. But at the same time, the framework also provides tools to gather economic values associated with sacred natural sites that are also sites of tourism and/or pilgrimage.

(c) Apart from providing indicators that gauge the presence and degree of prevalence of CES at such sites, the framework provides a robust methodology for conducting the CES assessment exercise.

(d) The indicators provided in this framework, though emerging from the KSL, will find much resonance in other parts of the HKH region, and perhaps also in other parts of the world inhabited by communities that worship nature. Thus the framework could potentially be used in many other regions besides the KSL.

Limitations of the Framework

The framework has the following limitations:

(a) The framework is yet to be tested on a broader scale in the KSL and as a part of a larger ES assessment that includes other kinds of ES as well.

(b) The ranking of the site for its relative value in terms of conservation, development, etc. needs to be systematized further.

(c) The framework was based on fieldwork done in KSL India and KSL Nepal, and a literature review that covered all the three KSL countries. But due to logistical reasons and geopolitical sensitivities, the development phase of the framework did not include fieldwork in KSL China. In KSL Nepal, a preliminary field study was conducted in Humla district, which lies in proximity to KSL China, but the political and economic setting of Humla is significantly different from that of KSL China. Thus it remains to be seen whether the framework is applicable in KSL China.

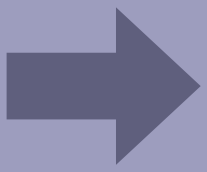
Illustration: **An overview of the methodology for assessing the CES of sacred natural sites in the KSL**

Step 1: **Selection of transect and local sacred natural sites**

Conduct pre-fieldwork studies, consisting of a literature review and interviews with knowledgeable persons (e.g., academics/travellers), to select the site for assessment.

Step 2: **Collecting data**

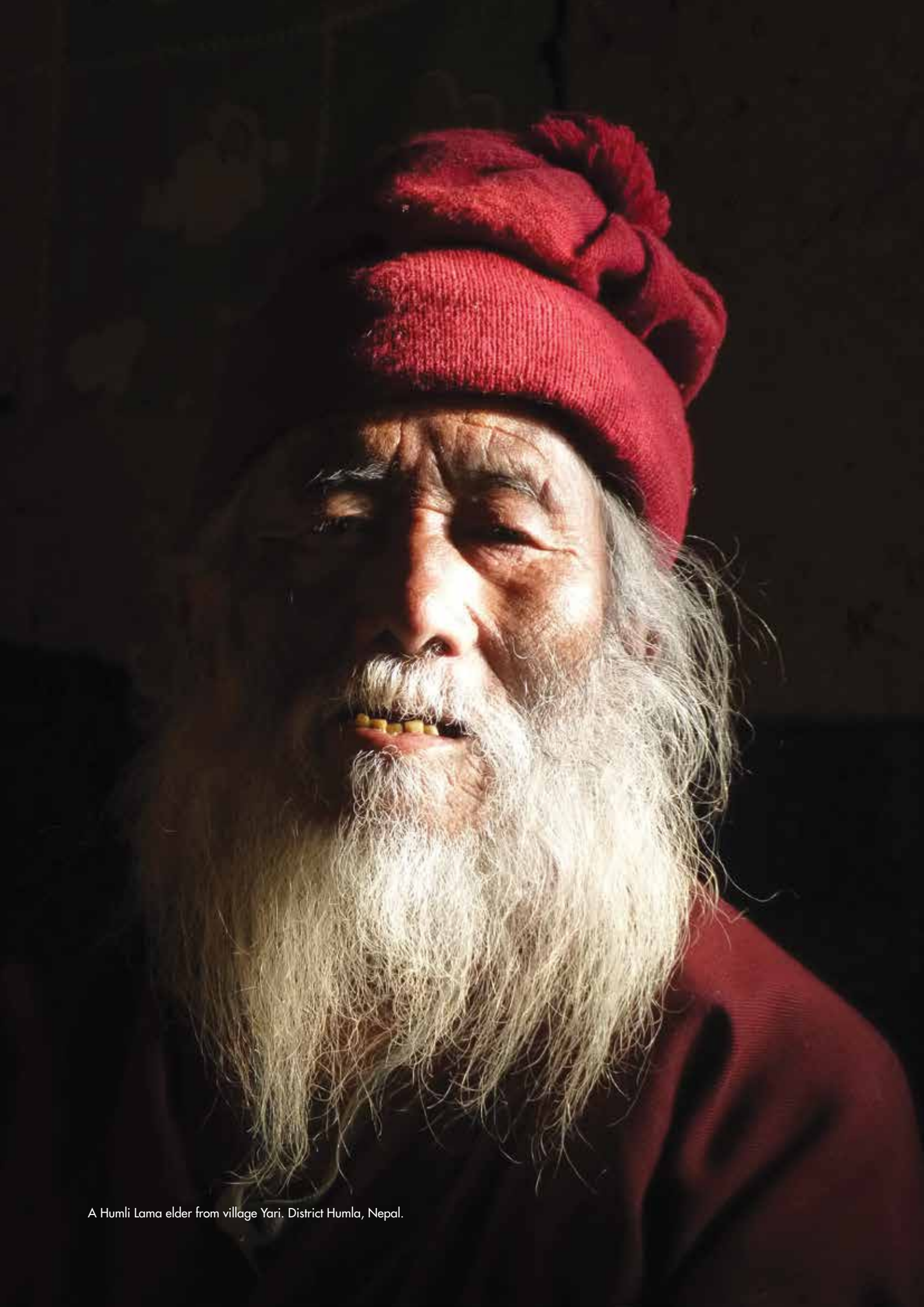
Conduct FGDs in key communities/settlements relevant to the site selected for assessment.



- Conduct FGDs to assess the CES of the site as per the indicators.
- Key informant interviews with persons involved in tourism/ pilgrimage related business at sites where Indicator 5 is present
- Conduct a rapid assessment survey either to establish the degree of prevalence of Indicators 2 and 3 at the major sites identified during the FGDs, or to find that out through the FGDs themselves.
- Verification and triangulation of data collected during fieldwork using methods provided in the far right column of Table 1 of Annexure 2.

Step 3: **Analysis and presentation of data**

- Presentation of a detailed introduction of the CES assessment
- Presentation of the detailed findings of the CES assessment
- Ranking of the major sites, based on the objective of the CES assessment (if required)



A Humli Lama elder from village Yari. District Humla, Nepal.

References

Adler, CE; McEvoy, D; Chhetri, P; Kruk, E (2013) 'The role of tourism in a changing climate for conservation and development'. A problem-oriented study in the Kailash Sacred Landscape, Nepal. *Policy Sciences*, 46(2): 161-178.

Azad, A (2013) *Sacred landscape in medieval Afghanistan: Revisiting the Fada'il-i Balkh*. Oxford University Press.

Bernbaum, E (1997) *Sacred mountains of the world*. San Francisco.

Bhatta, DB (2003) Community approaches to natural resource management: Sacred and non-sacred landscape in Nepal. Dissertation submitted to Miami University, Ohio.

Brooks, TM; Mittermeier, RA; da Fonseca, GA; Gerlach, J; Hoffmann, M; Lamoreux, JF; Rodrigues, AS (2006) 'Global biodiversity conservation priorities'. *Science*, 313(5783): 58-61.

Brown, G (2006) 'Mapping landscape values and development preferences: A method for tourism and residential development planning'. *International Journal of Tourism Research*, 8(2): 101-113.

van Berkel, DB; Verburg, PH (2014) 'Spatial quantification and valuation of CES in an agricultural landscape'. *Ecological indicators*, 37, 163-174.

Brown, C; Reyers, B; Ingwall-King, L; Mapendembe, A; Nel, J; O'Farrell, P; Dixon, M; Bowles-Newark, NJ (2014) Measuring ES: Guidance on developing ecosystem service indicators. UNEP-WCMC, Cambridge, UK.

