

**SEARCHING FOR ANTIDOTES TO GLOBALIZATION :
*LOCAL INSITUTIONS AT MONGOLIA'S SACRED
BOGD KHAN MOUNTAIN***

by

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Approval page

Abstract

The Bogd Khan Mountain (Uul) is a sacred natural and cultural site—an island-like forest-steppe mountain massif revered for centuries by Mongolians. This sacred site is also a 41, 651 hectare state-designated ‘Strictly Protected Area’ and a listed UNESCO Biosphere Reserve of global significance (1996). Bogd Khan Uul is adjacent to the nation's capital, largest and fastest growing city—Ulaanbaatar.

This case study employs an inter-scale research frame to draw linkages between current resource management problems at Bogd Khan Uul while at the same time examines the capacity of local, national and multilateral institutions to address these. In the process the research provides a glimpse of centuries old Mongol traditions—human ingenuity shaped by understandings that have co-evolved with the cycles of nature. The study provides contemporary insights into the dramatic changes that affected Mongolia and its institutions during its tumultuous global integration in the final decade of the second millennium.

The study’s inter-scaled Globalocal Diversity Spiral (GDS) framework focuses upon Bogd Khan Uul site-specific issues of forest and vegetation over-harvest, animal overgrazing and problematic tourism development; and key contextual issues of material poverty and local traditions. The research uses surveys and interviews to draw-upon the wisdom of a network of rangers who live and work on the periphery of the park. The study presents 21 knowledge applications that focus upon overcoming material poverty and building upon existing ‘pride’ in the mountain. Linked to the findings, three pathways are recommended: instigating park co-management or power-sharing processes; kick-starting ecological and cultural restoration; and initiating economic localization in communities and neighbourhoods adjacent to the sacred mountain. The study concludes that Mongol systems of survival can provide valuable lessons for biodiversity planners and for communities searching to address the significant problems associated with globalization.

D e d i c a t i o n

This work is dedicated to Mother Earth, Father Sky and to all my friends and relations on the delicate web of life that connects us all—past, present and future.

This effort is also dedicated to friends in Mongolia.

And this writing is in memory of Gramps Ted and Louie; and for Mathew. Each of you taught me to respect and love nature.

A c k n o w l e d g e m e n t s

Having once been shaped by academic institutions, I vowed to never return and be confined by the walls of the ivory tower. This vow was made after discovering the multitude of lessons out there in 'the university of life'. In 1997, I accepted an internship in Mongolia, supported by the University of British Columbia's Sustainable Development Research Institute. After returning to Canada in 1998, seeking new direction, I broke my vow and returned to the ivory tower, atop Burnaby Mountain, to Simon Fraser University. From this mountain in Canada I chose to follow-up on an interest at another mountain in Mongolia—the sacred Bogd Khan Uul. I returned to Mongolia on two separate occasions in 1999 and 2000, largely self-financed, but not without the substantial help of family, friends, Simon Fraser University and a B.C. and Canada Student Loan and of course the credit card. My questions about local knowledge do not prompt pat answers as this work may suggest and instead hint at the riches in the land of 'hook tangor' (blue skies).

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Chapter One

Introduction : A sacred Mongolian mountain

Mongolia is a nation faced with rapid institutional change, material poverty and ecological threats. This study shows how local ecological knowledge may support the alleviation of interrelated resource management problems at the sacred Bogd Khan Mountain (Figure 1). Pathways and applications to alleviate threats to the mountain's (*Uul's*) natural and cultural endowment are proposed in the areas of co-management, ecological and cultural site restoration, and economic localization.

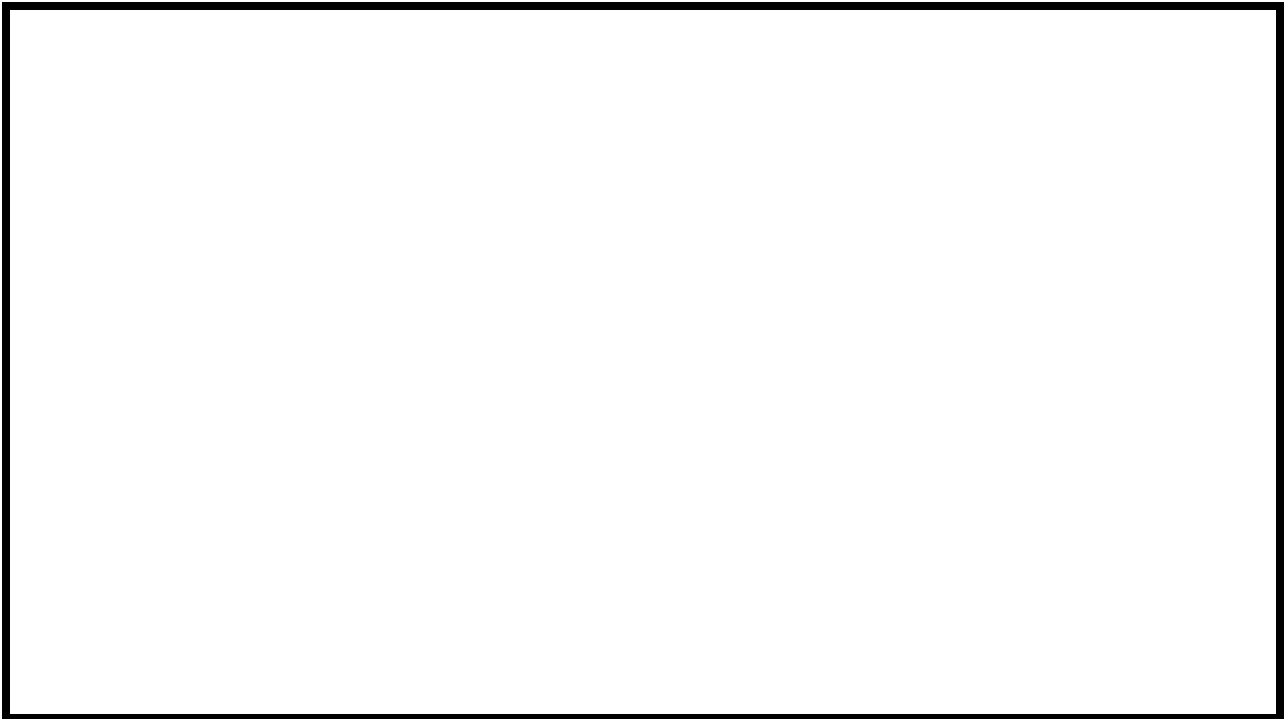
This research—conducted after the 1989-90 revolution—not only focuses on the Bogd Khan Uul, a state Strictly Protected Area and UNESCO-designated Biosphere Reserve; but it also provides a window on a fascinating society and its institutions in flux.¹ The study contributes to research on how communities and their institutions can use place-based knowledge to counter the difficulties of globalization² related to conformity with multilateral treaties and norms.

1.1 Nature protection in post-revolutionary Mongolia

Mongolia's land use and conservation reforms parallel its turbulent political history during the last decade of the Second Millennium. A bloodless revolution in 1989-90³ precipitated dramatic changes in this north central Asian state. The transition was from a Soviet-allied, one-party communist state (1924-90), to a democratic state increasingly integrated into global multilateral institutions, including the market economy. Amongst the first to sign the *United Nations Convention on Biological Diversity* in 1992⁴, Mongolia's leaders boldly proposed that the *entire*

nation be nominated as a "World Biosphere Reserve" (MNE 1997a: 16,101; Adyasuren 1998: 90).⁵ Though this all-encompassing protected area designation was not realized, by the mid-1990s the state had embarked on an equally ambitious conservation agenda—including protection of up to 30 per cent of its land base—in the midst of a severe economic collapse⁶ and late 1990s droughts.⁷ This research examines how local knowledge of resource management can work in times of uncertainty like those experienced in post-revolutionary 1990s Mongolia.⁸

Figure 1. Location of Bogd Khan Uul in Mongolia



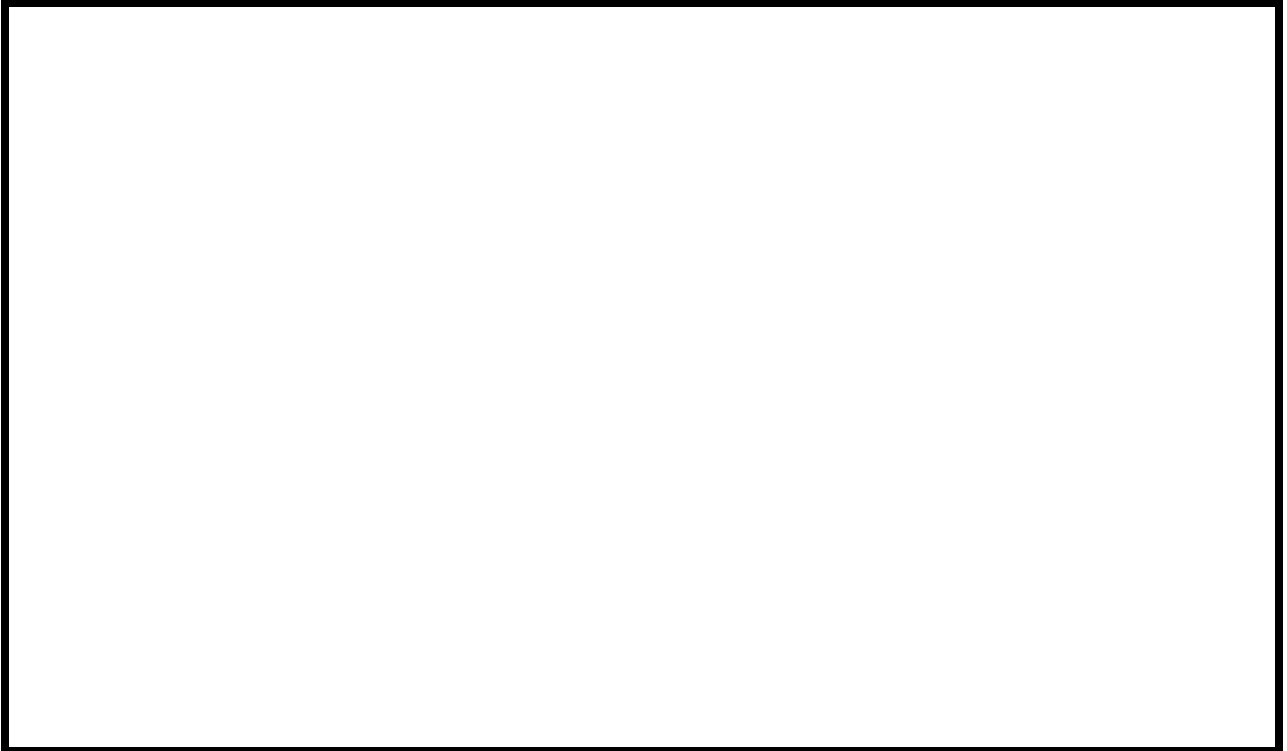
1.2 Research line of inquiry

The study's central line of inquiry is encapsulated in the question:

What conditions will enable Bogd Khan Uul (Mt.) stakeholder institutions to integrate local ecological knowledge into applications that reduce threats to the sacred mountain's natural and cultural endowment?

The case study tied to this research question recommends how to apply local knowledge in resource management to address the threats facing the state-designated Strictly Protected Area, and the UNESCO-designated Biosphere reserve that envelope the sacred Mountain (Figure 2).

Figure 2. Bogd Khan Uul: sacred site, Protected Area and Biosphere Reserve



1.3 A revolution in nature protection?

Having had the good fortune to travel, reside and work in Mongolia on four occasions since 1997, I have witnessed the importance that many Mongols ascribe to natural landscapes and sacred sites. My findings can only hint at the depth and beauty of Mongolia and its people.

Mongolia is a landlocked independent state enveloped by the Russian Federation, and the People's Republic of China (Fig.1). This vast, sparsely settled territory—2.3 million residents on 1.5 million square kilometres of land—has a wide variety of ecosystems with

unique floral and faunal features. Major geographic zones include steppe (grasslands), Gobi desert, taiga and mountainous zones (primarily the High Altai) (MNE 1997a, MNE 1997b). Bogd Khan Uul's ecosystem diversity is more fully described in this study's A-B-C Overview of abiotic, biotic and cultural aspects of the Strictly Protected Area (Chapter 4). In this work Mongolia's protected areas are defined as:

Legal or tacitly recognized geographic area(s) sanctioned by institution(s) and managed in some manner to conserve abiotic, biotic or cultural functions, including sacred or spiritual ones.⁹

However, serious questions have emerged about how the state's post-revolutionary land protection goals—particularly those stemming from the 1996 *Biodiversity Conservation Action Plan*—mesh with Mongolian citizens' daily lives.

1.4 Emergent institutions operating at different scales

This case study examines how a constellation of four clusters of institutions—state, civil society, market and multilaterals—address natural and cultural protection issues at one park. For the purposes of this study, institutions, are defined in the following manner:

Both formal and informal codes of conduct or rules which shape human interactions. These dynamic, symbolic systems are influenced by cultural-political forces, are bounded by rules and typically include procedural and enforcement mechanisms as well as an adherence to organizational and legal norms and they exist in both local and non-local contexts.¹⁰

While research focuses upon one 41,651 hectare protected area, the 'inter-scale concept' is important, since the new post-revolutionary institutions at the Bogd Khan Uul not only operate locally, *but also nationally and globally*. This research assumes that institutions are formal and informal, are nested or interconnected and polycentric (having different geographic locales).

1.5 Local ecological knowledge: wisdom that can bridge cultures

In a global culture dominated by universal ways of seeing, valuing and explaining, learning can result from distinct local perspectives (Tuhiwai-Smith 1999: 63, 105). Understanding how Mongolians perceive and manage both officially ‘protected’ and informally sanctioned ‘sacred space’ may be of interest to those concerned with nature protection and community-based resource management.

This research provides readers with a glimpse of Mongol perceptions about nature protection and ‘illicit’ resource use at the Bogd Khan Uul Strictly Protected Area. It also suggests that local ecological knowledge is essential to protect or restore Bogd Khan Uul’s natural and cultural systems.¹¹ Considerable evidence supports the contribution of longstanding, local-scale ecological wisdom or indigenous knowledge systems to the mutual sustenance of ecosystems and societies, both in Mongolia and at case study sites worldwide.¹² Since the 1989-90 revolution there has been a vigorous revival of a wide range of these systems throughout Mongolia that support nature protection. These include the revival of small-scale social and living arrangements, nomadic mobility for pastoralists, pilgrimages to sacred sites, *ovoo* worship (sacred rock cairns), festivals and artistic endeavors.¹³ Throughout this study, Mongolian local ecological knowledge (MLEK), is defined as:

Intergenerational, cultural-transmitted place or land-based understandings and beliefs derived from Mongolian epistemology and worldviews. It is an evolving knowledge that pertains to systemic relationships between and among sentient beings. This knowledge may be further distinguished by geography bioregion or ethnicity within Mongolia (e.g. Khalahk, Buryatya, etc.).¹⁴

Crucially, this knowledge is generated at a scale that is neither global nor fully national in the sense of geopolitical boundaries (Berkes & Folke 1998). This investigation draws upon the

wisdom of rangers, who work as stewards, enforcers and educators—to provide insight about the ecological health of the Bogd Khan Uul.¹⁵

Local ecological knowledge should not be viewed as rigidly locked-in or unduly romantic traditions tied to a particular place. Indeed, Kotkin (1999:9), suggests that there exists scholarship that sees Mongolia, “as [just] another place to document the unwanted assault of modernity on ‘tradition’.” My research suggests that one of the strengths of evolutionary local ecological knowledge systems is their adaptability and resilience in managing resources in the face of considerable ecological and economic change (Berkes & Folke 1998; Moran 1990). The next section outlines this inquiry’s organization.

1.6 Study organization

Thus far Chapter One has introduced the line of inquiry and the research context. Figure 3 illustrates how the research focus spirals inward to assess key site problems at Bogd Khan Uul; then spirals outward to focus on how inter-scale institutions affect local knowledge applications at the protected area. Visually the spiral in this figure illustrates the differing scales and associated degrees of detail that the study aims to reconcile.

Chapter Two, the **Conceptual Context** supports the construction of a meta-framework, the Globallocal Diversity Spiral (GDS). The chapter reviews literature in three spheres: local ecological knowledge theory, Mongolian nature conservation, biodiversity planning and institutions. The GDS is the central organizing concept for the paper. It consists of 3 components: *A-B-C Overview*, *Site Issues Scan*, and *Institutional Obstacles and Constellation Analysis (IOCA)*.

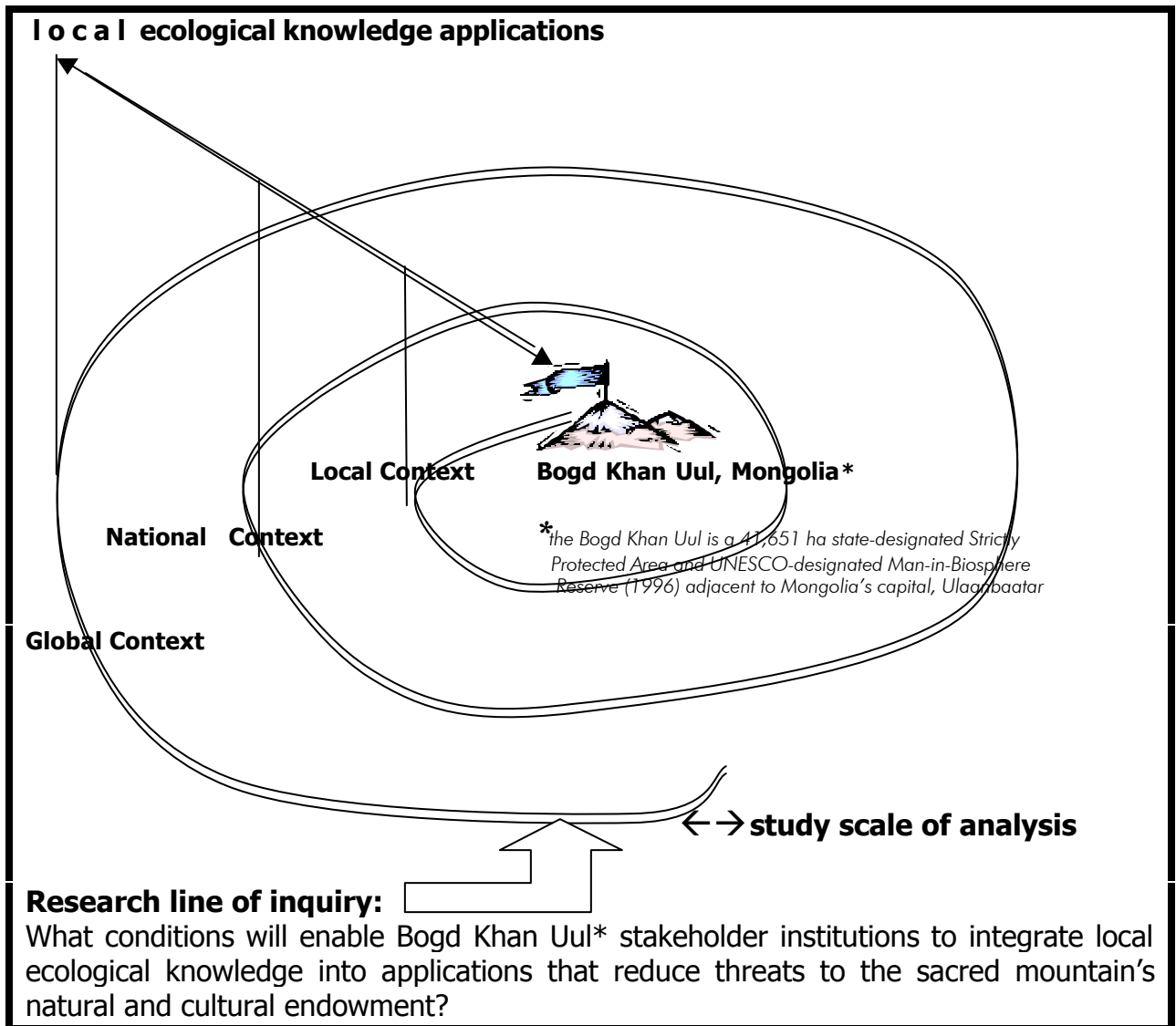
Chapter Three, **Research Methods**, explains the approach and mechanics of the study. It consists of four parts: philosophical rationale; the triangulation methods (surveys, interviews, secondary content analysis); issues of validity and reliability; and the development of empirical propositions.

Chapter Four, **Findings**, describes the outcomes of the interviews and questionnaire surveys of park rangers and key informants. It includes a site description referred to as the A-B-C Overview and a Site Issues Scan. The latter includes five key resource management problems, *Samar* (pine nut) harvesting, logging, overgrazing, berry picking and tourism development, along with contextual information on local traditions and material poverty.

Chapter Five, **Recommending paths: prioritizing local ecological**, proposes two pathways for addressing resource management problems on the mountain. The chapter presents 21 local ecological knowledge applications. These enabling conditions—pathways and applications—are linked to an assessment of institutional obstacles and capacities (*IOCA Framework*).

Chapter Six, **Conclusions**, builds upon the findings from previous chapters and argues for three action-research priorities: creating the conditions for co-management, enabling ecological and cultural restoration activities; and targeting economic localization at Bogd Khan Uul.

Figure 3. Case study scope and research question



Chapter Two

Conceptual Context

“If globalization means anything it means that the modes of action that we invent will never again be strictly local” —W. Magnusson—State Sovereignty, Localism & Globalism (1999)

2.1 Introduction

The conceptual¹⁶ challenge of designing a research framework for this study—analogue to Magnusson’s observation above—revolves around the impact that both ‘local’ and ‘non-local’ institutions have on issues at Bogd Khan Uul. To meet this scale-context challenge, this chapter develops a research frame that can scan site-specific-issues, but also *transcends* the local scale in order to include non-local factors affecting institutions. This meta-framework, the Globalocal Diversity Spiral (GDS), draws from three spheres of literature: local knowledge theory, Mongolian nature conservation, biodiversity planning and institutions. Each is described in the sections that follow.

2.1.1 Advancing local knowledge systems

Local knowledge systems evade precise definitions. Indeed, according to Henderson et al (1995): “indigenous knowledge defies and challenges modern classification of intellectual, cultural and spiritual rights as well as philosophy.” In spite of a lack of tight definitions, local knowledge systems—like Mongolian knowledge of resource management—deserve not only respect for their complexity, but careful examination for their longstanding ability to sustain humans and their environs.¹⁷ Linda Tuhiwai-Smith (1999) provides inspiration in the use of local knowledge systems that reduce ecological threats and support cultural survival.

Table 1. Tuhiwai-Smith's indigenizing projects*

Project	Description
Protecting	includes ways and means to protect, "peoples communities, languages, customs, beliefs, art and ideas, natural resources and the things indigenous peoples produce" (88).
Intervening	calls for proactive involvement in community-driven projects, "as an interested worker for change" She suggests changing the institutions and not the people to fit the structure (147).
Revitalizing	gives examples of community-based broadcasting and publishing that helps to restore art, language and cultural practices (148).
Connecting	is geared to establishing relationships between people and the environment including the "restoration of specific rituals and practices." An analogy of connecting in Mongolia would be the revived 'ovoo' ceremonies, which link nature protection in Shamanic, Buddhist & lay practices (148).
Discovering	suggests ways of making western science and technology work for and directed by indigenous people. Tuhiwai-Smith refers to applications in resource management and biodiversity (160).
Democratizing	features extending participation "outwards"—beyond local elites—and includes principles of "collectivity and public debate" (156).
Sharing	is about responsible research, how results are disseminated, and how information is presented, "in plain terms to the community" (161).
Envisioning	represents the ability of the Maori to: "imagine a future, that they rise above present day situations which are depressing, dream a new dream and set a new vision" (152).

Source: Linda-Tuhiwai Smith (1999: 142-161), *extracts 8 of 25 projects.

Her work examines the decolonization of the Maori people, their contested histories and distinct ways of conceptualizing place and time.¹⁸ She proposes 25 "projects"¹⁹ that focus on reviving indigenous knowledge systems, which may serve as models for advancing local knowledge at the Bogd Khan Uul (Table 1). Vandana Shiva (1992: 123), suggests that a prerequisite for the conservation of biodiversity is:

the conservation of cultural diversity and a plurality of knowledge traditions. This plurality, in turn, is ecologically necessary for survival in times of rapid changes and accelerated breakdown.

Shiva argues for holistic, systems-oriented approaches to nature protection based upon decentralized, local actions. She borrows lessons from Mahatma Gandhi's *Satyagraha* movement (i.e. 'struggle for truth'), arguing that the building blocks of local conservation ought to be *swarj*, or self-governance and *swadeshi* (i.e. 'spirit of regeneration') (125). Shiva's suggestions inspire—in this study—an analysis of the capacities of how stakeholder institutions put local ecological knowledge into practice.

Ideas about ecological and linked community restoration applications are found in Bill Mollison's work (1990) on '*permaculture*', or permanent agriculture systems. His text introduces a diversity of action-research on local knowledge systems worldwide. Mollison cites examples of centuries old indigenous technologies and complex adaptations including techniques for protecting and restoring: soils, forests, food systems and watersheds; along with developing alternative energy generation and community-based economic renewal projects. Restoration technologies and systems of the type that Mollison describes have the ability to achieve multiple ecological, social and financial goals both inside and on the periphery of Bogd Khan Uul.²⁰

2.1.2 Local knowledge in the era of globalization

Directions for protecting biodiversity in an increasingly multilateral, interdependent world are found in the works of Ostrom²¹ (1992), Scott (1998) and Berkes and Folke (1998). First, Elinor Ostrom (1992) suggests that the burden of proof remains with donor (financing) nations, and presumably multilateral institutions to demonstrate the absence of local knowledge and rules before initiating new programs, systems and developments. Ostrom's key recommendation²² is

relevant to developing applications that respect the local knowledge at the Bogd Khan Uul:

If a people have lived in close relationship with a relatively small common-pool resource system over a long period of time, they have probably evolved some system to limit and regulate use patterns; [and] before one imposes new rules on local systems, inquiries should be made to determine if some rules and customs do not already exist.

The A-B-C Overview and Site Issues Scan in this study includes a review of the history of nature protection and examples of local traditions at the Bogd Khan Uul, including brief descriptions of stories, songs and legends. While Mongolia's institutions are now strongly influenced by integration into global multilateral arrangements, they are simultaneously affected by the legacy of 70 years of rigid central planning (Bruun 1996; UNDP 1997a). James Scott (1998) provides one possible vision for how Bogd Khan Uul institutions can overcome the legacy of one-party rule (1924-89). Scott's assessment of social and environmental disasters in the former Soviet Union holds several insights for Mongolia's modern institutions,²³ since these were directly shaped by Soviet financial and technical support (Ginsburg 1999: 258). Scott prioritizes practical experience, experimentation, building communities of interest, informal processes and improvisation in the face of ecological and economic unpredictability—a radical shift away the development models espoused by many multilateral organizations (1998: 346). He suggests four rules of thumb (1998:345) that serve to directly challenge the development approaches of the keystone multilateral financial institutions and biodiversity planning organizations:

1. Taking small steps;
2. Favoring reversibility in interventions;
3. Accommodating surprises; and
4. Expecting that human inventiveness will improve upon designs.

The collaborative studies in Folke and Colding (1998) on small-scale, “adaptive and resilient,” traditional knowledge systems challenge institutions to maintain and advance local knowledge that protects natural systems (1998: 432).²⁴ These researchers present seven principles for managing natural and cultural endowments, applicable to a sacred site like the Bogd Khan Uul (1998: 430), namely:

1. Using management practices based on local ecological knowledge;
2. Designing management system that ‘flow with nature’;
3. Developing local ecological knowledge for understanding cycles of natural and unpredictable events;
4. Enhancing social mechanisms for building resilience (e.g. equivalents of rituals, taboos, social and religious sanctions);
5. Promoting conditions for self-organization and institutional learning;
6. Rediscovering adaptive management;
7. Developing values consistent with resilient and sustainable social-ecological systems.

Table 2 . Elements of local knowledge theory

<u>Element</u>	<u>Literature Cited</u>
*Local/Indigenous Ecological Knowledge: -evades precise or universal definitions -challenges modern notions of rights -reduces cultural & ecological threats -supports cultural survival	Henderson et al 1995 Tuhiwai-Smith 1999
*Cultural diversity/diverse knowledge systems can protect and enhance global-local biodiversity via: -Satyagraha (struggle for truth movement) -Swarej & Swadeshi (self-rule & spirit of regeneration)	Shiva 1992
*Ecological restoration techniques drawing from local knowledge of: -soil remediation, agroforestry, food and water systems; -energy generation, community economics, etc.	Mollison 1990
*The burden of proof remains on donor nations to examine their impact on local culture and customs	Ostrom 1992
*4 ‘rules of thumb’ for the use of context specific knowledge	Scott 1998
*7 ‘Principles for building resilient socio-ecological systems’	Berkes, Colding & Folke 1998

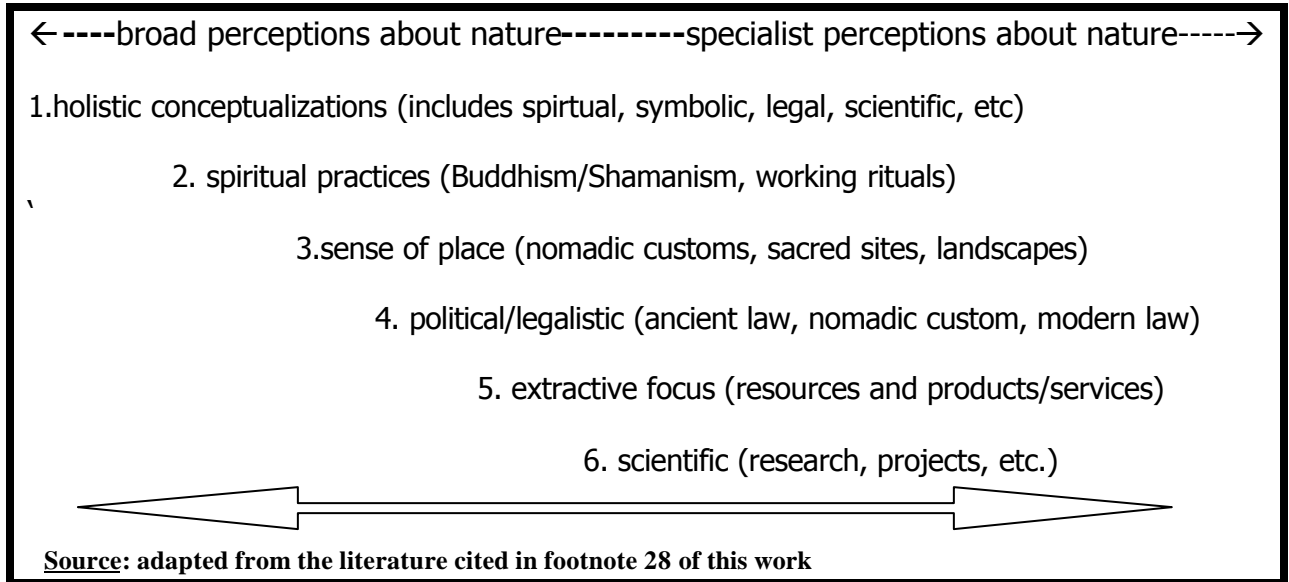
In sum, the suggestions of Scott, Ostrom, Mollison, Shiva, Berkes and Colding, shown in Table 2, provide guidance on how Bogd Khan Uul stakeholders might enact local knowledge applications.

2.2 Nature in the Mongol²⁵ worldview

Daily life activities provide glimpses of how nature and culture are closely intertwined with the Mongol worldview.²⁶ The semi-arid, continental-extreme climate, vast unsettled landscapes, and significant proportion of citizens maintaining centuries old traditions as nomadic-pastoralists (approximately one third)²⁷; partly explains why nature remains a key factor in Mongol cultural identity (Khuldorj 1998: 4-5; MNE 1997: 17; Germeraad & Enebisich 1996: 96). There is no shortage of national and foreign observers—from academics to romantic adventurers—who identify how nature shapes the Mongol worldview.²⁸

Drawing from works previously cited (in the preceding endnote) and those listed in the bibliography, a six-part continuum was constructed to illustrate six aspects of the importance of nature in Mongolia. I suggest these may range from holistic perceptions to utilitarian, specialized perspectives, exemplified by a scientific prism. The sections that follow provide examples of six dimensions, and their link with the research question about how to enable local knowledge to flourish at Bogd Khan Uul (Figure 4).

Figure 4. Six perceptions of nature in the Mongol Worldview



2.2.1 A holistic perception of nature

Holistic conceptualizations of nature relate to ways that nature may be comprehended. Germeraad and Enebisch's work (1996), encapsulates centuries of Mongol traditions with a focus on nomadic lifestyle and customary land use practises. They point out that rather than being subsumed by outside forces, a holistic worldview has allowed Mongols to adapt, co-evolve, and even thrive under variable ecological and spiritual influences. These influences include Shamanism, Mahayana Buddhism, external Manchu rule, communism and, recently, the market economy and multilateralism.

Mongolia's former Environment Minister, T.S. Adyasuren (Pers.Comm.2000 and 1998: 9-10), suggests that deep-rooted Mongol nomadic attitudes include coexistence within nature's limits. Some writers argue that abiotic and biotic influences have shaped the evolution of complex, adaptive²⁹ knowledge systems and social norms in Mongolia's pastoral-nomadic

culture (Fernandez-Gimenez 1997a: 169, 177; Khuldorj 1999).³⁰

Anthropologists Carolyn Humphrey and David Sneath (1999) assert that Inner Asian³¹ peoples essentially have a “respectful and holistic” attitude towards the natural world, associated with life and work on the land (1999: 2-3). They note how elders and Mongol spiritual practises serve to transmit values about nature (1999: 304-5). Humphrey argues that the Mongol view of nature differs from the ‘western’ due to the western separation of 'environment' and 'humanity'. She uses an example in the Mongol language to make her point:

The Mongolian term *baigal*, often translated as 'nature', is closely related to *baidal* ('state of being'; 'the way things are'). *Baigal* includes animate beings as well as inanimate objects. Objects in *baigal* are attributed with a notion akin to 'spirit', often personified in ritual context as *enjin* or 'master'. *Baigal* thus includes animals, mountains, trees, grass, weather and so forth as active subjects which have their own ways of being that affect human beings, just as humans have ways of life that affect them (1999: 2-3).

Holistic conceptualizations—including scientific, spiritual, extractive, aesthetic or traditional—feature multiple ways of ‘seeing’ nature and the world, (Botkin and Keller 1995: 622-626).³² For example, one Mongol sacred site might be ‘conserved’ by being honored in offerings, songs or worshipping ceremonies. Thus, protection may occur at the same location for spiritual purposes or simultaneously be protected in precise legal instruments (MNE 1997a: 77). This simultaneous existence of holistic spiritual perspectives³³ and codified legal frameworks demonstrates the accommodation for multiple ways of seeing nature, and is evident at Bogd Khan Uul as the findings indicate.

2.2.2 Spirituality and nature

A second aspect of understanding nature in a Mongol context is linked to living spiritual beliefs,

for centuries embedded in Mongol Lamaist-Buddhist and Shamanic philosophy (Germeraad and Enebish 1996; Merli 1999; Sneath 2000), and resurgent after the downfall of the one-party state in 1989.³⁴ Shamanic traditions include an emphasis on mother earth (*Utgen*) and father sky (*Tangor*), along with spirits in nature (*Lus Savdag*). The latter are associated with mountains, trees, flowing water, lakes, and fire (Merli 1999). The concept that the soul lies in the bones of animals is also part of Mongol traditions (Germeraad and Enbisch 1996: 39-40; Sneath 2000). Mongol Buddhist traditions have historically complemented or subsumed Shamanic rituals and beliefs (Hurelbaatar 2000: 93-94; Sneath 2000: 9; Merli 1999). Chapter 4 in this study identifies specific spiritual institutions and practices at Bogd Khan Uul that can continue to support ecosystem protection and restoration.

2.2.3 A pride of place

A third dimension in understanding how Mongols might 'see' nature, is conveyed in the symbolic sense of place linked with vast landscapes. For example, associations with nature and pastoral-nomadic lifestyle are manifest in the names of people and places,³⁵ legends, household design and layout, song, food, medicine, art, popular media, literature, rituals, spiritual practices, sport, and folk wisdom in both urban and rural areas (Humphrey and Sneath 1999: 2-3; Campi in Bruun 1999; Rosabi, 1999, Sneath 2000).

The essence of place³⁶ and even geographic direction is linked to the "Mongolian conception of life" and affinity with sacred mountains, rivers and lakes (Germeraad and Enebish 1996:101; Sneath 2000). Humphrey and Sneath (1999) identify the importance of the *hot-ail* or living community (community of kin/friend's *gers* or *yurts*) as the most localized, bioregional

unit of residency for rural Mongolians. The respect for nature, spatial and kin connections to 'the countryside', the products of nature, the staying power of traditional nomadic-pastoralist life and survival skills in the face of extreme environments³⁷ provide striking impressions of everyday Mongolia (Rosabi 1999b; Steinhauer-Burkhart 1999; Lawless 2000). Chapter 5 focuses on how the strong sense of place at the Bogd Khan Uul—manifest in stories, songs and legends—might be linked with reducing threats to the mountains' ecosystems.

2.2.4 Ancient legal traditions

A fourth view of nature is closely influenced by legal and administrative norms. Mongol legal traditions of resource management were shaped by successive authoritarian regimes and focus on the allocation of privileges to access steppe pastures for grazing. In spite of Mongolia's nomadic fame, far from open access arrangements have prevailed on the steppe-grasslands. This is indicative of the control that feudal lords or *Khans* and Lamaseries exercised over prime pastures (Sneath 1999: 236; Enkhbat & Odgaard 1996: 166). The *Great Yassa* legal code was promulgated in 1206 under Chinggis Khan—Mongolia's unifier of feudal states (Fernandez-Giminez 1997a: 247). This code introduced restrictions on water pollution, digging or damaging steppe lands, harming animals and causing fire. Infractions typically cite the death penalty and less severe punishments (Germeraad & Enbish 1996: 38-50, 52; Enkhee 1999: 4; Cami 1996: 94).

Hunting restrictions embedded in 1640s *Oirat Regulations* were adopted in several Mongol princely states (Germeraad & Enbish 1996: 53). Access restrictions to "forbidden places" and water rights were later specified under Manchu rule in the 1709 *Khalkha Djurim* or

*Northern Mongol Code*³⁸ (Fernandez Giminez 1997a: 249). The 1789, *Manchu Regulations*, stated that nobles could not alienate the land but could control tenant grazing rights and movements within *Khoshuun*, (princely territories) (Fernandez-Giminez 1997a: 252-265). Sacred sites, pastures and hunting grounds were apparently off limits to common herders and strictly controlled by *tsagdaa*, or guards, under these laws (Fernandez Giminez 1997a: 262; Enhkee 1998).

After Mongolia's communist party assumed full control of governance, the land tenure system reverted to state-central control, with open access (*res publicae*) under single-party rule (1924-89). Following a period of tenure uncertainty, control was vested to central ministries (although not formally until the *1971 Land Use Law*) in consultation with local *Neg Dels* (collective farms), *beg* (hamlet), *som* (county) and *aimag* (province) administrators (Fernandez Giminez 1997: 280). During this period, laws to protect game, watercourses, water wells, vegetation, and to prevent fire were enacted and apparently enforced (Germeraad & Enebisich 1996: 78-83). However, economic and military infrastructure took precedence over long-term ecological considerations (Adyasuren 1998).

Since the 1989 revolution there has been a flurry of environmental and nature protection legislation, in part influenced by Mongolia's ratification of the *United Nations Convention on Biological Diversity* (1992). Mongolia's history of legal customs for nature protection illustrates strong internal and external influences, the latest of which borrows from western protection norms and legal jurisprudence. How these legal traditions can better focus institutions to apply local knowledge at the Bogd Khan Uul is discussed in the I.O.C.A. framework, in Chapter 5 of this research.

2.2.5 A practical nature

A fifth dimension of the Mongol worldview on the environment includes practical uses of nature, or as Adyasuren suggests, extraction “for food and raw materials” (MNE 1997b, 8). Wood, fruit, herb, flower, nut and plant gathering and hunting provide important food or income sources for many Mongols, particularly in rural areas. Forests, and the steppe grasslands are sources of vegetation for traditional medicines³⁹ that are frequently dispensed in local pharmacies and hospitals as well as being used by Buddhist monks.⁴⁰

Fernandez-Gimenez (1997a) indicates, that public access rights to water and seasonal pasture for animal forage—central to nomadic life—are a community form of property rights. In part this is due to the importance of wide-ranging movement in Mongol herding strategies. Urban Mongols access nature for tourist and recreation purposes, as well as for logging, berry and pine nut extraction and grazing. Understanding how this perception of ‘nature as bountiful provider’ has since the 1989-90 revolution threatened the Bogd Khan Uuls’ ecosystems is the *raison d’être* for this study’s Site Issues Scan (Chapter 4).

2.2.6 Nature and science

A sixth understanding of nature involves scientific perspectives, exemplified in the activities of Mongolian universities, business and government. Dondog et al. (1996, 40) note that 45,000 researchers are employed in research centres and education organizations.⁴¹ During the communist era in Mongolia, scientific and research capacity were central priorities. Since 1990 many former research funding and technical exchanges have been substituted by western

support⁴² (Scott 1998; MNE 1997a; World Bank 1997; Ginsburg 1999). Scientific initiatives at the Bogd Khan Uul are identified in the *Institutional Obstacles and Capacities Analysis (I.O.C.A.)*, found in Chapter 5 of this study.

In sum, Mongol conceptualizations of nature appear to be holistic, symbolically connected to daily life, spatially attuned with a sense of place, linked to specific spiritual beliefs, associated with practical everyday uses, and capable of being viewed through a scientific prism. These six-dimensions of nature provide key context to this study's findings and recommendations.

2.3 Transforming institutions

Institutions in Mongolia underwent a paradigmatic shift after the 1989-90 revolution. Kotkin and Ellerman (1999) suggest that the core task of the Mongol state after 1990 was one of "reinventing its institutions and modern identity." How local ecological knowledge applications at Bogd Khan Uul relate to these fast-changing institutions is essential for linking this study's 'findings' to 'applications'. This section builds a framework that specifies the institutional requisites for ecological and cultural site applications at Bogd Khan Uul.

Michael Wells' (1996) introduces an inter-scale model to describe institutions that shape biodiversity protection. His model includes parliament, government agencies, NGOs, local level institutions, private sector firms, international trade agreements⁴³ and multilateral agencies (1996: 173-74). This case study's IOCA framework adapts a simplified version of Wells' model to assess four institutional clusters, namely: the state, civil society, the market and global multilateral organizations.

Critics of biodiversity planning norms, particularly in third world protected areas, cite

significant power asymmetries including western-driven norms; lack of rights for communities, indigenous peoples and women; and non-localized economic benefits. The results of such imbalances are evident in Ghimire and Pimbert's (1997: 16) challenging question:

How long can a park or reserve exist when it is surrounded by discontent and sometimes-hungry populations? If the degradation of natural resources outside the park or reserve and the erosion in traditional resource use and protection practices brought about in large part by the establishment of the protected area are considered, most parks and reserves would clearly have a negative environmental balance sheet.

The understanding of grievances with regard to protected areas—designations, regulations, enforcement and land use planning—need to be linked to the understanding of community and indigenous concerns. An array of these grievances is shown in Table 3. To overcome these imbalances necessitates discerning listening to the concerns of the aggrieved parties and altering the way protected areas are conceived, planned and managed.

Table 3. Synopsis of grievances with protected areas

<u>G r i e v a n c e</u>	<u>L i t e r a t u r e C i t e d</u>
-Lack of local input in park planning/management	Ghimire & Pimbert 1997
-Ignoring rights of the poor, women, indigenous people	Shiva 1997; Posey 2000
-Coercion and heavy-handed enforcement tactics	Sayer 1999
-Lack of respect for sacred sites & local knowledge systems	
-Non-local technology and project staffing or procurement	
-Expropriation of lands (transfer from local commons to state)	
-Conflict between local residents & national government	
-Externally conceived/unrealistic conservation objectives	
-External versus community control of resources	Gupta 1998
-Externally conceived treaties and conventions	
-Patenting of food, ceremonies, or tourist items	Tuhiwai-Smith 1999
-Commodification of indigenous spirituality	
-Creating sovereign reservations for the wealthy	
-Lack of cultural self-determination	

A framework that links power asymmetry to institutional capacity⁴⁴ is one step in analysing imbalances that exist between Bogd Khan Uul institutions and adjacent communities. This study's framework does this by providing context about the way that poverty affects residents adjacent to the protected area and identifying experiences elsewhere in Mongolia that involve communities and protection. The study's local knowledge applications also provide direction for addressing material poverty in communities adjacent to the mountain.

2.3.1 The state (Mongol Uuls)

The *I.O.C.A.* framework includes the state⁴⁵ since this study's key informants—the rangers—are employed by the state-funded, Bogd Khan Uul Administration. The Mongol state in the 20th century has shifted from the Qing Empire (under the influence of China), to a theocratic monarchy (under the Eighth Bogd Khan Jebtsundamba Hutagt); to one-party rule and an institutional infrastructure parallel to that of the former Soviet Union; and more recently, to a liberal democracy under or integrated into global multilateral arrangements. Table 4 summarizes the key events shaping institutions in Mongolia during the past century.

The modern state (*Mongol Uuls*) continues to play an axial role in the function of all institutions in Mongolia, particularly due to the nation's sparse populous and large territory. This remains the case, in spite of Mongolia's historical shift from one-party rule as a Soviet satellite state (1924-90), to an independent, pluralistic constitutional republic with an elected *Ikh Hural* (Great Assembly) and President, a *Hural*-appointed Prime Minister, a constitutional court (*Tsets*) and a foreign policy increasingly oriented towards multilateral relations, including

biodiversity protection (Tumurchuluun 1999; Ginsburg 1999: 251).

Kotkin and Ellerman (1999) describe institutional changes stemming from the 1992 Mongol constitution (*Mongol Ulsyn Undsen Khuuli*), including the following: entrenched human rights, multi-party elections, freedom of internal movement, religious and press freedoms, and the freedom to form N.G.O.s.

Table 4. Historical overview: factors affecting 20th century Mongol institutions

1911	-----	Qing-Manchu dynasty control collapses (1691-1911) and first declaration of independent Mongolian Republic under Bogd Khan Gegen (8 th Jebtzun Damba, Living Buddha)
1921	-----	Bolshevik supported Mongolian revolution led by Sukhbaatar and brief period of resurrected constitutional monarchy under Bogd Khan Gegen
1924	-----	Mongolian People's Republic proclaimed—begins 70 years as single party state under Mongolian People's Revolutionary Party (MPRP)
1935-39	-----	Height of killings of monks, shamans, intellectuals and political 'enemies of the state' under Choibalsan and directly supported by Soviet secret service
1937-39	-----	Bogd Khan Uul's Tsetsee Gun Shrines and <i>ovoos</i> destroyed; Manchir Hiid Monestary destroyed; <i>Tsam</i> dance and shamanic practises considered acts of treason
1950	-----	People's Republic of China recognizes Mongolia as an independent republic
1950s	-----	forced rural collectivization—creation of Neg Dels (state-controlled cooperatives)
1961	-----	Mongolia admitted to the United Nations general assembly
1975	-----	Soviet troops in Mongolia number approximately 100,000 personnel
1987	-----	Perestroika-Glasnost instituted in the U.S.S.R. under Gorbachev
1987-89	-----	' <i>Il Tod</i> '—Mongolian version of Glasnost or instituting new societal freedoms
1989	-----	peaceful pro-democracy demonstrations in Ulaanbaatar—MPRP declares multi-party elections Mongolian Democratic Union formed—aims to replace MPRP
1990	-----	MPRP wins freely contested multi-party elections; meetings to reform constitution begin
1992	-----	single party-state dismantled, new constitution (Mongol Ulsyn Undsen Khuuli) ratified Mongolia embarks on creating new democratic institutions and reforms to existing ones
1990-93	-----	massive economic collapse rocks all of Mongolian society; real wages in agriculture drop by one third and in industry by one fifth; widespread unemployment and spike in material poverty
1992	-----	first IMF structural adjustment program for Mongolia includes conditions for state reforms
1994	-----	six-point foreign policy introduced in conjunction with transition to market economy includes: Conformity with IMF and donor nations lending criterion, cooperation with U.N., World Bank Group, Asian Development Bank, intent to joint APEC and membership in G-77 (non-aligned nations)
1997	-----	Mongolia joins the World Trade Organization
1999	-----	Ninth Jebtzun Damba Hutagt Bogd Khan makes first Mongolia visit from home in Dharmasalla, India
Sources: Sandag and Kendall 1999; Kotkin & Ellerman 1999; Bruun & Odgaard 1996; Sneath & Humphrey 1999, Tumurchuluun 1999.		

This study demonstrates how these profound institutional changes affect management, enforcement, tourism, resource extraction and community participation at Bogd Khan Uul. This research also builds on Wells' (1996: 173) hypothesis⁴⁶ that state level macroeconomic policy—in this case shaped by Mongolia's Ministry of Finance, the International Monetary Fund (I.M.F.) and donor nations⁴⁷—directly affects biodiversity conservation. For example, Mongol state institutions have been seriously impacted by the hasty decentralization of powers, partly attributable to donor and I.M.F. dictates. Enkhbat and Odgaard (1996) detail the disastrous power shift from central to local government in the mid 1990s—including the transfer of authority over land use, tourism fees, water and natural resource use to ill-equipped local administrations.⁴⁸

In summary, this study's *Institutional Obstacles and Capacities Analysis* (I.O.C.A.) reviews the impacts of a new set of constitutional rights, the impacts of macroeconomic policy and how decentralization has affected the uptake and application of local ecological knowledge at the Bogd Khan Uul.

2.3.2 Civil society

Jeremy Rifkin (1995: 280) chronicles the global emergence of local-level institutions, referred to as the 'Third Sector' or civil society. This sector includes non-government organizations (N.G.O.s), voluntary, self-help, charitable, cooperative, mutual aid, social service, environmental, religious and social justice groups. It represents a vital force for transformation in the Third World.⁴⁹ Since Mongolia's 1997 *N.G.O. Law* creates few barriers to formation,⁵⁰ many exciting innovations are occurring within this relatively new Third Sector (UNDP 1997:

30-31; Ferguson 1999).

Borrini-Feyerabend's work (1999), suggests that initiating collaborative or co-management processes⁵¹ can overcome power asymmetries between state (or agency) and neighbouring communities. This involves working with Third Sector organizations and a range of stakeholders to decide resource and land management issues (1999: 226). Co-management, she argues, can lead to direct democracy because it helps put information and decision-making power in the hands of *diverse stakeholders* rather than exclusively with state enforcement agencies or local elites.⁵² This study identifies the potential for civil society organizations to initiate co-management⁵³ and local knowledge applications at the Bogd Khan Uul.

Humphrey and Sneath's research (1999), includes a focus on the *hot ail* (i.e. living community). These are Mongol family, kin and friend groupings of residences and networks of mutual support. *Hot ails* are physically manifested as clusters of *gers* (yurts) located at the valley, home pasture or watershed level.⁵⁴ The post-revolutionary re-emergence of semi-permanent *hot ails* underlines the point that institutions cannot replicate longstanding grassroots settlement processes. International N.G.O.s, and their local affiliates also play important roles, both tacitly and explicitly in protected area designations, management and projects.⁵⁵

Emergent civil society organizations (including Buddhist-Shamanist organizations), local living arrangements (urban neighbourhoods and rural *hot ails*), and international N.G.O.s are included in *Institutional Obstacles and Capacities Assessment* framework in order to assess their current and future roles in resource management at Bogd Khan Uul.

2.3.3 The market

Markets for goods and services are institutions because they represent sets of rules for conducting trade, transactions and commerce. As an institution defined by property rights *the market*, did not formally exist before 1990 in Mongolia. The shift from a command and control system with guaranteed employment and incomes, universal health care, and stable staple prices, to a system with unemployment, variable prices, property, products, advertising and so forth, affects Bogd Khan Uul both directly and indirectly. The market directly shapes Bogd Khan's tourism sector and indirectly (as an enabling institution) affects employment and resource commodity prices (e.g. *samar*, livestock, logs, even fruits and berries). The later are major factors shaping the relations between adjacent communities and the protected area.

Multilateral organizations,⁵⁶ through legal mechanisms and financing initiatives, also affect biodiversity protection. These include a wide range of tools, such as: direct aid via development agency loans and grants, debt-for-nature swaps, trust funds, tax policy, fees, property rights, leases and licenses, enforcement (fines, audits), bonds and deposits, accreditation schemes (e.g. eco-labeling), awards, information and community empowerment (Young & Cunningham 1997: 141-165). One advocate of using market tools in biodiversity protection is Anup Shah (1995). His work suggests that inappropriate tourism development, overgrazing and resource exploitation are "market failures," that may be remedied by strengthening institutional mechanisms. He examines fees and licenses for controlling tourism and buffer zone grazing uses and rights (1995: 7).

As an approach to revenue generation this research asked rangers about the feasibility of

initiating licenses or fees. The rise of tourism markets (*ger* camps and tour operators) and their operations inside protected areas are discussed in the *Site Issue Scan*, as is the effect of mobile independent herders and *hot ails* in conjunction with the issue of grazing or adjacent residents and vegetation harvest.

2.3.4 Global or multilateral institutions

Mongolia's protected areas planning approach is also shaped by global conservation norms and multilateral institutions. The international scientific establishment and conservation community helps shape state-level conservation policy. It focuses on global-regional biodiversity conservation, protection of ecological hotspots, reduction of species loss, configuration of protected areas, and tracking the fate of keystone species. Associated with these norms are a host of specific conservation science⁵⁷ and biodiversity planning methods or techniques.⁵⁸ These range from the use of geographic information systems to biogeographic classification typologies.

Table 5. Multilateral legal norms affecting Mongolia's protected areas

Legal and other norms	Literature Cited
U.N. Convention on Biodiversity	CBD 1992
U.N. CITES (Convention on Trade in Endangered Species)	Eidsvik 1993
U.N. RAMSAR (Convention on Wetlands Protection)	Eidsvik 1993
U.N. Convention on Desertification	Eidsvik 1993
U.N. World Heritage Convention	Eidsvik 1993
UNESCO Man & Biosphere/World Heritage Program	UNESCO 1978
IUCN Protected Areas Category System	Phillips & Harrison 1998
WTO membership (GATT signatory)	Tumurchuluun 1999
IMF membership (structural reforms; lending conditions)	Tumurchuluun 1999; Ginsburg'99
World Bank support and ADB entry (tied aid & loan terms)	above & Delgermaa 1999 and Bayarkhuu D.1999

The site overview framework in this study adapts one of these techniques by Grigoriev et al (1985). Their “A-B-C method”⁵⁹ provided a rudimentary site assessment and overview of comparative issues at Bogd Khan Uul. Multilateral institutions, shaped by conservation and development agencies, donor nations, treaties and bilateral organizations play important roles in influencing protected areas planning in Mongolia.

An example of a binding international agreement affecting the Bogd Khan Uul is the *U.N. Convention on Biodiversity* (1992). This requires that signatory nations, like Mongolia, develop biodiversity programs, establish protected areas, and maintain indigenous knowledge systems (CBD Articles 7-13).⁶⁰ Another agreement, ratified by Mongolia, is the *World Heritage Convention*, which supports UNESCO’s Man and Biosphere Programme (M.A.B.). This agreement has had a direct effect on management outlook at Bogd Khan Uul since UNESCO’s Coordinating Council has listed the state-protected area as a ‘Biosphere Reserve’ in 1996, as discussed in Chapter 5 of this study. A host of other multilateral agreements and treaties, influencing Mongolia’s protected areas, stakeholders and adjacent communities are shown in Table 5. Multilateral arrangements also refer to Mongolia’s macro-economic policy “conducted under the watchful eye of international donors and development banks”, according to Ginsburg (1999: 256). These include membership in the World Trade Organization (W.T.O.) and General Agreement on Tariffs and Trade (G.A.T.T.) and the A.P.E.C. (Asian-Pacific Economic Co-operation Agreement) and agreements with World Bank Group and foreign aid donors⁶¹ (Bayarkhuu 1999).

Bilateral funds earmarked for global conservation efforts—while still a small portion of overseas development assistance—have increased in the past five years and affects biodiversity

programming (Green 1999). This study's IOCA framework briefly identifies the current influences of multilateral and bilateral agencies and how they may support local knowledge applications at Bogd Khan Uul. This assessment also illustrates the institutional impacts of globalization on a protected area and its adjacent communities.

2.4 Globalocal Diversity Spiral: an applied research frame

This section describes how the preceding literature shapes a research meta- framework, referred to as the Globalocal Diversity Spiral (GDS). The GDS serves as an *analysis-visioning tool* that links site-specific problems (local scale) at Bogd Khan Uul, to institutional realities at the state (Mongolian) and international (global) scales. The GDS includes a set of local ecological knowledge applications that address key resource management threats.

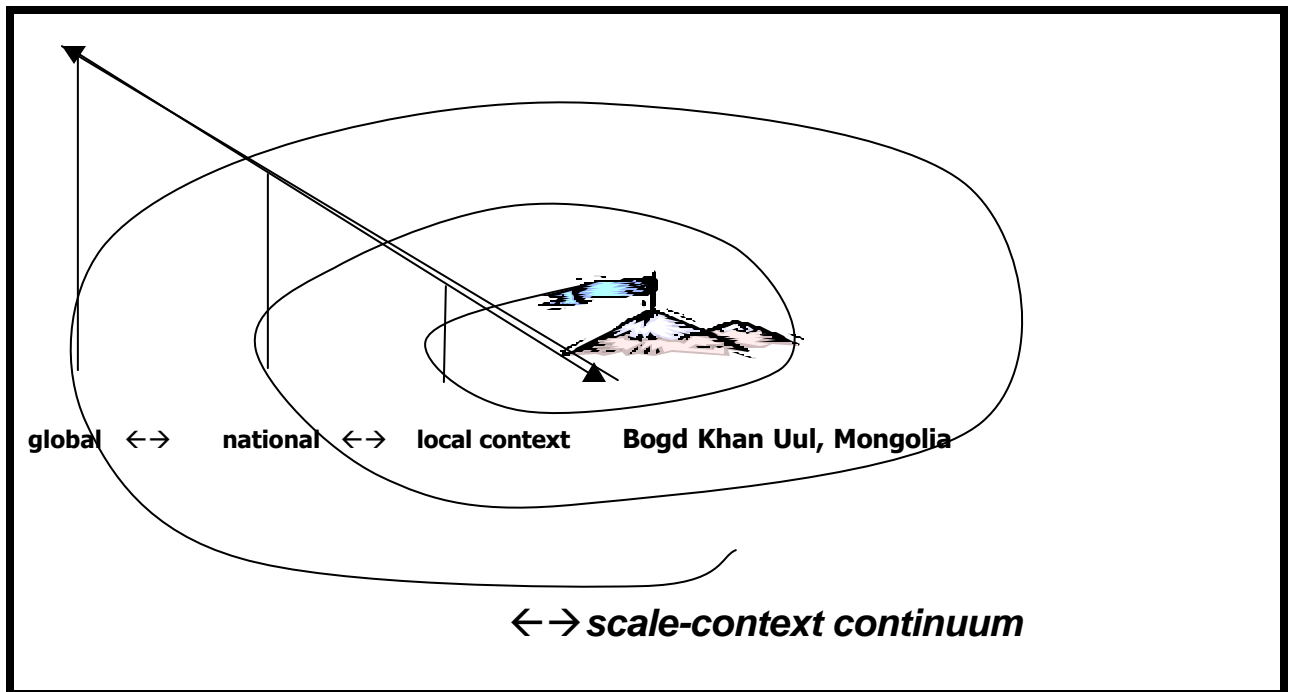
2.4.1 Globalocal Diversity Spiral (GDS) framework design and rationale

Distinguishing how institutions operate at different scales (from the local to global) involves trade-offs in degree of descriptive detail.⁶² To bridge this scale-detail gap, this study uses an inter-scale or micro-macro analytical approach and framework, referred to as 'globalocal' (global and local). This Globalocal Diversity Spiral (GDS) represents an open framework with differing scale-contexts and therefore differing degrees of detail –from fine-to course grained as one shifts from local to global.

While the GDS features three scales of institutional analysis (local, national, global) to encompass fieldwork findings, arguably, it could also have included the valley/pasture (hot-ail), bioregional (Inner Asia) or eco-regional (Tuul-Selenge Watershed).⁶³ Such an approach would

have provided a vital comparison to this institutional analysis at Bogd Khan Uul.⁶⁴ The term “Globalocal” is the composite word chosen for the GDS meta-framework since it represents the cross-scale bridging of local and non-local issues (*Whole Earth Magazine* 1998). The term “Diversity” is included in the GDS to represent the wisdom inherent or latent in Mongolian local ecological knowledge systems and associated with protecting biological diversity and cultural sites in one specific locale (Shiva 1997; Berkes & Folke 1998; Ramakrishnan 1996). The term “Spiral” is included in the GDS framework as an adaptation of Nelson’s use of the spiral as a visual metaphor, “envisioned as reflecting changes and interactions in abstractness, scope, and scale” (1991: 119).⁶⁵ The bulk of this study’s findings are derived from a ‘spiralling-in’ on the site-specific problems at Bogd Khan Uul, Mongolia (in the *A-B-C Overview and Site Issues Scan*) (Figure 5).

Figure 5. Inter-scale spiraling: transcending local \leftrightarrow global contexts



A cross-scale framework also allows for a spiralling-out or *scaling-up* to national (Mongolian) and international (multilateral) scales for the purpose of understanding institutional capacities to implement local knowledge. Overall this GDS approach adds layers of context rooted in local site issues to provide insight on Mongolia's fast-changing institutional environment.⁶⁶ The observer's (researcher's) point in time and point of view therefore shape the framing of fieldwork data and depend where on the GD spiral or scale-context continuum one's perspective is.⁶⁷ In sum, the GDS serves as an organizational frame conceptually attempting to reconcile scale-contexts. The inter-scale framework permits a focus beyond one specific site and situates findings within the capacities of local, national and global institutions. The next section identifies how the three frameworks that support the Globalocal Diversity Spiral are linked together to address this study's line of inquiry.

2.4.2 GDS meta-framework components

The Globalocal Diversity Spiral (GDS) consists of three key frameworks underpinned by Mongol perceptions of nature. These three frameworks include:

- (1) The A-B-C Site Description (A-B-C Overview).**
- (2) The Site Issues Scan (SIS).**
- (3) The Institutional Obstacles and Capacities Analysis (IOCA).**

Figure 6, below, illustrates how the three frameworks are interrelated to the case study's line of inquiry, whose focus is on identifying local knowledge applications. The three frames are

visually situated within the scale-context continuum (the GD spiral). These frames include:

(1) **The A-B-C Site Overview**—in Chapter 4—which provides key abiotic, biotic and cultural background at the Bogd Khan Uul; including an historical analysis of different types of protection at this sacred site, state-designated protected area and UNESCO Biosphere Reserve.

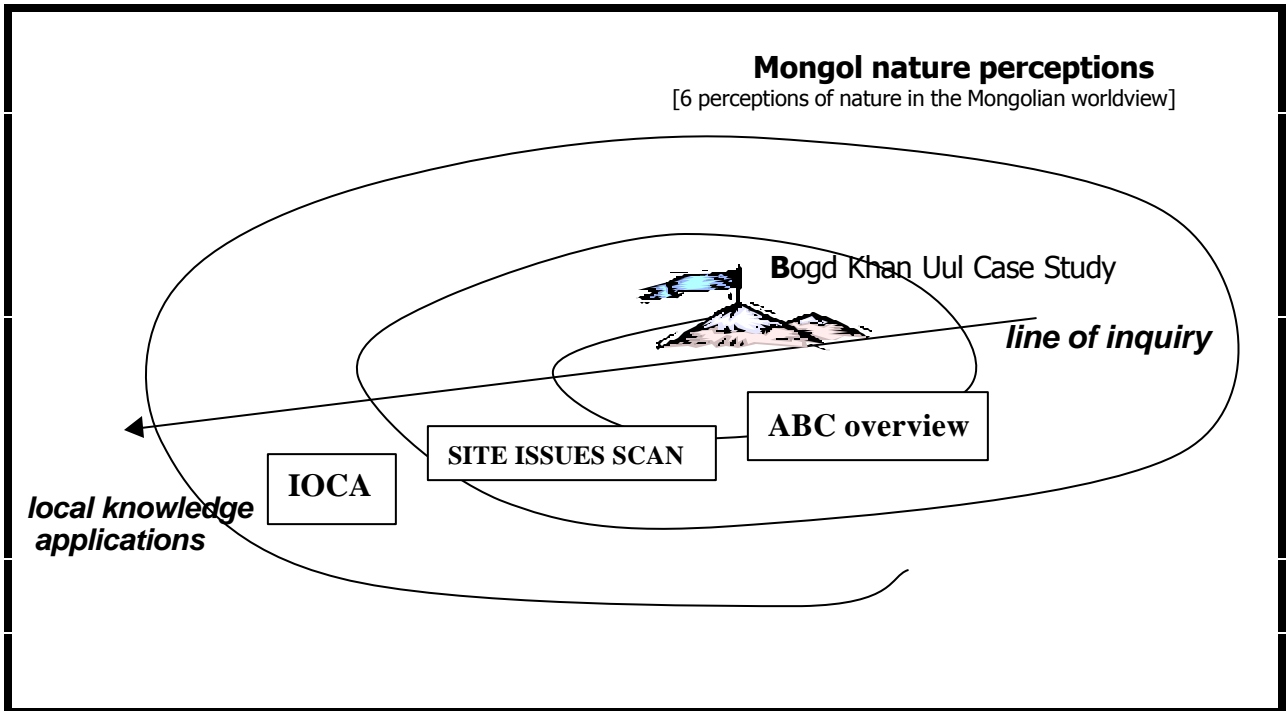
(2) **The Site Issues Scan**—also in Chapter 4—which draws-upon informant insights and secondary research and is organized around five core site issue categories. These include: pine nut (Samar) harvesting, illicit logging, animal overgrazing, berry harvesting, tourism development. In addition, critical contextual information on *poverty* and *local traditions* is included in this framework.

(3) **The Institutional Obstacles and Capacities Analysis (IOCA)**—in Chapter 5, which serves as the basis for supporting local resource management and research applications. It is applied in Chapter 5 to identify key institutional roadblocks to enabling local knowledge uptake (*Obstacles Analysis*); as well as to assess how four interconnected institutional clusters might support an evolution of local knowledge (*Capacities Analysis*). The four clusters state, market, civil society, multilaterals⁶⁸ are assessed for their capacity to support 21 local knowledge applications at Bogd Khan Uul.

In Figure 6 these three frames are visually arrayed from right to left with the ABC Overview and Site Issues Scan anchored in site-specific findings, while the IOCA framework moves from

national to global scales and includes an analysis-vision to support local ecological knowledge applications. Overall, the Globallocal Diversity Spiral meta-framework helps identify the requisite conditions under which local knowledge may flourish at the Bogd Khan Uul.

Figure 6. Globallocal Diversity Spiral (GDS) meta-framework



Chapter Three

Research Methods

“And to question is not to be pathologically sceptical about everything; it only means to be critically self-aware and yet passionately compassionate” —Majid Rahnema (1990: 221)

This chapter introduces both the philosophy and mechanics of the methods employed in the Bogd Khan Uul case study. It consists of four parts: my research epistemology; research procedures used during fieldwork; an assessment of validity and reliability threats; and an explanation of how this research supports empirical propositions, or builds theory about local ecological knowledge at one location in Mongolia.

3.1 Epistemology

‘Epistemology’, derived from the Greek, *episteme*, or knowledge, may be defined as a *theory of method, or grounds of knowledge* (Oxford English Dictionary: 1986). The epistemology underpinning this study is reflected in 5 core principles: diversity, reflexivity flexible interactivity, transcendent ends, and transforming ends, each summarized below:

(1) Diversity—there exist diversities of objective truth and concepts of time, place and nature, which are embedded in local knowledge systems;

This research attempts to respect the multiple ways of knowing, seeing and understanding the world (Tuhuwai-Smith 1999: 47,144), and the debatable notions of what constitutes objective truth (Cohen 2001: 46; Ghimire and Pimbert 1997a: 305; Maxwell 1996:87; Rosaldo 1993:21).

The study draws-upon diverse⁶⁹ and, at times, contested, trans-disciplinary research.⁷⁰ The GDS

meta-framework links current issues at a sacred site or protected area, to trans-scale institutions whose spheres of influence includes the site.

(2) Reflexivity—acknowledging and reflecting upon personal interests (and changes) not only identifies intercultural bias and power asymmetries,⁷¹ it provides an opportunity to convey lessons whose benefits may not be readily apparent;

While many personal reflections are outside of the scope of this study, some are manifest in the anecdotes noted in the findings,⁷² others, in the section that follows. The design of the GDS itself is intended to prompt discourse on explicit power asymmetries because its links non-local influences with local sacred site or protected areas.

(3) Flexible interactivity—it is ethical and logical to consult with research subjects and adapt to situations arising in the course of the research;

This principle can be expressed in the notion of ‘flow’⁷³(evolving fieldwork findings), shaping ‘form’ (theory/methods), rather than form being imposed upon flow.⁷⁴

(4) Transcendent ends—A research site has both local and global forces affecting it. Holistic analysis involves understanding other worldviews and providing context at differing scales, be it local or non-local, institutional or natural⁷⁵;

Transcending scale can help uncover explanations for how local knowledge systems are able to adapt to change processes. In using three scales of analysis and developing a rudimentary explanation of nature in the Mongol worldview (Chapter 2), this study seeks to examine links between local and global, or micro and macro processes.⁷⁶

(5) Transformative Ends—local ecological knowledge has the unique ability to support applications that can both protect and restore ecosystems and/or cultural sites;

This study links key site issues at Bogd Khan Uul with an analysis of institutional obstacles and capacities for local knowledge uptake. The study intends to support proactive and transformative applications of Mongolian local ecological knowledge.⁷⁷

3.2 Research reflexivity

This section explains how experiential knowledge shapes the study's methods and outcomes.

Being explicit about one's experience, intuition and bias can provide expansive insights for both reader and researcher.⁷⁸ That the observer has had an effect on experiments is an argument in both the social sciences (Rosaldo 1993; Laydner 1998: 106, Maxwell 1996: 91, Ghimire & Pimbert 1997a) and the natural sciences (Hawking 1988, referring to Heisenberg's Uncertainty Principle 1927; Nelson 1991, Capra & Steindl-Rast 1991).⁷⁹

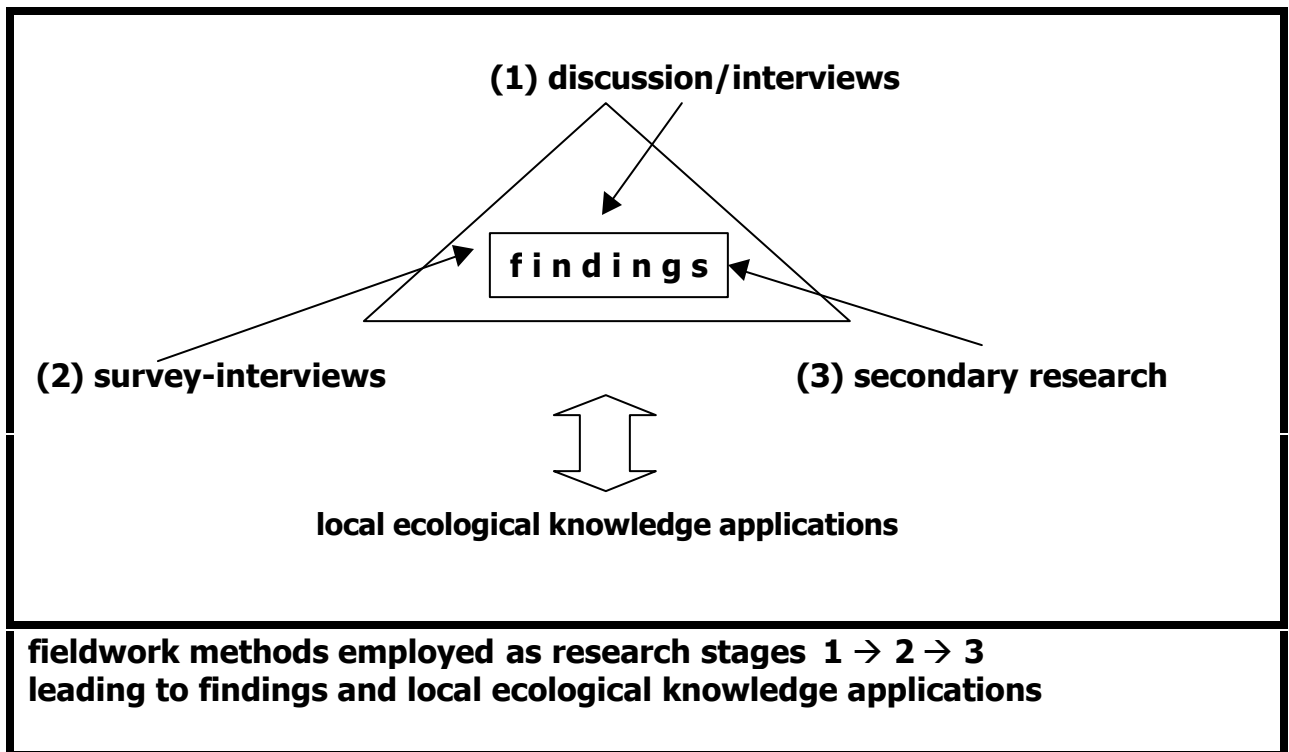
While the scope of this study does not permit in-depth reflexive analysis, it is important to identify that my work in Mongolia was not only shaped by my perspectives as a Canadian male, who happens to be queer; it was also shaped by my work experience as an intern with a Mongolian government project; with the United Nations as a consultant; as a writer at the *Ulaanbaatar Post*; as an E.S.L. teacher; and as a temporary resident of Ulaanbaatar intermittently from 1997-2000.

3.3 Research process: triangulation

3.3.1 Introduction

Ethnographer Joseph Maxwell refers to triangulation as, “collecting information from a diverse range of individuals and settings, using a variety of methods.” (1996: 93). Triangulation, as a research strategy, reduces the risk that one’s conclusions reflect systemic bias or limits of methods (Maxwell 1996:93; Babbie 1986:90). Figure 7 illustrates how the three research methods employed in this case study worked together to address the line of inquiry⁸⁰ and helped to reveal enabling conditions under which institutions may apply local ecological knowledge.

Figure 7. Triangulation research methods, Bogd Khan Uul Case Study



The three methods included in the triangulation process included the following:

- (1) two types of structured survey questionnaires;
- (2) open-ended scoping and semi-structured survey-interviews;
- (3) secondary-sourced information on nature conservation in Mongolia.

These methods created a body of fieldwork findings consisting of primary and secondary data (represented by the area within the triangle). Building redundancy into the research process provided both validity and reliability checks.

Since the 1999-2000 fieldwork findings were copious, the conceptual framework—the *Globalocal Diversity Spiral*—effectively served to filter the data and structured findings into three research frames (*ABC Overview; Site Issues Scan; Institutional Obstacles and Capacities Analysis*). The approach drew from Layder (1998), who suggest the use of ‘adaptive theory’ to frame research about complex social phenomena, and Maxwell who emphasizes flexibility in intercultural research.⁸¹

A case study approach was chosen for three reasons: first, it permitted coverage of a breadth of site-specific issues; second it allowed for a diversity of informant opinion,⁸² and third, a case of a single protected area allowed a layering of information at different scales (site, national, international).⁸³ The Bogd Khan Uul Strictly Protected Area was specifically chosen as the case site for the following reasons:

- (1) The site (Bogd Khan Uul) provided one window on a society undergoing rapid socio-economic and ecological change;
- (2) Bogd Khan Uul had an ancient and longstanding history of protecting nature as both a sacred site and legally protected area;

(3) The site had diverse ecosystems threatened by the impacts of Ulaanbaatar's rapid urban growth and increasing rural→urban migration since the 1989-90 revolution;

(4) The Bogd Khan Uul had national and global visibility due to its state and international designation as a UNESCO Biosphere Reserve and proximity to Ulaanbaatar, Mongolia's capital and largest centre.

3.3.2 Procedures in the triangulation process

The fieldwork undertaken in 1999-2000 is summarized in Table 6. It shows seven components followed by a justification of *how each contributed to addressing the line of inquiry*. The reality of research was by no means as linear listing below, implies. Multiple insights from discussions, interviews and literature accrued throughout made this a dynamic, multidimensional process. A detailed chronology of the changes in research suppositions and context on my experience in Mongolia is shown in the appendices.

Table 6. Triangulation research process description

Fieldwork Method	Description
(1) Scoping Discussions* (July-August 1999; June 2000)	Included unstructured interviews or questions and discussion focused on Mongolian conservation issue identification with Bogd Khan Uul management, Mongol researchers/civil servants and expatriate researchers to scope ecological and management problems in the park; permission to undertake 1999-2000 research granted and logistical issues addressed (translation, permits, waivers, camping arrangements, etc.). <i>*contributed initial hypotheses and allowed formulation of several possible pathways for lines of inquiry and pilot and long format questions.</i>
(2) Pilot Survey* (August 1999)	Tested a 36 question survey with a herder, tour operators, ranger assistant; reviewed initial premises about logging, tourism, grazing, local knowledge, management, etc. Decisions to: a. increase research focus on local knowledge and enforcement issues, b. include tourism issues as part of

the broader focus on economic localization;
c. interview rangers for year 2000 sample/census of issues and local knowledge solutions/applications at Bogd Khan Uul.

**contributed to constructing a research assessment frame that was inclusive of a wide spectrum of issues and involving institutions operating at multiple scales (i.e. local and non-local).*

(3) Long Form Survey Questionnaire*
(July 2000)

Administered an open-ended survey with broad coverage of questions/issues in 7 thematic areas (ranger skills/experiences, activities/resource access, resource management issues, community enforcement or local management, alternative management, key management issues); hand-delivered surveys to 21 rangers/families.

**contributed to scoping location, seasonality and magnitude of specific ecological problems (logging, grazing, plant harvest, tourism, etc.) and range of potential local knowledge applications at Bogd Khan Uul.*

(4) Short form survey Questionnaire*
(August 2000)

Administered closed-ended survey with 15 questions on themes of: resource problems, enforcement solutions, incentives, tourism, equipment and ranger personal resources.

**contributed to the verification/validation of 8 issues in Site Issues Scan (Samar, logging, grazing, tourism/camping, berries, income/poverty, enforcement, equipment) and provided an outlet for ranger-generated propositions about local knowledge applications.*

(5) Semi-structured interviews*
(August 1999; July-August 2000)

Interviewed selected contacts and reviewed questions on the long and short survey including significant probing of issues, side commentary and inclusion of issues raised by informants.

**contributed to the verification of suggested solutions to ecological problems and generated research propositions concerning local knowledge applications and institutional capacity (enforcement, community participation, education).*

(6) Secondary Research*
(May 1999-Spring 2001)

Selected key conservation and newspaper reports, participatory rural appraisals and national park reports. Undertook news archive and key library searches as well as data requests from Mongolian agencies selecting content relevant to: logging, grazing, tourism, vegetation extraction, enforcement, Mongolian parks planning, economic alternatives and community participation.

**contributed to SIS/IOCA content for different scales (local, national and global) for the case study; and verified and provided context to survey and interview findings.*

(7) Contextual data*

(March/June-July 2000)
(June-July 2000)

Obtained primary data to serve as context to this study, from:
(1) Mongolian Gender Centre's Yarmag Soup Kitchen Study which surveyed 17 families at Lotus Soup Kitchen on social and material conditions of residents living adjacent to Bogd Khan Uul Strictly Protected Area;
(2) Sant Maral Privatization Survey (March 2000) which contained public opinion research on 1177 Mongols in nationwide sample on issues of privatization and economic transition (Sant Maral Foundation/Barents Group LLC);

**contributed to the understanding of underlying conditions in communities adjacent to Bogd Khan Uul—demonstrated how material poverty and economic transition affected local ecological knowledge applications.*

3.3.3 Scoping issues and research consent

After several failed attempts to procure research funds I chose see my interest in nature protection in Mongolia as an opportunity to conduct independent research, free of the constraints and constructs typically imposed by funding bodies. The extended open-ended, collaborative approach to discussions, interviews and surveys in this study challenged the notion of pre-conceived survey questions before undertaking fieldwork. The approach used was linked to, previously noted principle #3, flow shaping form rather than form being imposed upon flow. Thus, a spiraling-in on key site issues—and increasing survey tool specificity—drew upon consultations with informants and the ongoing process of verifying key site issues⁸⁴ described in the processes below:

- In 1999-2000 proposals to Simon Fraser University's Ethics Committee I agreed to obtain informed, written consent from research subjects,⁸⁵ to respect confidentiality by protecting informants' identity and to provide access to the outcomes of this research.⁸⁶ As discovered in my first surveys, fieldwork in another culture goes beyond codified requirements and has more to do with mutual respect. In short, attempting to respect local customs and protocol was critical in garnering the respect of my host informants, not to mention deepening my understanding of Mongolia and Bogd Khan Uul;
- 1999 'Scoping interviews' gauged issues about nature conservation in Mongolia particularly at Bogd Khan Uul.⁸⁷ These interviews built upon ongoing conversations both in terms of content and identifying other informants. The approach is similar to what Babbie refers to as 'snowball

sampling' (1986: 263). Informants at this stage included Bogd Khan Uul management, government civil servants, N.G.O. and international development agency workers, Mongolian and foreign researchers (see list of interviews following Bibliography);

- Translation assistance was initially provided with the help of Otgannasen, and the expertise and personal observations of 4 other translators (Batbayar, Khosbayer, Erdene-Arjune and Undarga) were integral to bridging cultures as well as shaping the findings of this study (see Appendices);
- Recorded memos on the short survey forms, rough journal notes and retained proposals⁸⁸ were used to track changing assumptions and site observations during scoping and throughout the research procedures.

The most fundamental change was that the overall line of inquiry shifted from an exclusive focus on tourism in 1999, to covering a wider spectrum of issues in 2000, including logging, overgrazing, tourism, vegetation harvest, local traditions and alternative management approaches. This broadened scope was designed primarily for two reasons: (1) to cross-verify the multiple and divergent geographic threats to Bogd Khan Uul's ecological and cultural endowment and; (2) to represent diverse cross-scale problems and the roles of institutions in causing or resolving these.