Brown, J; Neil, M (2011) A site-based approach to delivering rangeland ES. *The Rangeland Journal*, 33:99-108. http://dx.doi.org/10.1071/RJ11006

Buijs, AE; Pedroli, B; Luginbühl, Y (2006) 'From hiking through farmland to farming in a leisure landscape: Changing social perceptions of the European landscape'. *Landscape Ecology*, 21(3), 375-389.

Carpenter, SR; Mooney, HA; Agard, J; Capistrano, D; DeFries, RS; Díaz, S; Dietz, T; Duraiappah, AK; Oteng-Yeboah, A; Miguel, H; Perrings, C; Scholes, RJ; Whyte, A; Reid, WV (2009) Science for managing ES: Beyond the Millennium Ecosystem Assessment. Proceedings of the National Academy of Sciences of the United States of America 106:1305-1312. http://dx.doi.org/10.1073/pnas.0808772106

Chan, KMA; Goldstein, J; Satterfield, T; Hannahs, N; Kikiloi, K; Naidoo, R; Vadeboncoeur, N; and Woodside, U (2011) CES and non-use values. Pages 206-228 in Kareiva, P; Tallis, H; Ricketts, TH; Daily, GC; Polasky, S; editors. Natural capital: Theory and practice of mapping ES. Oxford University Press, Oxford, UK.

Chan, KMA et al. (2011) CES and non-use values. In Kareiva, P; Daily, G; Ricketts, T; Tallis, H; Polasky, S (eds) The Theory and Practice of Ecosystem Service Valuation in Conservation. Oxford University Press, Oxford, pp. 206–228.

Chan, KM; Satterfield, T; Goldstein, J (2012) 'Rethinking ES to better address and navigate cultural values'. *Ecological Economics*, 74, 8-18.

Charak, SDS; Billawaria, AK (1998) Pahāri Styles of Indian Murals. Abhinav Publications.

Chettri, N; Shakya, B; Thapa, R; Sharma, E (2008a) 'Status of protected area system in the Hindu Kush-Himalaya: An analysis of PA coverage'. *International Journal of Biodiversity Science and Management* 4(3): 164–178

Damai, P (2008) Interrupting ethnographic spectacles in Eric Valli's Himalaya. Postcolonial Text, 3(4).

Daniel, TC; Muhar, A; Arnberger, A; Aznar, O; Boyd, JW; Chan, Kai MA; Costanza, R; Elmqvist, T; Flint, Courtney G; Gobster, PH; Grêt-Regamey, A; Lave, R; Muhar, S; Penker, M; Ribe, RG; Schauppenlehner, T; Sikor, T; Soloviy, I; Spierenburg, M; Taczanowska, K; Tam, J, von der Dunk, A (2012) Contributions of CES to the ES agenda. PNAS. Retrieved from http://www.pnas.org/content/109/23/8812.full (Accessed August 2014)

De Groot, R, Brander, L, Van Der Ploeg, S, Costanza, R, Bernard, F, Braat, L, Van Beukering, P (2012) Global estimates of the value of ecosystems and their services in monetary units. ES, 1(1), 50-61.

Dudley, N, Groves, C, Redford, KH, Stolton, S (2014) Where now for protected areas? Setting the stage for the 2014 World Parks Congress. Oryx, 48(04), 496-503.

Eck, DL (2012) India: A sacred geography. Harmony.

Eriksson, M; Jianchu, Xu; Shrestha, AB; Vaidya, RA; Nepal, S; Sandström, K (2009) The changing Himalayas: Impact of climate change on water resources and livelihoods in the Greater Himalayas. Kathmandu: ICIMOD

Espin, OO; Nicoloff JB (2007) An Introductory Dictionary of Theology and Religious Studies. Minnesota: Liturgical Press

Everard, M; (2012) What have rivers ever done for us? Ecosystem services and river systems. River conservation and management.

Fuller, CJ (2004) The Camphor Flame: Popular Hinduism and Society in India. New Jersey: Princeton University Press

GBPIHED (2010) KSL Conservation Initiative: Feasibility Assessment Report of India. G.B. Pant Institute of Himalayan Environment and Development, Almora.

Gobster, PH; Nassauer, JI; Daniel, TC; Fry, G (2007) The shared landscape: what does aesthetics have to do with ecology?. Landscape ecology, 22(7), 959-972.

Guo, Z; Zhang, L; Li, Y (2010) Increased dependence of humans on ES and biodiversity. PLoS ONE 5 (10):e13113. http://dx.doi.org/10.1371/journal.pone.0013113

Hendee, JT (2011) Assessing private forest landowner decision making in Illinois: applied management solutions for diverse objectives. Dissertation. University of Illinois at Urbana-Champaign, Illinois, USA.

IGSNNR (2010) KSL Conservation Initiative: Feasibility Assessment Report of China. Institute of Geographic Sciences and Natural Resource Research (IGSNRR). Chinese Academy of Sciences, Beijing.

Ingold, K; Zimmermann, W (2011) 'How and why forest managers adapt to socio-economic changes: a case study analysis in Swiss forest enterprises'. *Forest Policy and Economics* 13:97-103. http://dx.doi.org/10.1016/j.forpol.2010.06.003

Jeanrenaud, S; Gonzalo O (2007) 'Protecting sacred natural sites of indigenous and traditional peoples' in Mallarach, JM; Papayannis, T (eds) (2007) Protected Areas and Spirituality. IUCN and Publicacions de l'Abadia de Montserrat, Gland.

Jodha, NS (1992) 'Mountain perspective and sustainability: A framework for development strategy.' In Jodha, NS; Banskota, M; and Partap, T (eds) Sustainable Mountain Agriculture, pp 41-84. Delhi: Oxford and IBH Publication

Jodha, NS (2000) 'Globalisation and fragile mountain environment: Policy challenges and choices.' *Mountain Research and Development* 20(4): 296-299.

Jodha, NS (2004) 'Mountain agriculture.' In Messerli, B; Ives, JD (eds) Mountains of the world: A global priority, pp 313-335. New York: Parthenon Publishing Group

Joshi MP (1989) Sankaracharya, Lakulisa-Pasupatas and Uttarakhanda. In *Annals of the Bhandarkar Oriental Research Institute*. Vol. 70 (1/4): pp. 266-272.

Le Maitre, DC; O'Farrell, PJ; Reyers, B (2007) 'Ecosystems services in South Africa: a research theme that can engage environmental, economic and social scientists in the development of sustainability science?' *South African Journal of Science* 103:367-376.

Lutgendorf, P (2005) 'Sex in the Snow: The Himalayas as Erotic Topos in Popular Hindi Cinema'. *Himalaya, the Journal of the Association for Nepal and Himalayan Studies*, 25(1): 7.

Marsden, T (1999) 'Rural futures: The consumption countryside and its regulation'. *Sociologia Ruralis*, 39(4), 501-526.

McDaniel J (2004) *Offering flowers, feeding skulls: Popular goddess worship in West Bengal.* Oxford: OUP.

Milcu, AL; Hanspach, J; Abson, D; Fischer, J (2013) 'Cultural ES: A literature review and prospects for future research'. *Ecology and Society*, 18(3): 44.

Mitchell, N; Brown, J; and Beresford, M (2005) Conclusions – the protected landscape approach: Conservation for a sustainable future.

Negi, CS (2010a) Askote Conservation landscape: Culture, biodiversity, and economy. Bishen Singh Mahendra Pal Singh, Dehra Dun

Negi, CS (2010b) 'Culture and biodiversity conservation: Case studies from Uttarakhand'. *Central Himalaya Indian Journal of Traditional Knowledge*, Vol. 11 (2), April 2012, pp. 273-278.

Olschak Blanche, C; Augosto, G; Andreas, G; Buhrer Emil, M; Augusto, G; Andreas, G (1988) Himalayas: Growing mountains, living myths, migrating peoples.

Mercedes, O-A; Oviedo, G; Barroso, G; Gutierrez, M; Santiago, J; Verschuuren, B (2010) Developing a methodology and tools for inventorying sacred natural sites of indigenous peoples in Mexico. In Verschuuren, B; McNeely, JA; Wild, R; Gonzalo O (eds) Sacred Natural Sites: Conserving Nature and Culture. Earth Scan, London.