3.3.4 Pilot Survey—August 1999

Maxwell suggests that small-scale exploratory studies are central to understanding the people or phenomena one is studying (1996: 44). With a purpose of scoping key issues and generating field hypotheses in mind, a pilot survey was implemented in August 1999. It featured 36 questions generally related to the ranger's work, resource and visitor management issues, and the role of communities⁸⁹ (see Appendices). Four lessons gained from this pilot survey were as follows:

A. The importance of logistics—Lessons included properly gauging the time involved in locating the rangers, making the appropriate camping preparations, expecting quick

changes in the weather and being patient, flexible and adaptive throughout the survey work.⁹⁰

B. Including the capacity to discuss tangents—Serendipity can provide valuable insights.⁹¹ Much of our ‘off the record’ discussions facilitated learning outside of formal surveys. Research tools like the long and short survey formats were subsequently designed to record extensive side commentary.

C. Designing a broad research framework—Due to a lack of certainty about core issues both the research framework and survey tools were initially designed to be broad in scope. What informants had to say and what was witnessed in 1999 in terms of overgrazing, logging and new tourism camps shaped the inclusion of more targeted questions but in broader thematic areas in the 2000 survey.

D. Exercising caution with translations—We found that unless the translator/interpreter was fully aware of the intent of the survey question, ‘leading’ bias could occur with the surveyors’ delivery of questions. Undertaking intercultural work necessitated staying in sync with translators, asking clarifying or follow-up questions as feedback or checks on the interview/survey process, and monitoring the consistency of feedback.

After the pilot survey, initial suppositions about logging and tourism were deemed to be better included in a survey that covered a breadth of site issues (rather than single focus issues) and interviewing the rangers was chosen as the first research-survey priority in order to maximize the limited research timeframe.

In summary, the pilot survey underlined the importance of logistics and flexibility during fieldwork, of embedding ‘rest stops’ within the survey tools to examine informative tangents, of devising a broad research framework on ranger-defined and site-specific issues, rather than single problems, and of exercising caution in intercultural translation and interpretation.

3.3.5 Long survey—June/July 2000

The decision to conduct a survey of rangers was made in June of 2000, after approvals from Bogd Khan Uul’s Chief Ranger (Purevdorj)⁹² and the head of the Protected Areas Bureau, Ministry of Nature and Environment (Myagmasuren). The 21 paid field rangers (including one ranger assistant) working on the periphery of Bogd Khan Uul were given long-survey

questionnaires. Salient points about the ‘long format’ survey are noted below:

- ❑ After management scoping discussions, a seven-theme (50 question) open-ended survey was designed as a self-completion questionnaire and subsequently translated into the Mongolian language (see Appendices);
- ❑ A three-day horse trip in July 2000 was organized to deliver the survey; the trip included visits to the bulk of the 21 ranger stations in an approximate circumambulation⁹³ of the 41,651 hectare protected area. With consent of individuals or the protected area administration (for landscapes), photographs and a short video clip of rangers and valleys were taken on this trip;
- ❑ Survey *delivery* involved drop-offs to rangers or via their family or their friends.⁹⁴ The survey along with an explanation, a waiver and business card were delivered and respondents had approximately two weeks to complete surveys after this delivery;
- ❑ Survey *retrieval* involved interviews with each ranger, arranging translation assistance, transportation, petrol, and provisions. This phase was designed with the hopes that the rangers might be at their home, or postings, during daylight hours.⁹⁵

Mastering the appropriate length of visits involved striking a balance between three factors:

(1) the time involved in explaining the survey purpose; (2) obtaining sufficient non-questionnaire ‘side information’ or anecdotes; (3) respecting the ranger’s family space⁹⁶ and ranger’s/family daily work routines.⁹⁷ Responses to the long survey (12 of 21 returned) were deemed insufficient for full analysis due to the low responses within the 50 question fields. However these responses and discussions with rangers were valuable in designing a new ‘short’ format in August 2000. This ‘designed in Mongolia’ short survey is the focus of the next section.⁹⁸

3.3.6 ‘Short Format’ questionnaire-interviews

The short survey and simultaneous interviews provided the core data for statistical and anecdotal comparisons in this study’s *Site Issues Scan*. This four-page survey-interview consisted of 15 close-ended questions in eight themes: logging, grazing, *Samar* harvest, berry

harvest, enforcement, tourism/camping, fees and living standards (see Appendices). The short survey-interview was conducted with the 21 rangers and the management team. Typically, the translator (Erdene-Arjune, in this short survey phase) and myself completed survey-interviews in one to one and a half hours. This consisted of completing the close-ended short survey questionnaires and asking follow-up or tangential questions related to the survey themes. Comments were hand-written onto survey questionnaires and additional salient points were journal-transcribed.

Semi-formal interviews (modified versions of the short survey) were conducted with the Bogd Khan Uul management team, including the: Manager,⁹⁹ Chief Ranger, Forestry Ecologist, Communications Officer and Biologist. Informal interviews took place during the pilot phase in 1999 and also during the summer of 2000. Interviews with the former Minister of Nature and Environment, the former U.N.D.P. Director of Sustainable Development, and a U.S. Peace Corps intern were tape recorded and transcribed.

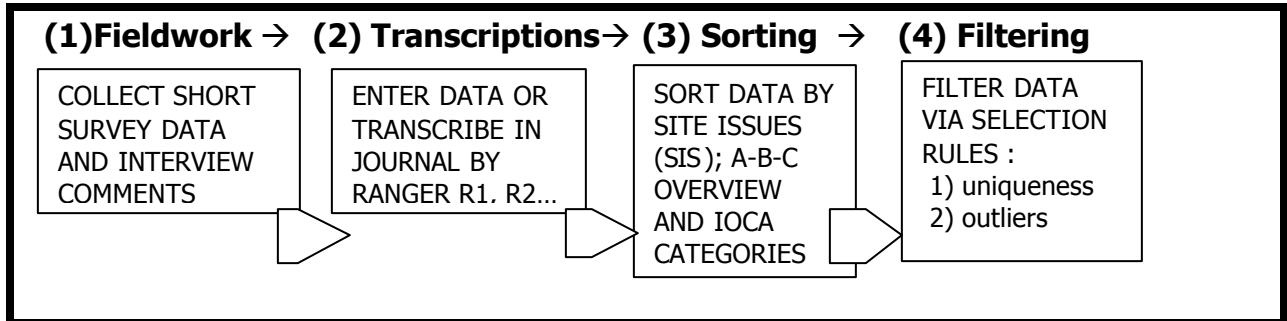
3.3.7 Secondary literature analysis—1999-2001

A source of crucial checks on the validity and reliability of informant data came from secondary source materials¹⁰⁰ (see Appendices). Secondary literature, largely from Mongolian conservation reports,¹⁰¹ was purposively sorted into the five Site Issues Scan categories as well as ‘material poverty’¹⁰² and ‘local traditions’ categories. Reports were sorted to support the A-B-C Overview and the assessment of four institutional clusters in the I.O.C.A framework.¹⁰³

3.3.8 Data Analysis: filtering and evaluating qualitative data

The data from fieldwork (surveys, transcripts, memos) and secondary information were sorted, ordered and filtered in 4 distinct phases, as Figure 8 illustrates.

Figure 8. Bogd Khan Case Study: data analysis process



A combination of survey-derived summary statistics (shown in tables/pie charts), and anonymous ranger commentary (confidentially identified R(x), for short survey, Ranger (x) for long survey, N(x) for Yarmag study) made up the key findings and institutional analyses work in this research.¹⁰⁴ Figure 8 indicates that after interviews were transcribed, survey data inputted, and secondary materials selected, information was categorized according to the Site Issues Scan (SIS), categories, namely: pine nut harvest, berry harvest, logging, grazing, tourism, material poverty and traditional knowledge and IOCA categories (state, civil society, market, multilateral organizations).

Interview commentaries were recorded in two journals—one for transcription; the other for sorting—selected according to the following rules: coherent unique statements about the site issue and key outliers or divergent opinions from the summary statistics for the site issue.¹⁰⁵ Short questionnaire survey data were the most straightforward for sorting since categories were mutually exclusive. To tabulate survey responses a simple spreadsheet¹⁰⁶ was designed (in *MS-*

Excel). Responses were tallied and ranked by frequency, mean, median, range and percentile of the census and assigned both average rank and weighted rank-scores according to the valuation rules detailed in the footnotes accompanying each table herein. The representative ranger statements, unique outlier statements, along with survey response summary statistics and rank scores, as well as secondary information anecdotes form the tapestry of ‘issue scan’ and ‘institutional analysis’ reports found in Chapters 4 and 5 respectively.

3.4 Validity and reliability: how might this research be wrong?

Why should we believe the research? How will we know that your conclusions are valid? And if the conclusions are valid, do they reflect the real world?

—adapted from Maxwell 1996: 86-87

This section explains how checks in research methods were designed to address possible validity and reliability threats during Bogd Khan Uul fieldwork.¹⁰⁷ Validity and reliability checks help avoid drawing mistaken conclusions from findings (1996: 86-87). Four key threats and the checks designed to address these are described in the sections that follow.

3.4.1 Validity/reliability threat: language and culture

For a non-Mongol speaker reliant upon third party translation, observations in the context of different linguistic and cultural norms leave findings potentially open to question. I was faced with the validity threat of ensuring that my data describe on the ground phenomena and the reliability threat of being unable to ensure that surveys were fully explained and understood by the rangers.¹⁰⁸ To bridge the significant cultural and linguistic gaps, I employed six checks:

- Meeting with previously established contacts in Mongolia (1997-98) for advice on cultural protocol and translations;

- ❑ Creating a framework to add cultural context from a non-Mongol perspective, namely, ‘6 ways of seeing nature in the Mongol worldview (found in Chapter 2);
- ❑ Employing triangulation methods (surveys, interviews and secondary research) provided a check against systemic bias;
- ❑ Conducting debriefing discussions with members of the administration (manager, chief ranger, biologist, tourism manager) after fieldwork helped to cross-check survey results and synthesized insights;
- ❑ Asking tangential questions (via translator) during ranger survey-interviews served to cross check survey questions;
- ❑ Working with five translators (each employed in distinct phases of the study with skills appropriate to these.) (see Appendices) provided different perspectives and research lenses. Translation also slowed the pace to ensure that responses could be carefully followed-up on under otherwise time sensitive circumstances.

3.4.2 Validity/reliability threat: observer and Potemkin effects

Another validity and reliability threat to my work is referred to as ‘reactivity’, which concerns “the influence of the researcher on the setting or individuals studied” (Maxwell 1996: 91). This threat is also referred to as the ‘observer effect’ (Ghimire & Pimbert 1997a: 305) and is akin to the *Potemkin Effect*. The *Potemkin Effect* is described as “an impressive façade or show designed to hide an undesirable fact or condition.”¹⁰⁹ It is particularly a problem facing non-local researchers who focus on a local scale or site. Since this study relied upon ranger estimates and observations that are largely based on their ‘visual memory’, rather than on statistical counts of visits or infractions, there is the possibility for exaggerated responses. If this were a systematic or consistent bias it would constitute a threat to the reliability of the research. This study employed four checks to address potential observer and ‘Potemkin’ threats:

- ❑ 5 interviews outside the network of 21 rangers provided a distinct cross-check of rangers who may have discussed ‘the Canadian researcher’s’ questions, especially given the 2-3 week time lag between survey drop-off and retrieval;¹¹⁰
- ❑ Translators provided important criticisms and insight on findings from outside ranger or management perspectives, drawing upon their

- understanding of the mountain and nature,¹¹¹
- Interviewing rangers and other informants provided important insights rather than what might have been just rote responses to close-ended surveys;
 - Employing an inter-scale frame of analysis helped place local problems in relation to national and global contexts, providing a type of ‘external check’.

3.4.3 Validity threat: limited survey period

Since fieldwork occurred exclusively during the summers of 1999 and 2000, unforeseen factors could have systemically affected responses or respondents during this period, or may have been present during the fall or winter season. For instance, *Samar* (pine nut harvesting)¹¹² and tourism were extensive during the summer period and rangers may have felt compelled to see these as more serious issues since they were synonymous with the survey timeframe.

To counter seasonal bias my inquiries about resource management issues (berry harvesting, tourism, mountain logging and grazing) extended beyond the summer in surveys and interviews. Additionally, comparisons to problems in other Mongolian protected areas, particularly with grazing and tourism issues, provided full year-round comparisons.

3.4.4 Validity threat: post hoc justifications

Post hoc reasoning¹¹³ validity threats can occur when a cause-effect analysis becomes convoluted—this leads the researcher to draw mistaken conclusions about the phenomenon from the findings. Given the inter-scale frame of analysis used in this study (Globallocal Diversity Spiral) there were significant validity threats in relation to macro-phenomena, or non-local scale phenomena, and their relationship to the local site issues. Two examples, included the following:

(1) The assumption that past resource management threats to Bogd Khan Uul have been less significant or that the park was in a ‘more pristine state’ either during single-party (1924-89) rule or under pre-communist era (pre-1924) is difficult to substantiate, without better data;¹¹⁴

(2) The assumption that resource management threats can be attributed *exclusively* to the policies associated with national and international institutions’ (civil society, markets, multilateral treaties, biodiversity and macroeconomic policies post-1989), remains difficult to attribute to a single macro-policy.

This study combined multiple sources and scales of analysis, embracing contextual and experiential knowledge as complementary sources of insight in addition to statistical data in order to better specify phenomena affecting Bogd Khan Uul’s ecosystems.

3.5 Building empirical propositions

While internal validity leads one to ask: “do the study results actually convey what is happening on the ground at the Bogd Khan Uul?” empirical propositions, based on observations, instead beg the question: “do these results correspond to what appears to be happening in other cases either in Mongolia or elsewhere?”¹¹⁵ Since my results are specifically focused upon conditions that might support the integration of local ecological knowledge at Bogd Khan Uul institutions, the conclusions—if they are externally valid—may serve as comparisons to other cases in Mongolia and elsewhere. While the case study results may serve as an external comparison to similar situations (sacred sites or protected areas), they cannot be extrapolated to other settings as individuated predictors of social ecology or local ecological knowledge phenomenon (Babbie 1986: 261).¹¹⁶

Chapter Four

Case study findings

4.1 Introduction

Understanding the nature of the problems at the Bogd Khan Uul sacred site provides insights into how best to focus local knowledge applications. Two components in the Globallocal Diversity Spiral meta-framework serve as the core structure for this chapter, namely: the A-B-C Overview and Site Issues Scan. The former component provides an abiotic, biotic and cultural scan, while the later identifies Samar and vegetation harvest, logging, overgrazing and tourism development issues. In addition, the sections on ‘Local Traditions’ and ‘Material Poverty’ provide essential context for developing well-focussed local knowledge applications—the focus of the final two chapters. This chapter’s format toggles between summary statistics and fieldwork narrative drawn from anonymous informant surveys and interviews.

4.2 Abiotic, Biotic, Cultural (A-B-C) overview

This overview provides a panorama of the Bogd Khan Uul’s unique history of protection and highlights issues related to the mountain’s ecological and cultural features. It draws from literature and field observations and describes significant features inside the Strictly Protected Area.

4.2.1 Historical analysis of protection

Words cannot aptly describe this sacred site where raptors soar high on the winds, beneath perpetual blue skies. This mountain massif in north-central Mongolia, next to the Tuul River (as shown in Figure 2) has long been considered sacred as this 1778 ‘Declaration of Protection for

Bogd Khan Uul' indicates (MNE 1998):

Sanjaadorjios office has informed [sic] that there is a 'Khan' mountain on the south of Khuree. The mountain is revered as the most picturesque and unique by all kings, princes, rulers, khutugts [nobles] and [sic] the four Khalkha provinces. According to legislation, the veneration of the sacred Mountains and stone piles is by incense and silk as perceived. The veneration of the Khan mountain is a good deed...Seal office declaration [for the] purpose of sending: On the 8th day of the 10th new moon in the 43rd year decreed by Heaven.

This island-like massif¹¹⁷ and the protected area enveloping it feature significant abiotic, biotic and cultural diversity. Bogd Khan Uul is a state-designated Strictly Protected Area, a 41, 651 hectare oval-shaped park, adjacent to Mongolia's capital and by far its most sizeable city, Ulaanbaatar.

The word *Uul*, in Mongolian, translates to 'mountain peak', 'small mountain range,' or a massif (MNE 1997a: iv). And while a series of peaks are located within the park, Mongols typically refer to the entire protected area, as 'the Bogd Khan mountain': Bogd Uul or Bogd Khan Uul. There is an inherent logic in this reference, since the massif is a distinct forest-island of rock amidst a sea of flat-rolling steppe, literally a natural oasis surrounded by development. In recent decades the rapid growth of settlements and intensive grazing has effectively blocked animal and other biota connectivity corridors to the contemporary park. Since Ulaanbaatar is the transportation hub of Mongolia, Bogd Khan Uul has been increasingly surrounded by infrastructure including air, rail, road and communication links.¹¹⁸

The first segment of the Mongol name for the park, the words '*Bogd Khan*', translate as 'holy king' or 'holy ruler,' hinting at the historical significance of the park. The Bogd Khan was the shortened version of the title conferred upon the Eighth Living Buddha Jebtsundamba Hutagt,¹¹⁹ the theocratic ruler of Mongolia from 1911-1919 (Sandag & Kendell 1999: 13). The

Eighth Bogd Khan Gegen's Winter Palace still stands in close proximity (under 5 kilometres) to the north slopes of the present-day Bogd Khan Uul Strictly Protected Area.

Archaeological findings, apparently dating as far back as 3000 years, are found throughout the contemporary park (Adyasuren 1998: 18, 34). Decrees for protection have been cited by historians from the 13th or perhaps 12th century, with the 1778 Manchu declaration— noted in the quote above—the earliest documented designation of protected status (MNE 1997, 55). Previous to the 1930s ‘great purges’ the land inside the modern day mountain park was considered monastic property and had been fiercely guarded, according to the accounts of foreign travellers.¹²⁰ Roy Chapman Andrews (1921: 67), cites his experience of entering Urga (previous name for Ulaanbaatar) in the early part of the 20th century:

The Sacred Mountain is a vast game preserve, which is patrolled by two thousand lamas, and every approach is guarded by a temple or a camp of priests. Great herds of elk, roebuck, boar, and other animals roam the forests, but to shoot within the sacred precincts would mean almost certain death for the transgressor.

A work published the following year by Ferdinand Ossendowski (1922: 231) also notes the brutal penalties for transgressions. He indicates that the mountain was designated a protectorate of the Eighth Bogd Khan Jebtsun Damba Hutagt.

Bogdo-Ol is the huge knot which ties together here three mountain chains: Gegyl from the southwest, Gangyn from the south, and Huntu from the north. This mountain covered with virgin forest is the property of the Living Buddha. The forests are full of nearly all the varieties of animals found in Mongolia, but hunting is not allowed. Any Mongol violating this law is condemned to death, while foreigners are deported. Crossing the Bogdo-Ol is forbidden under the penalty of death.

The significance of Bogd Khan Uul’s historical protection, and its past biological abundance, hints at what may have been irreversibly lost in the course of developments in the past century.

This study's historical analysis of the protection measures at Bogd Khan Uul draws from six secondary sources as shown in Table 7, below.

Table 7. A legacy of protection at Bogd Khan Uul

<p>12-13th century—Khan Tooril of Hereid Aimag refers to protection of Bogd Khan Uul's forests</p> <p>1709—Khalkha Djurim Laws (Northern Mongol Code) designates Bogd Khan Uul as one of 14 mountains, "protected from hunting, cultivation and timber felling"</p> <p>1750-1773—construction of Manchir Hiid Monestary near modern day Zunmod on the south slopes of Bogd Khan Uul (elevation 1800m)</p> <p>1778—legal designation of Bogd Khan Uul under Minister Yurendorj, Manchu Dynasty Declaration</p> <p>1808—reports by travellers of protection including stationed guard Lamas at Bogd Khan</p> <p>1920s—traveller reports of extensive protection of forest and wildlife at Bogd Khan Uul</p> <p>1921—Mongol Republic issues rules to protect the Bogd Khan Uul</p> <p>1924—Bogd Khan Uul under authority of First Forestry Unit, Mongolian People's Republic</p> <p>1930s—Manshir Hiid Monestary at Zuunmod and shrines commemorating Minister Yurendorj destroyed at Tsetsee Gun during period of state-sponsored 'Purges' (state approved arrests and massacres)</p> <p>1940—State Forest Law protects trees including at Bogd Khan Uul</p> <p>1957—first communist era law (People's Ikh Hural Presidium Resolution 31) established modern boundaries of Bogd Khan Protected Area (boundary used to 1988) and re-names park "Choibalsan", after the Prime Minister during the Purges, though name not apparently retained</p> <p>1971—<i>Land Use Law</i> (Ikh Hural Presidium Resolution)—all land designated state land, citizens' collectives or Neg Dels (agricultural co-ops) granted free and perpetual use</p> <p>1971—creation of a restricted research zone inside the park and linked protected area up to the Ulaanbaatar city limits of Presidium Resolution 241</p> <p>1974—old park boundary included in list of State Protected Areas (PIH Resolution 248), reaffirmed as Bogd Uul</p> <p>1975—key modern era legal act to protect Bogd Khan Mt. promulgated (PIH Resolution 146)</p> <p>1978—re-commemoration of protection at Bogd Khan Uul (200th anniversary of key protection)</p>
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Sources: Adyasuren 1997; 1998: 18; Chinzorig, Pers.Comm.2000; Enkhtuul, Pers.Comm.2000; Germeraad & Enebisch 1996: 27; MNE 1998:10, 4; Badarch email correspondence, 2001.

Since the fall of the theocratic monarchy under the Bogd Khan Gegen in the 1920s, and for most of the remainder of the 20th century, a forested northern valley in this park has been home to Mongolia's power brokers who reside inside the Ikh Tangor Valley presidential compound: from communist politburo elites, to post-1990 democratically elected Presidents and Prime Ministers. The park also serves a festive purpose as traditional backdrop for the spectacular

annual *Naadam*¹²¹ long-distance horse race that culminates adjacent to Bogd Khan's Nuhkt Valley.

Visitors to Mongolia cannot help but notice the mountain. Arrivals from Buyant-Ukhaa International Airport pass adjacent to the northwest slopes of the park. Beijing-Moscow rail travelers wind alongside the northeast slopes of the park and witness the first significant tracts of coniferous forests on journeys north of the Great Wall and Gobi Desert. Bogd Khan Uul is typically an initial daytrip or overnight stopover for many first-time package tourists to Mongolia.¹²²

For many Ulaanbaatar residents the mountain represents an important symbolic and physical connection to nature and it represents sanctuary from a rapidly growing and increasingly polluted urban area.¹²³ Bogd Khan Uul's symbolic importance to Ulaanbaatar residents is perhaps analogous to the importance attached to protected areas like Yellowstone or Banff National Parks in the Americas, and in another dimension, akin to indigenous peoples' reverence for sacred sites and spaces. The strong sense of place associated with Bogd Khan Uul—for local and foreign visitors alike—holds promise for addressing some of the current dilemmas facing the mountain, as Chapter 5 discusses. Besides this rich history, the Bogd Khan features important abiotic, biotic and cultural characteristics—as the next three sections reveal.

4.2.2 Abiotic overview

Bogd Khan Uul's forested slopes rise 750 metres above the surrounding steppe-grasslands to 2268 metre high Tsetseegun Peak. Located in the Siberian geomorphologic region, the Bogd Khan Uul is a large oval-shaped massif, over 40,000 hectares in size and is geologically a part

of the Khangai-Khentii mountain range that extends northeast to the Russian Federation frontier. Bogd Khan's abiotic features—climate, underlying geology, waters and soils—have formed ecological niches that provide sanctuary for a diversity of flora and fauna. Adyasuren (1997: 23) suggests this “complex system” should be viewed as:

[a] unique community of insects, birds and mammals. All due to a great number of its [Bogd Khan Uul's] specific features with regard to its taiga, forest-steppe, steppe, aquatic paludous environments, rocks, cliffs, settlements, various internal landscape zones, and its ecology.

This massif formed during the Palaeocene and Eocene epochs, approximately 38 to 63 million years ago. It is cut by steep valleys with high-angle slopes, particularly at watershed headwaters, of which there are 23 varying in size and seasonality (MNE 1998: 5). The bulk of surface water in the park finds its way into the Tuul River—a Selenge-Arctic drainage basin—located just north of the park, adjacent to Ulaanbaatar.

The 17 significant valleys of the park feature quaternary era geological deposits—less than 2 million years old—including sands, loams, silts, sandstones, clays and steppe-type soils.¹²⁴ Several high elevation plateaus (above 2000 metres) feature massive granite boulders and striking rock outcroppings (buttes). These make hiking and horse travel treacherous.

Bogd Khan Uul is affected by a north central Asian ‘extreme continental’ climate with low year-round precipitation.¹²⁵ Seasonal and daily air temperature variations—from January's lows of –38 centigrade to July's highs of +32 degrees, and mean annual air temperatures in the range of –2.5 to –3.1 degrees centigrade—highlight the extremes of this climatic region. At Bogd Khan Uul, the combined effects of 7 to 8 months of long-term below freezing temperatures, high elevations and low solar gain in some valleys result in permanently frozen

sub-soils. On average 28.8 per cent of the mountain's surface area, to depths of 1.5 to 5.2 metres, are in a state of permafrost (MNE 1998: 5).¹²⁶

Current global climate change models indicate that forecast warming trends in Siberia and North Asia could thaw Bogd Khan Uul's permafrost belt. This, in turn, could trigger hydrological changes and have ecosystemic ramifications in the park's high elevation forests and wildlife habitats. While the magnitude, amplitude and systemic impacts of globally induced temperature change at Bogd Khan Uul remain uncertain,¹²⁷ the acid rain air pollution caused from regional climate change in Ulaanbaatar's airshed poses immediate threats. These changes not only affect the health of residents in the Tuul River valley, but also the forests and ecosystems of the Bogd Khan Uul.¹²⁸ Regional air pollution—compounded by thermal air inversions—will continue to pose a problem to the health of Bogd Khan Uul ecosystems unless measures are put in place to handle sources of emissions.¹²⁹ Ecological applications that monitor local and global climate-induced risks to Bogd Khan Uul's ecosystems and hydrology can serve as important benchmarks for ecosystem health and the human health of adjacent residents. Several ecosystems monitoring applications are discussed in Chapter Five of this study.

4.2.3. Biotic overview

Visitors to Ulaanbaatar cannot help but notice the forested slopes of Bogd Khan Uul. They are the southern backdrop to this increasingly sprawling city. Nearly 55 per cent of 41,651 hectares of the mountain park is covered with coniferous forest, including the species: Siberian pine, the needle shedding Siberian larch, spruce—apparently rare to Mongolia—and fir. There are also pockets of deciduous trees, including birch, poplar and willow, particularly alongside

watercourses.¹³⁰ Since the massif is located at an intersection of forest and steppe vegetation zones, elevation profoundly shapes ecosystem complexity. The mountain is a veritable horizontal mosaic with eight major vegetation zones and 30 sub-categories of vegetation types¹³¹ including 588 species of plants and steppe grasses (Adyasuren 1997:4; 29-30) varying significantly according to elevation and solar exposure. Plants and flowers are used for food, fruit, medicines, eleroid oil, decoration, treacle (sugars), building materials and forage (Adyasuren 1997; MNE 1998: 7). Forests and vegetation provide habitat for 54 species of mammals,¹³² 194 species of birds,¹³³ 1660 species of insects, 4 species of reptiles and 2 species of amphibians. The biological diversity described above is matched by the uniqueness of Bogd Khan Uul's cultural endowment.

4.2.4 Cultural overview

The Bogd Khan Uul is favoured as a camping, picnicking, vegetation harvesting and vacation spot for local and foreign visitors alike, due to its proximity to Ulaanbaatar and its pristine nature. In addition, sites inside this 41,651 hectare-sized Strictly Protected Area have been formally revered for centuries. Cultural practises at Bogd Khan date back 3,000 years, as evidenced by cliff hieroglyphs, burial mounds and stone statues. These include the *Gual Maral* carving between Ikh Tenger and Baga Tenger valleys (Development and Environment 1997). Sacred sites continue to be actively used for ceremonial purposes, including for Shamanic and Buddhist worship and for the previously mentioned *Nadaam* sports festival.

Numerous *ovoos* (sacred rock cairns) and sacred trees have been marked with the uniquely Mongolian *hadag* (blue silk scarf) and multi-coloured Mahayana prayer flags. These

sites are found at peak and ridge tops, at valley passes, in ancient forest groves, alongside springs and at *ungod* (shamanic) trees throughout the protected area. The *ovoos* (sacred rock cairns) are

worshipped in both Shamanic and Buddhist faiths, as the section on Local Tradition in this chapter describes (4.5). In addition, the restored Buddhist temple at Manchir Hiid, near Zunmod, also attracts spiritual adherents (Adyasuren 1997: 24; MNE 1998: 3).¹³⁴

In spite of longstanding protection measures at Bogd Khan Uul, the park's ecosystems and cultural sites have been significantly impacted during the past century. The *Site Issues Scan*—the next section in this chapter—identifies these impacts in five areas. For example, deforestation, overgrazing, road multi-tracking and development are all in evidence in the park's outer 'conservation zone'. Ill-conceived thinning and logging approaches inside this relatively intact remnant forest ecosystem were undertaken in the name of forest conservation, wildlife protection and fire safety from the 1940s to 1960s.¹³⁵ During fieldwork in 1999-2000, I observed the impacts of these problems including varied development within the contemporary park boundaries. Developments during the past century have included resorts and tourist complexes, an air traffic radar installation, a space observatory, a juveniles prison, electricity corridors, radio towers, facilities for housing former Russian troops (now abandoned), tourist *ger* camps and numerous other structures.¹³⁶

In terms of cultural sights, Manchir Hiid Monastery and shrines at Tsetsee Gun, amongst others, were destroyed at the height of the state-sponsored purges between 1933 and 1942 (Shagar 1997: 72; Adyasuren 1997: 37). This dark period in Mongolian history included state-sponsored extra-judicial killings of 30,000 or more monks, shamans and political dissidents and

the nation-wide destruction or vandalizing of temples and sacred or holy sites (Sandag & Kendall 2000; Ginsburg & Ganzorig 1996: 147-157; Merli 1998: 39).¹³⁷ The drive to modernize between 1930 and 1950 also resulted in the restriction or elimination of pastoral long-range movements,¹³⁸ spiritual practices, local institutions and longstanding nature protection rituals.¹³⁹

The revival of these traditions—including at Bogd Khan Uul—signifies a reclaiming of Mongol customs since their suppression under authoritarian rule. While there has been widespread development and ecological devastation in Bogd Khan Uul's outer 'limited access zone', the forested slopes and presence of wildlife are indicators that at least some of the mountain's biodiversity remains intact (MNE 1997a, Adyasuren 1998). What makes Bogd Khan Uul particularly unique is the coexistence of traditional alongside modern management practices (Table 8). For example, revived Shamanist and Buddhist customs at sites inside the park occur synonymous with administrative measures like stationed rangers and tourist fee collection.

Since 1992, contemporary measures to protect the park, including the creation of a three-pronged zoning system for management planning,¹⁴⁰ and a "law and order" approach to protection have been introduced— also shown in Table 8. These included the 'limited use zone' on the boundary of the park, the 'conservation zone' and the most exclusionary and inner area, the 'pristine zone'. Part of the drive to conform to international protection norms also comes from UNESCO's 1996 'Biosphere Reserve' designation that conferred recognition of the protected area's unique ecological and cultural diversity. Neither rangers nor management acknowledged neither tacitly nor explicitly the importance of this designation. Apart from the three-part zoning system and some marketing materials, the UNESCO designation appears to

have made little difference in Bogd Khan Uul management practices or policies to date (Pers.Comm.,Chinzorig 2000; Pers.Comm.Batdulam 1999; Pers.Comm.Poland 2000).

Table 8. Modern management at Bogd Khan Uul

<p>1987-1991—mandate for first contemporary <i>Five Year Management Plan</i> at Bogd Khan Uul</p> <p>1988—administrative control of Bogd Khan Uul transferred from Forestry to Ulaanbaatar Nature Protection Bureau with financing from local government budget</p> <p>1988—Bogd Khan Uul Administration begins practise of “periodically taking measures on expelling economic entities from [inside] the protected area boundary”</p> <p>1991—financing for Bogd Khan Uul transferred from Ulaanbaatar city government to state government under the auspices of the Ministry of Nature and Environment</p> <p>1992—<i>Mongol Ulsyn Undsen Khuuli</i> (Mongol State Constitution) guarantees freedom to express faith allowing for revival of ‘traditional’ expressions of religion in nature, permitting <i>ovoo</i> worship and restoration of ancient temples at Bogd Khan Uul</p> <p>1992—three part zoning system in Bogd Khan Uul promulgated; Environment State Committee designates a travel route (for hiking, horse riding and prayer/pilgrimage) (Resolution 33)</p> <p>1994—Mongolian Land Law—first to be introduced under liberal democracy to be introduced; largely retains commons as public access with traditional, administrative rights governing uses, and with some restrictions on access to resources or movement in zones inside protected areas</p> <p>1995—Bogd Khan Uul included in new Law on Special Protected Areas as a gazetted “Strictly Protected Area” (Resolution 26). State and private summer residences and other buildings removed from Bogd Khan valleys</p> <p>1996—‘Biosphere Reserve’ nomination for Bogd Khan Uul by UNESCOs Coordinating Committee, Paris</p> <p>1997—Ministry of Nature & Environment (with support of UNDP Environmental Public Awareness Programme) publishes <i>Ecosystems of Bogd Khan Mountain</i> anthology of abiotic, biotic and cultural data</p> <p>1998—Ministry of Nature & Environment (with support of Japan’s Nagoa Foundation) publishes <i>Ecosystems Atlas</i> of Bogd Khan Mountain (a series of GIS maps) commemorating 220th anniversary of Bogd Khan Uul</p> <p>1998—Bogd Khan Mt. Tahilga Fund (Mongolian Non-Profit Organization) established by a resolution of the Ministry of Nature & Environment for “enabling public involvement” and the “restoration of traditional rules and customs for Bogd mountain and nature protection”</p> <p>1999—<i>Special Law on Tourism at Bogd Khan Uul & Khan Hentii Protected Area</i> permits development in limited use zones and collection of revenues for district governments</p> <p>2000—Draft <i>Bogd Khan Uul Four Year Management Plan (2000-2004)</i> under development for submission to Ministry of Nature & Environment</p> <p>Sources: Adyasuren 1997; 1998: 18; Chinzorig, Pers.Comm.2000; Enkhtuul, Pers.Comm.2000; Germeraad & Enebisich 1996: 27; MNE 1998:10, 4; Badarch email correspondence 2001.</p>
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In many respects Bogd Khan Uul does not conform to the ‘western notion’ of protected areas since there were few official cairns or markers, signs, fences or gates and it is difficult to obtain maps of the zones within the park (Pers.Comm., Ranger L, Aug.2000). There had also

been attempts to engage the community in rudimentary forms of consultation and at least one ranger had undertaken extensive steps to collaborate with nearby residents; however as Chapter 5 indicates, there remain deficiencies with the current approach to community consultation.

During my fieldwork, the drafting of a four-year management plan (2000 to 2004)¹⁴¹ was underway (Pers.Comm, Chinzorig Aug 27, 2000), as was the development of a small ranger station booth in the Zaishan Valley.¹⁴² In addition there were several small pilot projects focused upon research as well as ecotourism education.¹⁴³ These initiatives may have had their impetus with the UNESCO designation, although most likely this was one of several contributing factors (Pers.Comm.Bhum Yalagch, Aug.1999).

The problem of how the ecosystems of Bogd Khan Uul can remain protected in proximity to Ulaanbaatar—whose urban population has grown 70 fold in 70 years—underscores the need for protecting Bogd Khan Uul's unique endowment. Applications must proactively respond to the resource threats associated with increasing urbanization¹⁴⁴ such as vegetation and berry harvest, peripheral grazing and roads. The next section scans five issue areas where local knowledge applications may be targeted.

4.3 Site Issues Scan: a mountain's ecosystems under stress

The issues identified by Bogd Khan Uul rangers' were intended to support the work of managers, conservationists and stakeholders interested in protecting and restoring ecosystems and cultural sites. The Site Issues Scan identified five key 'issue' areas: logging, pine nut and berry harvesting, grazing, tourism development. In addition, two separate issues related to local tradition and poverty provide critical context for future management challenges.

Table 9 provides a synopsis of issues according to the commentaries of the rangers surveyed.¹⁴⁵ The rankings gauged the magnitude of problems throughout the entire park, since observations come from the network of ranger stations on the periphery of the 41,651 hectare, oval-shaped protected area. These observations reflect ranger' visual assessments of resource management issues focussed on their own patrol territory as opposed to the park as a whole. Rankings were categorized using two measures: weighted rank scores and average rank scores.

Table 9. Ranger-ranked site issues at Bogd Khan Uul* (n=16)

I s s u e	weighted (rank) s c o r e**	average (rank)\ s c o r e***
samar (pine nut) harvesting	29 (1)	2.44 (1)
logging	24 (2)	2.87 (3)
overgrazing	22 (3)	2.75 (2)
berry picking	19 (4)	4.13 (4)
tourism/camping	14 (5)	4.47 (5)

*derived from August 2000 short survey question #7 "Please rank the most serious problems in your area from the above 6 activities (rank 1 as the most serious problem to nature and 6 as the least important problem)". Tourism and camping results are combined in the report above.

**weighted rank scores are derived by assigning a weighting factor of 3 to #1 rankings, 2 to #2 rankings and 1 or parity to #3 percentile rankings. The aggregate of the three percentiles (#1,#2,#3) for each site problem equates to the rank score total values. Only the top three scores are weighted. This measure emphasizes magnitude of ranking while the impact of non-responses or multiple rankings for the same issue is reduced. The higher the aggregate score the greater the rank of importance the issue represents.

***average rank scores are derived from the statistical mean for a given issue. The closer the response is to 1 the greater the rank of importance the issue represents in the report.

The former (weighted rank scores) used aggregate rank scores of first, second and third rated issues. The later (average rank scores) indicate the mean rank for all five issues (see footnote explanations associated with each table). In the survey findings, summarized in Table 9, pine nut (*Samar*) harvesting, logging and animal overgrazing were respectively ranked as the top three key current issues by the rangers.

The extent to which rangers envisioned resource management issues affecting their patrol area to the year 2005 was also examined. A synopsis of future problem areas identified by the rangers is shown in Table 10. Over half the respondents expected that the numbers of tourists and pine nut harvesters would increase within the five years of the survey—56% and 54%, of rangers for these two issues respectively felt there would be increases. None of the rangers expected that any of the five issues would decrease as management problems within five years. In fact, when issues ranked, “*staying the same*,” were combined issues that might be “*increasing*”, 73%, 80%, 87%, 88% and 95% of rangers expected that either no decrease or increases in overgrazing, berry harvesting, Samar harvesting, logging and tourism respectively, could occur by 2005 (see Table 10 for details).

In summary, *Samar* harvesting, logging and overgrazing were considered the most critical current issues at Bogd Khan Uul. Tourism, camping and pine nut harvesting were believed to warrant future consideration—within the next 5 years. In addition, the problem of material poverty on the periphery of the park—not specifically addressed in the survey—was

Table 10. Ranger opinion of Bogd Uul problems to 2005* (*n*=16)

Bogd Khan Uul Site Issue	(+) increasing	(/)same	(-)decreasing
tourism**	58%	35%	6%
samar (pine nut) harvest	54%	33%	13%
logging	38%	50%	12%
overgrazing	33%	40%	27%
berry picking	27%	53%	20%

*derived from August 2000 short survey questions #1b-#6b “Do you see this number increasing/decreasing or staying the same over the next five years in your ranger patrol area?”
 **tourism and camping data were combined—rounded total equates to 99%, actual total is 58.3+6.3+35.3=100;

identified by informants frequently in conjunction with all of the survey site issues. Rangers overwhelmingly felt that all the site issues would either stay the same or increase as problems

during the next five years. The findings in the sections that follow may assist managers, conservation groups and other stakeholders in formulating solutions that lead to the resolution of the key site issues at Bogd Khan Uul.

4.3.1 Site Issue: Samar (Pine Nut) Harvest

Samar or pine nut harvesting is considered to be the foremost of site issues affecting the mountain, according to respondents. Specifically, 37.5% of rangers ranked *Samar* harvesting as the prime issue affecting in their patrol area. While 25% and 18.75%, ranked it of second and third order importance, respectively. At the time of writing, no data were available concerning the actual volume of pine nuts harvested with the park. However, one of the reasons for the high ranking appears to be that the summer 2000 was a very productive year. Bogd Khan Uul's forests vary in cone productivity, indicated by R2's observation, "this year 2000 [was a] very high year." Apparently 2002, 2004, etc. was expected to be high biannual cone-seed production years, with intervening years being significantly lower in productivity.

Several rangers' suggested why the *Samar* issue is considered of prime importance. Ranger R12, who ranked pine nut harvesting as the most significant problem in his area, commented on the large numbers of pickers in his patrol valley "on all sides [with] weekends [being], the busiest." In his estimation, up to "200 per day, or 400 per week" visited the valley for pine nuts. According to the *Law on Special Protected Areas* commercial harvesting for *Samar* beyond the limited use zone (i.e. into the conservation zone and pristine zone) is forbidden. However, rangers spoke of their difficulty in protecting these zones.