Pandey, A; Kotru, R; Pradhan, N (2016) Kailash Sacred Landscape: bridging cultural heritage, conservation and development through a trans-boundary landscape approach. In Verschuuren, B; Furuta, N (eds) Asian Sacred Natural Sites: Philosophy and Practice in Protected Areas and Conservation. Routledge, London.

Palomo, I; Martín-López, B; López-Santiago, C; Montes, C (2011) 'Participatory scenario planning for protected areas management under the ES framework: The doñana social-ecological system in southwestern Spain'. *Ecology and Society*, 16(1): 23. [online] URL: http://www.ecologyandsociety.org/vol16/iss1/art23/

Plieninger, T; Dijks, S; Oteros-Rozas, E; Bieling, C (2013) Assessing, mapping, and quantifying CES at community level. Land Use Policy, 33, 118-129.

Pravanada, S (1949) Kailas-Manasarovar. S.P. League Ltd., Calcutta.

Quétier, F; Rivoal, F; Marty, P; Chazal, J; Thuiller, W; Lavorel, S (2010) 'Social representations of an alpine grassland landscape and socio-political discourses on rural development'. *Regional Environmental Change*, 10: 119-130. http://dx.doi.org/10.1007/s10113-009-0099-3

Ramaswamy, S (2009) The goddess and the nation: Mapping Mother India. Duke University Press.

Raj, R; Morpeth, ND (2007) Religious tourism and pilgrimage management: An international perspective. CABI, Oxfordshire.

Rasul, G (2014) 'Food, water, and energy security in South Asia: A nexus perspective from the Hindu Kush Himalayas'. *Environmental Science and Policy*, 26(2): 174-180

Rasul, G; Chettri, N; Sharma, E (2011) *Framework for valuing ES in the Himalayas*. ICIMOD, Kathmandu.

Groot, Rd; Ramakrishnan, PS; van de Berg, A; Kulenthran, T; Muller, S; Pitt, D; Wascher, D; Wijesuriya, G; Amelung, B; Eliezer, N; Ram Gopal, A; Rossler, M (eds.) Xu Jianchu, Hebe Vessuri. (2005). 'Cultural and Amenity Services'. *Ecosystems and Human Well-being*. Vol. 5. Washington, DC: Island Press.

Saklani, DP (1998) Ancient communities of the Himalayas. New Delhi: Indus Publishing Company.

Singh, S (2005) 'Secular pilgrimages and sacred tourism in the Indian Himalayas'. *Geo Journal*. 64: 215-223

Snelling, J (1996) The sacred mountain: The complete guide to Tibet's Mount Kailas. Motilal Banarasidass, New Delhi.

Solomon, S (ed) (2007) Climate change 2007- the physical science basis: Working group I contribution to the fourth assessment report of the IPCC (Vol. 4). Cambridge University Press.

Spoon, J (2014) Everyday Buddhism and environmental decisions in the world's highest ecosystem. *Journal for the Study of Religion, Nature and Culture*, 8(4), 429-459.

Stepp, JR; Castaneda, H; Cervone, S (2005) Mountains and biocultural diversity. *Mountain Research and Development*, 25(3), 223-227.

Stone, MT; Nyaupane, GP (2015) Protected areas, tourism and community livelihoods linkages: A comprehensive analysis approach. *Journal of Sustainable Tourism*, 1-21.

Swinton, Scott M et al. (2007) 'ES and agriculture: Cultivating agricultural ecosystems for diverse benefits'. *Ecological Economics*, 64.2: 245-252.

Temper, L; Martinez-Alier, J (2013) 'The god of the mountain and Godavarman: Net Present Value, indigenous territorial rights and sacredness in a bauxite mining conflict in India'. *Ecological Economics*, 96, 79-87.

TEEB. (2010) The economics of ecosystems and biodiversity: Ecological and economic foundations, (ed.) P. Kumar. Earthscan, Oxford.

Tielbörger, K; Fleischer, A; Menzel, L; Metz, J; and Sternberg, M (2010) The aesthetics of water and land: A promising concept for managing scarce water resources under climate change. Philosophical Transactions of the Royal Society, 68:5323-5337. http://dx.doi.org/10.1098/rsta.2010.0143

TU (2010) KSL Conservation initiative: Feasibility assessment report of Nepal. Central Department of Botany, Tribhuvan University, Kathmandu.

IGSNRR (2010) KSL conservation initiative: Feasibility assessment report of China. Chinese Academy of Science, Beijing.

van Berkel, DB; Verburg, PH (2011) Sensitising rural policy: Assessing spatial variation in rural development options for Europe. Land Use Policy, 28(3), 447-459.

Vandewalle, M; Sykes, MT; Harrison, PA; Luck, GW; Berry, P; Bugter, R; Dawson, TP; Feld, CK; Harrington, R; Haslett, JR; Hering, D; Jones, KB; Jongman, R; Lavorel, S; Martins, P; Silva, d; Moora, M; Paterson, J; Rounsevell, M.D.A.; Sandin, L; Settele, J; Sousa, JP; Zobel, M (2008) Review paper on concepts of dynamic ecosystems and their services. RUBICODE Project - Rationalising Biodiversity

Conservation in Dynamic Ecosystems. Funded under the European Commission Sixth Framework Programme.

Verschuuren, Bas, Robert Wild, McNeely, Jeffrey, Gonzalo Oviedo, (eds) (2010) Sacred natural sites: Conserving nature and culture. Earth Scan, Washington D.C.

Voora, V; Barg, S (2008) Pimachiowin Aki World Heritage Project Area ES valuation assessment. International Institute for Sustainable Development (IISD), Winnipeg, Manitoba, Canada

Wu, Ning; Rawat, GS; Sharma, E (2013) High-altitude ecosystem interfaces in the Hindu Kush Himalayan region. In Wu Ning, Rawat, GS; Joshi, S; Ismail, M; Sharma, E (eds) High-Altitude Rangelands and their Interfaces in the Hindu Kush Himalayas. ICIMOD, Kathmandu.

Xu, Jianchu; Ma, ET; Tashi, E; Yongshuo Fu; Zhi Lu; Melick, D (2006) 'Integrating sacred knowledge for conservation: Cultures and landscapes in southwest China'. *Ecology and Society*. Vol. 10(2): 7. Retrieved from http://www.mtnforum.org/sites/default/files/publication/files/776.pdf (Accessed on August 2014)

Zomer, R; Oli, KP (eds) (2011) KSL conservation initiative: Feasibility assessment report. ICIMOD, Kathmandu.

Annexes

Annex 1: **The categories of beliefs and practices governing sacred natural sites**

A. Edwin Bernbaum's (1997) categories for the kinds of views that sacralize mountains:

a. Height: looking at mountains as the highest goals one can strive to attain, e.g., climbing Mt Everest

b. Centre: regarding mountains as the centre of the world, cosmos, or a region, e.g., Mt Gunung Anung for the Balinese people

c. Power: regarding mountains as places of power that need to be left untouched to safeguard a particular community's existence. E.g., Mt Tongariro for the Maori of New Zealand

d. Deity or abode of deity: regarding the mountain as a dwelling place of deities, or a deity itself. E.g., Mt Nanda Devi for the people of Kumaon, India

e. Temple or place of worship: viewing mountains as temples or places of worship. E.g., Mt Kailas as the pagoda palace of the supreme deity Demchog for the Tibetan Buddhists

f. Paradise or garden: viewing mountains as paradise on earth. E.g., the belief among the Muslim Kirghiz that a paradise lies beneath the snows of Mt Mustagh Ata in Central Asia

g. Ancestors and the dead: viewing mountains as the abode of the dead and residence of the ancestors. E.g., Mt Koya, a Tibetan Buddhist meditation centre, is also a graveyard for the adherents of Tibetan Buddhism

h. Identity: viewing mountains as the source of personal and communal identity. E.g., Niyamgiri hills for the Dhongaria Kondh tribe in Chattisgarh

i. Source: viewing mountains as a source of water, life, fertility, and healing. E.g., the Himalayas for the Hindus

j. Inspiration, renewal, and transformation: viewing mountains as ideal places for meditation and spiritual transformation. E.g., the Hua Shan mountain for Daoist hermits.