Rangers estimated that volumes of harvest ranged from 1400 to 60 visitors per week

with the mean number of weekly visits equating to 157 harvesters and the median 170.¹⁴⁶ It is important to bear in mind that Bogd Khan Uul is an unfenced reserve and that the notion of “reporting to the ranger” regarding harvesting was considered alien, as were the concepts of fences or fees in many protected areas in Mongolia.

R10 suggested that harvesters frequented the protected area to gather pine nuts for commercial purposes. The difficulty that some rangers face was so acute that on at least two occasions during my research, rangers reported that they were involved in physical altercations while attempting to prevent the harvest.¹⁴⁷ The large increases in the numbers of *Samar* harvesters have affected both tree bark and cone propagation (potential seedlings and under-story vegetation), according to some reports.

4.3.1.1 Samar harvest at Bogd Khan Uul

The edible *Samar* in Bogd Khan Uul’s forests originates from the cone seeds of the forests of Siberian Pine (*Pinus sibirica*), in Mongolia referred to as the Siberian Cedar. At Bogd Khan Uul these cone-bearing forests are generally located at the 1600-2000 metre elevation levels. While *Pinus sibirica* stands most frequently occur in southern and western valleys, the valleys where harvesters enter do not necessarily correspond, with impacted locations (Figure 9). Instead some valleys are simply used as entry points for harvest elsewhere, apparently beyond the ‘limited use zone.’ R2 suggests that harvesters come from Tov Aimag, Nailach and Ulaanbaatar, adjacent populated centres. Valleys next to Ulaanbaatar, reported the highest volumes of harvest traffic on a weekly basis.

Samar harvesting typically took place from mid to late summer and into the fall. R10

suggested that the *Samar* season—in his patrol area—began July 20th and continued for two months. Ranger I commented on problems he had in the fall, “controlling people for [harvesting] secondary natural resources like nuts and berries.” Recently harvesters had apparently been trying to outdo each other, exemplified, in R17s comment that, “picking [Samar] before maturity [was] a problem.” Ranger L pointed out the difficulty in preventing impacts on vegetation since many pine nut pickers are youth who entered the reserve without permission. According to this same ranger, in July 2000, a 25 year old died after falling 15 metres from a tree in an attempt to harvest *Samar*.

The markets of Ulaanbaatar appeared to be the central destination for pine nuts, *Samar* were sold in the whole cone as unhusked seeds, or out of the cone as husked seeds.¹⁴⁸ Large wooden mallets—fashioned from small logs—were apparently used to knock at the tree trunk in order to shake cones loose from the canopy of Siberian Pines.¹⁴⁹ Several interviewees referred to groups of harvesters who were returning from the forest with sacks of pine nuts. Generally, I was struck by the fact rangers did not put on facades ‘to regulate or inspect’ even when individual harvesters passed within short distances of the ranger station during our interviews. Many rangers were somewhat resigned and reflective about the deeper causes of the problems of harvesting. Several rangers indicated that harvesters were typically youth and the elderly attempting to supplement their family incomes by harvesting *Samar* for commercial purposes.

4.3.1.2 Samar harvest impacts

What are the ramifications of an uncontrolled harvest of *Samar* inside the Bogd Khan Uul? R5 commented that while picking, *Samar* harvesters “damage the wood in the process.” Ranger C

suggested that nut pickers “break the young trees and shrubs.” These comments associated the wider effects of excessive harvesting upon cone propagation and forest regeneration.

Figure 9. Bogd Khan Uul Samar harvest hotspots.



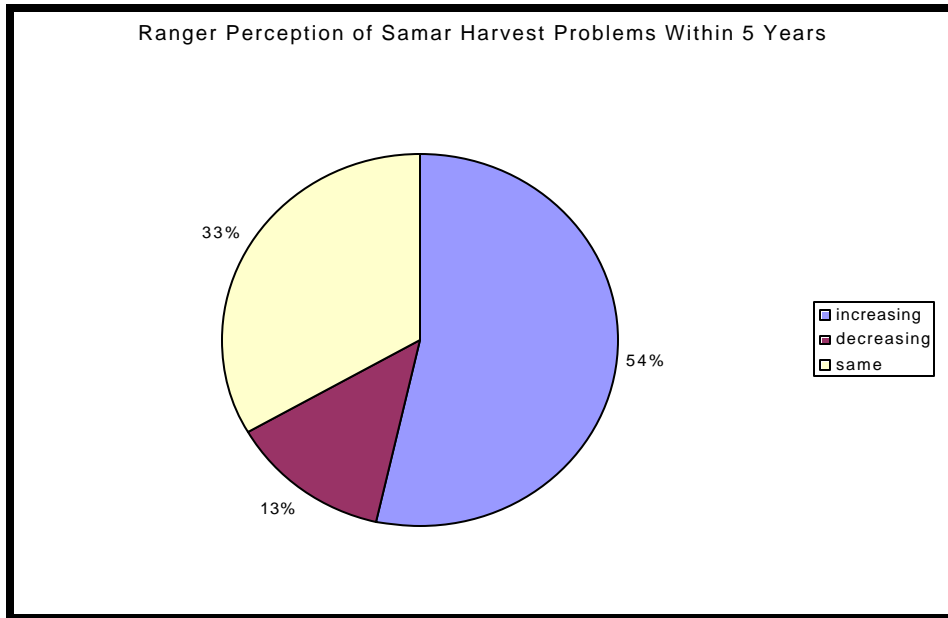
Ranger I suggested that harvesters were “usually interested in the use of secondary natural resources but have no interests in [the plant or tree’s] reproduction.” Adyasuren suggested that for at least 60 years, a significant proportion of bark in Bogd Khan Uul’s forests had been damaged “by improper harvesting methods for ‘samar’ or pine-nuts” (1997a: 35). In the past decade this threat has been especially pronounced, like other resource threats to Bogd Khan Uul, in part due to the Mongolian economic collapse and an increased reliance upon natural resources to stem poverty.

4.3.1.3 Samar harvest dilemmas: enforcement and poverty

Rangers R9 and R8 noted their inability to address the problem of excessive or early *Samar* harvest using patrol or policing approaches. Instead they identified how broader systemic issues such as the economy, poverty and social conditions were central to the harvest issue. For instance, both R9 and R8 suggested that the numbers of pine nut pickers was dependent on the “economic situation” or “living conditions” in Mongolia. R19 also noted that the illicit harvest is tied to “the budget” of the state or park. Even in valleys with a visible ranger station, harvesting remained an evident issue. That pickers were willing to risk possible fine or arrest demonstrated the desperation that some residents faced. For example, R11 suggested, “people usually ignore[d] the law or law enforcement.”¹⁵⁰ This raised serious questions about whether heightened enforcement and perimeter security will actually serve as effective, or even necessary deterrents, and whether they might preclude potentially more effective and more comprehensive long-term community-based options. In sum, *Samar* harvest was most significant during biannual peak growth in Siberian Pine cones, with the impacts most severe in the valleys adjacent to Ulaanbaatar. The problem was seen as the most significant ranking issue in an array of five site issues, as well as being an enforcement and material poverty issue.

4.3.1.4 Bogd Khan Uul Samar harvest in the next five years

More than half—54% of the rangers—felt that the *Samar* harvest problem would increase over the next five years as shown in Figure 10. For example R11 commented that he saw harvester numbers as potentially increasing, though this “depend[ed] on the living conditions”, while R12 suggested that in his valley picking would increase during the biannual peak harvest years. Dependence on the longstanding natural cycles of *Samar* productivity at Bogd Khan Uul

Figure 10. Trajectory of *Samar* harvest to 2005

illustrate an ecosystem in which humans play an integral role. The problems of excessive *Samar* harvest were one resource threat, amongst others, that required concerted and systemic responses. The assessment of site issues that follows builds a comparative analysis of resource threats to Bogd Khan Uul's ecosystems and points to the need to search for effective local knowledge solutions capable of addressing multiple resource threats.

4.3.2 Site Issue: Logging

Logging at Bogd Khan Uul has had a highly noticeable visual and ecological impact as reflected in habitat loss, soil erosion and surface/subsurface vegetation degradation. The 'ABC Overview' identified the sporadic logging of forests at the Bogd Khan Uul from the 1940s to 1989. A recent threat to the forests has been the impacts of acid rain caused by thermal air inversions in

the Tuul River basin contributing to the production of oxides of nitrogen and sulfur.

The *Laws on Strictly Protected Areas* authorized rangers to prevent illicit logging on their own or in conjunction with local police. The same law permits forest cleaning, fire and disease “prevention” carried about by the rangers or teams organized by the protected areas administration. Fuelwood collection of deadwood for household use is conditionally accepted inside the ‘limited use’ zones and apparently this is tolerated at Bogd Khan Uul (MNE 1997a, 146). Preventing illegal logging remains difficult without economic and organizational support. For example, R15 expressed strong frustration, if not desperation, with the situation in his patrol area:

I’ve been [working] here for 10 years now, I’m desperate to find anything to fight logging...we’ve tried with the police. [I] can’t do anything to handle the loggers, even working with the local police and local administration.

Rangers identified logging to be a problem particularly on the north (Ulaanbaatar) slopes of the park. For example, rangers stationed next to Ulaanbaatar reported significant incidences of logging, ranging from 75 to 280 visits per week. R2 suggested that logging was also a problem on the south slopes, in particular, “between Zunmod and Delger-Zuun.” The illicit logging ‘hotspots’ based-upon ranger observations are shown in Figure 11. An average number of 50 weekly visits occur system wide (median 75), peaking during winter months.¹⁵¹ Five rangers (31.25%) ranked logging as the most serious problem facing the protected area; three (18.75%) ranked it second, and another three ranked it as the third most serious threat to the Mountain. Logging ranked second out of six in the *Site Issues Scan*, according to the weighted rank scores. The issue of illicit tree felling inside an ancient protected area like the Bogd Khan Uul indicates the systemic failure of institutions to stem broader social and economic problems including

material poverty outside the park's boundaries. The next section discusses the rangers' perspective on why illegal logging takes place inside this UNESCO Biosphere Reserve.

4.3.2.1 Seasonality and location of logging

Rangers suggested that the bulk of tree poaching occurred in fall and winter months, particularly in the lead-up to the coldest local period (January to March). This is when wood for heating becomes a necessity, particularly for the single homes and *gers*, which constitute over half of Ulaanbaatar's housing stock. Both R15 and R22 noted that illicit logging occurred from November to April and R22 suggested that this was largely for "firewood". Under the one-party system, fuel was provided to households or *Neg Dels* (collectives); however, the shift to the market economy left many without fuel and the Bogd Khan Uul's forests were an obvious local source (Pers.Comm.,Badarch, Aug.22, 2000).

R15, believed that logging in his patrol area constituted 300 to 450 weekly visits that apparently served as a source of fuel for some 6000 people. R14 suggested that from September to October, both live and deadwood was gathered. Youth dragging off deadwood were observed on several occasions and Ranger M affirmed that this occurred in his patrol area. Both R15 and R22 suggested that the problem of tree poaching occurred largely between November and April. Ranger M suggested that logging was a year round problem, with the fall season being the busiest period. R2 suggested that loggers had "hidden paths or routes" and logs were dragged from the forest to urban areas or *hot ails* during "early morning or in the dark" from October to April. Ranger B also reported night logging incidents in his patrol area.¹⁵²

Figure 11. Illicit logging hotspots at Bogd Khan Uul



4.3.2.2 'External' issue versus 'enforcement' issue'

Several rangers made links between poverty and unemployment as being causal in the illegal logging.¹⁵³ For example, R13 suggested that “when people’s life becomes better its O.K; when there is no poverty it [the logging] will probably [have] stop[ped].” Ranger M relayed the following about an incident involving late night wood raiders outside the Bogd Khan Uul:

We saw a tree poacher at 1:30 in the morning...it was these two old people...and they were dragging those things that they carry water in and it had five big five big trees stacked on top of it. Of course they [rangers] pulled them over and they confiscated the trees and there was a big huge argument... the tree poachers were saying 'well you know we're poor and we are raising our grandchildren'... the park staff was [saying] 'we understand that but it's against the law, you can't keep taking these trees'...obviously they didn't have anything to take...so basically they just confiscated the trees and said 'you know you're breaking the law don't do it again' and left.

R17 expected logging to increase since “life standards [will be] decreasing” in the next 5 years.

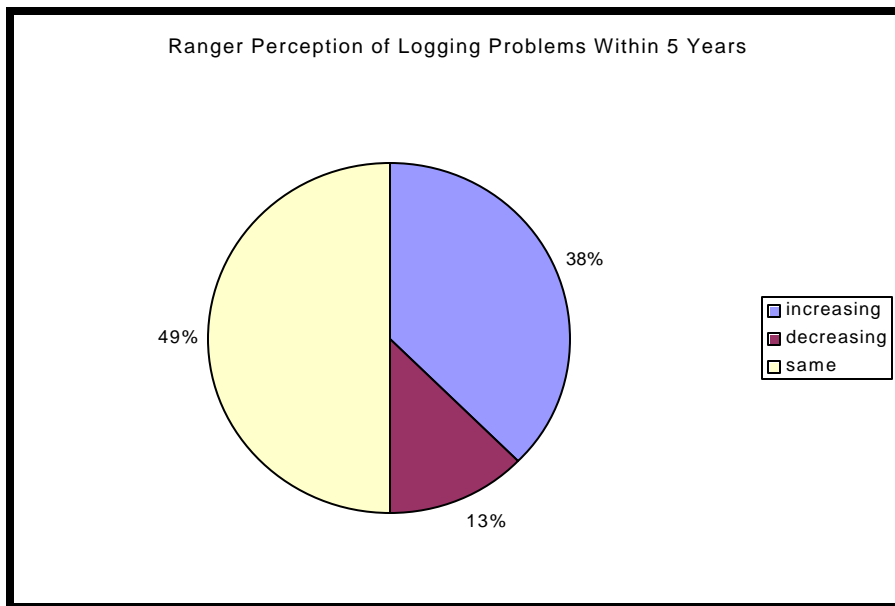
R19 noted, as “social conditions get worse, Mongolians start[ed] to log.” Another ranger, R9, commented on the futility of enforcement measures: “[I can] confiscate logs, tools, sledges, carts [but poachers] keep coming still.” R15 suggested that loggers were generally “low income” and that there was, “no way to solve the problem.” By contrast, R5 suggested that with appropriate support, rangers are able to handle ecological threats, including logging. In a similar vein, R14 indicated that without the assistance of his friends on tree poacher patrols, enforcement would prove to be far too difficult. How economic hardship relates to ecological degradation at the Bogd Khan Uul is addressed in the section on material poverty (4.4). Approaches to better support rangers on the job while improving community relations are described in the Institutional Obstacles and Capacities Assessment (IOCA) (Chapter 5).

To summarize, the rangers viewed logging as an important site issue—ranked within the top three site issues overall. Many saw logging as being highly linked to overarching economic hardships. Most of the rangers found it very difficult, if not futile, to prevent tree felling, particularly in valleys adjacent to Ulaanbaatar. Several rangers indicated that more human and financial resources might help them tackle the problem in the future.

4.3.2.3 Illicit logging in the next five years

Figure 12 summarizes rangers’ future expectations of logging problems at the Bogd Khan Uul.

Most rangers either saw the problem of illicit logging as likely to remain as is (49%), or to even worsen (38%) over the next five years. Only four rangers suggested that visits to their patrol areas would decrease in this timeframe.

Figure 12. Trajectory of illicit logging to 2005

Even the comments of R14 that there might be a decrease in logging, noted that, “it will depend on if they [poachers] have a proper job.”¹⁵⁴ Management implications and an approach to economic localization are suggested in Chapters 5 and 6 respectively, as means of stemming resource depletion like logging.

4.3.3 Site Issue: Animal Grazing

The periphery of much of the Bogd Khan Uul is surrounded by highly denuded steppe-grassland ecosystems partially impacted by urban and industrial uses and road multi-tracking. Another major stressor in recent years has been the large numbers of grazing cattle, goats, sheep and horses. Grazing in Mongolia typically takes place in an open access (*res nulles*) situation and, with the exception of settled and protected areas, there is little fencing to demarcate state or private holdings. With the exception of the Ikh Tangor, Baga Tangor and Zunmod (Manchir

Hiid) Valleys there is no fencing on the periphery of the Bogd Khan Uul. Many grazing animals are herded along the periphery of the park and ranged (grazed) in the territory of temporary and permanent *hot ails* (small groups of *gers*/yurts).¹⁵⁵ The outer portion of the park has been increasingly used for grazing since the mid- 1990s' economic collapse, evident in this comment:

Last 5 years from 1995, the livestock holders increased, many provinces' families moved to Ulaanbaatar. In Bogd Khan areas [there are] increased pastures... especially in summer times. (Badarch Memo 1/18/01).

While grazing is illegal in all zones inside the park boundary, the steppe-grassland ecosystems appear to be considered open for grazing by many, as is evidenced by the number of mean weekly grazers of 128 animals, and median weekly of 90 reportedly entering the ranger patrol areas.¹⁵⁶

4.3.3.1 Grazing impacts

With the exception of the upper Shajin Khurkh Valley—with few evident impacts—I observed moderate to heavy grazing impacts throughout Bogd Khan Uul's outermost limited use zone in 1999-2000. These impacts were evident on lower slopes and valley bottoms around the circumference of the entire park. Impacts included denuded grasses, braided trails on slopes, erosion, deep cut gullies, diminished ground vegetation, feces-polluted or muddied (high turbidity) waters, and channel-eroded watercourses.¹⁵⁷ The impact of excessive vehicles was reported by Ranger K and affirmed by R2 who noted “too many cars” suggesting up to a ten-fold increase in herders using vehicles to search for their cattle during the past decade.¹⁵⁸ Grazing impacts were also evident in R2's comments that there is virtually “no steppe grass” and that which remains “is overused, but [none-the-less] many people still come.” R8 added

there are “stories that the grass was so high [in the eastern valleys] that a horse would be lost lying down.” Both R8 and R9 linked grazing to wildlife disturbance; R9 suggested: “wildlife has decreased because of the human settlement...[and with] too much grazing the wildlife are avoiding [the park].” He also affirmed the impacts that grazing animals have on erosion and watercourses.

4.3.3.2 Grazing privileges

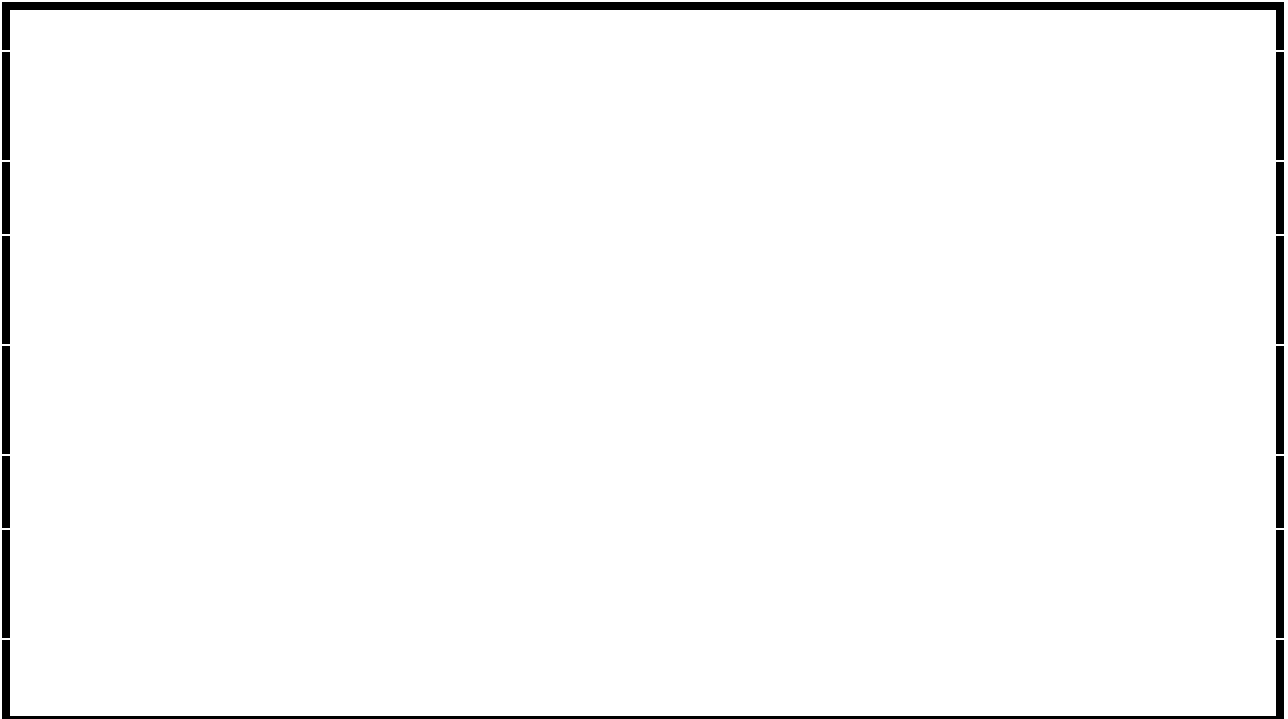
The only legal exception to grazing within protected area boundaries is for rangers, who may retain small herds of cattle as a perk of the job. R19 and Ranger M suggested that at times family and friends graze cattle, goats and sheep inside the conservation zone. This privilege of accessing the relatively lightly used protected area grasslands constitutes a significant proportion of rangers’ income. Of the rangers surveyed, 81.25% suggested that half or more of their income came from grazing animals (largely cattle).¹⁵⁹ R19 pointed out the weaknesses of this privilege system in his wry comment that, “they [rangers] dedicate all their working time to breeding livestock.” These personal grazing rights not only raised issues about how to model ecologically friendly behaviour to adjacent residents, but how to create the conditions so that rangers and their families are not threatened by material poverty.

4.3.3.3 Grazing seasonality and location

While grazing takes place year round, the pressures are most acute in summer months when forage is healthiest.¹⁶⁰ Most survey respondents identified the impact of cattle in the conservation zone. R22 suggested that the bulk of grazing took place “in summer [months] from May to September” and was most problematic in the south-eastern valleys of the park.¹⁶¹ Ranger B reported that cattle and sheep grazers in his area originated from Uliastai and Amgalan

(suburban Ulaanbaatar) on the northeast slopes of the park. Ranger G suggested that overgrazing has been problematic in the park's eastern valleys and slopes "since 1962." Other ranger-reported grazing hotspots at Bogd Khan Uul are indicated in Figure 13.

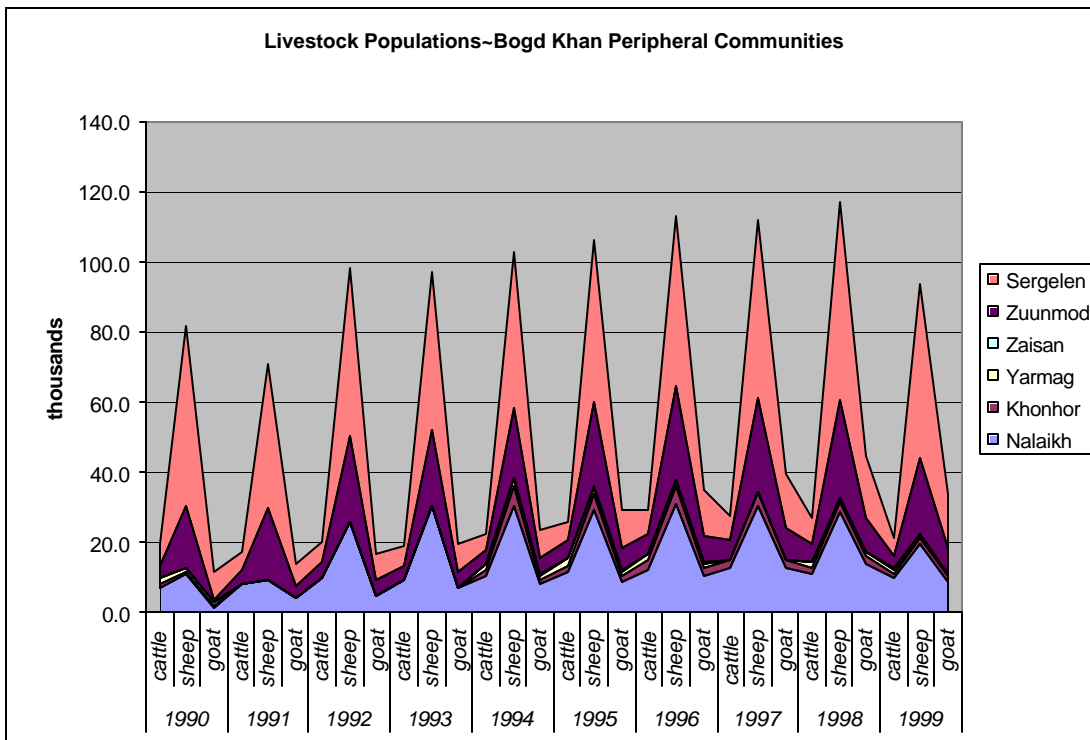
Figure 13. Grazing hotspots at Bogd Khan Uul



The privatization of Mongolia's collective farms (*Neg Dels*) in the early 1990s and the rise in individually controlled mixed livestock herds has affected demands for fodder. According to R17, herders "do not want to pay for grazing rights or hay." R20 believed that livestock numbers were increasing, "because of privatization, and the private cattle [left] no money to pay for hay." Ranger K referred to discussions with Bogd Khan Uul management about, "using livestock grazing land for companies and enterprises in the Strictly Protected Area." The

suggestion illustrated how financial difficulties force park managers to consider short-term revenue generating alternatives whose long-term consequences may be harmful to Bogd Khan Uul's ecosystems.

Figure 14. Grazing pressures on the periphery of the protected area



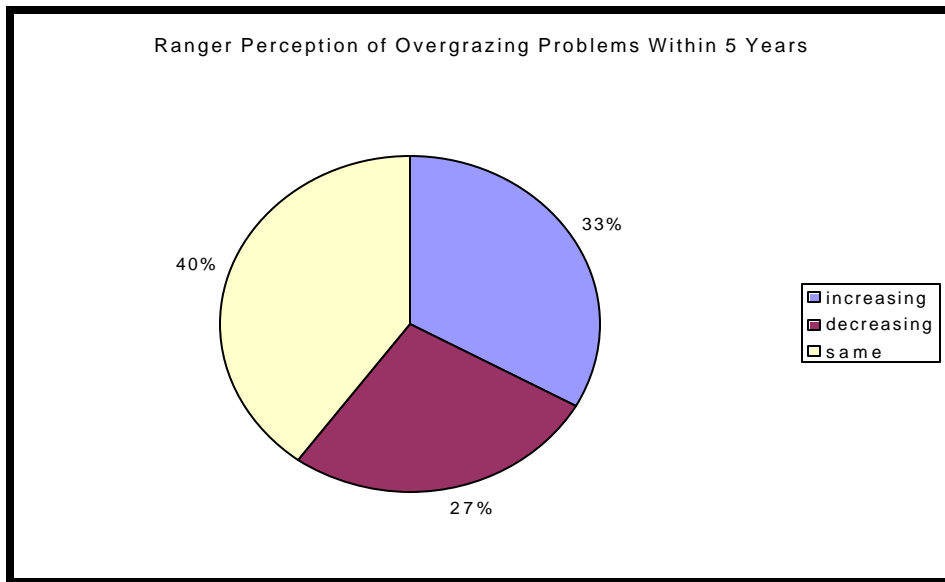
Source: Mongolian National Statistical Office, with cross-tab provided by A.Demberal, August 2000.

Statistics on registered animals in communities adjacent to Bogd Khan Uul illustrated a steady growth trend in herd size over the past decade (Figure 14). These statistics—collected from six locations on the periphery of the park between 1990 and 1999—did not include unofficial livestock associated with migrating herders. This 25% increase in official livestock numbers in a

little less than a decade¹⁶² provided a rough indication of the increased stress on the carrying capacity¹⁶³ of the steppe in Bogd Khan Uul's Limited Access zone. Separate data indicated at least a three-fold increase in livestock numbers within Ulaanbaatar city limits between 1985 and 1996 (MNE 1997: 40). In sum, the combination of larger private herds and greater pastoral mobility has changed grazing patterns throughout Mongolia, and in turn appeared to have impacted the steppe-grassland in Bogd Khan Uul's outer zones. Rangers' grazing privileges created contradictions about conservation uses and signalled the importance of addressing the material difficulties of rangers and residents in tandem with the ecological impact of grazing on the steppe.

4.3.3.4 The future of grazing at Bogd Khan Uul

Figure 15. Trajectory of grazing to 2005



Aside from some rangers' suggestion of fencing to reduce park boundary infringements, R9 suggested that in future the number of grazers would be "decreasing with law enforcement [and

that] the local [government] administration near his station should help with the enforcement.”¹⁶⁴ He suggested that currently rangers “cannot put much force on the herders.”

Amongst the array of problems that rangers ranked, grazing was seen to be the one most likely to decrease over the next five years (27%). Still, most rangers (73%) expected that the numbers of grazers would remain constant or even increase to 2005 (Figure 15). R7 suggested that grazing was variable and unpredictable, but he did expect increases over the next five years, “as families come”, migrating or passing near the park. The same ranger suggested the Khan Hentii-Terelj National Park has had success in addressing the overgrazing issue. He commented, “they [Khan Hentii] stopped hunting and overgrazing” and suggested that they were able to do this because: “they provided tools, and up-to-date technology.” Further conservation applications are discussed in Chapter 5’s recommendations.

Ranger R10 commented that Ulaanbaatar’s city government was considering regulating grazing inside the urban area.¹⁶⁵ I was unable to obtain information on this proposal at the time of my fieldwork however this policy would have implications for the stressed northern valleys of the park. A suggestion of regulating grazing by the use of fences or fees goes against the nomadic notion of open access according to some informants. For example, R8 commented that, “for Mongolians to create a fee for overgrazing is very difficult. No one may accept [because of] nomadic heritage.”¹⁶⁶ A proactive approach to reducing grazing pressures was taken by R5, who noted that in Spring 2000 he “approached the local people to work together” and subsequently:

Organized a meeting [about grazing]...for those people with cattle [and suggested] don’t send your cattle into the park and don’t take any wood...we need to work together to protect nature. Most agreed but there were some who did not.

Like logging, the impacts of grazing were highly evident at Bogd Khan Uul, not only from rangers' comments but also affirmed in relatively conservative official data. The issue of how to manage illicit grazing will be a critical test for the applications of local knowledge. It is related not only to public access questions, but also to rangers' privileges and the need to work directly with adjacent communities and migrating families to respect the sacred spaces of Bogd Khan Uul.

4.3.4 Site Issue: Berries and Fruits

The *Mongol Law on Nature Protection* treats the berry harvest as a form of resource extraction of medicinal, food and plants of a “non-commercial nature.” This harvest is limited to the outer ‘limited access zone’ of Strictly Protected Areas.¹⁶⁷ While none of the respondents considered the berry or vegetation harvest to be a top-ranking issue, two of them (12.5%) gave it secondary consideration. Five rangers (31.25%) ranked it a third order concern—for an overall fourth ranking amongst five issues surveyed.

The weekly estimates of visits for berry and fruit picking ranged from a high of 400 per week to a low of 10. The mean number of visits was estimated to be 31.9 and the median was 30.95 weekly visits.¹⁶⁸ Ranger R7 indicated that since harvesters did not report their trips to the rangers it was difficult to gauge the actual visitations. Since the study surveys occurred during the summer high season, and rangers were not asked about multi-purpose harvest trips into the park (i.e. trips for berries *as well as* trips for plants, *Samar*, picnics, etc.) the data provided only a cursory sketch of problems. How can rangers balance residents' need for access to vegetation

and berries with issues of protecting the sacred mountain? The discussion in Chapters 5 and 6 provides some insight on these issues.

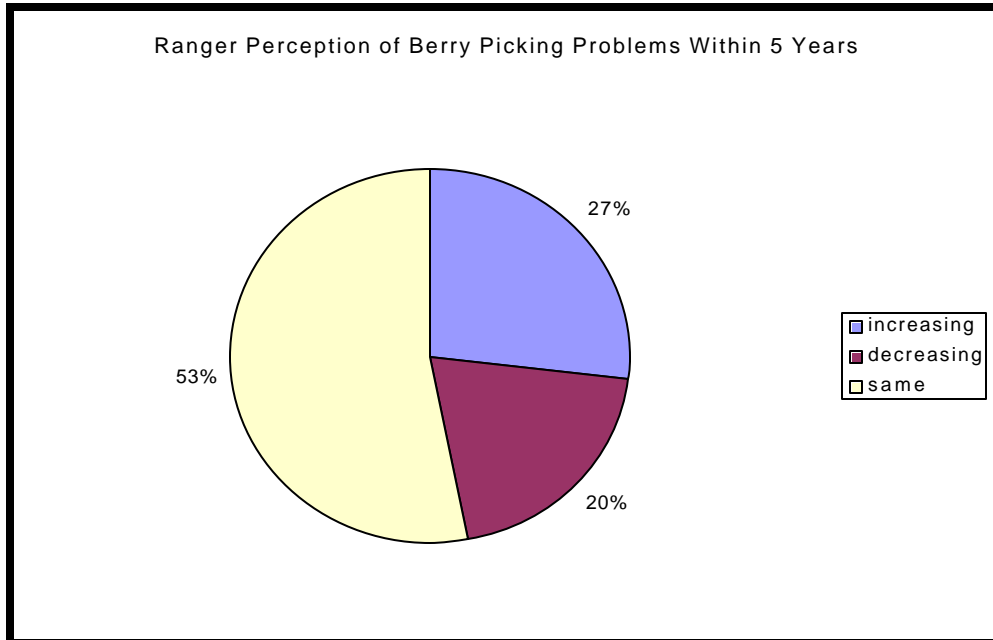
4.3.4.1 Wildberries—diversity and seasonality

The Bogd Khan Uul features a wide diversity of vegetation within a relatively small, isolated ecosystem. Like much of the steppe and mountainous regions of Mongolia it features an abundant array of wildflowers and wildberries throughout the summer months.¹⁶⁹ *The Bogd Khan Uul Atlas*, identified 11 herbal teas, 14 species of fruits and over 100 species of medicinal plants at the mountain (1998: 7). One ranger, R20, identified blackberries, strawberries and mushrooms as important types of vegetation harvested by visitors in his patrol area. *The Atlas* (29), also noted gooseberries, red leaf barberries, red currents, black currants, wild cherries, raspberries and cranberries, along with wild onions as plants and fruits found on the mountain.¹⁷⁰

Residents living next to the mountain gravitated to proximate valleys of the Bogd Khan Uul, particularly if the harvest supported their diet or income. R15 indicated that Zaishan and Khurhree Valleys—both immediately south and adjacent to Ulaanbaatar—were problematic for excessive summer and fall harvests.¹⁷¹ In contrast, R17 suggested that both berry and *Samar* harvesting were “limited problems for a short term.” Ranger I commented that “one ranger is not enough to control people who pick the undeveloped nuts and berries,” suggesting that there had been problems with over-picking. In sum, the issue of berry harvest ranked as the second lowest ranger priority overall. Where there were difficulties, harvest problems appeared to be concentrated in late summer and fall, especially near the Ulaanbaatar-facing valley slopes. While 53% of rangers suggested that the volume of berry harvest would remain the same over

the next five years, another 27% forecasted possible increases in the numbers of visits. Figure 16 summarizes ranger forecasted berry harvest problems to the year 2005.

Figure 16. Trajectory of berry harvest to 2005



While 53% of rangers surveyed suggested that the volume of berry harvest would remain the same over the next five years, another 27% forecasted possible increases in the numbers of visits. Figure 16 summarizes ranger forecasted berry harvest problems to the year 2005. To pick berries and vegetation, especially since it is a customary act for many living near the Bogd Khan Uul, appeared to be considered a basic right, although this was increasingly affected by more serious resource management threats to the park. In future access to berries and vegetation for traditional harvest may become threatened due to measures designed to stem the depletion of other resources. Community-based management processes should take into account future rights

for adjacent residents to access berries and vegetation.

4.3.5 Site Issue: Tourism Development

Few rangers considered tourism to be a current problem in terms of numbers of visitors or the magnitude of their impacts. This is reflected in the mean and median weekly estimates of 20 and 37 visitors respectively.¹⁷² Only 25% of the rangers even ranked tourism amongst the top 3 issues and, of these, all 4 ranked it only third. Tourism and camping were, however, the most serious future concerns of respondents, reflected in the issue rankings to the year 2005.

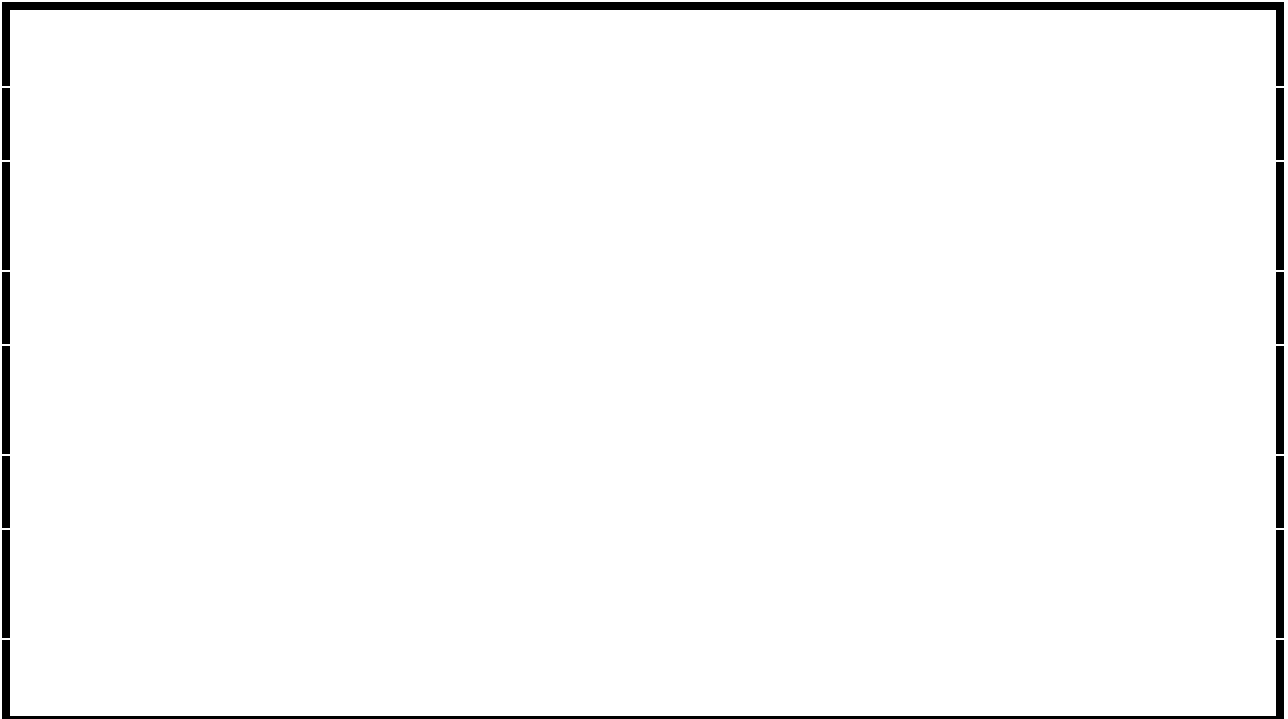
Before the early 1990s Mongolia was largely off limits to foreign visitors and entry was strictly controlled; except for East Bloc and Soviet nationals. Until the 1990s, tourism was controlled through a state monopoly enterprise, *Julchiin*, which also ran a resort and several *ger* camps at Bogd Khan Uul.¹⁷³ By 1962 there were 2500 state and private guest houses¹⁷⁴ scattered throughout the park's valleys that served as recreational summer homes for Ulaanbaatar residents. Ranger L commented that as recently as 1995 there were 200 cabins in one valley. By the mid-1990s, however, cabins and temporary *gers* were no longer permitted inside Bogd Khan Uul and owners were required to remove these from the park's outer limited use zone.¹⁷⁵ Since the removal of these cabin-type lodgings in Bogd Khan's valleys, tourism at the park appears to have had a relatively light impact on the area's landscape with the exception of several valleys. The 1999-2000 data on visitors indicated 2500 annual visits to the park.¹⁷⁶ The next section suggests why there is reason for concern about future tourism development at the park.

4.3.5.1 Camps and resorts

My research identified 16 registered summer season *ger* camps, a year-round resort at Nuhkt

and a guesthouse in the Presidential compound (Ikh Tangor Valley). These largely operated inside the 'limited use zone of the park' (Figure 17) (Pers.Comm., Timurhuu, Aug.24, 2001). Most of these developments are small camps having fewer than 10 *gers* and very basic guest facilities.¹⁷⁷ The park's management suggested there was potential for at least up to twice this number despite the increasing impacts of the current *ger* camps.¹⁷⁸ Many private tour companies also included short visits to Bogd Khan Uul, either with stays at guest camps or on day trips to Manchir Hiid monastery.¹⁷⁹ R22, suggested that the major weekend tourist facilities used during the summer months were Manchir Hiid monastery, Jargalant (Chinggis Khan Ger Camp) and the Ikh Tangor (Presidential Palace) diplomatic quarter.