B. Chandra Singh Negi's (2010b) categories of taboo systems and restraint practices governing sacred natural sites such as sacred groves and meadows in KSL India

a. Restraint in harvesting

b. Protection or propagation of resource species

c. Regulating onset or duration of harvest in sacred natural sites

d. Taboos against harmful habitat modification

e. Patch switching to maximize overall return rates from resource extraction in sacred natural sites

f. Dedication of forests to a deity

C. Diana L. Eck's (2012) categorisation of principles of divine manifestation for the Hindus, through which the divine manifests itself in the material world. These principles are manifested both in some particular well known pilgrimage sites, and duplicated among countless regional and minor pilgrimage sites.

a. 'Avatarana' (divine descent): "It fell from heaven to earth, so it is sacred. There could be no better pedigree of the sacred here on earth. Divine descent from heaven to earth is certainly one way in which this world is connected to the heavens. The words avatarana, avatara, and tirtha all come from that same Sanskrit root meaning 'to cross over'…This language of crossing has a wide symbolic reference, from the descending

and ascending flow of life between this world here below and the worlds of heaven above, to the ultimate crossing of the 'river' of birth and death to the 'far shore' of liberation. The river, of course, are the great descenders." (Eck 2012: 18-19)

b. 'Swayambhu' (self-manifest divinity): "Here, they say, the divine presence erupted from the earth and was manifested of its own accord! Innumerable places are said to be tirthas because the divine burst forth in that very place… The notion that aspects of nature are 'self-manifestations' of the divine is widespread, both in Shaiva and Vaishnava traditions. Special stones are called svarupas, literally God's 'own form', not the divine images humans create, but God's own…In consecrated temple images, murtis, made by the hands of the artisan, divine presence is established and the prana, the breath of life, imparted to the image in the rites of prana prathishtha, literally 'establishing the breath'. A swayambhu image or a svarupa, however, has no need of prana pratishtha." (Eck 2012: 20-22)

c. 'Pratishtha' (sanctification by adhesion): "All over India,…, there are murtis and lingas said to have adhered fast to this place or that by spontaneous natural fusion. Someone put the image down, and it could not be moved again by any amount of muscle. Here,…, it seems that the divine does the choosing, selecting this place or that for a home. In many of these stories it seems that the fusion of god and earth could, in principle, take place anywhere." (Eck 2012: 24-25)

d. Body Language - the Body of God: "Yi-Fu Tuan, theorist of space and the human experience, sees the human body as providing one of the primary schemas for understanding and ordering space. It is our primary environment, our microcosm, and it provides an intimately indigenous pattern for viewing the wider cosmos. It is not surprising that the body-cosmos scheme is widely employed in the patterning of India's sacred landscape… One need only recall the Vedic homologies of sun-eye, mind-moon, veins-rivers, hair-trees, and so forth, to imagine how naturally the earth's tirthas would have a place in this body. The most striking instance of relation of sacred space to body-cosmos is the system of pithas, the 'seats' of the Goddess said to be the various parts of the body of the Goddess, distributed throughout India." (Eck 2012: 25-26)

e. The Four Dhams – a Fourfold Dwelling: "A dham suggests not so much that we 'cross over' to the divine, but that the divine dwells among us now…The char dham pilgrimage is one of the most popular in India, for it takes pilgrims on a circumambulation of the whole country…The standard four claim virtually unanimous agreement [Badrinath in the north, Puri in the east, Rameshwara in the south, Dvaraka in the west]…The char dham yatra is a complete pilgrimage – fourfold, as signaled by the four directions – and is widely duplicated in local and regional pilgrimages." (Eck 2012: 29-30)

f. Threes, Fours, Fives, Sixes, Sevens, and Eights: "The grouping of tirthas in numbered sets creates a landscape, linking place to place and thereby spanning the land between. Rivers,…, are often gathered together in threes, creating trivenis where they meet. Goddesses too, tend to appear in clusters of three, either within the sanctum or in separate shrines…The triplicate goddess not only demarcates a wider locale, but also indicates the complexity of the faces of the Goddess…The grouping of places in numbered sets brings them together in the mind's eye, whether or not they are visited by pilgrims." (Eck 2012: 31-34)

Annex 2: **Formats for data collection and presentation in the assessment of cultural ecosystem services of sacred natural sites and landscapes**

Table 1: **Target group and questions for focused group discussions**

Target group for focused group discussions

If possible, the group formed for the FGD must include people from each of the following categories:

- Male and female elders from the custodian community/communities
- Shamans, medicine men, priests and other kinds of religious figures in the community
- Male and female members of working age (18–55 years) from the custodian community/communities
- Members of local management bodies, and local tourism business operators

If the custodian community or village is highly stratified, separate FGDs may need to be conducted based on their distinct social-economic characteristics (e.g., privileged/less privileged)

S. No.	Indicator	Questions for FGD	Steps for further verification/ triangulation
1	Presence of beliefs ascribing cultural significance to natural sites (ranging from a single tree/rock to a forest, cave, lake, pond, mountain, water body, etc.)	• What is the importance of the site for the custodian community/communities? • What is the contemporary social role and meaning of the site for the custodian community/communities? • Are there any kinds of taboos and restrictive/ regulating practices associated with this sacred natural site? • What is the impact of social stratification on access to the site, especially for women and members of marginalized groups such as the lower castes? • Are there any species of flora and fauna that have a particular significance (symbolic, mythic, totemic, or in terms of traditional ecological knowledge) in the site? • Are there any festivals or rituals associated with the site? If so, how are they celebrated or conducted? • Are there any folksongs, myths, legends, genealogies or facets of local history associated with the site? • Is there any cultural practice, myth, folk story, or historical facet that links this site to another sacred or historic site (both within and outside the transect)? • Is there any cultural practice, myth, folk story, or historical facet that links this site to the Mt Kailash pilgrimage?	Literature review and interactions with experts in local history, culture, and ecology.
2	Degrees of prevalence of such beliefs across age, gender, caste, and other relevant social groups	Get a general sense from the FGD.	This indicator needs to be further assessed through a rapid household survey. See Part 3.2 of the framework for further details.
3	Impact of the cultural significance of the site on developmental and commercial activities for competing land-use	The questions for the FGD shall be as follows (these can be improvised as necessary): • Has any significant development activity, such as construction of infrastructure, monocultural plantation and deforestation, etc. been stalled due to the presence of this site? • Has the presence of this site catalyzed certain kinds of developmental activities, such as tourism/pilgrimage related businesses? [Field observations should verify the responses obtained.]	This indicator needs to be further assessed through a rapid household survey. See Part 3.2 of the framework for further details.
4	Influence of the site on community bonding	The questions for the FGD shall be as follows (these can be improvised as necessary): • Does the site enable community bonding? If yes, in what ways/through what means? • In the face of modernization, globalization, and migration, does the site and its attendant rituals/ festivals play any role in bringing the community together?	Literature review and interactions with experts in local history, culture, and ecology.

5	Presence of pilgrimage and/or tourism at the site	• Is this site popular among pilgrims and tourists? • If yes, what is the composition of the visitor groups, in terms of their age groups, where they come from, what community they belong to, and what they come here for? • Are there ancillary tourism businesses and basic services (such as toilets, eateries, lodges, souvenir shops, transport agencies) around this site that cater to the needs of the visitors? • If yes, is there an estimate of how many people are employed by such businesses? • Also, how much is the annual revenue generated from tourism/pilgrimage related activities at the site? • Are the visitors to this site aware of the other cultural sites, including cultural ecosystem sites, nearby? • How many people visit the site annually? Are there peak and slump seasons?	If valid, the FGD findings for this indicator need to be verified and probed in more depth through meetings with diverse local stakeholders involved in livelihood activities related to tourism/ pilgrimage. (See the 'degree of prevalence' column for this indicator in Table 2 of Part 4 of this framework.)
6	Presence of local self-organization or management structure for the site	• Is there any system of local self-organization or a legally constituted/registered body for the management of the site? • If yes, then when was it established; how are its members selected; what are its agenda and activities; how is it sustained, and how effective is it in managing the site?	If valid, the indicator needs to be verified through first-hand observations at the site, and interactions with persons from the site's management body, if they are not present at the FGD.
7	The site's influence on the custodian community's perceptions of natural disasters, mishaps, and climate change	Is there a belief that wrongdoing in or around this site can lead to negative consequences such as natural disasters and domestic/social conflicts? If yes, are there any anecdotes that illustrate this?	N/A
8	Presence of transboundary linkages at the site	• Does this site in country A (say India) have a mirror site in country B (say China) or country C (say Nepal)? • Does this site lie on a pilgrimage route to a transboundary pilgrimage site (Mt Kailash in KSL China, Tilthin in KSL India, or Shikhar Parvat in KSL Nepal)? • Does this site in country A (say India) have any connection to country B (say China) or country C (Nepal) in terms of the people who serve here, or its artistic heritage or artefacts? • Does this site in country A (say India) serve as a good or traditional vantage point for a holy site in country B (say China) or country C (say Nepal)?	Literature review and interactions with experts in local history, culture, and ecology. Photographic documentation of the site recommended.
9	Presence of healthy ecosystems/species at the site due to regulation of human-nature interface through belief-systems	• Get a general sense of the traditional ecological knowledge associated with the site and the transect/ local landscape in which the site is located from the FGD. • Also note if and how the natural resources of the SNS differ from those in the surrounding landscape and in state protected forests, both according to the local community and according to scientific opinion.	This indicator would require verification through expert analysis. The enumerator, unless he or she is an ecologist, would need to make thorough observations of the ecosystem site, and this would include photographic documentation and GPS recording of the site's location and dimensions. These can later on be studied by a trained ecologist and also triangulated through GIS technology. The site's provisioning and supporting services, and provisioning services (if any) can also be quantified through available methods and approaches. This can help find a quantifiable measure of how valuable a contribution is enabled by the cultural beliefs that govern the site.

Table 2: **Format for rapid assessment survey**

Target group for rapid assessment survey

The rapid assessment survey is to be conducted in settlements where the local custodian communities of the sites reside – in other words, in the key settlements of the transect around the chosen SNS. The researcher must ensure even representation of different social groups in the custodian community. From each group, the researcher must try to include:

- Men aged 60 years and above/whatever age happens to be the average age when people become grandparents in the community
- Women aged 60 years and above/same as above
- Men aged between 18–60 years (with the upper age limit being the average age when people become grandparents in the community
- Women aged 18–60 years/same as above

There may be a number of sacred sites in the transect, both built and sacred. Through the FGD, the researcher should try to identify 3-5 sites, including of course the chosen SNS, that have great significance for the custodian community. For each of those sites, the researcher would need to find out how strongly held the views of the local community at large are. This is required for the assessment and verification of Indicators 2 and 3.

Inquiry

Question that each respondent will be asked: How strongly do you believe in the customary beliefs and practices associated with, and the present day social role played by [Site 1, Site 2, Site 3, and so on]?

For each site, tick on the column that best captures the respondent's answer.

(Responses to the right; names of sites below)	Very strongly; I would curtail or modify any commercial or developmental activity that would entail using the site's land so as to preserve it.	To some degree; I would respect the site and its traditions, but would use its natural resources for livelihood and other activities to a limited extent.	Not much; I know the site has had cultural importance in the past, but now I would use it without second thoughts for livelihood and other activities (including development and commercial).
Site 1			
Site 2			
Site 3 (and so on)			

Table 3: **Format for presenting a detailed overview of the values of CES for each site enlisted in table 1**

Name of site:
Legal category of land on which the site stands:
Address:
GPS coordinates (if available):
Name and affiliation of data collector:
Date(s) of data compilation:

Indicator	Details (To be filled if the indicator is present. Enter relevant qualitative details about the site that may get overlooked during the rapid measures. If any indicator is absent at the site, enter 'absent'.)	Degree of prevalence (To be filled if the indicator is present. Tick the indicator's significance level (e.g., high, medium, low) unless stated otherwise.
Indicator 1		a. Traditional/historic importance of the site: High__ Medium__ Low__ b. Present day importance of the site: High__ Medium__ Low__ c. Strength of customary restricting/regulating practices and/or taboos at the site: High__ Medium__ Low__ d. Density of totemic species (if applicable) of flora and fauna at the site: High__ Medium__ Low__ e. Scale of festivities/ritual occasions at the site: • restricted to one social group within one village__ • restricted to one social group spread over more than one village__ • one entire village__ • more than one village, including visitors from relatively distant places__
Indicator 2		Scale of support for customary beliefs and practices at the site (as outlined in Indicator 1) along the axis of: a. Gender and age: Among men aged 55 years and above: High__ medium__ low__; Among women aged 55 years and above: High__ medium__ low__; Among men aged between 18-55 years: High__ medium__ low__; Among women aged between 18-55 years: High__ medium__ low__ b. Social groups (if the villages near the sites are socially heterogeneous, which they usually are): Among people of higher social status: High __ medium__ low__; Among people of medium social status: High __ medium__ low__
Indicator 3		Scale of support for the site's CES in the face of competition for land-use with developmental or commercial activities, along the axis of: a. Gender and age: among men aged 55 years and above: High__ medium__ low__; Among women aged 55 years and above: High__ medium__ low__; Among men aged between 18-55 years: High__ medium__ low__; Among women aged between 18-55 years: High__ medium__ low__ b. Social groups (if the villages near the sites are socially heterogeneous, which they usually are): Among people of higher socioeconomic status: High__ medium__ low__ Among people of medium socioeconomic status: High__ medium__ low __ Among people of low social status: High__ medium__ low__

Indicator 4		Scale of community bonding engendered by occasions observed at the site (e.g., annual festivals, rituals, ceremonies, etc.): a. Drawing in only people from the custodian community who live in close proximity to the site (e.g., persons from one or two settlements)__ b. Drawing in also persons from the custodian community who have migrated temporarily/permanently to other regions__
Indicator 5		Scale of pilgrimage and tourism at the site: (Provide figures, even if approximate) a. Number of pilgrims who visit the site annually __ b. Composition of pilgrimage (tick the relevant option): Mostly local__; Many locals and significant numbers of outsiders__ c. Number of tourists who visit the site annually__ Composition of tourists (tick the relevant option): Mostly local and from within the district/state/province__ Large numbers both from within region and from outside__ d. Number of annual visitors to the site__(if separate figures for pilgrims and tourists are not available) e. Number of local people who gain part-time or full-time employment due to pilgrimage/tourism at the site__ f. Number of local businesses dependent on pilgrimage/tourism at the site g. Average incomes per capita of different segments of the population that gains employment due to tourism/pilgrimage at the site: (e.g., guide__; cleaner/site caretaker__ ; souvenir shop owner__; hotel/lodge owner__)
Indicator 6		Effectiveness of local self-organization/management of the site: a. Very effective (ecosystem in good shape; good waste disposal; effective curb on use/abuse of the natural wealth of the site) __ b. Average (ecosystem in good/average shape; sporadic waste management; some laxity regarding use/abuse of the natural wealth of the site) __ c. Poor (ecosystem in poor shape; waste management marginal/very occasional; local self-organization negligent or aiding opportunism regarding use/abuse of the natural wealth of the site) __
Indicator 7		N/A
Indicator 8		N/A
Indicator 9		d. Health of ecosystem at the site: Very good__ average__ poor__ e. Value of supporting and regulating services provided by the site__(in monetary terms, or other terms as applicable)

Annex 3: **Case Study – CES assessment of the Gwallek Kedar sacred forested range, Baitadi**