Figure 17. Tourism camps or resorts sites at Bogd Khan Uul



However this survey did not calculate the volume of visitors or capacity of these sites. A synopsis of the type and location of tourist accommodation sites inside the conservation zone is

shown in Table 11.

4.3.5.2 Recreation and tourism

The extent of recreational and tourist-oriented activities varies significantly around Bogd Khan Uul. R19 commented on the need for urban residents to connect with their impressive natural environment: “They are Mongolians and they need to use their Mongolian land. They need fresh air.” Observed and reported visitor activities between 1997-2000 were extensive and included: horse riding, worshipping (at *ovoos* and temples like Manchir Hiid) picnicking, hiking,

Table 11. Tourist camps or resorts at Bogd Khan Uul

<u>Tourism Resort</u>	<u>Location</u>	<u>Type of Facility</u>
AHB Trade Company	Zalaat Valley	Ger camp
Borhan Juulo	Zalaat Valley	Cabin camp
Bumbat Resort/Z.Company	Bumbat Valley	Ger camp
Chinggis Khan Camp	Jargalat Valley	Ger camp
Eshbtrade Camp	Little Zalat Valley	Ger camp
Forest Land Camp	Shajiin Khurkh Valley	Ger camp
Hurhree Camp	Hurhee Valley	Ger camp
Ikh Tangor Guest Hotel	Ikh Tangor Valley	Hotel/diplomatic guest quarters
Khor/Mongol Explore	Shajiin Khurkh Valley	Ger camp
Manchir Tour Company	Manchir Hiid Valley	Ger camp
Monnar Tourist Camp	Turgen Valley	Ger camp and children’s camp
Nukht Resort	Nukht Valley	Hotel and ger camp
Osoriin Ochid	South of Chuluut Valley	Children’s camp
Paradox Company	Zalaat Valley	Ger camp
Saran Khat Camp	Torkhurkhyn Valley	Ger camp
Sun Trade Khurkh Camp	Torkhurkhyn Valley	Ger camp
Suun Bogiin	Suun Bogiin Valley	Cabin camp
<u>Source: research field notes and interviews 1999-2000</u>		

vegetation harvesting, paragliding, horse racing, wrestling, fishing, car camping, mountain biking, skiing and sledding. Park trails were used for picnicking and harvesting and R22 supported the current plan for upgrading the historical Zaishan Valley (Ulaanbaatar) to Machir

Hiid (Zunmod) trail for “hiking, horse riding and praying” (MNE 1997: 9).¹⁸⁰

Neither the 1995 *Law on Special Protected Areas*, nor existing management plans provided guidance on recreational activities inside Strictly Protected Areas. R22 suggested that the forthcoming *Law on Ecotourism* might provide future direction. As with the implementation of other laws, rangers remained skeptical because of the lack of funds, equipment or systemic support for them to take initiative.

4.3.5.3 Transparency and tourist camp approvals

Ranger R10 suggested that contracts between tour operators and the Ministry of Nature and Environment needed to include stronger environmental management measures. They considered these to include *ger* camp issues like waste collection, fencing and installation of septic systems. Several informants raised concerns about the legitimacy of the current development approvals process and the impacts of new tourism camps. Referring to one site in particular and associated waste problems, Ranger L suggested that it was, “wrong to give them permission to build up here.” One anonymous private camp operator noted: “one to two years back [i.e. 1997-98]” there were indiscretions with the tendering process for new tourist facilities in the conservation zone of the park (Pers.Comm., Aug. 4, 1999).¹⁸¹ R10 commented that financial favours to high officials influenced land use decisions at the Bogd Khan Uul, and R5, referred to corruption and suggested that individual connections held sway with the Ministry of Nature and Environment in the approvals processes for tour camps.

Ranger L believed that in recent years, ministerial approvals for tourism developments had been influenced by suasion, stating that, “big cheeses bribe and get land,” for tourism resort

development. R17 alluded to the broader influence of special interests in the park and opined: “those who have money will not leave the Bogd Khan Mountain, even if it is a Strictly Protected Area.” One ranger even suggested that the creation of a particular tourist resort was harmful to the park’s ecology. He claimed “this is treated like private property so they will destroy [local ecology].” Ranger O indicated that the current development approvals process consisted of a four-stage contract involving: 1) referral of development proposals to the Ministry; 2) comments from Bogd Khan Uul management; 3) Ministry technical reviews; and 4) approval or rejection by a 7 person ministerial committee.

4.3.5.4 Jurisdictional wrangling

Another issue that a number of rangers raised concerned the allocation of revenues generated from tourist companies leasing land inside the limited use zone. This represented a jurisdictional issue on two fronts. First, it involved frictions between the protected area (central government) and local administrations (Ulaanbaatar and Tov *Aimag* or Province’s government). The central government was responsible for conservation, enforcement and planning, while local governments (Ulaanbaatar City and Tov *Aimag/Zunmod*) retained partial revenue from developments within that portion of the limited use zone of the park that also fell within local jurisdiction. The second issue was that the increasingly lucrative tourism ‘revenue pie’ was split amongst the state (Ministry of Nature and Environment) and Bogd Khan Uul Administration.¹⁸²

4.3.5.5 Stemming tourism impacts

Rangers were asked to indicate their level of support for measures to handle future tourism impacts—seen as the most important future issue at the park by the rangers. These measures are shown in Table 12. While the Park administration hired a tourism specialist in 2000 to address

site issues related to new resort developments, rangers expressed unambiguous support for additional training, a code of conduct to guide resort and visitor behaviour, additional specialist staff, and improved trail systems. Rangers unanimously opposed a moratorium on camp developments inside the park. Creating a special zone in the park for increasingly popular forms of recreation in Mongolia (e.g. cycling, paragliding) was deemed to be acceptable for 56% of the ranger's interviewed. There was strong support for strict enforcement of laws and some supported a potential increase of fees levied on individuals and camps. This issue is discussed in further detail in Chapter 5.

Aside from problems related to water, electricity, garbage and pollution, tourism development was seen as introducing a host of other difficulties. For example, R22 felt that “since the 1990s with western style [non-Soviet] cars,” there had been “easy access to camping and [the] western style of life causes problems,” although he did not elaborate on the latter point. R2 also identified “damage to the land as car numbers increased more erosion on the land.” Road braiding or multi-tracking associated with tourism and livestock monitoring were seen to be problems throughout the conservation zone.¹⁸³ R22 suggested that a code of conduct for tourists was very important, as were special recreational zones for biking or paragliding.¹⁸⁴ R11 suggested that “higher personal standards” in tourism would complement the notion of having a code of conduct¹⁸⁵ for visitors inside the protected area. R12 proposed the “need to communicate, explain and teach [and] learn the history of the mountain or park.”

While rangers did not see local or foreign tourism numbers as a current issue—attributable to the closure of over two thousand summer dwellings inside the park through the early to mid 1990s—the survey identified the need for a transparent, corruption-free approvals

process for developments. In addition they saw the need greater collaboration amongst local governments, assurances that environmental monitoring measures were put in place, a need to review the question of tourism fees (at least for foreign tourists and tour camps), and to ensure adequate training and resources to handle increased foreign visitors.

Table 12. Hypothetical measures to stem Bogd Khan tourism impacts* (n=16)

Rangers supporting measure to...	% in favor	% against	% uncertain
1. Increase tourist entry fees	56%	31%	13%
2. Create recreation/sporting zones	56%	31%	6%
3. Increase tour camp fees	88%	6%	6%
4. A 5-year moratorium on ger camps	--	100%	--
5. Implement tourist training for rangers	100%	--	--
6. Add tourist specialists/staff	100%	--	--
7. Institute a visitor code of conduct	100%	--	--
8. Strictly enforce existing laws	100%	--	--
9. Improve trail systems	100%	--	--

*derived from responses to August 2000 short survey question #10b "To handle the increases in tourism which of the following [measures] should be instituted?" followed by a listing of 9 hypothetical measures.

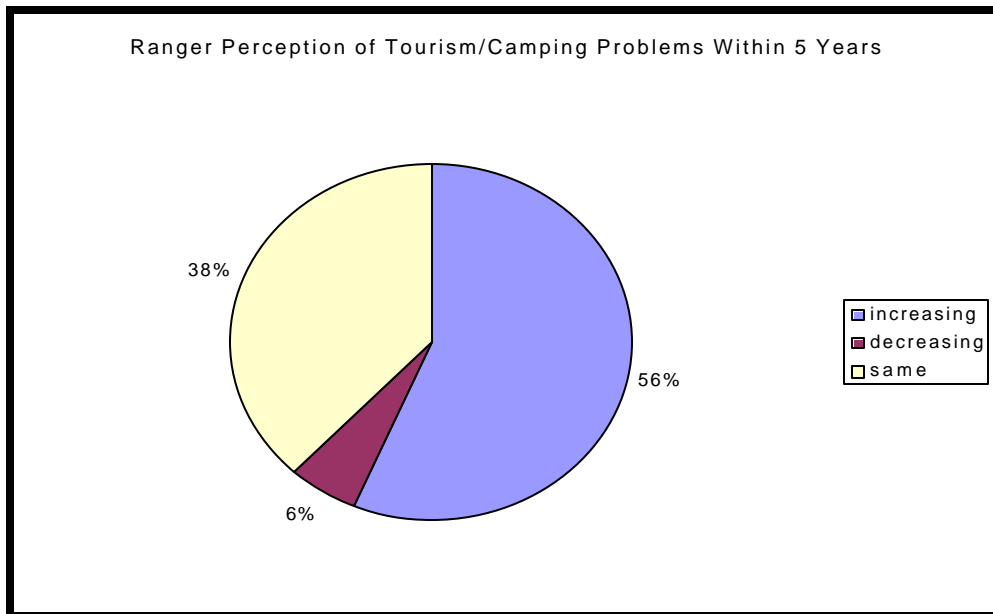
4.3.5.6 Tourism in the future at Bogd Khan Uul

Amongst the site issues surveyed, 56% of the respondents ranked tourism as the issue most likely to increase in numbers as a problem in five years, while 38% of the rangers expected the status quo and only one ranger suggested that numbers would decrease. Chapter 5 will identify possibilities for revenue generation and for intercultural linkages in relation to future tourism at Bogd Khan Uul (Figure 18). If the concerns of commentators on the Mongolian situation are accurate there will be increases in nature-based and ecotourism within this five-year period, likely affecting the Bogd Khan Uul due to its gateway location next to the capital city and transportation hubs.¹⁸⁶ According to R22, "they [the administration] want to increase facilities

[and] tourism will be used as an investment.” He added “one incentive is to establish *ger* [camps] for Mongolians—in limited use zones. To build for families for weekends [so that] they can organize nice tours or trips for tourists.” R10 commented that he expected to have a heavy workload with the future growth in tourist visits.

Tourism merits important consideration, not only for its potential impacts (ecological, social, economic) including frictions between state and local governments, but for its potential to generate revenue and an understanding of Bogd Khan Uul’s unique cultural and ecological beauty.

Figure 18. Trajectory of tourism to 2005



4.4 Material poverty on the periphery of Bogd Khan Uul

“This is a sacred place. But I need to feed my family.”

—Ranger M referring to resident opinions about protection.

“[The] law says how to fine, but people don’t have money...or addresses, or they are wrong. There is nothing I can do.”

—R2’s comments on enforcing regulations and fines

Material poverty¹⁸⁷ has affected nearly every aspect of daily living in Mongolia and evidently people’s livelihoods in communities adjacent to Bogd Khan Uul. It similarly affected rangers and their families who live and work on the periphery of the mountain.¹⁸⁸ Identifying how material poverty affected rangers and residents is critical in targeting how local knowledge of resource management may potentially alleviate this problem.¹⁸⁹

A common issue identified in this study concerns how individual material circumstances led to resource exploitation and in turn to pressures on Bogd Khan Uul’s ecosystems.¹⁹⁰ Comparing the conditions today with the era before the economic collapse, Ranger R10 noted, “the situation and circumstances are totally different. [Everyone] is so concerned with money. People have to live for today.” Ranger R10 suggested that 1 in 5 families “have nothing to do and lack money.” In fact 36% or 870,000 Mongolians, live *below* the monthly poverty line of 14,674 Tugrugs (Tgs).¹⁹¹ This is less than C\$24 per month income (UNDP 2000: 55, 26).¹⁹²

The material poverty of the 1990s is attributable to two key events,¹⁹³ first, the Soviet Union’s collapse and the loss of direct financial and technical aid from this ally (nearly 30% of G.D.P); and second, the application of the extreme market theory of ‘shock therapy’—sanctioned by the keystone international economic organizations¹⁹⁴ and the international

development establishment.¹⁹⁵ This one-two economic punch seriously affected institutions and individuals in Mongolian society during the 1990s.¹⁹⁶ During the same period as this economic malaise rangers were asked to protect the resources of the mountain, however, they increasingly faced the large-scale internal migration of residents and growing material poverty of settled residents adjacent to the park.

Grazing is partly attributable to the rural-urban migration issue. Similarly, material poverty in Ulaanbaatar affected illicit logging and the harvest of *Samar* for supplemental income. Rangers tacitly supported residents' right to harvest and even graze, knowing that most could rarely afford the fines and this penalty would create more difficulty for them. The two sections that follow provide a picture of the material situation of rangers and one community located adjacent to the north slopes of Bogd Khan Uul.

4.4.1 Rangers facing poverty

The results of my survey and discussions with rangers provide an understanding of the systemic impacts of material poverty.

Table 13. Bogd Khan Uul ranger income and family assets* (n=16)

material status indicator	Mean	Median
income (annual)	594,761tgs	360,000tgs
#cattle	5.52	5
#sheep	22.86	70
#goats	6.29	20
#horses	6.95	10

*derived from August 2000 short survey questions #11, 12, 13 respectively: "What is the total estimated annual income for your family from all sources? Besides your work as an employee for Bogd Khan SPA what other income sources does your family have? (please list in order of importance & estimate percentage of total family income in #11); Please describe a little about your family's assets? (as listed in question 13).

Rangers faced many material, work and health stresses. However, steady employment and perks—such as grazing privileges—made their situation good relative to many Mongolians. Most rangers had no electricity, telephone or refrigeration and lived on an average Tgs30,000 per month (1999-2000 wage equivalent to C\$42 a month). Table 13 illustrates the material status of the Bogd Khan rangers.

Rangers found that their wage-income alone could not support their family needs and required being supplemented by raising animals or bartering.¹⁹⁷ All of the rangers surveyed were animal owners and the majority considered the value of their cattle—or at least their market or dairy potential—to have more importance than their monthly wage packet. Ten out of the sixteen rangers suggested that cattle revenues constituted over 70% of their annual total wage income. This indicated the significance of grazing privileges.¹⁹⁸ Most rangers had radios (87.5%); two-thirds owned televisions (75%); three owned motorcycles and only two owned telephones. The rangers resided in small groupings of traditional *gers* (similar to *hot ails*) with a mean of 7.5 or a median of 9.5 family or friends living nearby.¹⁹⁹ Clearly rangers were not only faced with the responsibility of acting as stewards for valleys inside the Strictly Protected Area, but were also responsible for supporting large households, often with sizeable extended families.²⁰⁰

R19 suggested that improved salaries would allow rangers to dedicate more time to their jobs, rather than worrying about grazing livestock to survive. R7 commented that, “if government provided a higher wage and supplies, then work [conditions] will be improved.” In sum, the rangers’ income situation—while centred on steady employment—remained precarious since it relied upon grazing livestock inside the park. This not only kept them away from their

stewardship focus it also created a conflict of interest in that they retained privileges to graze on a public nature reserve, while at the same time had a duty to prevent others from grazing in the park.

4.4.2 Adjacent residents facing poverty: case of Yarmag

The case of the community of Yarmag provides a picture of the socio-economic situation on the periphery of the park. This suburb of Ulaanbaatar—part of the Khan Uul District—is located on the south side of the Tuul River in close proximity to the north slopes of Bogd Khan Uul's forested Nukht, Artsat and Khuush valleys.²⁰¹ Yarmag residents were identified by several rangers as perpetrating resource depletion in several of the northern valleys.²⁰² A questionnaire conducted by the Mongolian Gender Centre (August 2000) surveyed 17 families who used the Lotus Soup Kitchen, asking individuals who ranged in age from 5 to 74 about their personal material, employment and health situation.²⁰³ This study took place concurrent to my fieldwork inside the park and it provided one perspective of life in a community adjacent to Bogd Khan Uul.

The mean monthly income of informants in the Yarmag survey was just under Tgs 25,000.²⁰⁴ One individual, N15 (confidentially identified), was homeless and hoping to find a *ger* for herself and her children. Another young mother N17 was trained as a hairdresser but was not working because of child birthing sickness. Her comments reflected her fears about the health of her children and the difficulty of providing food and finding work. Some mothers brought their families to the soup kitchen twice a day for hot meals. This survey also provided insight into multi-dimensional stressors affecting sizeable ranks of the materially poor in

Ulaanbaatar—most notably the health difficulties of the elderly, children and infants. The health concerns mentioned in the survey included failing kidneys, rickets, anemia, mental stress and environmental diseases.²⁰⁵ Others identified an inability to find work or training *near home* and concerns about opportunities for their young. N10 regularly brought her children and grandchildren to the soup kitchen and shared her fears and aspirations:

I'm [a] woman headed family with 9 children. The oldest one, Selenge, has 2 kids without [a] husband. My life is very hard. I'm very thankful [for] having food [for] my 5 children and 2 grandsons. Also it is good [for] our children's health. It is difficult to live here further cause [sic] our family is very big. This house is my son's. He is in prison [for] 2 years. He will be free from a prison soon after the Mercy Law.

Reducing the burdens upon the pastures and forests of Bogd Khan Uul, in areas near Yarmag, is part of the challenge that ranger's identified. For example, N13c²⁰⁶ commented, "sometimes I go to the mountain in order to bring wood," and N13d stated, "I bring wood in order to help my home." N10d explained that he helped his family, "carry water and bring firewood". Similarly, N4a and N4b both stated that they helped their families with grazing calves and cows.

Perhaps the best hope for overcoming Mongolia's troubling circumstances remains with the youth who are able to retain focus, vision and a sense of optimism despite the difficult circumstances, as exemplified in this 17 year olds' (N13) dream:

I eat [a] hot meal once a day since I'm belonged [sic] the project "Soup Kitchen." But eating is not important, the most important thing is to acquire knowledge, education and profession. So I have firm aspiration[s] [for] learning...but [the] main difficulty is money.

Another older informant, N9, expressed a thirst for knowledge, "I want to know political life and nowadays' situation."²⁰⁷ This optimism and curiosity about the future and the world has

been evident amongst land-locked Mongol citizens throughout the 1990s (UNDP 1997, 1998, 2000).

These glimpses of the situation in one neighbourhood next to Bogd Khan Uul and the ranger's household situation illustrated that neither rangers nor the park's neighbouring residents existed in a vacuum and that both experienced the hardships of material poverty. Additional, profiles of small communities surrounding the mountain would likely reveal similar socio-economic hardships as Yarmag. For instance, Tsergelin, Khonhor and Zunmod, all small centres adjacent to the mountain, suffered from chronically high unemployment and visibly difficult life and material circumstances.

Can local knowledge applications provide answers for adjacent Bogd Khan Uul communities facing serious material poverty? Can such applications provide answers to the network of rangers who simultaneously faced resource threats often from materially poor residents? Chapter 6 proposes several pathways for addressing these crucial, linked issues.

4.5 Local traditions at Bogd Khan Uul

The five resource management issues in the *Site Issues Scan* demonstrated some of the resident rangers' local knowledge of Bogd Khan Uul. Discussions also hinted at a wealth of customs and traditions that have the potential to reduce threats to the mountain's natural and cultural endowment. R2, suggested "it [Bogd Uul] is highly respected—but in the last few years this expectation [of respect for nature protection] has broken down." R10 also noted that when there were no environmental laws "religion used to protect this place."

Others expressed scepticism about the ability of spiritual practises to protect the

mountain's ecosystems.²⁰⁸ For example, R10 said, “the past is the past—today there are 200 plus religions [branches/organizations] and there is no specific religion tied to nature.” Others acknowledged the importance of tradition, if not explicitly, then in the manner in which they recounted stories. Many rangers lived in the customary manner that rural Mongols have for hundreds of years.²⁰⁹ Four specific customs provided a glimpse of complex local knowledge systems at Bogd Khan Uul.

4.5.1 Ovoos and Tsetsee Gun Peak

The ritual of visiting and worshipping Tsetsee Gun Peak (at 2268 metres, the highest point inside Bogd Khan Uul) is linked to the ceremonial worship of *ovoos*, or what is known as ‘offering or sacrificing’ to *ovoos*.²¹⁰ As Chapter 2 noted, the *ovoo* holds high esteem in both Shamanic and Buddhist customs in Mongolia. In Shamanism the *ovoo* represents an interface between heaven, or sky god (*Tangor*), and mother earth (*Utgen*). In Buddhism, elaborate mantra dedications to the core tenants of Buddhist philosophy often fuse with local shamanic belief systems in *ovoo* ceremonies. Additionally, *ovoos* may serve as property or territorial markers indicating pasture or water use privileges (Rosabi 1999: 2).

Physically, *ovoos* are conical sacred rock cairns that evolved in form as stones, sticks or tree branches are added or piled by passers-by. Branches are often covered with multicoloured *Mahayana* prayer flags or the traditional Mongol silk-blue *khadag*.²¹¹ Rosabi (1997: 2) describes the *ovoo* as follows:

...piles of stones, as well as bones of animals, flags, silk scarves, beads, incense and other artefacts, left by travelers as a means of worshipping the spirits of a mountain or other sacred place and of ensuring good fortune during their travels.

Numerous *ovoos* were observed throughout my travels around the park between 1997 and 2000. At Bogd Khan Uul these were located on ridge peaks, on passes between valleys, beside weathered trees of significant size, alongside the Tuul River and creeks. On occasions when I was with Mongolian companions, visits typically involved the custom of selecting three rocks (away from the *ovoo* itself), then circling the *ovoo* in a clockwise direction thrice from the downhill side and placing rocks on the *ovoo* with each rotation.²¹² One *ovoo* dedication ceremony near the Bogd Khan Uul in July 2000, involved volunteers cleaning accumulated debris in the vicinity of the Tasganii *ovoo*, and a rededication by Khambu Lama Chojjams and monks from Ghandan monastery.²¹³

Tsetsee Gun, which also had several *ovoos* near the peak, holds importance as a sacred site for at least three reasons. First, this unusual rock formation is the highest point of land inside the protected area. Second, Shamanic and Buddhist ceremonies continued to be practised at the site. For instance Ranger M noted that, “lamas go up to bless the mountain [and this practice] goes back to original protection for Bogd Khan Uul.” The same ranger noted that women were not allowed to participate in a particular worship ceremony at Tsetsee Gun Peak in Septembers, although R1 suggested that this practice is no longer strictly observed. Third, Tsetsee Gun formerly was the site of three shrines dedicated to Minister Yurendorj the official who affirmed protected status for Bogd Khan Uul in 1778.²¹⁴ Since that time the peak historically featured biannual visits from high state officials at least once every three years.²¹⁵ According to Ranger D the nation’s democratic leaders visited the peak to commemorate the mountain. Ranger R9 indicated that *Nadaam* wrestling champions—considered folk heroes amongst Mongols—once visited the mountain annually. Apparently, the entire Bogd Khan Uul

ranger team visit Tsetsee Gun annually. They do this not only to discuss common concerns and bond, but also to reaffirm the sacred status of the mountain.

4.5.2 Shamanic Ceremonies

Shamanism features dedications or offerings to *ovoos* and *ungod* trees, evident in several locales at Bogd Khan Uul. During the summer solstice in June 1999 ceremonies held at the Bogd Khan's "Bumbat Ikh Ovoo" included a "great sun ritual", a "tree ceremony"²¹⁶ and a "fire ritual". This *Ikh Naran Tahilga* (i.e. summer solstice ceremony), organized by the Discover Mongolia Tourism Network, the Golomt Mongolian Shaman Centre and the Shamanic Research Centre, was held in the Bumbat valley. The literature for the ceremony stated that, "this event is important in reviving the age-old tradition of the Mongols of conserving and worshipping nature, and celebrating the relationship between nature and mankind" (Discover Mongolia: 1999). The organizers of the event indicated that they had serious interest in reviving customs that protect nature, albeit combined with personal stake in a tourism business.²¹⁷ In spite of commercialization, the event also signified the revival of organized shamanism, an unusual phenomena since it had been suppressed during the one-party era (1924-1989).²¹⁸

Adherents of shamanism apparently consider numerous sites within the bounds of Bogd Khan Uul to be sacred places where *lus savdag* (i.e. spirits or lords of nature) reside and may be communicated (or mediated) with. For example, R14 referred to the high number of visits to *ovoos* in his patrol area where many Mongol visitors and some foreign tourists came at least once a year, depending on the astrological calendar date. Ranger M referred to the importance of Chandymyn *ovoo* (used for a Shaman's conference and urban shamans' visits) and *ovoos* in

Khurhree Valley and near Shavart Spring.

4.5.3 Manchir Hiid Monastery and the Ikh Toiroo

The Manchir Hiid or Manjushri Buddhist monastery, located at mid-elevation (1,800 metres) on the south slopes of the park in the Zunmod Valley, had recently undergone reconstruction. The entire complex consisting of 20 temples and housing 350 lamas was destroyed during the 1930s anti-religious purges under Prime Minister Choibalsm (reportedly from 1936-38). Originally constructed between 1733 and 1750, the reconstructed interior is adorned in the Tibetan ‘Yellow-Hat’ or Gelukpa order motifs. A Buddhist fresco graced a nearby granite rock adjacent to the main reconstructed building. The modern museum had photographs of the original temples and several large objects from the original monastery complex remained outside the monastery.²¹⁹ Ranger R1 noted that lamas and pilgrims used to come visit and chant mantras and stop at the nearby ‘holy waters’, including one spring said to cure intestinal disorders and another, eye disorders.²²⁰

Although not associated with the monastery in particular, Manchir Hiid represents one destination for pilgrims undertaking the *Ikh Toiroo* (i.e. big loop), a circumambulation journey by foot around the Bogd Khan Uul massif in order to honour the holy mountain or for giving praise to Buddha. Ranger R5 noted that old people circled the mountain a long time ago, though he felt that this tradition had faded away. With the recent religious freedoms, however, some are apparently undertaking the trip again. For instance, near Zunmod, the mother of one of our horse camp guides affirmed that pilgrims walk around the outer part of Bogd Khan Uul, “taking almost seven days” (Pers.Comm., Songra, July 20, 2000). This pilgrimage had historically been

a custom of the ‘Red Hat’ (Sagyapa Order) lamas, considered nomadic monks of sorts who apparently regularly circled the mountain undertaking pilgrimages before the 1930s.²²¹

R8 also noted that ‘Yellow-Hat’ (Gelukpa Order) lamas from Ulaanbaatar’s Ghandan Monastery visited his patrol area to procure several medicinal herbs and “from April to June the ‘Red-Hat’ (Sagyapa Order) lamas started walking around the mountain.” He added that pilgrims began from Zaishan (Manchir Hiid) and took up to one week to circle the mountain, including a stopover at Ulaanbaatar’s Ghandan monastery. He described how along the way people “worshipped *ovoos* and created new *ovoos*.” R2 suggested that, “just before becoming a lama they [monks] did a challenge—they take a small tent and go camping,” presumably while circumambulating the mountain. He added, “simple people who are devoted, they walk around [the mountain].”

4.5.4 Stories, Songs, Sutras

Informants made reference to a number of distinct stories and songs like, “Praising of Bogd.” Sutras (i.e. chanted religious scripts) directly referred to specific sites and legends about the Bogd Khan Uul. These also reinforced the importance of protecting this space. One ranger, who also happened to be a professional singer, sang a song that included allusions to elements in the Mongolian natural environment, including to the beauty of the Bogd Khan Uul. Ranger R20 made reference to a famous epic song known as, “Bogd Dunjngarav [or Dumjvgarav] Praising Song”. Another informant, a Mongol radio personality, indicated that he made a program featuring traditional Mongol songs for the horse head fiddle based upon a 1983 epic poem entitled, “In praise of Bogd Khan.” One of the translators (Erdene-Arjune) referred to a storybook used in his school days (pre-1989) that recounted traditional tales about Bogd Khan

Uul.

The combination of religion—mostly Lamaist Buddhism and Shamanism—as well as the status of the mountain as a sacred place has spawned many stories, some of which appear to embed codes of conduct and localized ecological knowledge. Others are folk tales apparently woven into popular Mongol myths and legends. R12 commented that, “the power of spirituality affects the human brain more directly [than regulations]. That’s why people are afraid that they will get punishment like being killed by lightening.” A tour camp operator spoke of a number of Mongol traditions of nature protection that appear to have been dropped over time, but that remained in the memory of elders.

R10 made reference to a Mongolian Gelukpa order sutra read exclusively by the Dashchoilin Temple Lama (Hamba Lama Dumjav [or Dunjav]) in dedication to the Bogd Khan Uul. This is apparently read at *ovoo* dedication ceremonies once every two years in the spring and autumn. Sutras are influential in encouraging people to make connections with natural systems and for instilling a code of conduct towards nature amongst all generations.

Also noteworthy is the legend of *Garuda*, apparently also referred to as the *Hangaard*, the spirit bird symbol or protector god of Bogd Khan Uul (also the symbol for the modern protected area logo). The *Garuda* spirit legend combines indigenous shamanic worship of the sky, the four directions and the four holy mountains surrounding Ulaanbaatar, including the Bogd Khan Uul. This particular story fuses Tibetan Buddhist traditions²²² with elements of shamanic belief systems.²²³

While on a fieldtrip to Tsetsee Gun rangers also referred to different manifestations of *luvs savdag*. At Bogd Khan Uul one of these manifestations of *savdag* was said to appear as an

old man wearing a white *del* (Mongol long coat) and riding a white horse (Pers.Comm. R1 and Ranger O, 2000). In a cautionary tale, R8 alluded to “stories that the forests, if they were cut, would result in a curse.” He later referred to the fact that the park had been legally protected for at least 300 years, but did not directly attribute this to fear of such a curse amongst nearby residents. Lamas formerly protected the park (under the auspices of the 8th Bogd Khan Gegeen or Jebtsun Damba Hutagt) as noted in the historical analysis previously in this chapter. The penalties for poaching or forest removal in this period (1800s-1920s) appeared to be brutal. This along with the reported death penalty for harming wildlife inside the park, reported by early travelers, likely served to create a fear-based deterrent for trespass previous to the 1930s.

While pilgrims, lamas and nature worshippers circumambulated the mountain, visited temples, or took trails through the forests or to the peaks of the sacred mountain, some historically came to seek solace in *agui* (caves). R12 indicated that there was a cave where lamas would regularly come to meditate. R10 also alluded to the story of two Yellow Hat lamas who visited Bogd Khan Uul in order to enjoy the serenity and enter deep meditative states. “They used to communicate with each other and argue about stories—they could hear each other speaking,” he reported.

It appeared that even the geography of the mountain was identified in a ritualized manner. Valleys and watercourses were, “in old times,” described in a reverential manner: “108 valleys”, “88 watercourses and springs”, and “8 blessed valleys”, according to R10.²²⁴ The same ranger also suggested that in old times one could see the “88 watercourses”, but this was no longer possible due to a lack of water in streams and creeks. R21 noted how, “everything [resources] were evenly spread or distributed at Bogd Khan Uul—streams, pine nuts, forests,

etc.” and how this was considered, “a good omen.” R20 made reference to a particular location as: “blessed by 21 Taras” or Boddhisatvas,²²⁵ enlightened beings that provide the gift of infinite compassion. The same ranger also identified a specific valley as being one—of likely many in Mongolia—locations of Chinggis Khan’s mobile encampments. He indicated that apparently Chinggis asked that people bless the mountain during the time of his rule in the 13th century.

The Shajin Khurkh Valley (i.e. valley of the spiritual or power gathering) at Bogd Khan Uul may have symbolic significance in Mongolia’s fledgling democracy. According to R5, in the 19th century there were “gatherings with chanting and the big religious leaders [would] come together to discuss what would be happening next year.” The same ranger indicated that the Eighth Bogd Khan lived in this valley during the summer. Ranger R6, referred to the same valley and suggested that gatherings were “government meetings every few years,” held almost 200 years ago. Ranger G alluded to the Khurak²²⁶ as a state gathering site inside the Bogd Khan Uul, and explained that, “all Mongolian state ministries gathered here discussing policies in this valley.” The situation of different forces in Khurak vying for importance in Mongolia several hundred years ago, is not dissimilar to modern rivalries in this fledgling democracy. Perhaps this 200-year-old approach to gathering different interests provides one vision for designing a contemporary multi-stakeholder or co-management process for the protected area, as proposed in Chapter 5.

The River Tuul is colloquially referred to as “Mother Tuul” and “*Khattan*” (Queen), while the mountain Bogd was referred to as a “*Khan*” (King). R10 related a short tale in which Queen River Tuul wrapped around and protected the King Bogd Mountain like a *hook khatag* (i.e. blue silk scarf/sachet). This metaphor aptly described the geography of the winding, braided

course of the River Tuul in relation to the north part of the Bogd Khan Uul massif.

Ranger, R12, noted that many people held a great deal of respect for the mountain. To touch the mountain was considered akin to touching a king's head, he said. R10 alluded to a story that in the 1920s near Ulaanbaatar was "one rock with a Tibetan mantra written on it; this used to reflect to the Tuul River and that is why the river is purified. The colours of the writing [on the mantra] were white, pink and blue." Through the waters of the Tuul are currently far from pure, this vision of a clear flowing river has not been lost. Clearly local traditions and legends can build a sense of shared understanding, vision and pride in the mountain. A sense of common purpose and pride appear as critical conditions in addressing the 1990s socio-economic hardships facing communities on the edge of the park. Chapters 5 and 6 elaborate several pathways for how to work towards resolving these dual economic and ecological hardships.

4.6 Synopsis of Site Issues at Bogd Khan Uul

The ABC Overview and Site Issues Scan in this chapter provided an overview of the key issues facing Bogd Khan Uul and the resource management threats to the year 2005. Table 14 synthesizes the key concerns expressed in survey findings and informant commentaries. The chapters that follow identify how local knowledge might serve as a remedy for these problems, particularly, where cross cutting or associated resource management issues are evident.

Table 14. Synopsis of key findings from Site Issues Scan

SITE ISSUE	FINDINGS
SAMAR (pine nuts)	<ul style="list-style-type: none"> → top-ranked issues by rangers - harvest peak in mid-late summer - peak biannual harvest proximate to UB - raises issues of poverty and trespass/enforcement
LOGGING	<ul style="list-style-type: none"> → among the top three ranger-ranked issues -illicit logging primarily over winter for fuel -key logging hotspots near Ulaanbaatar -raises issues of poverty and deforestation -issue of respect for sacred space
GRAZING	<ul style="list-style-type: none"> → among the top three ranger-ranked issues at BKU -pressures since 1989-90 on park's outer zone -grazing hotspots include settled areas/movement corridors -ranger grazing privilege a stewardship and a poverty issue
BERRY HARVEST	<ul style="list-style-type: none"> → ranked a minor current and future issue at BKU -access for personal uses remains a seasonal issue confined to highly visited forest areas -indicative of a breadth of knowledge of plant diversity and traditional local uses
TOURISM	<ul style="list-style-type: none"> → seen as future threats by rangers in the park's 'limited use zone' -concerns about corrupt development approvals process and camp site pressures identified -interest in training, codes of conduct improving approvals and site management
MATERIAL POVERTY	<ul style="list-style-type: none"> → material poverty significantly affected ranger's and adjacent residents daily lives -influences frontline enforcement approach -limits range of management choices and shapes organizational outlooks and planning
LOCAL TRADITIONS	<ul style="list-style-type: none"> → respect is manifested in stories, songs, sutras and revived customs and codes of conduct -e.g. ovoos at Tsetsee Gun, passes, forests, rivers, etc. -e.g. shamanic ceremonies and practises -e.g. Manchir Hiid restoration and Ikh Toiroo

Chapter Five

Recommended pathways: Prioritizing local knowledge at Bogd Khan Uul

“It is not ethical to walk away, or simply carry out projects which describe what is already known.” —Susan Tuhuwai-Smith (1998: 147)

The applications presented in this chapter respond to the deep sense of frustration that Bogd Khan rangers expressed in addressing resource threats at the mountain. The *Site Issues Scan* found that current resource problems—excessive vegetation harvesting, illicit logging, high impact tourism developments and overgrazing—would remain or even worsen as difficulties at the mountain during the next five years.²²⁷ To respond to informants’ trepidation this chapter will outline two pathways and 21 knowledge applications (5.1 Recommended Pathways). This chapter’s *Institutional Obstacles and Capacities Analysis* (IOCA 5.2) assesses four issues that hindered the uptake of local knowledge at Bogd Khan Uul. Finally, the *Institutional Capacities Analysis* (ICA 5.3) evaluates the capacity of four institutional clusters—state, market, civil society and multilateral organizations—for implementing local knowledge applications.

5.1 Pathways for future consideration

Based on the comparative findings in this case study’s *Site Issues Scan* and *A-B-C Overview* two integral questions²²⁸ arose: (1) how can material poverty in the communities adjacent to Bogd Khan Uul be addressed? And (2) how can the notion of ‘pride of place’ plant the seeds of transformation and restoration at the mountain? These two action-research questions serve as the

basis for the sections that follow.

5.1.1 Material poverty: a common thread and threat

Material poverty is a cross cutting issue underlying resource degradation threats at the Bogd Khan Uul. This issue indiscriminately affects adjacent residents, park rangers, and neighbouring communities. In addition, poverty affects the priorities of organizations and shape management and enforcement priorities. Since Bogd Khan Uul is adjacent to a large and growing urban population, the issue of material poverty must be viewed in tandem with the reality in those communities on the park's periphery.

The findings highlighted the difficulty of forming a long-term vision for park management when material poverty influenced daily life and work. The Yarmag soup kitchen study²²⁹ illustrated material poverty's impacts on residents surrounding Bogd Khan Uul. Four concluding points about material poverty, derived from both primary and secondary findings, are as follows:

- a. Material poverty significantly affects ranger's daily lives. My findings and observations—particularly as reflected in the words of the rangers—and survey of the rangers' family situation, physical and emotional health, their relationships with nearby *hot ails* and communities; including their outlook for change over the next five years illustrated this contention;²³⁰
- b. Material poverty affects frontline enforcement. The enforcement challenge overwhelms rangers. Rangers attribute resident's economic hardships as causal in the excessive extraction of mountain resources, specifically, illicit logging, overgrazing, vegetation losses and *Samar* collections throughout the limited use zone of the park, particularly on the north slopes and valleys next to Ulaanbaatar's large and growing population. At worst, the situation is manifest in verbal or physical conflicts between residents who use Bogd Khan Uul to supplement already meagre incomes;²³¹
- c. Material poverty limits the range of management choices at the park. Pressures to designate and develop land for tourism the lack of basic equipment for rangers (winter

clothing, telephones or transport) and insufficient pay due to state and administrative budget limitations prompted many rangers to express cynicism about the choices available to them. In spite of the difficult circumstances, some findings provide hope for the future—these serve as the basis for this chapter’s local knowledge applications.

d. Material poverty shapes the outlook of organizations. Economic status can affect risk-taking behaviour in the workplace like speaking-out about corruption,²³² or introducing innovations, co-operating with other organizations and attempting new approaches to working with the public. There appear to be few organizational incentives for rangers or administrators to promote change when there is a precarious employment, material situation and adverse macroeconomic climate.

a. Recommended Pathway:

That Bogd Khan Uul stakeholders actively work to alleviate material poverty in adjacent communities.

Overcoming material poverty in Mongolia is a task that is currently being addressed in hundreds of distinct actions by the Mongol state, civil society and foreign state-to-state agencies. These organizations’ experiences provide valuable lessons about ways to meet basic needs including children’s and youth’s needs, food security, housing, meaningful employment and education, including links to ecological and economic objectives. The work of Buffer Zone Councils at existing protected areas and several projects inside and on the periphery of national parks also provide examples of multiple foci projects that protect nature, while supporting micro-enterprise and social services on the periphery of protected areas.²³³ The 21 applications found in this chapter are linked to the goal of actively working towards alleviating material poverty in the communities next to the Bogd Khan Uul Strictly Protected Area.

5.1.2 Pride of Place: A key for cultural site and ecosystems restoration

In spite of a negative outlook about equipment, the financial difficulties affecting their jobs and the fate of fellow neighbors, rangers expressed considerable pride in the history of the mountain and its natural and cultural endowments. Examples of informants, who when asked about Bogd Khan Uul, expressed a ‘pride of place’ included the former environment minister of Mongolia, a herder interviewed during the pilot survey in 1999, a former Buddhist monk at the Ghandan monastery, an ex-Mongolian official with the United Nations, the five translators who helped with this research, and a tour camp operator who just opened a *ger* camp along the Tuul River. Informants also shared stories about the natural and cultural significance of the Bogd Khan Uul, as demonstrated in Chapter 4. The findings provided a glimpse of the wealth of knowledge associated with the mountain’s ecological and cultural endowments. Regarding this local sense of pride three conclusions were drawn:

A. Many express respect for Bogd Khan Uul. Despite cynicism about economic hardships, respondents showed respect for the mountain in words and actions. These include the revived customs of *ovoos* worship, mountain circumambulation, pilgrimages to Manjir Hiid Monastery, and demarcation of sacred trees, mountain passes, springs and other sites.