Overview

The CES framework developed at ICIMOD was piloted at the Gwallek Kedar sacred forest in Baitadi district (KSL Nepal) from 19 to 25 February 2016. The fieldwork was facilitated by a local NGO called the Social Awareness Development Association (SADA), which provided the team with a local resource person. The initial team of assessors included Abhimanyu Pandey (ICIMOD), Naresh Kumar Pandey (SADA), Dr Pasang Yangjee Sherpa and Himani Upadhyaya (both involved under a collaboration between ICIMOD and the India China Institute (ICI), New York, USA). Unfortunately, due to a freak accident in the field on 20 February, one of the ICI-ICIMOD collaboration researchers got seriously injured. Under the prevailing circumstances, both these researchers had to then leave for India on 21 February. However, it was possible to conduct one focus group discussion (FGD) and two key informant interviews. All in all, nine FGDs (covering over 60 respondents from different caste, age, and gender groups) and about ten key informant interviews were conducted in two of the eight VDCs over which the Gwallek Kedar sacred forest (which covers 2,500 hectares, according to local sources) spreads, as per the format prescribed in the CES framework developed at ICIMOD. Overall, the study found: (a) how the everyday religion of the local communities was centered upon various myths, beliefs, rituals and practices related to the Gwallek Kedar sacred forest, and (b) how people in different social strata (along the axes of caste, gender, and age) experienced and interrogated the cultural values attributed to the Gwallek Kedar sacred forest.

Methodology

The assessment of CES in the Gwallek Kedar sacred forest followed the general methodology prescribed by 'A Framework for the Valuation of Cultural Ecosystem Services of Sacred Natural Sites in the Kailash Sacred Landscape'. It included a combination of FGDs and key informant interviews, supplemented by first-hand observations (recorded through participant observation, photography and GPS). As mentioned before, nine FGDs were conducted in two of the eight VDCs over which the Gwallek Kedar sacred forested range spread. The two VDCs were selected for the following reasons:

(a) They provided a representative sample of the social groupings found in the rest of the six VDCs as well.

(b) Areas within these VDCs were widely held to be important in the local dynamics of the veneration of the Gwallek Kedar sacred forest.

(c) There was not enough time and resources to cover the more remote VDCs.

The FGDs intended to cover a representative sample of the custodian populations of the Gwallek Kedar forested range. Table 1 shows the breakdown of the nine FGDs in terms of their participant composition.

The Gwallek Kedar sacred forest, covering roughly 2,500 hectares. District Baitadi, Nepal.

Table 1

FGD No.	Date	No. of participants	Focus group composition
1	20 Feb 2016	5	Bahun/Chettri community: young/adult men - 4; elderly man - 1
2	21 Feb 2016	6	Bahun/Chettri community: elderly women - 5; young/adult woman -1
3	21 Feb 2016	10	Bahun/Chettri community: young/adult men - 6; elderly men - 4
4	21 Feb 2016	4	Dalit community: young/adult men - 3; elderly man - 1
5	22 Feb 2016	10	Bahun/Chettri community: young women – 9; minor girl - 1
6	22 Feb 2016	5	Dalit community: elderly men - 4; young man - 1
7	22 Feb 2016	6	Dalit community: elderly women - 3; young/adult women - 3
8	23 Feb 2016	10	Bahun community (key religious figures in the veneration of Gwallek Kedar): elderly men - 6; young/adult men - 3; minor boy - 1
9	23 Feb 2016	5	Dalit community: elderly man - 1; young/adult men - 2; young/adult women - 2

Table 2 below shows the total number of FGD participants from each social group, differentiated by caste, gender, and age group.

Table 2

Social group	Details		
	Gender	Age	Total no. of FGD participants from this social group*
Bahun/Chettri elder	Male	Above 50	11
Bahun/Chettri elder	Female	Above 50	5
Bahun/Chettri youth/adult	Male	Between 20 and 50	11
Bahun/Chettri youth/adult	Female	Between 20 and 50	11
Dalit elder	Male	Above 50	6
Dalit elder	Female	Above 50	3
Dalit youth/adult	Male	Between 20 and 50	6
Dalit youth/adult	Female	Between 20 and 50	5

* Two participants in the FGDs were minors: one a Bahun boy serving in a religious capacity at the main Kedar temple, aged 15, and the other a Bahun school-going girl, aged 12.

The Bahun Chettri community dominated the local custodian community of the Gwallek Kedar sacred forest, in terms of numerical strength, socioeconomic influence, and traditional bio-cultural knowledge. The ten odd key informant interviews were all conducted among Bahun and Chettri elders. An attempt was to made to conduct key informant interviews with two elders from the Dalit community. But the lack of time made it impossible to create enough rapport with the Dalit elders for more open interactions. One must see this limitation in context of the local caste dynamics and the high caste background of the researchers. Each key informant interview lasted between 30 to 45 minutes.

Table 3 presents a detailed overview of the CES of Gwallekh Kedar sacred forest.

Primary information of the site

Name of site	Gwallek Kedar sacred forest
Legal category of land on which the site stands	
Address	The sacred forest is spread over a minor mountainous range that runs through the following eight VDCs of Baitadi district, Nepal: Gwallek, Durgasthan, Salena, Maharudra, Nagarjun, Giregaad, Rodideval, Dehimandu.
GPS coordinates	(Yet to be ascertained)
Name and affiliation of data collector(s)	Abhimanyu Pandey (ICIMOD); Naresh Kumar Pandey (SADA); Dr Pasang Yangjee Sherpa (ICI); Himani Upadhayaya (ICI-ICIMOD)
Date(s) of data compilation	20–24 February 2016