B. Critical knowledge of resource management is highly localized. Bogd Khan ranger’s demonstrated an intimate technical, experiential and shared collective knowledge of their home valleys. Rangers, tourist operators and adjacent residents have a strong place-based knowledge, partly because many move on foot or horseback, and because they reside near or at valley ranger stations.

C. Spiritual practices are resurgent at Bogd Khan Uul. Buddhist and Shamanist practices link place and nature within a deeper Mongol cosmology.²³⁴ These traditions are equipped with codes of conduct that complement modern nature protection, respect for *ovoos*, sacred trees, pilgrims’ routes and the restoration of monasteries, forests, watersheds and so forth.

B. Recommended Pathway:

That stakeholders focus on common pride for Bogd Khan Uul as a means to maintaining protection and initiating restoration of ecosystems and cultural sites.

The expressed sense of pride in the Bogd Khan Uul's history, natural beauty and sacred sites was a common link expressed by rangers, residents, administrators, civil servants, spiritual practitioners, tour/camp operators and civil society informants during the study. This shared pride has strong potential for transformative acts that can rejuvenate the park's most troubled ecosystems. Shared acts can also serve as vehicles for developing long-term demonstration projects that dovetail with ecological and cultural restoration objectives. Several applications are described in the next sections.

5.2 Institutional Obstacles Analysis

Bogd Khan Uul Strictly Protected Area. It is very forbidden to pollute the following: soil, water, air, or plough the land, dig the land, take gravel and sand, logging and bring dogs and guns...
 –sign posted outside the Bag Tenger Valley: 2000.

To kick-start local knowledge applications at Bogd Khan Uul, informants were asked to assess key obstacles associated with equipment, enforcement, revenue, and community relations. These issues brought-out deeply embedded concerns about current management practices.²³⁵ The rangers' assessment of these four key obstacles shape the 21 recommendations found throughout the remainder of the chapter.

5.2.1 Overcoming equipment obstacles

Rangers broadly supported initiatives that would assist them in doing their jobs better.²³⁶ Equipment issues arose throughout the study, underlining widespread discontent about current working conditions.²³⁷ Rangers consistently stated that they lacked sufficient equipment to do their jobs properly, even rain or snow gear and uniforms,²³⁸ according to R5 and R7. Ranger R2 attributed these difficulties to poor overall “social standards,” an issue discussed further in this chapter.

Table 15 summarizes equipment priorities that rangers believed would assist them in their daily work. By far the most significant number—three fourths of those interviewed—indicated that acquiring basic telephony amongst the ranger network should be the highest priority.²³⁹ Mongolia’s former Minister of Nature and Environment identified the need for, “a communication network for the inspectors [rangers].” He cited the frequent fire problem as an example of why an improved communications network was critical at Bogd Khan Uul. The manager of the park also ranked the establishment of a communication system as “the first priority” (Pers.Comm.Chinzoring, Aug.27, 2000).

Another equipment priority expressed was the need for vehicles or patrol horses for use in monitoring the presence of fire in valleys, patrolling for resource exploitation and handling emergencies.²⁴⁰ R19’s suggestion of a “rapid response or fire brigade” complemented R15’s calls for firefighting equipment and basic supplies such as flame retardant, sand, axes and hooks (for moving wood).

Table 15. Equipment gaps reported by Bogd Khan Uul rangers* (n=16)

equipment gap	weighted (rank) score**	average(rank) score***
telephone/mobile phone	44 (1)	1.24 (1)
patrol horse	21 (2)	2.88 (3)
vehicle	18 (3)	2.20 (2)
guns	18 (3)	3.19 (4)
radio communications	10 (4)	4.60 (6)
uniform	4 (5)	4.33 (5)
education posters/pamphlets	2 (6)	4.63 (7)

*derived from August 2000 short survey question #8 "If you had the choice—which would you recommend as your most important equipment purchase for your work? Please rank in order from 1 to 7 with 1 as the most important and 7 as the least important listing included: radio, mobile telephone, guns, binoculars, education posters, horse, other.
**weighted rank scores are derived by assigning a weighting factor of 3 to #1 rankings, 2 to #2 rankings and 1 or parity to #3 percentile rankings. The aggregate of the three percentiles (#1,#2,#3) for each site problem equates to the rank score total values. Only the top three scores are weighted. This measure emphasizes magnitude of ranking while the impact of non-responses or multiple rankings for the same issue is reduced. The higher the total score the greater the rank of importance the issue represents.
***average rank scores are derived from the statistical mean for a given issue. The closer the response is to 1 the greater the rank of importance the issue represents.

The Bogd Khan Uul Administration lacked basic office and field equipment.²⁴¹ To illustrate the effect of the budget difficulties, at one point during my research the Ulaanbaatar office was unable to cover its telephone bill and the services were temporarily disconnected.²⁴² The five Ulaanbaatar staff shared cramped quarters and used an outdated vehicle to visit the ranger team, conduct inspections and handle emergencies. In sum, due to the limits of funds within the state, the rangers lacked basic equipment—particularly for communications and transportation to do their day-to-day work. Similarly the Ulaanbaatar administration lacked the ability to support the rangers.

APPLICATION 1 — develop a communications network amongst rangers and the Ulaanbaatar office (with other stakeholders) for emergency support, joint patrols and ecological monitoring.

5.2.2 Overcoming obstacles to enforcement

A crucial obstacle to employing local knowledge in the park is the manner in which

enforcement is handled. Surveys and discussions with rangers revealed one group whose attitude towards enforcement included toughening policing in a quasi-military manner. This included the use of guns and perimeter fencing as means to reducing threats to the protected area (*I refer to this group as 'hawks'*). Another group of rangers preferred education or engagement with the community as a means to solving current problems (*I use the term 'doves'*).

The motivations behind the hawkish approach appeared to stem from Mongolia's authoritarian past, where laws and nature protection were apparently more respected by the public at large. 'Hawks' were strongly influenced by a near siege mentality that viewed all valleys and most resources in the park as being under threat. A factor influencing 'the doves' was the 1990s spike in material poverty affecting citizens and institutions alike. The doves were realistic in recognizing that resource threats would not abate until root issues—like poverty on the periphery of the park—were addressed.²⁴³ Many doves and hawks empathized with their countrymen's inability to pay steep fines. R14, a hawk, suggested that in addition to uniforms, that handcuffs and special arms (guns), boots, etc. were needed.²⁴⁴ The Park Manager and R9 emphasized the need for fences to limit the impacts of urban residents and grazers. While some rangers argued for fences in order to protect wildlife inside the park and limit human and grazing trespass, others expressed concerns about fences for the very fact that these conflicted with traditional Mongolian values about the need for open access to the resources of nature, not to mention their impact on wildlife mobility.²⁴⁵

Ranger M identified peer pressures from being a member of a *hot-ail* and from the neighboring adjacent communities. R22 even warned that rangers needed protection to avoid being attacked. Both during and previous to my fieldwork, physical assaults and acts of violence

against rangers in Bogd Khan Uul and other Mongolian protected areas had been reported. One informant attributed the death of his son Batbayar to poachers while he was on ranger patrol in 1991 (Pers.Comm. Kharhorin Myagmar, July 23, 2000). I was made aware of two incidents of violence involving *Samar* harvesters during Summer 2000 fieldwork. One apparently was a physical attack on ranger Darma and another reportedly was a physical assault on ranger Batsaikhan.²⁴⁶

Despite the apparent interest in arming rangers amongst some Ministry of Nature and Environment officials, guns clearly did not rank as a top priority of the frontline rangers as Table 15 illustrated. While rangers' nervousness about increased incidence of violence, made them amenable to quasi-military options, many still worked comfortably with adjacent residents. I argue that the quasi-military pathway would be a mistake for at least five reasons: (1) it could lead to more lethal outcomes due to an asymmetry of power; (2) it would be more costly and necessitate longer-run capital costs than alternative approaches; (3) it would increasingly enclose and secure the protected area as a restricted nature reserve, and would eventually create a security force increasingly separated from the community at large; (4) fencing could have uncertain and potentially irreversible impacts on biotic corridors and movements; (5) the option would forgo involvement of community stakeholders in future governance in favor of fortifying the park's perimeter. Clearly, alternatives that **build reciprocal respect** between rangers and community are needed instead of divisive measures.

Rangers also ranked five hypothetical enforcement paths that could address resource management and safety threats. Responses are summarized in Table 16. While no path was clearly favoured, rangers leaned towards supporting improved existing enforcement

mechanisms—such as strengthening the Ulaanbaatar-based management team, improving the existing agreements with police²⁴⁷—before implementing entirely new approaches.²⁴⁸ A dejected R15 commented that both management and rangers “have tried all the ways [enforcement paths] but [had] no success.” He argued that patrolling takes “lots of energy or time,” since people come at night for logs. In discussion about enforcement and policing, R9 suggested that rangers were bound by the current regulations. He instead argued: “the whole system should be changed.”

Table 16. Hypothetical enforcement pathways* (n=16)

Enforcement pathway	weighted (rank) score**	average(rank) score***
increased UB-based managers patrol	31 (1)	1.79 (3)
increased local police role	28 (2)	1.85 (4)
co-op patrols with existing rangers	19 (3)	2.54 (5)
local community volunteer patrols	10 (4)	1.50 (2)
new mobile/roving ranger force	7 (5)	1.25 (1)

*derived from August 2000 short survey question #9 “Which of the following power/authority to control poaching, logging and other illegal activities makes the most sense to you? Choose THREE ONLY and rank these from 1 to 3, with 1 being the most important and 3 the least important (listing as above enforcement paths).
 **weighted rank scores are derived by assigning a weighting factor of 3 to #1 rankings, 2 to #2 rankings and 1 or parity to #3 percentile rankings. The aggregate of the three percentiles (#1,#2,#3) for each site problem equates to the rank score total values. Only the top three scores are weighted. This measure emphasizes magnitude of ranking while the impact of non-responses or multiple rankings for the same issue is reduced. The higher the total score the greater the rank of importance the issue represents.
 ***average rank scores are derived from the statistical mean for a given issue. The closer the response is to 1 the greater the rank of importance the issue represents.

Both R17 and R20 made reference to the large territory for which they were responsible.²⁴⁹ R17 patrolled a 600 hectare-sized area and R20 claimed he was unable to consistently patrol his large territory.²⁵⁰ Several rangers identified the distances from their home postings to the nearest police stations as being at least 10 to 25 kilometres away (R19, R9, R8, R20). This distance made co-operative and emergency responses impractical, particularly since most rangers lacked

vehicles or communications equipment. R12 worked with the local police, but added that access to their services “depended on who you are; this is Mongolia,” underlying the importance of funds and connections. Both the Park Manager and R9 commented on their ongoing efforts to increase the involvement of the local police in resource management. In addition, many rangers expressed a lack of clarity and even outright frustration about how to go about their duties while the park was under threat from adjacent residents on many resource fronts (logging, grazing, etc.).

In sum, in spite of a lack of consensus on the approach to enforcement, many rangers requested greater third party assistance to support their enforcement work, whether from Ulaanbaatar, or with the aid of existing police forces.

APPLICATION 2 — Develop long-term enforcement alternatives that focus on building reciprocal respect between rangers and adjacent communities before considering costly quasi-military approaches that potentially diminish community relations.

APPLICATION 3 — Support short-term ranger enforcement needs by providing personnel and communication assistance from Ulaanbaatar (Administration); improving local police partnership agreements and establishing co-operative ranger patrols at ecological ‘hotspots’.

5.2.3 Overcoming obstacles to revenue generation

The combined state and economic crisis in Mongolia has contributed to the budgetary woes of the Bogd Khan Uul Administration. Aside from the spike in material poverty of adjacent residents this financial crisis puts stresses on the five ‘Administration’ staff and 21 rangers who protect the 41,651 hectare-sized site. The 1999-2000 operations and staffing budget for the entire park was 17 million tugrugs or approximately C\$24,000 (Pers.Comm, Chinzorig, Aug.23,

2000).²⁵¹

Part of the financial difficulties were that the Bogd Khan Uul Administration could not draw from third party revenue (e.g. foundation grants) or tourist camp fees without intervention from the Ministry of Nature and Environment. Thus, funding for sponsored restoration projects and local *ger* camp fees did not go directly to the park (Pers.Comm.Chizorig, Aug.27, 2000).²⁵² Without clear revenue sharing agreements that support local autonomy for the park, disputes between the local administration and the ministry were bound to arise.²⁵³ Ultimately the natural and cultural endowment of Bogd Khan Uul was forgotten in turf wars over revenue.

5.2.3.1 Are fees a realistic option?

In Mongolia there have been debates about increasing entry fees for tourism inside protected areas.²⁵⁴ One survey question asked whether hypothetical fees or licenses for resource use and tourism/vehicle fee increases would be effective at Bogd Khan Uul.²⁵⁵ Table 17 summarizes rangers' views on implementing fees or increases in fees associated with: *Samar*, berries, grazing, tourism, and vehicles.

With the exception of fees for *Samar* harvesting, the survey found a high degree of uncertainty amongst the frontline staff, underlining the need for exercising caution before considering new fees or hiking existing fees.²⁵⁶ As many rangers' comments indicated, fees or licenses may increase the existing administrative burden as well as community-relations difficulties.

Table 17. Rangers perceptions of new fees or fee increases* (n=16)

	-----acceptable-----	-----unacceptable/undecided**--
Samar (pine nuts)	81.25%	18.75%
Cars (Int'l) increase	81.25%	18.75%
Berries	68.75%	31.25%
Tourists (Int'l) increase	43.75%	56.25%***
Tourists (Mgl) increase	43.75%	56.25%***
Grazers	43.75%	56.25%
Cars (Mgl) increase	31.25%	68.75%

*derived from August 2000 short survey question #10a "If there was more control (fencing or police) what would be an appropriate fee/license or tax for the following over the next five years (state an amount in tugrugs for a one time only fee) including the question, "is a fee appropriate, YES or NO?" (pine nuts/KG; berries/KG; tourism; vehicle; other fees). Fees in place at the time of fieldwork were as follows: international tourists 1000tgs/person; domestic tourists 100tgs/person; domestic or international tourist/diplomatic vehicles 300tgs/car;

**inappropriate and uncertain responses were combined in this column, because of the wide variance in those expressing uncertainty (at least three issues had 'undecided' ratings over 50%) interpreted as either disapproval or the fact that they did not want to completely rule out the option;

***in several cases within the uncertain responses informants felt fees ought to remain the same as present rates.

Rangers who might consider the use of fees were asked to estimate possible amounts (in Mongolian tugrugs/Tgs per unit) that users or harvesters might be willing to pay. Table 18 cites these 'willingness to pay' estimates, including possible fee increase amounts. Ranger R12, who tentatively supported fees, commented that "as a way of stopping people from going-up [the mountain]," some may work since "people have money" from sales of berries and nuts.²⁵⁷ While R14 supported some fees, he felt there ultimately "needed [to be] more management assistants and vehicles and equipment." Others felt that fees might bring much needed revenue to the park. The Park Manager suggested that *ger* camps might take on additional responsibilities for patrols and cost sharing of park needs in their respective valleys.²⁵⁸

Table 18. Ranger estimates for willingness to pay fees* (*n varies*)

	Estimated fees	Mean	Median
Samar	Tgs/Kg	309	475
Cars (Int'l)	Tgs/vehicle	1495	2000**
Tourists (Int'l)	Tgs/person	1047	1500**
Berries	Tgs/kg	245	425
Tourists (Mgl)	Tgs/person	176	500**
Grazers	Tgs/animal	78	250
Cars (Mgl)***	Tgs/vehicle	152	800**

*derived from August 2000 short survey question #10a "If there was more control (fencing or police) what would be an appropriate fee/license or tax for the following over the next five years (state an amount in tugrugs for a one time use only fee). Included the question, "is a fee appropriate, YES or NO?" (pine nuts/KG; berries/KG; tourism; vehicle; other fees);
**fees in place at the time of fieldwork were as follows: international tourists 1000tgs/person; domestic tourists 100tgs/person; domestic or international tourist/diplomatic vehicles 300tgs/vehicle.

5.2.3.2 Concerns about fees

In spite of their willingness to provide estimates,²⁵⁹ many rangers expressed concerns about fees. R15, who was highly critical of fees, opined: "more damage will come" from a fee-based system. He suggested that since it is "already against the law" to pick, harvest, graze, etc.; that existing laws constituted a sufficient deterrent to resource extraction. Other rangers noted how there were legal tools in place, and instead they identified their equipment and educational priorities. These laws included steep fines upwards of 250,000 tugrugs (C\$403) and 10-50,000 tugrugs (C\$16-80) for organizations and individuals respectively who are involved with poaching or illegal resource extraction. R5 felt that "fees were not appropriate," as a means of protection and suggested that [it was] "most important to put something in the brain; to educate from childhood," referring to community-based approaches.

Ranger R7 suggested that fees "depended on the social [material] status of the people," and that instituting fees, "needed more examination to set a price." Similarly R20 commented: "its lots of work to calculate the price of pine nuts," and that fees must be "well thought out."

R17 was also critical of fees and suggested new fees may condone activities currently deemed illegal (such as increased vegetation harvests) inside other zones of the park and have the “possibility of [creating] other problems.” R13 believed fees were “not a good idea [since] they will think [resources] are for profit.” R9 questioned: “what good is it to get them to pay [fees]? I’m the one who suffers,” referring to the additional workload if fees were instituted.

Rangers expressed apprehensions about enforcing the current regulations. R8 reflected: “if a new law exists, it lasts for three days—first day it is enforced, second day so, so [sic]...third day it is not at all [enforced].” R2 commented that “we just obey what the law says,” characterizing a lack of autonomy within the ranger team. R8 noted a conflict with traditional notions of land use. His comments were similar to those of R9 who suggested: “Mongolians have a nomadic mentality so they don’t want to pay [fines or fees].”²⁶⁰ In a sense fees for land uses (like grazing and harvesting) were expected to be a point of contention with herders’ nomadic practices and even their worldviews.²⁶¹ This issue illustrated the broader debate underway about how to manage land in Mongolia since the advent of the market economy in the 1990s.²⁶²

Questions about fees also raised issues about jurisdictional control over revenues generated from tourism (visitors and camps). Ranger R1 commented that there was, “always miscommunications,” between the Bogd Khan Uul Administration and local governments (Tov and Ulaanbaatar). In this regard R22 proposed that the park’s administration should capture a greater proportion of current entry fees and earmark these directly for uses in the protected area.

5.2.3.3 Protected area trust funds

One revenue generation possibility is the use of a locally managed interest-bearing investment

fund, like the *Tahkilga Fund*.²⁶³ This type of non-profit entity is capable of pooling revenue and targeting seed capital, grants, loans or equity investments focused towards cultural and ecological restoration projects. Biodiversity investment funds have the potential to source domestic and foreign support for initiatives and projects specifically at the Bogd Khan Uul.²⁶⁴ Barriers to implementing such funds include: the need for seed capital; the importance of ongoing funding support; democratic governance and transparent organizational structure and long-term financial management; along with uniting fund managers and target recipients in such a way so as to avoid turf protection or overzealous micro-management from Administration or Ministry of Nature and Environment officials.

5.2.3.4 Other revenue generation approaches

The apparent prestige associated with the UNESCO Biosphere Reserve designation may also heighten international visibility, which potentially could aid in attracting technical and financial support for research, ecological and cultural restoration projects.²⁶⁵ Funds may also be generated from future tourist visits to *ger* camps, hostels; or from guide or eco-restoration and ecological monitoring services joint-ventured by the park, a co-management entity or a cooperative enterprise.²⁶⁶ Biodiversity projects in Mongolia and elsewhere demonstrated the need to develop projects that involve local stakeholders, while reinvesting monies as close to the protected area adjacent communities as possible.

In sum, with the exception of existing fees and perhaps *Samar* harvesting, rangers expressed significant uncertainty about recommending fees or licensing schemes. Ill-conceived fees, licensing or privatization schemes appear to have the potential to lead to further resource

depletion while making the work of rangers more difficult. Revenue opportunities exist via research and restoration efforts, existing tourism fees, *ger* camp taxes, park-owned ventures and joint ventures, and, from the use of interest-bearing funds, ideally managed by local stakeholders. The limitations of the current revenue-generating options available for Bogd Khan Uul beg the question: what additional approaches can address the problems identified in the Site Issues Scan? The next section on co-management may provide additional insights.

APPLICATION 4 — Legislators should exercise caution when considering fees or licensing schemes since they may create more harm than good in terms of community and administrative impacts. Any fees for tourism ought to consider domestic and international norms.

APPLICATION 5 — Alternative revenue generation schemes that may be effective include: (1) seed or loan funds for park research/education projects, ecological and cultural restoration activities; (2) park-owned ventures or joint ventures such as eco-friendly *ger* camps and hostels, guide services and ecological restoration services.

5.2.4 Overcoming obstacles to community-based management

Overcoming the obstacles that prevent Bogd Khan Uul rangers and adjacent communities from working together can provide a climate for long-term, cost-effective solutions to protection, enforcement and ecological restoration needs. Working with community stakeholders as equals and developing processes that reinforce mutual understanding and respect, often referred to as community-based, co-operative or co-management. Such approaches to management and organizational culture are not alien to Mongolian traditions (Khuldorj 1999). With the exception of individual rangers or ranger-neighbouring community relations, conscious efforts to build community partnerships had not taken place or been supported in a concerted manner at Bogd Khan Uul (Pers.Comm.Chinzorig, Aug.27, 2000).

Ranger L contended that without “education for the public on how to protect the ancient mountain,” rangers’ jobs would remain difficult. The same ranger suggested using notice boards and official signage to convey basic information and regulations about the three zones in the park. Both R15 and R22 suggested using standard designed posters and display boards at valley entrances. R10 wanted to work with the public to solve grazing, waste and deforestation problems. He suggested working with the media, including radio, in order to raise awareness of environmental issues at the mountain.²⁶⁷

Several rangers were favourable to the concept of voluntary patrols that employed or involved local residents.²⁶⁸ R11 suggested that this enforcement path might be effective with a “bonus or stipend to encourage their [residents’] work.” R21 suggested the need for “financial encouragement” for volunteers, though he concluded that there would be insufficient funds for such initiatives. R9 indicated that currently “people police themselves.” Ranger L suggested that the “public must be involved otherwise [it’s] hard to do [my] job,” and added, “education for [the] public on how to protect [the] ancient mountain,” is important, as is, “educat[ing] from grassroots.” R10, who spoke about the importance of involving future generations, argued to:

keep the name of the Bogd Khan Uul as a strictly protected area since I won’t be here forever...but if the next person might come there is a need to support protection more properly.

R5 began a dialogue with local residents and students about vegetation depletion. It expanded to cover other prescient issues. He noted that, “whenever possible [he] worked with local people...gave ideas and negotiates.” For example, he developed a partnership with a local school, opening a dialogue with students on how to protect the mountain, and organized a field trip and nature protection competitions.²⁶⁹ He added that there is a greater need “to involve

parents, since they live nearby [and that] old people are quite conservative.”

R10 noted that people concerned about nature and environment “have a lack of encouragement” and that “young people are not interested [in environmental protection work] because the wage is less.”²⁷⁰ This raised the issue of training for future and existing rangers. Most rangers at the park were over 50 years of age and there were few young employees entering the team, raising issues about how to mentor new employees so as not to lose valuable local knowledge. Ranger-identified training needs²⁷¹ in the area of eco-tourism might dovetail with education (or train-the-trainer sessions) or community involvement initiatives including ranger-poacher conflict resolution, ecological inventoring, community-based mapping, ecological restoration and monitoring, community-based enforcement, and so forth.²⁷²

Few participatory action projects and little training had occurred at Bogd Khan Uul by the end of the 1990s. Such initiatives could serve as initial vehicles for developing long-lasting, meaningful projects and relationships that help build better governance or co-management systems.²⁷³ Other rangers underlined the importance of focusing on the problem of poverty at the mountain. R22 maintained, “the most important thing is to improve people’s living conditions.” And Ranger M suggested that when individuals were faced with material poverty, they were more likely to explain: “this is a sacred place, but I need to feed my family.”²⁷⁴ To address material poverty local economic goals could be more explicitly tied to future projects inside the park. Goals could include a focus upon employment, training, health and providing micro-finance or seed capital to local residents.

To summarize, at Bogd Khan Uul there were few attempts to foster direct community relations that might lead to genuine co-operative resource management. Rangers’ neighbourly

efforts served as a starting-point for further initiatives and could potentially develop as pilot projects in conjunction with ranger training. Possibilities for projects at Bogd Khan Uul, based on other examples in Mongolia included: community-ranger mutual learning, volunteer action days, media education campaigns, spiritual site clean-up or inventorying, ecological restoration projects (e.g. tree planting), adjacent community micro-enterprise development, joint community-ranger policing, ecological inventorying (e.g. rare species) and eco-monitoring. Perhaps the experience of the ranger who opened a dialogue with an adjacent community's students is most informative, since this action triggered other innovative projects that were designed to protect the mountain. Uniquely Mongolian solutions that draw upon the wisdom of past traditions will inevitably be informed by global biodiversity norms in this era of international interchange.²⁷⁵ Co-evolving knowledge will be critical in addressing the threats to Bogd Khan Uul—especially in the present climate of economic and institutional uncertainty.

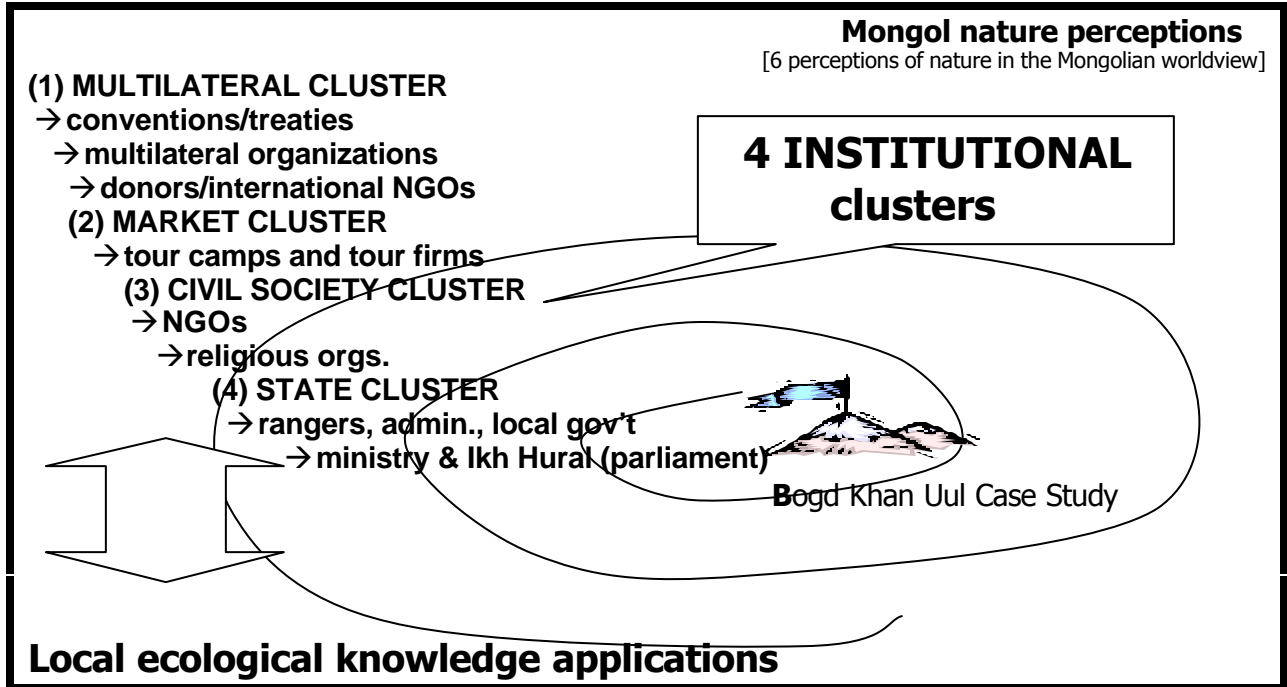
APPLICATION 6 — That stakeholders support a range of training and pilot projects such as youth and university outreach, ecological and cultural inventories, monitoring, research and restoration.

5.3 Institutional Capacities Analysis

Adherents may witness a Shamanic ovoo ritual in one valley of Bogd Khan Uul. Meanwhile, pilgrims make a short trek to a restored Buddhist temple in another: at the same time, vacationers relax in traditional 'gers' (yurts) in a tourist camp tucked in another forested valley, just as an astronomy team prepares to work through the night observing the cosmos at an observatory perched elsewhere on the mountain...

The above examples illustrate the diversity of activities and underlying institutional functions inside the contemporary Bogd Khan Uul.²⁷⁶ The purpose of this 'Capacities Analysis'²⁷⁷ is to identify how four institutional clusters might put local ecological knowledge into practice.²⁷⁸

Figure 19. Institutional obstacles and capacities analysis (IOCA) overview



For the purposes of this study these institutional clusters represented organizations lodged within the institutions of: state, market, civil society and multilaterals, as Figure 19 illustrates. How nature protection fared during Mongolia's transition to a market economy remained an unresolved question. In the decade following the 1989-90 revolution, the Mongol state had assumed a key role in nature conservation. However this role is by no means exclusive. Emergent institutions linked to civil society, NGOs, the market and organized religion all played a role in nature and cultural protection. Specifying how these institutions can create the conditions for enabling the use of local ecological knowledge at the Bogd Khan Uul is the challenge of this section.

5.3.1 The State (Mongol Uls)

The dominant institution affecting activities at Bogd Khan Uul—and therefore local knowledge applications—remains the state. Within one decade of the 1989-90 revolution, Mongolia’s nature protection experiment has come to represent a paradigm shift in land use. There has been over a 3.7 fold increase in territory designated as “protected areas” from 5.5 million to 20.5 million hectares (MNE 2000, 4), including a state policy with the intent of protecting 30 per cent of the land base.²⁷⁹ Five divisions of state and their relationship to the Bogd Khan Uul are assessed below.

5.3.1.1 Ikh Hural (Great Assembly)

The Mongol state is constitutionally responsible for nature protection and resource management, including the creation of protected areas and establishment of fees for resource use. The central organ of governance, the Ulaanbaatar-based *Ikh Hural* or Great Assembly—a unicameral 76-member national parliament—has enacted a plethora of legislation that affects the Bogd Khan Uul directly, including:

- ~*Law on Special Protected Areas 1994*
- ~*Law on Land 1994*²⁸⁰
- ~*Law on Environmental Protection 1995*
- ~*Law on Hunting (and Conservation) 1995*
- ~*Law on Natural Plant Use Fees 1995*
- ~*Law on Water 1995*
- ~*Law on Natural Plants 1995*
- ~*Law on Special Protected Area Buffer Zones 1997*
- ~*Law on Socio-Economic Well Being (Local Regions & Protected Areas) 1997*
- ~*Law on Tourism in Mongolia 2000*

Most relevant amongst these is the *Law on Special Protected Areas*. It established a four-part,

nation-wide protection regime that included strictly protected areas, national conservation parks, nature reserves and monuments (MNE 1997c; MNE 1996a: 32).²⁸¹

At the international level, the state is responsible for negotiating, ratifying and implementing treaties, conventions and agreements, such as the *U.N. Convention on Biodiversity*. Under the 1992 *Mongol Ulsyn Undsen Khuuli* (Mongol State Constitution), a bundle of rights confers significantly greater responsibility to individuals than were conferred under the one-party regime (1924-89). The change after 1990 is identified by this U.N. assessment:

In terms of the law, Mongolia has in some respects changed from a "hard state" to a "soft state". Mongolians did not in the past really internalize the country's legal standards. They obeyed the law largely out of fear. Nowadays, with less rigorous enforcement, there is a temptation to ignore the law. Corruption too remains a growing problem. (UNDP, 2000: 14)

These newfound rights affected the Bogd Khan Uul. For example, the new 'right to mobility'²⁸² enabled family movement amongst *aimags* (provinces) and cities. This was one factor (along with the economic collapse of rural centers) that explained influxes of residents to Ulaanbaatar and increased residential, as well as grazing pressures on the periphery of Bogd Khan Uul. The right to 'freedom of religion',²⁸³ created the conditions for revived Shamanic and Buddhist practices at *ovoos* and other sites, and supported the partial restoration of the Manchir Hiid Buddhist Monastery. The right to free associate and form non-government organizations²⁸⁴ has spurred the creation of several N.G.O.s with interests in the Bogd Khan Uul. These included groups concerned with traditional uses and conservation. Newly created property rights enabled limited liability entities and joint ventures to obtain 60-year leasehold rights at state designated tourism sites inside the park and newly incorporated tour companies bring visitors on guided

tours inside the park.

Citizens' rights and responsibilities under the new state constitution also affected interactions between individuals, rangers and police—particularly in terms of the moral weight of the law and how it was enforced.²⁸⁵ Findings showed a shift from an apparent general fear of retribution (under authoritarianism), to a situation where explicit laws and rights are administered in a more transparent legal system. In the shifting legal terrain of the past decade rangers, police, the judiciary and Ministry of Justice remain unable to consistently enforce and monitor the flurry of environmental or biodiversity infractions. As this study's findings indicated, rangers generally do not handle infractions or prosecutions—partly due to the numbers and partly due to transgressors' poverty. Many citizens also openly questioned the accountability and transparency of the police and legal apparatus.

Clearly individual economic insecurity undermined the ability of the rule-of-law as a mechanism to protect the Bogd Khan Uul.²⁸⁶ The findings in Chapter 4 identified state corruption in association with the tourism land use approvals at the park. This issue is an example of how corruption—whether real or perceived—plagued the efforts of Mongolia's new state bodies to do their job. At the time of fieldwork, corruption (or the perception of it) involved politicians, civil servants and enterprises in the emergent market.²⁸⁷ Developing stronger community relations or even governance mechanisms and improving local accountability and transparency in systems and actions will help ensure that Bogd Khan Uul administration and rangers avoid circumstances that might lead to corruption.

APPLICATION 7— Bogd Khan Administration should with state legislators and the Ministry of Justice the creation of conflict of interest, transparency code and approvals protocol for licensed tourist operators.

APPLICATION 8 — Both state and community interests need to take proactive steps to develop multi-stakeholder democratic governance mechanisms.

5.3.1.2 Ministry of Nature and Environment

Contemporary protected areas in Mongolia face formidable threats: drought, desertification, overgrazing, excessive extraction of forest and plant resources, industrial pollution, urban sprawl, animal poaching, trade in endangered species, multi-tracking of roadways, lack of technical resources and staff, unclear governance responsibilities, inadequate training and corruption.²⁸⁸

Mongolia's state Ministry of Nature and Environment approach to nature protection appeared to parallel that of a western civil service in terms of *de jure* (legal) responsibilities, but not in regards to organizational culture. In a hierarchical manner, the *Ikh Hural* enacted legislation and civil servants in the Ministry of Nature and Environment implemented the legislative intent through programs and regulations such as the *National Program on Special Protected Areas* and the *Law on Special Protected Areas*. Within a two-year period (1994-96), seventeen entirely new environmental laws were introduced in Mongolia. These included the law that re-designated Bogd Khan Uul as a Strictly Protected Area (1994). Mongolia's *Biodiversity Conservation Action Plan* (1996) envisioned that by 2015, up to thirty per cent or more of the nation's land base would be classed as one of four types of Protected Areas, indicating a significant commitment to nature protection.²⁸⁹

The Ministry's 'Eco-Tourism/Protected Areas Bureau' (established in 1993) was

designated the focal point of nation-wide conservation efforts.²⁹⁰ This unit was responsible for detailing legislation on nature protection and monitoring the long-term effectiveness of the protected area network. Its responsibilities included ecological and enforcement monitoring, biodiversity research and negotiating international cooperation agreements. On a weekly basis Bogd Khan Uul management and rangers forwarded data to this Ministry regarding fees, fines, weather observations, wildlife counts, poaching, pollution, fire and ecological restoration activities (Pers.Comm.Chinzorig, Aug.27, 2000). Tourism development issues within the pristine zone of the Bogd Khan Uul—and Mongolia’s other protected areas—are also addressed by a Minister-appointed Buffer Zone Committee. Much potential for coordinated efforts exists within the Ministry and its numerous bilaterally-sponsored projects. Examples included: the two focal points for geographic information systems and information technology in the Ministry, the National Biodiversity Project, the Environmental Public Awareness Programme (proposed phase 2) ongoing ranger training initiatives and buffer zone development initiatives.

APPLICATION 9 — The Ministry of Nature and Environment should kick-start financial and other incentives for community-based resource management at Bogd Khan Uul.

Coordination with existing bilateral projects could provide much needed financial and technical support and training to both the Bogd Khan Uul Administration and Bogd Khan Uul ranger team.

APPLICATION 10 — The Ministry of Nature and Environment should support the development of local funding mechanisms by soliciting international support that targets ecological and cultural protection and restoration activities at the Bogd Khan Uul.

5.3.1.3 Management of Bogd Khan Uul Protected Area Administration

The Bogd Khan Uul Strictly Protected Area Administration conducted frontline management of

the park based out of an office in Ulaanbaatar and at 21 ranger stations on the periphery of the park. The administration consisted of five employees and a team of 21 full-time rangers responsible for the day-to-day work and interpretation of the rules-in-use and management plan.²⁹¹ Since the Administration has been located in Ulaanbaatar, it remained under the heavy influence of the policy norms in vogue at the Ministry of Nature and Environment. This was particularly the case in comparison with other protected areas in Mongolia. This proximity was positive in the sense that there was access to tremendous research and civil society resources (N.G.O.s, spiritual groups, etc.) as well as potential for linkages with international biodiversity initiatives. However, autonomy for the current administration, and moreover, the ranger network were clearly lacking. This was evident in the ranger's unambiguous frustrations about handling resource management issues (logging, pine nut harvest, grazing, etc.), and administrator's concerns with being unable to access resources, training and technical support.

APPLICATION 11 — That the Bogd Khan Uul Administration support ranger or community-initiated projects that focus on education and ecological/cultural restoration.

Some rangers made important alliances with neighbouring communities, as the findings showed; however, efforts to assess the strengths and weaknesses were lacking. Similarly, several rangers had good working relations with tourist camps—however, tourism approvals and tax revenues were exclusively handled inside the Ministry and apparently little consultation directly with rangers occurred. Moreover, initiatives in education and enforcement that proactively involved communities were constrained by limited financial and legal support from the Ministry. Without ranger involvement and consultation in local matters, the discrepancies between Ministry and Administration decisions and on the ground reality can only grow.

5.3.1.4 Rangers

Since the rangers were the frontline staff responsible for day-to-day matters related to nature protection, emergencies, enforcement and education, their role was pivotal in implementing local knowledge applications. At Bogd Khan Uul the focus had been on the police-like enforcement of regulations, although many rangers indicated a desire to undertake community education and joint projects with their neighbours focused on protecting the mountain. Many rangers were also frustrated by the flurry of regulations introduced by the Ministry and the lack of financial resources to support their implementation. Despite the harsh economic situation during the 1990s 'transition period,' some rangers and NGOs demonstrated that they did not accept externally-dictated regulations, and were able to devise innovative ways of protecting the mountain's ecology while involving neighbouring communities at the same time. Supporting these innovators and initiatives will be critical to improving protection and restoration efforts at Bogd Khan Uul.

Some rangers played down their neighbourly relations with community members. However, these strong mutual relations reduced the need for an excessive enforcement presence and created the conditions for community involvement. Such relationships bode well for future projects such as ecosystems restoration or ecological monitoring. Above all, rangers desired improved working conditions, including telephony and communications, basic tools for the job (like winter clothing and uniforms) and relevant training, not to mention pay and benefits befitting the responsibilities of their positions. Rangers had over 30 years working experience (in the general workforce) and on average they were employed for over 6 years at Bogd Khan

Uul.²⁹²

One clear weakness the findings showed is that neither the resources nor plans were in place for creating mentoring positions for the next generation of rangers.²⁹³ This study's findings also highlighted the precarious material circumstances rangers and their families faced—difficulties shared by many in Mongolia. These findings also underlined the general frustrations rangers faced in the 1990s, working as frontline witnesses to what must have appeared to be the breakdown of protection measures, institutions and ecosystems.

APPLICATION 12 — The Administration should work with existing training and ecological education organizations to develop ranger and mentor-training initiatives geared to Bogd Khan Uul needs.

5.3.1.5 Local Government

The Bogd Khan Uul is surrounded by settlements, most having their own government administrations. Two jurisdictions in particular, exercise influence over aspects of the protected area: Ulaanbaatar (population 630,000) and Tov (Central) Aimag or province. With their taxation authority, these local governments may capture revenue from tourism land uses inside the strictly protected area despite the fact that the Ministry of Nature and Environment and Bogd Khan Uul Administration were mutually responsible for its protection of natural areas. Ulaanbaatar's districts—the most powerful local governments in Mongolia—exercised land taxation functions inside the northern portion of the park. These governments included Khan Uul District, Amgalan District and Sukbaatar Districts (Ulaanbaatar), along with the communities of Khonhor and Zunmod (in Tov Aimag or province). With the decentralization of powers there apparently had been jurisdictional frictions between Tov Aimag, the Ministry of Nature and Environment and Bogd Khan Uul Administration that involved in disputes over the

issue of revenue collection and land use in the ‘limited access’ zone (outermost portion of the park) (Pers.Comm.,Chinzorig, Aug.27, 2000). One possible mechanism for resolving these types of issues may be to develop the co-management capacities of existing buffer zone committees, currently in place in each Ulaanbaatar district.

Presently these committees are largely ineffectual administrative entities, but each has the potential for involving a wider group of stakeholders (Pers.Comm.Chinzorig, Aug.27, 2000).

APPLICATION 13 — Use existing mechanisms (the buffer zone committees) to support multi-stakeholder or co-management approaches for resolving inter-jurisdictional land use and revenue disputes.

5.3.2 The Market

The influence of the market (as an institutional realm) at Bogd Khan Uul is largely defined by three economic entities: tourist camps, tour operator and third party firms. This included the activities at 17 tourist sites located inside the park along with tour operators trips and ceremonial events. Interviews with several tour camp operators at the park and the Mongolian Ecotourism Association revealed an eagerness to make foreign connections in order to expand their market share (Pers.Comm. Bhum Yalagch, Aug.,2000).

Mongolia’s roller-coaster entry into the market economy resulted in the formation of numerous horizontally integrated enterprises with multiple interests in diverse sectors of the economy, including tourism. For instance, some camps were subsidiaries of large tourist enterprises whose presence raised concerns about their long-term stake in supporting protection measures at the mountain. While the apparent rush to develop or market tour facilities was largely about obtaining hard currency from a growing tourism market, there appeared to be little

care about respecting the unique ecosystems in some of the tourist developments at Bogd Khan Uul. The potential joint or cooperative marketing efforts amongst Bogd Khan Uul camps also represented an opportunity for developing coordinated tourism codes of conduct.²⁹⁴ Similarly opportunities existed for joint ecological and cultural restoration projects, supported from tourism businesses operating inside the park. New tourism developments therefore represented both hazards and opportunities for protection of Bogd Khan Uul's natural and cultural features.

In addition to those firms that are directly held by third party companies or units within larger firms, there are numerous Mongol and foreign tour companies that used the Bogd Khan Uul as a venue for excursions in package tour itineraries. Generally, tour stops included Manchir Hiid Monastery in the Zunmod Valley on the southern portion of the park. In addition, several of the smaller *ger* camps have developed partnership arrangements with outside tour operators whose packages included hikes to Tsetsee Gun, short horse trips and overnight stays. Bogd Khan Uul administration (or a co-management entity) could support the development of joint ventures, or park or locally-owned small guide, tour, and education businesses in order to generate revenues for equipment and activities identified in this study.

One issue that development inside the protected area raised is about whether protection can be furthered or undermined by business ventures. For example the Summer Solstice Ceremony, marketed by a co-operative tourism network²⁹⁵ and described earlier in Local Knowledge findings, illustrated how traditions have themselves become a market 'commodity'. This begged the questions: can market goals support nature and cultural protection, or do businesses in the park risk undermining the sacred site itself?

APPLICATION 14 — Ensure that Bogd Khan Uul tour camps, operators and rangers agree to develop a tourism code of conduct focused on camp and visitor eco-friendly behaviour, ecological and cultural education.

APPLICATION 15 — Support joint stewardship projects amongst Mongolian and foreign tour operators, tour camps and visitors that seed initiatives such as ecological and cultural restoration projects and international community-to-community or park-to-park partnerships.

5.3.3 Civil Society

At the Bogd Khan Uul there existed the presence of a relatively new set of non-government civil society organizations (NGOs) involved in spiritual practices, ecotourism, poverty alleviation and nature conservation. These conformed to the wider phenomena of NGO growth in Mongolia. In addition, both Shamanism and Buddhism were civil society religious institutions²⁹⁶ active at the Bogd Khan Uul.²⁹⁷ The role of N.G.O.s, *hot-ails* and resurgent religious organizations is discussed in the sections that follow.

5.3.3.1 Non-government organizations (NGOs)

Even before the advent of NGO legislation, introduced in 1997, a flurry of new non-government organizations linked to nature protection appeared in Mongolia.²⁹⁸ Several had direct or indirect stake in the Bogd Khan Uul. For example, the *Takhilga Fund* N.G.O. focused on raising revenues for nature protection at the sacred site. The stated aim of the *Takhilga Fund* was:

the restoration of traditional rules and customs for Bogd mountain protection followed for centuries, [the] study and development of classic forms of natural protection...[and] public awareness raising activities.

This Fund was established in an effort to create a permanent environmental education centre—initially located at the Agricultural University and supporting a map, booklets and film

commemorating the 220th anniversary of the park.²⁹⁹ The fund apparently was also one of several sponsors for the previously noted summer solstice, *Ikh Naran* ceremony (Pers.Comm., Discover Mongolia, Aug.1999). Another recent N.G.O., *Development and Environment*, had been involved with developing publications for students and policy makers to raise awareness of flora and fauna and the impacts of rapid urbanization at Bogd Khan Uul (Ferguson 1999: 72).³⁰⁰ This N.G.O. partnered with the Ministry for Nature and Environment, the Foundation for Environmental Protection and Japan's Nagoa Foundation to develop a geographic information system compendium of maps of the Bogd Khan Uul in 1998.

Another N.G.O., *Nature & Development* (an organization with the former Minister of Nature and Environment on its board) was involved in producing 5000 pamphlets and a scientific overview publication, *Ecosystems of Bogd Khan Mountain* (1997). The *Mongolian National Ecotourism Association* (an N.G.O. founded by one of the UNESCO designation proponents) provided support for ranger and guide training and brochures for distribution to visitors entering the Bogd Khan Uul.³⁰¹

The *Discover Mongolia* tourism network represented a non-profit network of private organizations specializing in ecotourism. It has been involved in traditional ceremonies and raising awareness of protection at Bogd Khan Uul. The actions of this N.G.O. and of other civil society organizations demonstrated capacity for increasingly integrated activities. Such multi-stakeholder approaches offer more promise than the status quo for restoration of ecosystems and cultural sites at the Bogd Khan Uul.³⁰²

APPLICATION 16 — That Bogd Khan Uul stakeholders build on successes in existing small-scale NGO initiatives while seeking domestic and international support for further community-to-community and NGO-NGO exchanges and integration.

5.3.3.2 Hot-ails and neighborhoods

The smallest clusters of resident pastoralist-herders live in *hot-ails*, or small *ger* groupings usually confined to a valley. Individual *gers* and *hot ails* are located variably around the periphery of the Bogd Khan Uul. They were outside the outer bounds of the park and in many respects their activities reflected the traditional nomadic-pastoral living arrangements of rural Mongolia. The groupings of *gers* adjacent to the Bogd Khan Uul were physical manifestations of small-scale networks amongst kin and friends both for both filial and mutual economic support.³⁰³ Similarly, urban neighborhoods (typically groupings of *ger* compounds or *hashaas* both in Ulaanbaatar and Zunmod) served as important mutual support and networking functions such as barter, labour and information exchanges.

Most rangers themselves lived a traditional Mongol rural life. In addition to their work as rangers, they rely upon local livestock breeding, dwell in *gers* and even *hot-ails*. They typically used animal dung for fuel and had diets centred on meat in winter and dairy products in summer.³⁰⁴ The role that *hot ails* played vis-à-vis nature protection was not examined in this study, but like adjacent neighborhoods and small communities (e.g. Yarmag, Sergeliin, Khonhor, Zunmod, Nailakh) these appeared to hold potential as being important venues for conservation education. This was particularly the case with respect to overgrazing challenges. Both neighborhoods and *hot ails* might be used as focal points to develop activities that simultaneously address restoration and employment or material poverty issues.

APPLICATION 17 — Administration and rangers should initiate joint dialogue with local neighborhoods and hot-ails having a focus on protecting the mountain's ecology and resolving enforcement difficulties.

5.3.3.3 Shamanism

The spiritual revival in Mongolia included urban and rural Shamanism in its complex formal and informal manifestations. The findings on local knowledge (Chapter 4) identified occurrences of Shamanic worship at Bogd Khan Uul including the importance ascribed to specific locations in nature (e.g. trees, streams, etc.) and interfaces with nature (e.g. *ovoos*).

In terms of organized structures, the Golomt Shamanic Centre (founded as an NGO in 1996) and at least one other emergent association,³⁰⁵ had been involved with Shamanism in Mongolia (Merli 1999). This N.G.O. had organized *ovoo* ceremonies at the Bogd Khan Uul and one ranger noted foreign interest in these activities, along with the previously noted 1999 summer solstice ceremony (Pers.Comm., Discovery Mongolia: 1999).

Shamanic cosmology influenced many Mongolian ceremonies and customs (often fused with Buddhist customs) and involved regular annual pilgrimages to special sites (wrestler treks, parliamentarian trips, etc.) and *ovoo* worship. Without full consultation about the customary protocols, Shamanic ceremonies appeared to be under some threat of being appropriated by the tourism industry. Partnerships between urban shamans and tourist groups about how to protect or safely access these spaces are needed. The insights of the Shamans themselves may be important in creating a vision for the future protection of this sacred mountain.

APPLICATION 18 — Administration, tour camps and tour operators should work with organized Shamanic groups and independent Shamans to ensure ongoing respect for sacred sites and traditions, and enhancing ecological and cultural protection at the mountain.

5.3.3.4 Buddhism

Buddhism has visible manifestations at Bogd Khan Uul via organized religious institutions as well as via the individual actions of practitioners and monks.³⁰⁶ At Bogd Khan Uul the ‘Red Hat’ and ‘Yellow Hat’ orders were visibly involved in a number of activities as noted in Chapter 4. A wide range of formal and informal Buddhist organizations (both domestic and international), were affiliated with domestic temples or *sanghas*. Since cultural restoration continued to be a priority of the local Buddhist community, these projects could also be linked with an increasing focus on ecological restoration and protection measures, particularly at locations adjacent to sacred sites. Foreign organizations supported the restoration of Manchir Hiid Monastery, the Bogd Khan Uul’s Winter Palace as well as local *ovoo* rededications. In future, Mongolian and possibly foreign practitioners might work closely with the rangers and other stakeholders to jointly tackle threats to the sacred mountain.

APPLICATION 19 — Rangers, administration, tour camps, and tour operators should work with organized Buddhist groups to ensure the ongoing respect for sacred sites and traditions and to envision paths for further ecological and cultural restoration at the mountain.

5.3.4 Multilateral context

The international community has had a strong and at times excessive, influence on policy in most spheres of life in Mongolia since the collapse of the Soviet Union. From a biodiversity protection perspective, this involvement had been primarily through steering legislation, foreign direct investment (direct aid, tied aid and loans), technical assistance, programming, training, boundary delineation, technology dissemination and even community participation.³⁰⁷

Understanding how institutions were shaped by broader national and international norms and

trends provides important insights on ways in which local institutions could address problems at the Bogd Khan Uul. These macro-micro linkages are of particular interest in the era of globalization since rapidly changing institutional norms, treaties and international financial institutions have often ignored local communities' efforts or potential.³⁰⁸

5.3.4.1 Conventions and treaties

In my work with the United Nations Development Program (previous to this research), I learned that Mongolia's protected area development projects were shaped by the involvement of multilateral, bilateral and international non-governmental organizations.³⁰⁹ Mongolian macro-economic policies were strongly shaped by the stabilization strategies set out by the International Monetary Fund (exemplified by the 1992 Strategy For Mongolia) and supported by multilateral institutions such as the Asian Development Bank, World Bank Group and major international donor nations states to Mongolia such as Japan, the United States and European Union.

Mongol fiscal and monetary policy and state spending priorities directly impacted the allocation of funds for citizens' social services and nature protection. Moreover, conformity with lending conditionalities (e.g. fiscal reforms, decentralization, etc.) and austerity measures had direct consequences on the state's philosophical outlook and the sustainability of government services. Ranger's personal circumstances and the Yarmag case illustrated how the late 1990s reduced safety nets and cutbacks in operating services had an impact upon both human health and the ecological health of the mountain and neighbouring communities.

The 1992 United Nations Convention on Biological Diversity (CBD) was one of the

major multilateral agreements that brought into legal force indigenous and local communities' self-defined approach to conservation and use of local knowledge.³¹⁰ This gives legal impetus to a broader range of potential initiatives by community-based stakeholders interested in protecting Bogd Khan mountain from harmful developments such as tourism or exports of plants for medicinal purposes.³¹¹ Bogd Khan Uul stakeholders may also push wealthier nations that have ratified the CBD, for support and for developing partnerships focussed on conservation and long-term material poverty alleviation.

The World Heritage Convention, supports UNESCO's Man and Biosphere (M.A.B.) programme. The M.A.B. accepted nominations for sites that have ecological, historical and cultural significance. It selected sites that show potential to serve as national models for protection and sustainable development (UNESCO 1987: 20)³¹² and included these on a list of global significance as either, 'Man and Biosphere Sites' or, 'World Heritage Site' candidates. In 1996 Bogd Khan Uul was selected by UNESCO to be a MAB candidate site (MNE 2000: 26).³¹³ Since then, UNESCO had sponsored a regional forum on Asian Biodiversity (in 1998) and featured the Bogd Khan Uul as both host and a subject site.

The UNESCO designation also conferred the responsibility for the Bogd Khan Administration to undertake long-range planning and develop community partnerships in order to retain the 'biosphere' designation. As noted earlier, Bogd Khan Uul had undertaken 4 and 5-year management plans; had developed a three-pronged zoning system (limited use, conservation and pristine zone), had toughened enforcement measures and sponsored local and foreign research; actions that in part, may have been attributable to the UNESCO designation.

With the exception of the park biologist (Pers.Comm.Enkhtuul, Aug.2000), rangers did

not distinguish between areas in the three-pronged zoning system at the park and there were few differing management measures (signs, publications, etc.) to treat the zones distinctly aside from their identification on maps (Pers.Comm., K,Poland, Aug.2000). While the UNESCO designation brought with it international recognition and could assist in attracting visitors and researchers, it likely also represented an added pressure to conform to global biodiversity norms, rather than focus on local problems as priorities.³¹⁴

5.3.4.2 Donor nations and international NGOs

With the exit of Soviet technical and financial aid, Mongolia's biodiversity planning efforts were shaped by foreign aid and by reliance upon multilateral organizations (Bayarkhuu 1999).³¹⁵ Bilateral funding from state to state agencies directly and indirectly supported conservation projects throughout Mongolia.³¹⁶ In the sphere of nature protection, this included projects supported by multilateral organizations like the World Bank Group, the United Nations Development Program and the Global Environmental Facility, and agreements like the trans-boundary protected area treaties with China and Russia.

The International Union for the Conservation of Nature (IUCN), an umbrella organization of global conservation interests, has shaped the structure of Mongolia's four-part protection regime and likely the zoning within parks.³¹⁷ (MNE 1997, Phillips & Harrison 1998). Several international N.G.O.s were directly involved in activities inside Bogd Khan Uul. For example Japan's Nagoa Foundation's supported of the creation of the Bogd Khan Uul Atlas (1998); JICA (Japanese International Co-operation Agency) supported a project involving low income residents, planting 10,000 tree seedlings in the Artsat Valley.³¹⁸ A proposed initiative by a U.S. Peace Corps intern in Mongolia led to the development of an entry station in the

Zaishan Valley for rangers to greet visitors and assess entry fees (Poland 1999). Whether such an approach would be effective in the short term or long run remained uncertain. In Summer 2000, G.T.Z. and the German Embassy were reported to be supporting a small mobile education exhibit that included a focus on eco-education at the Bogd Khan Mountain (Pers.Comm.,B.Yalaghch, Aug.27 2000). The trail between Zunmod and Zaishan valley was flagged (marked) by several U.S. volunteers, keen on supporting the Administrations' proposal for a revived pilgrimage trail between Machir Hiid and Gandan monasteries. The U.N.D.P and Dutch Government's Environmental Public Awareness Programme provided indirect support for several N.G.O.-led initiatives at Bogd Khan Uul including clean-ups along the Tuul River, and publications of research and education materials.

APPLICATION 20 — Keystone international economic organizations and international donors whose activities influence Mongolia's protected areas should respect local customs, knowledge and traditions—particularly those articulated by local stakeholders.

APPLICATION 21 — International donors and bilateral partners should explore local knowledge bridge-building projects, including international park partnerships, community-to-community projects, knowledge or training exchanges focused on ecological restoration and cultural site protection along with community-based governance.

The current climate of state, market and civil society institutional dependency on external technical and foreign aid, inevitably raises the following question: how can multilateral agencies and foreign donors support Mongolia's revival of local knowledge systems³¹⁹ while avoiding the imposition of external notions of governance and community development? While the 21 recommendations—summarized in Figure 20—identify several directions for governance and community development at Bogd Khan Uul, representatives of multilateral development and aid

agencies ultimately need to consult face-to-face with local stakeholders to seek answers to such questions.³²⁰ The Mongolian teachings of mutual respect and discerning listening ought to guide these types of consultation.

Chapter 5 outlined two goals in support of ecological and sacred site restoration. These focused on overcoming material poverty and developing a restoration agenda that builds on pride in the sacred mountain. Both the key management problems and the capacity for institutions to remedy these were assessed in this chapter.

Figure 20. Enabling local knowledge applications at Bogd Khan Uul

The following local knowledge applications are tied to those stakeholders with the highest potential for implementation at the time of fieldwork.³²¹

Applications	Suggested key stakeholders
1. develop a communications network	rangers, Admin., Ministry
2. develop long-term enforcement alternatives	rangers, communities
3. support short-term ranger enforcement	Admin., local police, Ministry, rangers
4. examine alternatives to fees	Ministry, Admin.
5. examine alternative revenue generation options	Ministry, Admin., foreign supporters, donors, NGOs, review METF model
6. support a range of youth pilot projects	all key stakeholders, particularly universities, schools
7. create conflict of interest, transparency, and tourism approvals protocol	Ministry of Justice, <i>Ikh Hural</i> , Admin. Ministry, tour operators
8. develop multi-stakeholder democratic governance mechanisms	Ministry, Admin., local government
9. create financial incentives for community-based resource management	Ministry, bilateral projects, adjacent residents, ENGOS
10. support the development of local funding mechanisms	NGOs, Ministry, foreign supporters, Admin.
11. support community-initiated projects focused on education and ecological/cultural restoration	Admin., NGOs, adjacent residents
12. develop ranger and mentor-training initiatives	Admin., training and educational institutions, universities (local & foreign)
13. support multi-stakeholder approaches for resolving inter-jurisdictional disputes	Admin., ministry, local communities, local government, NGOs
14. develop a tourism code of conduct	tour operators, Admin., Ministry, rangers, adjacent communities
15. initiate joint stewardship projects with tour operators	tour operators, tour camps, foreign supporters, communities and international parks/UNESCO, ENGOS
16. build-upon existing small-scale NGO initiatives	international supporters, ENGOS
17. initiate joint dialogue with local neighbourhoods/ <i>hot-ails</i>	Admin., rangers, adjacent communities
18. work with shamans to ensure ongoing respect and protection for sacred sites and traditions	organized and independent shamanic groups, Admin., tour camps/operators
19. work with Buddhist groups to ensure ongoing respect and protection for sacred sites and traditions	organized Buddhist groups international supporters
20. prioritize importance of local knowledge, customs and traditions and locally articulated priorities.	multilateral funds, donors Intn'l ENGOS, intn'l financial institutions
21. explore local knowledge 'bridge-building' projects	multilateral funds, donors, communities, admin., rangers

Chapter Six

Conclusions: Co-evolving knowledge systems

“Bogd Khan Uul has always been a sacred mountain”

—a herder commenting on his understanding of Protected Areas (Aug. 1999).

This case study has illustrated that a sacred site may be seen as a state-designated strictly protected area to a group of rangers, an international UNESCO biosphere reserve to travelers, and a sanctuary and holy site to residents, including Buddhists and Shamans. The globallocal framework of analysis illustrated the difficulty of divorcing local issues from non-local (national or international) influences. This study’s Globallocal Diversity Spiral (GDS) couples what many might see as exclusively local resource issues—like vegetation depletion, logging and tourism developments—to non-local factors affecting institutions such as national biodiversity policies, new state-level rights and laws, material poverty and global economic integration. The globallocal framework is one conceptual tool for identifying issues that transcend varying geographic scales. The GDS’ application in this case study illustrated that an island-like protected area cannot be divorced from the realities surrounding it—since no park is an island.

The pathways and recommendations in Chapter 5 demonstrated ways in which local knowledge may be applied by organizations with interests in the Bogd Khan Uul. The question of what constitutes Mongolian local ecological knowledge also raised the issue of whose local knowledge is appropriate and most relevant? It remains to be seen which stakeholders amongst the institutions assessed in this research are best able to stem the current threats and protect Bogd Khan Uul’s natural and cultural gifts. In a visible protected area adjacent to a fast-growing

urban centre possible stakeholders are diverse: elected politicians, herders, civil servants, lamas and shamans, park rangers and managers, social and natural scientists, adjacent residents, conservationists, historians, tour operators and foreign supporters amongst others.³²² No doubt Mongolians have longstanding experience in how best to put knowledge into action. Both praxis and deep contemplation are, after all, important aspects of Mongol cosmology.

A precautionary conservation planning³²³ approach would argue that the problematic site issues at Bogd Khan Uul be viewed as likely to remain the same or potentially worsen in the near future.³²⁴ Thus, those with a stake in the long-term sustainability of the mountain need to heed the words of the rangers synthesized in this study. These include warnings about vegetation depletion, logging, overgrazing and problems with future tourism developments, as well as the associated material poverty in periphery communities. What concerted action can stakeholders take to stem current and potential problems identified in this research? This concluding chapter proposes three directions for local ecological knowledge applications³²⁵ at the Bogd Khan Uul: **co-management, restorative actions, and economic localization**. The order of placement of these three is intentional in that in order to achieve economic localization, requisites will include restoration oriented projects and more importantly, a set of strengthened local institutions that address governance and co-management. An assessment of the capacity of existing institutions to act on these three pathways is included in Appendix A.

6.1 Co-management: building a solid foundation for transformations

A key enabling condition for long-term protection and restoration activities at Bogd Khan Uul would be the instigation of a co-management or governance process involving diverse

stakeholders in shared decision-making. This approach has the potential to create a transparent, cost-effective, localized system of management or even governance for the park and adjacent lands.³²⁶ Such a process could help resolve inter-jurisdictional land use and tourism frictions; could serve as a vehicle to pool multi-jurisdictional tourism revenues (possible fundraising) and channel these to conservation and restoration efforts, as Chapter 2 indicated. Co-management processes have been used elsewhere to address land use planning conflicts related to resource use and access. At Bogd Khan Uul these included threats from Ulaanbaatar urbanization, vegetation harvest and pasture access issues. A co-management process can also help create the conditions that seed initiatives such as ecological restoration, cultural site protection and economic localization. Community-based approaches that have a capacity for handling enforcement issues need to be considered, particularly those that have the propensity *to address other issues* such as education, participation, economic localization and long-term conservation initiatives. Again joint negotiations and power sharing—inherently embedded in co-management designs—can tackle enforcement, often in a cost-effective manner.

A co-management process might involve diverse groups or individuals who have a stake in protecting the Sacred Mountain, and could even evolve as a unique form of local governance. Further research into the possibility of forming a co-management committee, board or non-profit organization and how best to include representatives from adjacent communities governments, *hot ails*, park administration, tourism operators, Mongolian faith or spiritual groups, conservationists, herders and international supporters, among others, may be worthwhile.³²⁷ Examples at two protected areas in Mongolia: Gobi Gurvainsaikhan and Hustain Nuruu illustrate how local buffer zone councils can bring together diverse interests to work on

developing joint conservation and local economic plans and projects.

6.2 Restorative acts: ecological and cultural site restoration

While this research is only one small snapshot of the issues at one protected area, rangers proposed many ideas for the resolution of current problems at Bogd Khan Uul. Developing local knowledge applications without working with rangers or local residents would be a significant oversight. The local ecological knowledge of park staff, residents, civil society organizations, education institutions and tourism operators, is critical to protecting the mountain.

The rangers' suggestions included working with adjacent communities, youth and tourism firms on protection and restoration projects. Current tree planting, monastery restoration³²⁸ and trail work are all demonstrable examples of successes to build upon at Bogd Khan Uul. Other projects attempted in Mongolian and international protected areas also serve as examples of greater community involvement. In addition to buffer zone councils, attempted in several protected areas, W.W.F. Mongolia (Sacred Gift to the World project) has focussed on identifying and recognizing local stories and legends and educating Mongolians about local sacred sites. Reforestation and community forestry initiatives have also been supported by foreign aid organizations both inside and outside protected areas (e.g. JICA, WorldVision, etc.) and environmental public education has been spurred by the burgeoning Mongolian civil society and by environmental N.G.O.s (see Ferguson 1999).

Specific project ideas for further investigation stemming from the findings include: conducting taxonomical inventories and ecological monitoring (like animal counts and forest health); local school and university teaching or training initiatives and information technology

initiatives, (e.g. monitoring) implementing steppe-grass restoration and elimination of road multi-tracking; monitoring of local and non-local climate change on watersheds and ecosystems; collection of herder and resident oral histories for targeting ecological restoration and spiritual site protection; undertaking Tuul River shore/riparian zone protection and Bogd Khan Uul stream restoration. Ecological monitoring projects could be combined with Mongolian-based, as well as foreign-supported research on local ecological knowledge at the *hot ail*, valley, watershed, bioregion and eco-region level.

With increased community participation—particularly through paid employment combined with training—vegetation depletion, logging and overgrazing can diminish as threats while simultaneously, residents gain important skills. The question of who pays for local initiatives ought to be linked to further investigation on revenue-generating options including: trust funds, park controlled business options and fees suitable to the current needs at Bogd Khan Uul.

Empowering the rangers in their role as educators and pro-active long-term stewards—rather than enforcers—is another critical direction for future management of Bogd Khan Uul. Basic equipment and a communications network are immediate expressed priorities and their realization would support restoration on all fronts. Several small projects involving rangers working with communities may spurn acts that evolve to inspire restoration of Bogd Khan Uul's ecosystems.

6.3 Economic localization: a means to eliminate material poverty

Four lessons embedded in Mongolian local knowledge systems, provide insight about how Mongols handled the collapse of 1990s socio-economic safety nets and weathered the resulting instabilities.³²⁹ In turn these four provide clues for how to strengthen the economies of communities adjacent to the Bogd Khan Uul.

1. Localization—buying, shopping and making products, goods and services as close to home as possible, supported via word of mouth, and financial incentives or disincentives. Localization can encourage circulation and re-circulation of monies within the local economy and fair trade from outside the local systems;

2. Meaningful work—having a project that can focus and build pride provides important income and supports dreams and visions of a better tomorrow;

3. Network economy— networks³³⁰ are an important Mongol safety net for family and friends and include sharing food, friendship, love of stories and song, exchanging information, finances, goods, soft credit, and social interchange in tough times. *Mongol Idesh* (i.e. food or meat for the winter) demonstrated the importance of sharing and bartering amongst relatives and kin connections and urban-rural connections;

4. Non-material wealth—the importance of Mongol connections to family, friends and nature through the arts, revived traditions and spiritual connections provided individual and collective knowledge about specific places, about nature and about the universe.

These four constitute a virtual Mongol ‘survival system’ and deserve further study not only by civil society social innovators, but by International Financial Institutions like the World Bank Group, and I.M.F., whose United Nations’ chartered mandates include the alleviation of poverty and attainment of sustainable development.³³¹

The concept of economic localization focuses on providing a policy environment and financial tools³³² that emboldens stakeholders to generate local initiatives, joint ventures and micro-enterprise at the community level. By maximizing enterprise development, procurement and projects within a local economic ‘territory’, the process of economic localization or repatriation of income and savings can occur.³³³ An example of this approach in Mongolia’s protected areas is the park managed ‘eco-ger’ accommodations at Gorkhi-Terelj National Park.

The concept combines park revenue generation, local small business development and training for residents. Such an initiative reduces enforcement costs by maximizing community involvement and in turn increases stake in the protection of resources. Further research into how economic localization might tackle personal and community economic insecurity in settlements adjacent to Bogd Khan Uul is needed. How a co-management process or the existing buffer zone advisory committees or N.G.O.s might successfully initiate such projects is worthwhile investigating. As previously noted possibilities for projects at Bogd Khan Uul, based on other examples in Mongolia include: community-ranger mutual learning, volunteer action days, media education campaigns, spiritual site clean-up or inventorying, ecological restoration projects (e.g. tree planting), adjacent community micro-enterprise development, joint community-ranger policing, ecological inventorying (e.g. rare species) and eco-monitoring. Communities on the periphery of the park have little or no voice in the formulation of Mongolia's macroeconomic policy, consequently, research into developing a localization strategy might also encourage direct participation in broader budgetary and land-use planning priorities.

6.4 Final remarks

This study conducted over the course of two years identified how emergent institutions affected nature and cultural protection at Bogd Khan Uul. In the process, it provided a glimpse of the intense changes that Mongolian society underwent during the final decade of the 20th century. Attempts to understand and describe the Mongolian approach to nature protection and the unique Inner Asian worldview are limited at best.

In spite of the potential for food crises and civil unrest throughout the 1990s, Mongolians adapted to the trying ecological and political circumstances, partly by reviving and

reinventing institutions and spiritual practices, and partly by placing an importance on strong extended family ties, notions of sharing, networks, and an unwavering belief in the importance of mother nature. In the transition from a one-party authoritarian state to a dizzying dance with globalization and accelerated processes of economic and cultural integration, Mongols have been able to maintain their endemic strengths.

Mongolians, like the institutions that they have revived in the 1990s demonstrate a remarkable resilience and adaptability in the face of hardships. This includes an ability to survive economic and institutional collapse, systemic chaos, a political revolution and two severe winter droughts in one decade. Through all the hardships Mongols have been able to retain their immense generosity, humor, and love for the land and life. There is much to learn from their systems of survival—networks, localization and Mongol *Idesh*—as well as from their local knowledge of resource management.

The case of the Bogd Khan Uul has shown the incredible obstacles that remain in protecting nature in the long run, but also demonstrated the potential role that local knowledge can play in protecting and restoring cultural and ecological endowments. To the outsider, the strength of endemic ecological knowledge at Bogd Khan Uul may not be initially evident—especially the extent to which her forests, watersheds and grasslands have been compromised. However, this study’s metaphorical ‘dialogue’ with rangers illustrated the breadth of place-based ecological and historical wisdom amongst only one small network of individuals. More thorough research would involve herders, *hot ails* and long-term adjacent residents. This type of local wisdom—from many diverse stakeholders—will be a necessary ingredient in restoring healthy ecological and institutional processes at Bogd Khan Uul.

Local insight from the frontline ranger team working on the periphery of this protected sanctuary also demonstrated that nature has never stopped being an important measure and mirror of our own humanity. How we shape and are shaped by sacred places like the Bogd Khan Uul brings to mind the Mongolian herder's adage: "nature is our manager." While human systems and organizational designs do go awry—as evidenced by the collapse of institutions in 1990s Mongolia—the mountains, steppe, forests, fauna and the people living there continue to be governed by the daily rhythms of nature. In spite of globalization, Mongol 'governance by nature' is a reminder that well before it was named a 'UNESCO biosphere reserve' or a state 'strictly protected area', the Bogd Khan Uul was considered a sacred mountain, influenced by the changing seasons on the vast Asian steppe.

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Endnotes

¹Mongolia's entry into international or multilateral institutional arrangements—one measure of globalization—has been dramatic. Within a short period of time this included entry into multilateral institutions like the IMF, World Bank Group, Asian Development Bank and the development of a foreign policy that has entirely new bilateral relations with China, the European Union and the Americas (Tumurchuluun 1999; Delgermaa 1999). Separate measures of change include the sweeping legal reforms initiated since the 1989 revolution that have resulted in the “introduction or substantial amendment” of some 118 laws. Fewer than half of these had *Ikh Hural* (Parliamentary) passage at the beginning of the new millennium (Miller & Taylor 2000).

²Globalization represents the process of increased “broadening and deepening of interactions and interdependence among societies and states throughout the world” (Cohn: 2000, 10). Fundamental shortcomings of this process include the need to redress socio-economic asymmetries, roadblocks to adopting fair trade, human and labour rights, and ecological justice for all citizens of Mother Earth.

³The revolution in Mongolia—possibly inspired by democratic revolutions in Eastern Europe, Philippines, South Africa and elsewhere in the Soviet Union— began in December 1989 with approximately twenty young Ulaanbaatar residents, including the Mongolian Democratic Union, calling for an overhauled state, free multi-party elections and economic reforms. Demonstrations continued up to March 1990 when the governing Mongolian People's Revolutionary Party (MPRP) announced major reforms including free elections, a new constitution and open foreign relations. These changes were ratified at an April 1991 congress of the MPRP. In July, of the same year, the first internationally-observed, openly contested elections took place (Ginsburg and Ganzorig 1996: 148; Sandag & Kendall 2000:13; Bruun & Odgaard 1996: 28; Goldstein & Beall 1994: 25; Ginsburg 1999: 247, 251).

⁴In addition to being a party to the *Convention on Biodiversity (CBD)* in 1992, Mongolia also ratified the *Convention to Combat Desertification* (1994), the *Convention on International Trade in Endangered Species on Wild Fauna and Flora* (1996) and the *Ramsar Convention on Wetlands of International Importance* (1996). Horizontal multilateral relations are increasingly important in the era of globalization, as Manuel Castells (End of Millennium, 1998, Blackwell, Oxford ,p.355) argues in his comprehensive three volume work. He suggests that: “Nation-states will survive, but not so their sovereignty. They will band together in multilateral networks, with a variable geometry of commitments, responsibilities, alliances and subordinations.” He adds, “the global economy will be governed by a set of multilateral institutions, networked amongst themselves. At the core of this network is the G-7 countries club, perhaps with a few additional members, and its executive arms, the International Monetary Fund, and the World Bank, charged with regulation and intervention on behalf of the ground rules of global capitalism.” Some of this case study examines potential local alternatives to top-down state and market institutions.

⁵With its large 1.57 million sq.km land base, Mongolia's territory encompasses a wide variety ecosystems with unique habitats for flora and fauna. Major geographic zones include: steppe, gobi desert, taiga and three mountainous zones (MNE 1997a; MNE 1997b).

⁶In the mid-1990s Mongolia's *Ikh Hural* (Great Assembly) approved sweeping environmental protection and land conservation reforms at the same time as her citizens were experiencing the socio-economic consequences of one of the planet's most severe peacetime economic collapses of the 20th century (Bruun 1996). Research varies in the assessment of the impacts of the economic depression in the 1990s, however most cite impacts beyond macroeconomic indicators, including human health, food security and social stability. (Adyasuren 1998: 91; Agriteam Canada Consulting 1997: 1; Bruun & Odgaard 1996: 23; UNDP 1997: 13; UNDP 2000: 9; Goldstein & Beall 1994: 116; Humphrey & Sneath 1999; Rosabi 1999, 16).

⁷During the winter of 1999-2001 the livelihoods and food security of rural residents in at least half of Mongolia's rural aimags (provinces) were at risk due to severe winter drought conditions. The

pronounced winter drought cycle reduced available forage and resulted in the deaths of an estimated 3 million livestock (1999-2000) (World Wide Website of UNDP relief effort, <http://www.owc.org.mn>; Pers.Comm.Demberal August 2000).

⁸Adyasuren suggests that the political and socio-economic upheavals in late 1980s Mongolia also had environmental causes including: the replacement of traditional husbandry, inadequate technology, natural resource inefficiencies, stresses on ecosystem carrying capacity and ecological degradation (1998: 11). The issue of Mongolia's outstanding debt to the Russian Federation for Soviet-era infrastructure support and cited by the Russian government has brought forth counter-charges of environmental degradation caused during the stationing of the Soviet army (Sanders 1996: 220).

⁹This definition adapted from Phillips & Harrison (1999: 13); Nelson (1978: 2), Eidsvik (1993: 285), Grigoriew et al (1985); Poole in Davis (1993: 15).

¹⁰This definition adapted from Berkes & Folke (1998: 5), Bernauer (1995: 351-52); Ostrom (1984: 4), Wells (1997: 167-193), Humphrey and Sneath (1999: 15), Friedland & Alford (1991), cited in Goldman (1998b: 48) Shah (1995: 6-7).

¹¹Berkes and Folke (1998:14) argue that indigenous ecological knowledge represents a "reservoir of active adaptations" derived from millennia of localized human experiences.

¹² I cite works that focus on local and traditional approaches to conservation and ecological protection, including MNE 1997: 13; Adyasuren 1998: 10; Humphrey and Sneath, 1999: 302-306; Griffin 1993: 18; Fernandez-Giminez 1997a; Germeraad and Enebish 1996, and from international case study sites (examples in Folke et al 1998: 429-31; Feeny 1992: 282; Ghimire and Pimbert 1997, 23; Bonte 1996; Gadgil et al 1993; Mullenkei 2000; Troster 1998; Lertzman 1998; Howard 1994; Zent 1999; Posey 1998a,b; Gupta 1998, Ramakrishnan 1996).

¹³ The revived Lamaist-Buddhism and Shamanic spiritual practices has been synonymous with the emergence of complex codes of conduct revolving around nature worship (Germeraad & Enebish 1996; Humphrey & Sneath 1999; Fernandez-Giminez 1997; Bruun 1996, 72; Merli 1999).

¹⁴This definition adapted from: Berkes & Folke (1998: 5, 14); Germeraad & Enebish (1996:17); Posey (1998a: 3, 6-7); Scott (1998: 316, 346); Ostrom (1992: 313); Howard (1994: 192); Henderson et al (1995: ii). This definition emphasizes a cogency of place-based understandings about the web of life and the abiotic, biotic and cultural factors affecting ecosystems. These are multifaceted understandings that represent knowledge gained through everyday observations about ecosystems and are typically passed-down from elders (Posey 1998a). This study is a variant on the 'elder as repository of knowledge'.

¹⁵The importance of local wisdom was a major factor in my choice of interviewing frontline park rangers rather than exclusively Ulaanbaatar-based management or government officials, NGO, bilateral and multilateral organization officials. While the rangers are paid from the state they also reside with their families on the periphery of the park many in the typical style of Mongolian pastoralists.

¹⁶For Chapter Two's title I adopt Maxwell's term "conceptual context" to include those elements that have shaped my research design and helped construct a theoretical framework, since much more than literature provides context. This framework literature, experiential knowledge, networks amongst researchers, unpublished papers, works in progress and grant applications (1996:26). Maxwell suggests that, "an exclusive orientation toward the literature leads you to ignore your own experience, your speculative thinking and your pilot and exploratory research."

¹⁷The paradox of defining local and traditional knowledge is it evades a definition—a direct challenge to current utilitarian and reductionism in vogue in applied academic disciplines. Henderson et al (1995, ii, iii) argue for the need to protect communal stories, heritage and culture, including languages, artistic works, traditional designs, and oral traditions (iii).

¹⁸Linda Tuhiwai-Smith (1999: 47,65) argues that part of the process of the assimilation of the Maori peoples has been the “failure of research and the academic community to address the real social issues.” Her forceful critique of science opened my eyes to the complex ways of indigenous knowledge systems and reminded me to remain reflective during my work. Her concerns included cultural survival, community economic renewal, the impacts of bio-prospecting and protected areas becoming “sovereign reservations for the elite.” Her vision of proactive projects that support local knowledge and “diversities of truth” provide inspiration for communities facing the challenges of globalization (144).

¹⁹Tuhiwai-Smiths’ twenty-five projects—including in her work on decolonization—include Claiming, Testimonies, Story Telling, Celebrating Survival, Remembering, Indigenizing, Intervening, Revitalizing, Connecting, Reading, Writing, Representing, Gendering, Envisioning, Reframing, Restoring, Returning, Democratizing, Networking, Naming, Protecting, Creating, Negotiating, Discovering and Sharing (142-161).

²⁰Several good examples of initiatives with multiple objectives like focussed on nature protection, economic localization and community participation can be found in Mongolia’s protected areas. One is at Hustain Nuruu Protected Area (the Takhi/Prezwalsky’s Horse Reserve) where nature protection has been combined with tourism initiatives and a dairy to create local employment. Another example comes from the Gorkhi-Terelj National Park where an attempt has been made to channel tourism revenue back into the protected area’s revenues by managing Eco-Gers (tourism gers). Profits support local guides, other employment and the park’s budget.

²¹Elinor Ostrom authored the study *Making the Commons Work* (1990), which is viewed as a landmark study in the recognition of longstanding local knowledge systems and the institutional prerequisites for managing common property resources like fisheries, forests, pastures, etc. Her work cites principles that are drawn from a number of international cases and illustrates the use of local knowledge systems that have evolved over long periods of time and which are based upon complex local customs.

²²From Elinor Ostrom, “The Rudiments of a Theory of the Origins, Survival, and Performance of Common Property Institutions,” in Bromley, Daniel, W. Ed. *Making the Commons Work*. ICS Press. 1992. 293-318.

²³His advice is most prescient for those post-1989 multilateral agencies currently involved in shaping Mongolia’s biodiversity or macroeconomic policy.

²⁴ Fikret Berkes & Johannes Colding suggest that research is needed on cross-scale problems and issues in the spheres of co-management and institutional learning (1998: 433). Berkes own work with Cree Indigenous Knowledge introduces four nested scales or levels of analysis: first, knowledge of land and animals; second, land and resource management knowledge systems; third, common-property systems, and fourth, worldview or cosmology, which shapes human-nature relations and gives meaning to social interactions (1998: 124).