Assessment of the CES of the site

Indicator of CES	Details	Degree of prevalence
Indicator 1 (Presence of beliefs ascribing cultural significance to natural sites (ranging from a single tree/ rock to a forest, cave, lake, pond, mountain, water body, etc.)	• **Abode of the local supreme deity:** Traditionally, the locals have sought to preserve the Gwallek Kedar forest as a place of quiet that is undisturbed by human actions and what the locals perceive to be social impurities, in order to provide an ambient environment for the eternally meditating god Kedar/Mahadeva. • **Wish-fulfilling pilgrimage:** This deity is considered to be the 'King of all (local) gods' who administers to the needs and wishes of his devotees through his active representative deity Nagarjun. A pilgrimage to the Gwallek Kedar sacred forested range is considered to be a wish fulfilling ritual act. It is believed that the pilgrim has to be ritually pure and carry pure motives for his or her wish to be fulfilled. For the local community, Gwallek Kedar is the most important among the four sites that they regard as their 'chaar dhaam' (four cardinal pilgrimages), namely Gangotri, Badrinath, Kedarnath and Gwallek Kedar. It is also the most important of the four 'Kedar' abodes found in this region straddling the Indo-Nepal border along the middle reaches of the Mahakali valley, i.e., among Raula Kedar (Baitadi, Nepal), Thagel Kedar (Pithoragarh, India), Dhaj Kedar (Pithoragarh, India), and Gwallek Kedar. • **Last resort for wish fulfillment/finding solutions:** Each different segment of the local custodian community, such as the Bahuns, Chettris, and Dalits, has its own clan gods and ancestral spirits. The local community turns to these minor deities when they face domestic/health related problems. These deities are believed to prescribe remedies through local oracles known as 'dhamis'. However, if an appeal to the minor deity proves ineffective, the ailing person/family makes a pilgrimage to the Gwallek Kedar sacred forest after elaborate purification rituals, and/or makes offerings/animal sacrifices to Kedar's deputy Nagarjun. • **An integral part of local folk culture:** The supreme deity of Gwallek Kedar and his numerous subordinate deities are the subject of various folk songs (some of which were recorded over the course of the fieldwork). Several festivals are held in different seasons either in proximity to or through a pilgrimage to Gwallek Kedar (see details of Indicator 4). • **Symbolic and ritual purity:** To maintain the sanctity of the sacred forest, no shoes or leather products are allowed inside. The supreme deity of the sacred forest loves peace and non-violence, and thus animal sacrifice and hunting are prohibited in the forest. Also, traditionally, houses in the vicinity of the sacred forest were not allowed to be made over two stories, since doing so could possibly challenge the symbolic supremacy of Gwallek Kedar and incur his wrath. Also, traditionally, no structures, even devotional ones, were allowed to be built in the precincts of the sacred forest. • **Socially and ritually gradated access and restrictions on access:** Traditionally, Bahun and Chettri (high caste) men are allowed to go into the forest and to the top of the forested ridge, which is considered the natural sanctum sanctorum of Gwallek Kedar. Bahun and Chettri women, during their periods, are completely barred from entering even the lower reaches of the sacred forested range of Gwallek Kedar. During other times, these women can go up till about 100m from the top of the forested ridge to pay their obeisance. However, both pre-pubescent and post-menopause Bahun and Chettri women can go till the very top for ritual offerings. Dalit men and women are completely barred from entry into the sacred forested range, and have to leave their offerings at the edge of the sacred forest for members of higher castes to take into the sacred forest. Such discriminatory rules of access also apply to various springs emanating from the Gwallek Kedar sacred forested range. At many of these springs, especially those upstream and thus closer to the forest, access is denied to all Dalits and to menstruating women of Bahun/Chettri castes. • **Mandatory self-purification rites must for access:** Even for the eligible members of the Bahun and Chettri castes, elaborate rites of self-purification, collectively known as 'Chokha-bokha' rites, are prescribed for each individual interested in making a pilgrimage to the sacred forest. These include abstinence from 'tamasic'/impure food; wearing only traditional cotton clothes and no footwear during the arduous trek through the sacred forested range to the highest point in the range, which is considered the natural sanctum sanctorum of lord Kedar/Mahadev. • **Divine retribution for breaking such rules:** The contravention of such rules is expected to result in divine retribution in the form of untold misery and misfortune for the rule breaker.	• Traditional/historic importance of the site, on the scale 'very high > high > weak > doesn't matter': **Very high** • Present-day cultural importance of the site: **High, but in ways slightly different from those in the past. More pilgrims from distant places visit the site now than in the past, as a result taboos that limited access to the site and formed the basis of conservation have become weak.** • Strength of customary restricting/regulating practices and/or taboos at the site: **High, but gradually weakening, and definitely weaker than what it used to be a generation ago** • Density of totemic species (if applicable) of flora and fauna at the site: **N/A** • Scale of festivities/ritual occasions at the site: • restricted to one social group within one village__ • restricted to one social group spread over more than one village__ • one entire village__ • **more than one village, including visitors from relatively distant places**

Indicator 2 (Degrees of prevalence of such beliefs across age, gender, caste, and other relevant social stratification groups	The FGDs and the key informant interviews show that such beliefs still persist among the local custodian community. But while all the respondents were aware of these beliefs, several, especially Bahun/Chettri elders (both male and female) and some young Dalit men, spoke of a gradual weakening of the taboo system. Some of the key ways in which changes seem to manifested are: • **Shrinking of the perceived boundaries of the sacred forest:** Earlier, the physical boundaries of what is regarded as the sacred part of the Gwallek Kedar forested range extended much farther. The physical boundaries of what is regarded as the sacred forest are not marked. Factors such as caste, gender, and age seem to determine how people define the boundaries of the sacred forest. • **Opening up of parts of the Gwallek Kedar forest range for livelihood purposes:** This directly affects the way that forested range figures in the daily lives of the local community. People from across all segments of the local community, including Dalits, now go to the lower reaches of the Gwallek Kedar forested range to collect timber (through lopping) and NTFPs such as fodder and herbs, and to graze livestock. The Bahun/Chettri as well as Dalit elders said this would have been completely unthinkable in the old days. • **Growing demand for equity of access among Dalits:** While the Dalits interviewed under the FGDs generally seemed hesitant to express their views on the Gwallekh Kedar sacred forest, two young Dalit men talked about the need for equity of access to the sacred forest, and also to the springs emanating from this forested range. They said significant numbers of young Dalits are now defying traditional taboos and even going all the way to the top of the forested range to pay their obeisance to Gwallek Kedar. They said members of higher castes perform purification rituals if they find Dalits going near the sacred springs, or entering the sacred forest, and even when they (higher castes) are accidentally touched by Dalits. They said that such rituals of purification daily perpetuate the stigmatization of Dalits.	Scale of support for customary beliefs and practices at the site (as outlined in indicator 1) on the scale 'very high > high > weak > doesn't matter', among: • Elderly Bahun and Chettri men: **Very high** • Elderly Bahun and Chettri women: **Very high** • Young Bahun and Chettri men: **High** • Young Bahun and Chettri women: **High** • Elderly Dalit men: **Very high** • Elderly Dalit women: **Very high** • Young Dalit men: **High** • Young Dalit women: **High**
Indicator 3 (Impact of the site's cultural significance on developmental activities)	People across all the social groups who were interviewed indicated strong support for keeping the 'upper part' of the Gwallek Kedar forest free from any kind of construction or commercial activity. As mentioned before, this forested ridge is considered to be the natural sanctum sanctorum of the supreme deity of the region, lord Mahadeva/Kedar. The respondents asserted they would not let any developmental activity take place in this area. However, some notable changes have begun to take place in the vicinity of the sacred forest, including: • **The building of a road along the middle slopes of the forested range:** About three years back, a village access dirt road that could sustain up to medium load vehicular transport was built under a GIZ project along the middle slopes of the Gwallek Kedar range. At several points, the road passes through parts of the forested range that were earlier considered sacred and out of bounds for any construction or even social activity, apart from the purpose of veneration. • **The building of permanent concrete structures (small shrines and temples) in the lower reaches of the sacred forest:** About half a kilometre from Sunnakhan, the place from where the pilgrimage to the Gwallek Kedar forest traditionally starts, new concrete structures for veneration have been erected since the building of the road.	Scale of support for the site's CES, in the face of competition for land-use with developmental or commercial activities, on the scale 'very high > high > weak > doesn't matter', among: • Elderly Bahun and Chettri men: **High** • Elderly Bahun and Chettri women: **High** • Young Bahun and Chettri men: **High** • Young Bahun and Chettri women: **High** • Elderly Dalit men: **High** • Elderly Dalit women: **High** • Young Dalit men: **High** • Young Dalit women: **High**

Indicator 4 (Influence of the site in enabling community bonding)	Various festivals and rituals are celebrated all through the year in which either the supreme deity Kedar plus his subordinates play an important symbolic role, or the forest itself becomes the centre of devotion. These events foster community bonding, and also reinforce the belief system around Gwallek Kedar. Lots of pilgrims from distant places also visit Gwallek Kedar at such times. The important festivals include: • **Navratra** – in the months of Ashoj/Kartik (which generally coincide with October/November), and Ram Navami – in the month of Chait (somewhere between mid-March and mid-April). During both these festivals, villagers organize themselves into 'bhajan mandalis' (devotional song groups) and sing odes to the gods of the Gwallek forest both in community gatherings such as feasts and ritual wakes, and at designated spots within the sacred forest. • **Kedar Jaa**t – in the months of Kartik/Mangsir (which generally coincide with November/December). Local custodian community members not only make the annual pilgrimage to the Gwallek Kedar forest, but also travel in a clockwise direction through the villages that encircle the sacred forested range. • **Avraat** – in the months of Ashaad and Saawan (i.e., the monsoon season). Devotees of Gwallek Kedar and his subordinate deities go to certain designated spots within the Gwallek Kedar sacred forest (such as Shaullallah and Moolpani), stay there for 2–3 nights singing devotional songs and sometimes conducting 'yagya' (sacred fire ceremony) in order to either thank the gods for fulfilling a wish, or to ask the gods for something. • **Gora Jaat** – a 3–4 day festival in the month of Chait (somewhere between mid-March and mid-April). It is an interesting event in which women of higher castes make a figurine of lord Kedar with grass, rice, and cloth, and engage in communal dancing with this figurine. Also, contests of 'dohri' (challenges of wit, romance, and devotion through the medium of catechism like to and fro questions between men and women) are conducted. Dalit musicians (drummers and horn players) initiate the festival and take charge of the music throughout the event.	Scale of community bonding engendered by occasions observed at the site (e.g., annual festivals, rituals, ceremonies, etc.): • Drawing in only people from the custodian community who live in close proximity to the site • Drawing in persons from the custodian community living in proximity to the site, as well as visitors from distant places for pilgrimage.
Indicator 5 (Presence of pilgrimage and/or tourism at the site)	• **A pilgrimage site of central importance for the local community:** As also mentioned under Indicator 1, for the local community (i.e., for at least the residents of the eight VDCs over which the sacred forest spreads), Gwallek Kedar is the most important among the four sites that they consider their 'chaar dhaam' (four cardinal pilgrimages), namely Gangotri, Badrinath, Kedarnath and Gwallek Kedar. It is also the most important of the four 'Kedar' abodes found in this region straddling the Indo-Nepal border along the middle reaches of the Mahakali valley, i.e., among Raula Kedar (Baitadi, Nepal), Thagel Kedar (Pithoragarh, India), Dhaj Kedar (Pithoragarh, India), and Gwallek Kedar. • **Draws visitors from distant locations:** According to the respondents, during the festival seasons, Gwallek Kedar draws several thousand visitors from not just Baitadi district, but also from other districts of far western and western Nepal, as well as from Pithoragarh and Champawat districts of Uttarakhand (India). Holy men from several other, more distant, parts of India and Nepal are also reported to visit the site sometimes. Precise numbers or records of visitors are not available. Interestingly, many elderly respondents remembered having witnessed the late King Birendra and Queen Aishwarya of Nepal visiting the Gwallek Kedar forested ridge on a helicopter in B.S. 2045 (1988 A.D.). • **Near absence of any tourism infrastructure:** The large numbers of visitors to the site find accommodation at the local people's homes through informal, low-cost arrangements. Nearly all houses in these VDCs have toilets, though accessing water for household needs is a pervasive problem. There is no local body that regulates or monitors visitors' activities or assesses their needs. A few villages interspersed among the eight VDCs have small 'hotels/lodges/teahouses' – small communal dorm-like places that also provide meals. However, a separate study needs to be conducted to find out more about the state of tourism at Gwallek Kedar. • **State efforts to promote tourism related capacity building:** In 2013, the Ministry of Tourism, Culture, and Civil Aviation (Govt. of Nepal), in association with the NGO Nepal Homestay, organized a training on how to run homestays. Nineteen persons from Gwallek VDC participated in the training. The government also made plans to construct a building that would house a cultural interpretation centre for the Gwallek Kedar site. But the respondents complained that there was no follow-up.	Scale of pilgrimage and tourism at the site: • Number of pilgrims visiting the site annually: **N/A, but estimated to be in several thousands** • Composition of pilgrims: - Mostly local - **Many locals and significant numbers of outsiders** • Number of local people who get part-time or full-time employment due to pilgrimage/tourism at the site: **N/A** • Number of local businesses dependent on pilgrimage/tourism at the site: **N/A** • Average income per capita of different categories of people who get employment due to tourism/pilgrimage at the site: **N/A**

Indicator 6 (Presence of local self-organization or management structure for the site)	There is currently no local organization that deals with tourism, pilgrimage, promotion, or conservation of the site. The taboo system continues to form the basis for regulating the local community's gradated access and management of the site. The respondents stated that the pilgrims from outside who visited Gwallek Kedar mainly went to his temple in the Nagarjun VDC, or to the temples of his subordinate deities. The local custodian community made sure that anyone wanting to go to the upper, sacred part of the Gwallek Kedar forested range, had to have undertaken all the necessary ritual purification steps, i.e., these persons should have done 'chokha-bokha'. But such an arrangement was not instituted in any way, and lapses happened from time to time. Upon a visit to the interior of the sacred forest, up till the point where it was permissible for outsiders belonging to high castes (but without having done 'chokha-bokha'), the data collectors found little waste, but heavy evidence of NTFP collection.	Effectiveness of local self-organization/management of the site: • Very effective (ecosystem in good shape; good waste disposal; effective curb on use/abuse of the natural wealth of the site) • **Average (ecosystem in good/average shape; sporadic waste management; some laxity regarding use/abuse of the natural wealth of the site)** • Poor (ecosystem in poor shape; waste management marginal/very occasional; local self-organization negligent or aiding opportunism regarding use/abuse of the natural wealth of the site)
Indicator 7 (The site's influence on the local custodian community's perceptions of natural disasters, mishaps, and climate change)	• Some of the respondents attributed the drying of several springs emanating from the Gwallek Kedar forest to the building of the road. They saw it as a kind of divine retribution rather than as an ecological impact. • Several respondents, especially among the higher castes, attributed the Maoists' failure to gain a footing among the Dalits of these VDCs during the insurgency, to the abundant farm and fruit produce among the Dalits – a benediction bestowed by Gwallek Kedar forest – due to which the Maoists found it hard to convince the Dalits through their rhetoric. This view, however, didn't hold much currency among the Dalits, although they didn't offer a counterview.	**N/A**
Indicator 8 (Presence of transboundary linkages at the site)	• As also mentioned in Indicator 1, for the local community, Gwallek Kedar is the most important among the four sites they regard as their 'chaar dhaam' (four cardinal pilgrimages), namely Gangotri, Badrinath, Kedarnath and Gwallek Kedar. It is also the most important of the four 'Kedar' abodes found in this region straddling the Indo-Nepal border along the middle reaches of the Mahakali valley, i.e., among Raula Kedar (Baitadi, Nepal), Thagel Kedar (Pithoragarh, India), Dhaj Kedar (Pithoragarh, India), and Gwallek Kedar (Baitadi, Nepal). • The site is not linked in any way to the Kailash Manasarovar pilgrimage. Kailash Manasarovar is not considered a part of the local sacred geography.	N/A
Indicator 9 (Presence of healthy ecosystems/species at the site due to regulation of human-nature interface through belief systems)	(Needs to be verified by a separate study, which should be done by trained ecology specialists, in consultation with knowledgeable local persons).	• Health of ecosystem at the site: • Very good__ average__ poor__ • Value of supporting and regulating services provided by the site__ (in monetary terms, or other terms as applicable)

Some insights into the nature of findings

1. The local community's veneration of the Gwallek Kedar sacred forest has shaped the local culture and heritage, including architecture, folk music, and clothing of people in the region. Such aspects can fruitfully be used to promote the Gwallek Kedar site for heritage tourism. It might be interesting to note that about two years ago, Nepal Tourism Board trained about 15 local households in the Gwallek VDC in running homestays, in an apparently stand-alone activity of tourism promotion in the Gwallek Kedar area. But the tourism authorities did not follow up on the training to promote the site.
2. However, the traditional conservation system of the Gwallek Kedar sacred forests is fundamentally based on exclusionary taboos that reinforce the social marginalization of vulnerable groups such as Dalits and women. The findings of this assessment reveal that traditional systems of natural conservation should not be romanticized as ideal local level solutions for natural resource conservation/management. Rather, such practices should be evaluated in detail to find out whether they are sustainable in terms of social equity and justice too.

Limitations of the study

1. While an effort was made to cover a reasonable representative sample of the local custodian community, it would have been better to verify the findings, especially on Indicators 2 and 3 (see Annex), among an equal number of total respondents in two more VDCs. Due to constraints of time and resources, and the early departure of the ICI researchers due to unforeseen circumstances, the remaining data collectors could only cover a limited area.
2. Besides, while the data collectors made a few sound and video recordings of folk songs that feature Gwallek Kedar (as required by the proposed methodology for the CES assessment), more professional work is needed to gather this kind of cultural material in order to use it for tourism promotion.

International Centre for Integrated Mountain Development
GPO Box 3226, Kathmandu, Nepal
Tel +977 1 5003222 **Fax** +977 1 5003299
Email info@icimod.org **Web** www.icimod.org

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