²⁵The name ‘Mongol’ originated with unification of nomadic clans apparently in the early 12th century (Sneath 2000: 2). Later in 1206 a unified feudal state of Mongols was created under the leadership of Chinggis Khan (Genghis Khan). (Gilberg & Svatesson 1996: 9; Germeraad & Enebisich 1996: 32).

²⁶Berkes and Colding (1998:124) use the terms ‘worldview’ and ‘cosmology’ interchangeably to represent that which “shapes human-nature relations and gives meaning to social interactions. Raine (1999: 31) refers to worldview as “ ‘a picture’ of the way things in sheer actuality are, the concept of nature of ‘self’ and society. A worldview contains the most comprehensive ideas of order. It is the lens and focus by which reality is perceived.”

²⁷Cited in Humphrey (1999: 200), who makes the argument that it is difficult to strictly define nomad. She uses the terms sedentarization and pastoral lifestyle and introduces an index for degree of sedentarization, inclusive of the fact that many rural Mongols live in populated rural centres (*soms*) for part of the year and engage in pastoral activities and/or migrations for another part of the year.

²⁸I identify these works for references to the importance of nature in the Mongol worldview drawing from academic, governmental, philosophical, historical, developmental to romantic adventure—for the purposes of introducing my research. The argument that anthropologists engage in about the extent to which cultures are shaped by their natural environment is beyond the scope of this study. Adyasuren 1998; Baatar 2000; Enkhee 1999; Khuldorj 1998 & 1999; MNE 1994 & 1996b; Germeraad & Enebisich 1996; Shagdar 1997; Andrews 1921; Fernandez-Giminez 1997a; Gilberg 1996; Goldstein & Beall 1994; Humphrey & Sneath 1999; Lawless 2000; Ligaa 1994; Ossendowski 1922; Prejevalsky 1876; Sneath 2000.

²⁹Diverse sets of ecological knowledge and traditional pastoral practices also require regular adaptations for changes in climate and forage, animal health or adaptations due to disaster, like drought, blizzards or fire.

³⁰The renaissance of Mongol tradition does not discount those pre-1989 customs that were maintained in spite of sometimes repressive and authoritarian state actions, particularly under the 1930s Choibalsan regime towards longstanding customary practices (Sandag & Kendall 2000). Key cultural components that survived this dark period include: Mongol-based languages, elder respect, epic stories, poetry, music, epic narrative, patrilineal naming and social organization, *Idesh* 'meat for the winter', *tsaillaga* 'tea for guests', *budaalga* 'gatherings for births and birthdays', *daillaga* 'receptions in honor of individuals' and steppe reciprocity (sharing arrangements with neighbours/community), ethnobotany, lunar new year festival (*Tsagaan Sar*) and summer outdoor festivals and feasts (*Nadaam and Nair*), seasonal movements and collective activities (e.g. felt making) (Gilberg & Svantesson 1996; Humphrey and Sneath 5, 17: 1999, Dondog 1996: 39).

³¹*Inner Asia* is used in their study to refer to people residing in Mongolia, Inner Mongolia (People's Republic of China), Tuva and Buryatia (both Republics in the Russian Federation).

³²In a conversation with a former Mongol colleague, while traveling in Khovd Aimag in 1998, we discussed how western notions of conservation and environmentalism differ from those in Mongolia. For example he pointed out what he saw as contradictions between the western-inspired animal rights and conservation movement and the need to hunt for sustenance.

³³The same syncretistic tendency to 'take in attributes of another' have been noted in Mongolian Buddhism and Shamanism (Merli 1999). Love and respect for nature is a common attribute in ceremonies and practices in both spiritual practises.

³⁴The 1989-90 revolution eventually led to the enshrinement of religious freedoms under the Mongol Ulsyn Undsen Khuuli (Mongolian State Constitution) of 1992. These freedoms have led to both an indigenous resurgence and foreign-influenced religious activities include various strand of Buddhism and Christianity (Baptism, Church of Jesus Christ Latter Day Saints, Adventism, Roman Catholicism) and the Bahai faiths amongst others (O'Donnell 1999; Merli 1999). External spiritual practitioners are involved in setting both social or ecological goals as well as proselytism, although this is not a direct objective of some foreign-funded NGOs (examples might include ADRA or World Vision). Mongolian culture has demonstrated an adeptness for appropriating external religious practices via syncretism (Merli 1999), the foreign influences are not beyond the concern of some local observers.

³⁵One example of nature's prominence is the association of common Mongol names with nature. The women's name, Baigalma, for instance, translates to nature's child or nature girl. Former colleagues and acquaintances have names like Tsetsgee (flower), Narantsetseg (sunflower) or Chuluuntsetseg (stone and flower). At times during my research informants would personalize nature. For example, people

made reference to the Tuul River adjacent to the Bogd Khan Mountain as 'Mother Tuul' or the Bogd Uul as 'old man' mountain.

³⁶Sneath (2000: 217-218) identifies how even the Mongol terminology used for the cardinal directions are heliocentric in relation to the household level. "The ger is always pitched so that the door faces south. This orientation is so central to Mongolian culture that the words for 'ahead', 'behind', 'left' and 'right' are the same as those for south, north, east, and west respectively.

³⁷Survival in spite of the recent Tsuud (drought over winter) resulting in approximately 3 million livestock deaths in 2000 is a testament to Mongols ability to cope in the face of harsh climatic and economic conditions. Long-term ecological issues such as steppe carrying capacity desertification and the impacts of climate change will likely increasingly mitigate future ecological and socio-economic disasters. Goldstein and Beall's interviews with herders show how the unpredictability of nature affects herders' approach to decision-making. One herder they interviewed sums up the message succinctly, noting that, "nature is our manager." (1994:33-39).

³⁸During the *Northern Code* era, land use remained under control of either hereditary nobility or monastic Buddhist lamaseries.

³⁹Howard (1994: 192) makes reference to the use of "healing and prophylaxis" as elements of complex "knowledge systems rooted in the traditions of local communities.

⁴⁰U.Ligaa notes that "71.6 percent of all medicines used in Mongolian traditional medicine are obtained from plants" His research describes over 380 species used in Mongolian traditional medicine, including their distribution, ecology, chemical composition and applications ("Medicinal Plants of Mongolia Used in Mongolian Traditional Medicine". 1994. Korean Cooperation Agency Press).

⁴¹Key research centres include the Mongolian Academy of Sciences, the Mongolian National University, Mongolian Technical University and Mongolian Agricultural University along with a large number of private and N.G.O. education organizations that were initiated during the 1990s.

⁴²Significant domestic and bilateral projects employing a scientific paradigm that were initiated or resuscitated during the post-revolutionary period include ranger training, biological inventories, anti-desertification schemes, protected area buffer zone development, remote sensing, energy efficiency and climate change research, geographic information system and remote sensing projects, land conservation, air pollution reduction, disaster mitigation, forest fire reduction and community-based conservation.

⁴³There appears to be little evidence to date that biodiversity conservation projects in and around protected areas have been able to reconcile local peoples' long-term social and economic needs with long-term conservation goals. D This profound failure surely indicates a need for researchers and development workers to work to better address the power asymmetries that occur between local and non-local interests (Wells 1996: 179; Ghimire and Pimbert 1997:6).

⁴⁴Effectiveness in this case represents the gaps between institutional goals and actions. This institutional gap analysis adapts concepts from Bernhauer (1995), who suggests that international environmental institutional performance/effectiveness can be evaluated by examining the gap between institutional goals and environmental degradation.

⁴⁵The term 'state' is used to refer to the nation state in the post-1648 Treaty of Westphalian sense (as discussed in M.Zacher's article "The decaying pillars of the Westphalian temple: implications for international order and governance" in J.N.Rosenau and E.O.Czempiel eds. *Governance without Government* (Cambridge University Press 1992). States are sovereign entities governing national territories and operating in accordance with international norms. By this definition states include

constitution level rules as well as governments, administrative systems and organizations that are part of the state apparatus.

⁴⁶Wells suggests, “their [macroeconomic policy makers] support in sanctioning, encouraging or imposing incentives for biodiversity conservation seems essential” (1996:173). My findings show that rangers frequently raised broad economic and social issues—like poverty and unemployment—as national scale issues underlying local scale problems.

⁴⁷Donor funding, in essence, represents an externally dictated budget for Mongolia. Sander (1996) also identifies the impacts of I.M.F. intervention in 1992 on Mongolia’s domestic policies. Regular plans (such as the Medium Term Strategy 1999-2000) must conform to advice from donors and from key lending nations, which in Mongolia include key funders Japan, the U.S. and European Union. For example at the 1999 7th Annual Assistance Group Meeting (Donor’s Meeting) in Ulaanbaatar US\$320 million (over 30% of the GNP) was earmarked to projects for an 18 month period, the bulk for hard infrastructure projects (50%), banking reforms (20%) and structural reforms (15%). Twenty four nations, 11 international organization and four NGOs affirmed this strategy (*UB Post*, June 30, 1999: 26: 163, 1).

⁴⁸This rapid downloading of responsibilities precipitated a mid-1990s crisis in local government due to a lack of local electoral accountability, undefined responsibilities, an already eroded public services and a lack of financing authority.

⁴⁹For local level organizations Wells uses the categories of traditional authority structures, local governance structures, local political parties, self-interest organizations and private entrepreneurs (1996: 174).

⁵⁰To demonstrate the prolific rise in NGO growth, the Mongolian Ministry of Justice registered 7 NGOs in 1992 and by 1996 770 NGOs were registered with the same ministry (UNDP 1997: 31).

⁵¹Abrams (2000) defines co-management as “power-sharing in the exercise of resource management between a government agency and a community or organization of stakeholders designed to improve resource sustainability and advance socio-economic goals.” Other approaches to involving communities include bioregional planning, building transnational coalitions of NGOs and using holistic, micro-macro approaches to analysis, like those identified at the beginning of this literature review.

⁵²Ghimire and Pimbert (1997: 34-3), argue that community or stakeholder consultation processes need to be holistic, long-term, involve genuine power sharing with a focus beyond on a conservationist agenda.

⁵³Co-management is also referred to as collaborative or cooperative management.

⁵⁴Humphrey refers to *hot ails* as “pastoral pre-collective groups” (1998: 174, 120-121). She cites Simukov whose pre-collective era research suggests that *the process of forming* a hot-ail is ‘an institution’, rather than the hot ail itself. In this study (at Bogd Khan Uul) I include *hot ails* as organizations within the institutional frame of civil society. Fernandez-Giminez (1997: 325-326) refers to hot ails as being “an important social safety net in the wake of privatization” in rural areas. She defines a *hot ail* as “traditional herding camp consisting of 2-12 households [which has] rapidly re-emerged as an important social grouping.” She adds: “the khot ail [sic] is a malleable group whose membership shifts seasonally and annually, but which is usually composed of a core of households, often close kin. Other households with more distant kinship ties, friends and acquaintances, may camp with the core for several seasons. “ Odgaard (1996: 131) emphasizes the importance of shared work, shared herding responsibilities, and the importance that loans of food and livestock play and how *hot ails* are “potentially important” for poverty alleviation since they are flexible networks that reduce risks to individuals.

⁵⁵Bilateral development agencies are state-to-state funders, examples include, for example, CIDA, USAID, JICA, KICA, DANIDA, FINKA, AUSAID, etc.

⁵⁶Research by James and Green (1999) in conjunction with the World Conservation Monitoring Centre indicated that little is known about the proportion of foreign aid targeted for biodiversity protection. They argue that Third World protected areas are highly under resourced—accounting for 10 per cent of global protection expenditures but having 60 per cent of the global share of protected spaces. They call for a \$300 billion dollar infusion of foreign aid for biodiversity protection (2,22).

⁵⁷Examples of conservation science techniques include species population size and viability analysis and island biogeography, patch dynamics, fragmentation theory, stress theory, catastrophe theory and cumulative change theory (CBD 1993; Wilson 1992; Soule & Kohm 1989; Kelley 2000; Conservation Int'l 1991, Moran 1990, Theborge 1993; Little et al 1990; Lees & Bates 1990).

⁵⁸Examples of parks or biodiversity planning techniques include biogeographic classification systems, the abiotic, biotic and cultural or ABC boundary delineation method, geographic information systems or GIS planning/mapping methods, and GAP protected area network analysis (Udvardy in Eidsvik 1993; Grigoriew et al 1985; Wilson 1992; Theborge 1993; WWF Canada 1993).

⁵⁹While the method has been used to delineate park zones or boundaries based on descriptions of varying abiotic, biotic and cultural (A-B-C) conditions, it also serves as a useful framework for a site overview as used in this work.

⁶⁰Additional Articles in the *Convention on Biodiversity* include provisions for ensuring sustainable development adjacent to protected areas, protecting threatened and endangered ecosystems and species and their habits, providing financial support and incentives to Third World nations for protection, supporting *ex-situ* conservation (e.g. seed banks) supporting and promoting research, training and public awareness of biodiversity issues (CBD 1992).

⁶¹Both Wells (1996) and Haque (1999: 204-206), suggest that international trade agreements—like the WTOs General Agreement on Tariffs and Trade (GATT), if interpreted narrowly, may perversely treat conservation protection as a barrier that discriminates against free trade.

⁶²As an example, the impacts of the *Convention on Biodiversity* on policies at the Bogd Khan Uul are very different from the inability of rangers to enforce the annual pinecone nut (*Samar*) harvest in the forests of the Bogd Khan Uul; as are the impacts of structural adjustment programs on Mongolia's macro-economic policy and how this may affect the decisions of illicit Bogd Khan Uul 'survival loggers' who reside in the materially poor neighbourhood of Yarmag (a south-western Ulaanbaatar district).

⁶³Using the analogy of 3 scale-contexts applied to Burnaby Mountain (home of Simon Fraser University) an institutional frame could include Burnaby Mountain (City of Burnaby, and S.F.U.), national/Canada and multilateral organizations in B.C. and Washington State; an ecological frame could include Stoney Creek Watershed, Fraser (*Sto: Lo*) River and Cascadian Bioregion.

⁶⁴One bioregional and eco-region scale interdisciplinary research project has already taken place in this part of Mongolia involving U.S. research work in the Lake Hovsgol-Selenge River basin (MNE 1994).

⁶⁵Another work that supported my research framework because it attempts to transcend global-local scale dilemmas is Ankhil Gupta's, *Postcolonial Developments: Agriculture in the Making of Modern India* (1998). Gupta situates local resource issues in the context of international institutions like the *Convention on Biodiversity* and U.N.-World Bank Global Environmental Facility (1998: 300), and in doing so, illustrates that problems are both local and global in scope and context. Yet another examination of cross scale issues comes from the field of evolutionary biology and the work of Simon Levin who focuses on issues of pattern and scale in ecology (Levin, S.A. 1992. *The Problem of Pattern and Scale in Ecology*, *Ecology* 73:6, pp.1943-1967.).

⁶⁶In spite of the many disadvantages of being an outsider in Mongolia, a foreign perspective and work with a multilateral development agency gave me insights into constructing a framework whose scope

extended beyond the geographical confines of the Bogd Khan Uul. To illustrate how individuals are both affected by and can operate at different geographic scales I draw from personal experience from the summer of 2000, where I was operating at four distinct geographic scales (in terms of state/political boundaries). While I was conducting my research at the Bogd Khan Uul (local scale) I was simultaneously working with the North East Asian UNDP HIV-AIDS—involving Mongolia (national), China, North and South Korea (nation-regions) and also writing a paper on global trade and the environment (multilateral), which I submitted to Canada by electronic mail. So in a sense I was working with institutions and organizations that were operating in four different spatial spheres.

⁶⁷This framework permits coverage of *local context issues Bogd Khan Uul* resource management and household level poverty in adjacent communities; *national scale context* legal systems and macroeconomic policy; *global-international scale context issues*, like Mongolia's accession to multilateral biodiversity (CBD) or conformity with I.M.F. conditionalities, or donor aid policies.

⁶⁸The four institutions included the state (rangers, management, local government, ministry, parliament), the market (tour camps and tourism firms), civil society (non-government organizations, hot-ails, 'traditional' religions Shamanism, Buddhism) and the global biodiversity regime (conventions, treaties, multilateral organizations, donors and NGOs).

⁶⁹Maxwell (1996: 94) suggests that a diversity of feedback: "is an extremely useful strategy for identifying validity threats, your own biases and assumptions, and flaws in your logic or methods." In part the pursuit of deeper knowledge on subjects linked with the Bogd Khan Uul and in part a personal passion led me to explore literature from a range of fields including: Inner Asian history, social anthropology, conservation biology, restoration ecology, political-economy, indigenous knowledge systems, mountain eco-tourism; common property theory, participatory action research, collaborative management, qualitative research methods, along with a range of non-academic works, identified in this study's bibliography.

⁷⁰Since arriving to Mongolia in 1997, I gained insights from friends and colleagues whose guidance and criticisms of my research draws from diverse areas, including: conservation, environmental public awareness, Mongolian management culture, NGO development, sustainable development, tourism development, economics, nutrition research, infant and mothering, education, media democratization, gender issues, youth issues, public health, family planning, urban shamanism, land use planning, pastoral studies, religious studies, strengthening democracy, rural development, public opinion research, journalism, human rights advocacy work.

⁷¹Michael Goldman refers the 'instrument effect' where institutions and researchers have a tendency to, "dis-embed their subject matter from dominant sites of power and knowledge." (1998: 46). To resolve this Goldman calls for 'global commons' analyses to be critical, self-reflexive and at the same time, acknowledge power asymmetries.

⁷²The explicit thinking about one's background and ideas represents, according to Maxwell, potential sources of: "insights, hypotheses, and validity checks." (Maxwell 1996: 28) and improves the transparency of one's fieldwork agenda (Rosaldo 1993; Tuhiwai-Smith 1998).

⁷³In this work, language and cultural barriers and local events—like elections, petrol costs, office moves, equipment breakdowns and the festivities at the *Nadaam Festival*—affected the timing and effectiveness of surveys and interviews. As previously noted, the structural changes in the study design, research question and hypotheses were tracked in journals and memos.

⁷⁴Flexibility refers to handling unanticipated circumstances and modifying one's course of action where necessary (Maxwell 1996: 3). This occurred as Bogd Khan Uul rangers, managers and other informants provided fresh insights in both survey design and planning, pilot testing and during the survey-interviews.

⁷⁵Natural scales might include watershed, bioregion, eco-region; institutional scales might include local, regional, nation-state or international/multilateral.

⁷⁶The rationale behind the inter-scale framework develop is discussed in the previous chapter, however it is important to reiterate the importance of three works underlying the epistemology of this approach, namely Gupta (1998), Nelson (1991), Berkes et al (1998).

⁷⁷My own discomfort with developing hard and fast management recommendations in this study stems from concerns about spatial, temporal and cultural distance from the Bogd Khan Uul, as well as about the historical misapplication, misuses and misinterpretations of research, exemplified in Goldman's 'instrument effect' and critiques of research on indigenous cultures (Posey 1999; Tuhwai Smith 1999). Majid Rahnema's critique about well-intentioned advocates of community participation who argue for "action with immediate, tangible results" suggests that the conditions already exist in many 'traditional' societies for transformative acts to take place by exercising patience, selflessness, compassionate observation, self-reliance and conviviality with an emphasis on building constructive relationships (1990: 219-221).

⁷⁸Associated with this 'observer effect' is a need to be explicit about one's worldview in order to understand the research phenomena and to specify one's aims to third parties, particularly as an ethical aspect of intercultural work (Hastrup 1995; Rosaldo 1993: 202, Tuhwai-Smith 1999:161).

⁷⁹For example, Maxwell suggests (1996: 27-28) that researchers ought to reflect upon their own experiences—"researcher [as] the instrument of the research"—in order to gain insights, generate hypotheses and address validity questions (27-28).

⁸⁰These are not linear processes, but included developing working hypotheses 'on the fly', as informants and secondary research provide fresh insights before, during and following fieldwork.

⁸¹Maxwell stresses the importance of interactivity and flexibility in research design and that toggling between purpose, theory, methods, research questions and validity issues is part and parcel of the research process. Babbie (1986:239) argues that fieldwork is much more than data collection and hypotheses-testing, necessitating a focus on understanding processes to generate theory. The process includes making initial observations, developing tentative general conclusions that suggest particular types of further observations, making those observations and thereby revising your conclusions, and so forth." (239)

⁸²Initially I had thought it possible to conduct comparative research between parks in Mongolia, and in 1999 I visited the Gobi Desert and Lake Hovsgol in south and western Mongolia, respectively, in order to determine whether this was feasible. Distance, cost and a lack of secure research funds made me realize the difficulties inherent in such an approach. I focused on locations closer to Ulaanbaatar by mid summer 1999 and in addition to Bogd Khan Uul possible research sites included Hustain Nuruu and Gorkhi-Terelj Protected Areas.

⁸³I attempted to combine ranger spatial commentaries with my surveys in summer 2000. The Ministry of Nature and Environment's Information and Computer Centre kindly produced a set of small scale G.I.S. contour that included the patrol areas of individual rangers stations. These could not be used in a systematic manner (observation mapping) and proved to be difficult to use in light of the time constraints.

⁸⁴Remaining adaptive and responding to basic daily considerations raised by informants (see Methods Chapter 3) partly corresponded to the reality of organizations and institutions with whom I worked. My findings show how some rangers found it difficult to focus on the long term in the context of material poverty that affected daily personal, community and institutional life. ((UNDP 1997; Sant Maral 2000 and Findings (Chs.4,5) herein)).

⁸⁵Another aspect of consent was obtaining approval to conduct research inside the protected area. In spite of a lack of singularity of purpose inherent in my initial research proposals (shaped by the approaches detailed in Chapter 3), manager Batdulam expressed support for my work and provided a

research pass permitting access to the strictly protected area (July 1999). A pilot survey was later developed and tested in August of that same year.

⁸⁶Consent forms (including a description of my research and my business card) were included in the long format survey and were translated to the Mongolian language, along with an oral explanation provided by translator Hosbayar, when we formally introduced ourselves and the survey to the rangers (see Appendices).

⁸⁷Scoping stage subjects that were discussed included co-management or community involvement, ecotourism, poverty adjacent to the park, financial incentives for nature protection, park management planning, applying or heightening awareness about local ecological knowledge, understanding Mongolian nature traditions, how corruption affects nature protection, as well as how one might conduct community mapping and ecological analyses.

⁸⁸These administrative documents (funding proposals, letters of approval, etc.) track the changes that I was responding to in the field.

⁸⁹The pilot survey was field-tested in August 1999 with a herder, a tour camp operator and ranger assistants, during a 3-day trip on the north-east perimeter of the protected area with the assistance of a Mongolian translator and a Swedish environmental studies researcher.

⁹⁰Locating rangers during the pilot survey proved to be elusive since there were few effective means of alerting them before our visits (no telephones, etc.). Building in the possibility of plenty of visits to the stations on the periphery of the park therefore guided our planning efforts to connect with the rangers in 2000.

⁹¹During the pilot survey we spoke with ranger assistants, tour camp operators and a herder. All provided important insights on problems at the park and how to develop future survey tools.

⁹²We initially worked with Purevdorj since the newly appointed manager Chinzorig was unavailable during the first stage of our work in 2000.

⁹³From the Latin *circum* (round) and latin *ambulo* (walk). A circumambulation refers to a circular trip, usually pilgrimage around a holy site, which can include a mountain. Examples of circumambulation include treks around the holiest mountains in Buddhism and Hinduism, for example Mt.Kalaish, located on the edge of the Tibetan plateau. In Mongolia this is referred to as the *Ikh Toiroo* and may take 3-7 days walking time.

⁹⁴As is noted later in the study, most ranger's live with large and often extended families. Since rangers were often in the field during our visits we dropped off surveys to family and in some cases friends who then forwarded the material. In Mongolia word spreads quickly amongst a *hot ail*—particularly if a foreign researcher is delivering a package—so there was little fear of surveys not going to their intended destination or being misplaced.

⁹⁵Locating the rangers often proved to be a difficult task since their main work during the time of our drop offs and pick ups was largely outdoors and our arrivals were typically unscheduled and unannounced. See the discussion on difficulties with communications in Chapter 5.

⁹⁶As with other trips to the Bogd Khan Uul, horse travel provided the opportunity to gain insights into the themes covered in the Ste Issues San. Each visit to the rangers' home covered important ethical protocol like garnering consent for my research, cultural protocol, like greetings, introductions and receiving traditional milk-tea as a guest, *Tsutsai*, and when in season, 'white goods' (mare/cattle dairy products). Formalities provided time for the rangers to gauge their comfort and understanding with the survey contents.

⁹⁷To rush the visits during the short and long surveys would have been inappropriate and in some cases an affront to Mongol traditions like respect for guests. The process of retrieving long format surveys and administering the short surveys commenced within two weeks of delivering the former, and involved translator Erdene-Arjune and myself traveling by jeep, bicycle and on foot on a number of separate occasions during a three week period in August 2000.

⁹⁸In 2000 I considered the idea of surveying individual pine nut pickers, since large numbers had entered the park to harvest during the peak biannual cycle of *Samar* (Siberian Pine Nuts). Another survey of 'stakeholder interests' adjacent to the park would have been ideal however organizing this in a short period of time would have proved to be difficult. **Meaningful participatory research at Bogd Khan Uul would have had the mechanisms in place at the community level before hand. For an outside researcher to organize and complete this over a period of two summers would have been not only difficult but also foolhardy.**

⁹⁹Regular contact with management proved to be difficult due to staff changes and absences (for example, a new manager was appointed between 1999 and 2000).

¹⁰⁰These materials included reports and studies by protected areas staff, non-government organizations, consultants, state organizations, bilateral and multilateral development agencies, academics, tourism businesses and scientific organizations.

¹⁰¹A secondary review of Mongolian newspapers, conservation and participatory action research, provided additional insights into the day-to-day issues facing other protected areas in Mongolia.

¹⁰²Data from two surveys provided context on the material poverty affecting Bogd Khan Uul peripheral communities (found in the *Site Issues Scan*). Both studies were conducted within the timeframe of my research (July and March 2000, respectively). These included data provided by the Lotus Soup Kitchen manager (Mongolian Gender Centre: Yarmag Study, July 2000) and research conducted by the Sant Maral Foundation (Barents Group LLC Privatization Study, March 2000).

¹⁰³Key secondary source sites in Mongolia included the UNDP Library, the U.N.-W.W.F.-GTZ joint conservation collection and archived material at the *Ulaanbaaar Post* and *Mongol Messenger* English-weekly newspapers.

¹⁰⁴To protect the confidentiality of informants responses are distinguished throughout this study by confidentiality attributes. For example, the indicators R21 or R4—represents ranger comments in the short survey, while identifiers like 'Ranger A or Ranger B' represent comments attributable to long survey, as well as all management, discussant and informant interviewees and N9 represents respondents to the Mongolian Gender Centre Study.

¹⁰⁵Constructing theory from research, as Layder suggests, is an evolutionary process that includes: ordering and reordering of various sources of data; reading and re-reading diverse literature, incorporating multidisciplinary perspectives and using intuition (1998: 104-109). His model of methods builds upon what is commonly referred to as 'grounded theory'.

¹⁰⁶An MS-Accel spreadsheet was developed in December 2000 in order to tally ranger responses to the short survey questions. Categories included: daily, weekly volumes and expected changes over five years for resources (pine nuts/*samar*, berries, loggers, grazers, campers, tourists) along with ranked problems, ranked equipment issues, ranked policing approaches, fees, tourism approaches, alternative income possibilities, other income sources and ranger assets.

¹⁰⁷According to Maxwell (1996: 86) validity is a goal and not a product—it cannot be proven or 'taken for granted' it "depends on the relationship of your conclusions to the real world, and there are no methods that can assure you that you have adequately grasped those aspects of the world that you are studying." Babbie defines reliability as "a matter of whether a particular technique, applied repeatedly to the same

object would yield the same results each time” while validity “refers to the extent to which an empirical measure adequately reflects the *real meaning* of the concept under consideration.” (Babbie 1996: 109,112).

¹⁰⁸Maxwell suggests that a serious threat to the validity of research is the interpretation of findings (1996:90) and advises: “Imposing one’s own framework or meaning rather than understanding the perspective of the people studied and the meaning they attach to their words and actions [can create a threat].”

¹⁰⁹Maxwell (1996:99) describes how Griegori Potemkin, Prime Minister and advisor to Russian Tsarina Catherine the Great, during a royal tour, is alleged to have had fake villages built along the river and staffed with friendly farmers in order to impress the Tsarina. An example of the later I became aware of was while working in an overseas development agency when dignitaries would visit our project for photo opportunities and staff focused excessive energies on the visitors.

¹¹⁰The included interviews that reviewed the ranger survey questionnaires with Adaysuren, Badarch, Poland, Chinzorig, and Purevdorj. I found that the rangers were forthright, if not blunt about issues, including complaints about management, and higher-ups—or ‘big cheeses’—as one translator referred to high officials.

¹¹¹Rangers did not gloss over or hide the fact that they felt incapable of enforcing trespasses (for logging, overgrazing, pine nut picking) and generally they felt sympathetic with fellow citizens and in turn the state of the park’s ecology. In addition, the rangers were even more comfortable than say Canadians, discussing issues of personal income and wages in an interview. Moreover, some of the rangers expressed the hopes that my work would activate change (particularly in reference to equipment); although one partner of a ranger openly expressed her cynicism with university researchers and their ability to affect change.

¹¹²Many of the summer *Samar* were visibly available at *guanz* (neighbourhood food stalls) and in the food markets of Ulaanbaatar and Zunmod—although it remained unclear the proportion of these that are harvested from Bogd Khan Uul or extracted from forests elsewhere.

¹¹³I use the term *post hoc* as the short form of *post hoc ergo propter hoc* (literally: after this therefore because of this) usage cited in *Whole Earth Magazine* (1991: 64) in article by William H. Calvin.

¹¹⁴I provide an historical analysis of the site in the *ABC Site Overview*, based partly on the accounts of Mongolian researchers and foreign travel. One caveat I needed to employ in compiling these was the tendencies in the pre-1989 regime to exaggerate or misrepresent particularly issues that may be construed as criticism.

¹¹⁵Ultimately constructing theory about social phenomenon is an evolutionary process that includes ordering and reordering of various sources of data; reading and re-reading diverse literature, incorporating multidisciplinary perspectives and using intuition (Layder 1998: 104-109).

¹¹⁶In a similar line of argument, Earl Babbie (1986:239) suggests that besides data collection fieldwork includes hypotheses testing and instead has a focus on understanding processes and generating theory.

¹¹⁷A massif is defined as a ‘mountain heights forming a compact group’ (Oxford English Dictionary: 1984).

¹¹⁸Infrastructure adjacent northeastern section of the park includes the Russia-China Trans-Siberian rail corridor, a major highway, power grid and other infrastructure. In contrast to the 41,651ha Bogd Khan Uul Strictly Protected Area, the urban area of Ulaanbaatar is estimated to be 135,810ha and the extent of air pollution in the airshed is estimated to be 230,000ha in size (1994 ERDAS-IVAS Remote Sensing Analysis noted in Adyasuren 1997: 10).

¹¹⁹The Ninth Living Buddha Jebtsun Damba Hutagt (Sonom Dargia) who visited Mongolia in 1999 has also been referred to as the Bogd Khan Lama (Kohn 1999: 1), like his predecessor.

¹²⁰Adyasuren (1997: 34) reports that Russian traveller S.Gribovsky made observations about the forests of Bogd Khan Uul and their protection. Adyasuren also suggests that only the Bogd Khan could give permission to enter the preserve which apparently had guard posts at 28 mountain passes in 1809.

¹²¹The *Naadam* summer festival is a regular event in rural Mongolia. The Naadam in Ulaanbaatar is the largest festival in Mongolia. This three-day event is held every July and features what are termed 'the three manly' sports horseracing, wrestling and archery along with a range of other activities.

¹²²For example package tours frequently take visitors to Manchir Hiid Monestary and in recent years many travellers have been accommodated in the 17 tour camps and resorts on the periphery of Bogd Khan Uul.

¹²³Bogd Khan Uul is easily accessible by transit, bicycle, taxi or foot to Ulaanbaatar residents.

¹²⁴*The Bogd Khan Atlas* (MNE 1998: 6) makes reference to 12 types of soils inside the park. The fact that the protected area is located at an intersection of several distinct soil zones, also affects vegetation diversity. The soils in the high elevation areas may be categorized as 'alpine landscape' and 'mountain valley', and feature 'taiga' and 'chernozem' soils. The valley bottoms and slopes include 'forest steppe' and 'steppe' soil categories and feature dark chestnut, meadow and alluvial soils (Adyasuren 1997: 9).

¹²⁵Precipitation at Bogd Khan Uul—90 per cent of which comes in the form of late summer rains—significantly varies with elevation and averages 250mm per annum in the low-elevation buffer zones, and up to 450mm per annum in high elevation zones (Adyasuren 6: 1997). The intense late summer rains have high incidence of ground contact lightning and represent a serious threat to Bogd Khan's forests. Snow cover, generally 4-8cms thick, blankets most of the mountain from mid-November to mid-March.

¹²⁶This equates to 9.9 cubic kilometres of the Bogd Khan massif that is in a state of permafrost.

¹²⁷The findings of the U.N. Intergovernmental Panel on Climate Change (Wembley Third Assessment Report, Sept. 29, 2001 Cambridge U.K: Cambridge University Press) drew from a range of climate change scenarios that included temperature changes in the range of 1.4-5.8 centigrade before the year 2100. One emission scenario suggested that northern latitude regions may experience significant changes in winter temperatures, cumulative annual runoff and permafrost formation. Separate models developed by Mongolian scientists show that a doubling of CO₂ emissions in Mongolia could result in significant changes in vegetation throughout the nation, namely a shift of warm climate southern vegetation northward and to higher elevations (models of State Meteorological Agency reported in Khuldorj 1998: 32).

¹²⁸Temperature increases in Ulaanbaatar's airshed—currently prone to winter air inversions—and high concentrates of oxides of nitrogen and sulphur have contributed to urban smog within the Tuul River Basin and airshed bounded by the Bogd Khan Uul (Adyasuren 1997: 6, 11).

¹²⁹Adyasuren (1997: 6) cites a 0.8 to 3.5-4 degrees centigrade increase in January temperatures since the 1970s at Takhilt and Buyant-Ukhaaa weather stations respectively (north slopes of Bogd Khan Uul). Of this local warming in the range of 0.8-2.5 centigrade, he suggests, is attributable to urbanization and smog.

¹³⁰Adyasuren (1997: 27) categorizes forests and vegetation according to three elevation zones: 1950-2100 metres, 1800-1950 metres and 1400-1800 metres. The highest zone in the park is dominated by pine and larch forests and has vegetation including motley grass, shrub-moss and Pine-open woodlands. Mid-elevation areas feature fir, cranberries, arid moss, sorvo and green moss. Low-elevation areas

feature mixed age stands of Larch on the north slopes of the park and pine-birch-spruce on the south slopes, with vegetation cover including motley grass, coevals and sorvo grasses in non-forested areas (MNE, 1998: 28).

¹³¹The eight major categories include, the following: high mountain, mountain sub-valley forest, mountain taiga forest, mountain subtaiga forest, mountain meadow steppe, mountain steppe, meadow marsh vegetation and dry steppe.

¹³²Large mammals include wild boar, deer (including: roe and musk deer), elk, fox, wolves, lynx and small mammals including marmont, hedgehog, squirrel, vole, badger, polecat, lemming, shrew and hare, to mention a few.

¹³³Avian diversity is wide ranging and includes 194 species of birds, 103 of which nest at Bogd Khan Uul (51 as full-time residents). Some species include the black stork, Eurasian honey buzzard and white-tailed or sea eagle. The moose, white tailed gazelle, brown bear, elk, wolverine, mole, mink, tsokor and ruddy shell duck have out-migrated or are considered locally extinct in the past century (MNE 1998: 8; Adyasuren 1997: 20). Along with musk deer, Siberian roe deer, the sable, the hare, 20 species of birds and 16 plants are designated as endangered or rare species at Bogd Khan (1997 D&E).

¹³⁴During my 1999-2000 fieldwork I was made aware of publicly announced Shamanic and Buddhist ceremonies at two separate locations inside the park and at one outside the western park boundary.

¹³⁵These include timber extraction and thinning of this dryland ecosystems forests (Adyasuren 1997: 35).

¹³⁶Adyasuren (1997: 35) indicates that by 1962 there were 1180 buildings, 2500 private homes or state gers (for vacationers), and 40 'large' buildings located in 17 valleys at Bogd Khan Uul. Apparently at one time up to 15,000 people spent their summers in the park.

¹³⁷I visited Ulaanbaatar's Victims of Political Repression Museum and my notes transcribed from exhibits indicate 5 periods of repression from 1922-1964, with the most brutal evidently being the 1933-42 Great Purges. The exhibit notes the arrest and annihilation of "civil servants, intellectuals, monks, and army officers" and the "destruction of historical monuments and monasteries" amongst the gross human rights and justice violations on the part of the state during this period (Research notes, July 2000).

¹³⁸The state made several attempts in the past century to force collectivization (as distinct from the autonomously formed collectives *hot-ails*) on Mongolia's herders (Humphrey & Sneath 1999: 39; Campi 1996, 100).

¹³⁹The rule of Mongolia's Choibalsan parallels Stalin's Soviet authoritarian approach to land management, suppression of spiritual practises and an abject failure to consider the role of local knowledge, customs and traditional ecological knowledge (exemplified in Scott 1998).

¹⁴⁰These include Limited Access (buffer zone), Conservation Zone and Pristine Zone. Uses permitted in the Pristine Zone include: scientific research and non-invasive activities that "preserve the original natural conditions"; in the Conservation Zone uses include area improvements that "enhance flora and fauna reproduction and eliminate damage caused by natural disaster" along with uses permitted Pristine Zone. In the Limited Access Zone uses include: those permitted in the Conservation and Pristine Zone along with forest "maintenance and cleaning", soil and plant restoration, animal research, ecotourism, accommodations, *ovoo* worship "and other traditional ceremonies"; audio and video recordings; and "pursuant to the appropriate procedures, local residents may collect and use side-line natural resources and medicinal and food plants for their household needs" (MNE: 2000: 65-66).

¹⁴¹Previous management plans at Bogd Khan Uul were developed in 1987-91, 1991-96, 1996-2000.

¹⁴²The U.S. Peace Corps supported this project and while being a common approach used in North American parks management is considered unusual in Mongolia (Poland 1999).

¹⁴³These include the Ecosystems Atlas of Bogd Khan Mountain (1998). Co-sponsored by the Japanese Nagoa Foundation the publication Ecosystems of Bogd Khan Mountain developed in conjunction with 5 domestic and bilateral partners (1997). A project co-sponsored by the Mongolian National Ecotourism Society, UNDP and the Dutch Government providing signs and brochures for visitors and training rangers, with a focus on ecotourism (1997-98). A project co-sponsored by the Development & Environment NGO, UNDP and Dutch Government publishing a booklet for schoolchildren and policymakers on the flora and fauna of Bogd Khan Uul (1997-98); A project co-sponsored by the Ministry of Nature & Environment, UNDP & Dutch Government establishing an 'information and public awareness centre' including a database of endangered species in the area (1997-98).

¹⁴⁴The population of Ulaanbaatar in 1930 was 10,500 residents (MNE 1997). By 1999 the number of inhabitants was 691,000 (National Statistical Office of Mongolia (2000: 28);

¹⁴⁵Sixteen of 21 rangers provided their opinions in surveys and interviews conducted during the year 2000.

¹⁴⁶Data are derived from the August 2000 short survey question #1a and 1b "Approximately how many pine nut pickers would you estimate are in your ranger patrol area during the peak/high season in one week?" and "do you see this number increasing/decreasing or staying the same over the next five years in your rangers patrol area?"

¹⁴⁷According to a Bogd Khan S.P.A. management employee a ranger in the Artsat Valley (Batsaikhan) was attacked by Samar nut pickers (Pers. Comm. Nyamsuren, Aug.24, 2000). During a separate visit to the Torkhurkyn Valley the translator (Erdene-Arjun) noted that the ranger's family told him that Darma—who appeared to be in poor shape since our last visit—was "beaten-up by poachers recently" (Aug.18, 2000).

¹⁴⁸The unhusked seeds, which commonly appear in Ulaanbaatar are shelled and eaten in a manner similar to sunflower seeds. These have a whitish appearance and taste like pine nuts that are commercially available in North America. *Samar* were widely available at *Tuutz* (street vendors) in Ulaanbaatar and Zaishan in August. 2000.

¹⁴⁹A mallet and container used for knocking and sorting the nuts from branches was photographed on trails inside the protected area. On this and other horse and hiking trips were seen bagging *Samar* for the return trip to Ulaanbaatar with sacks up to 25 kilograms in size based upon some rangers accounts.

¹⁵⁰Shah (1995: 7) makes the argument—decidedly from an economic perspective—that for regulations to be effective they need to "either provide incentives for following them or they have to be backed up by monitoring and enforcement...[however]...if regulations are perceived to be unfair, say, then there is an incentive for some either to circumvent or change them." This would suggest that in the case of pine nuts the current paper regulations are faulty since they fines do not match the economic reality of individuals.

¹⁵¹Data are derived from the August 2000 short survey questions #3a and 3b "Approximately how many loggers would you estimate are in your ranger patrol area during the peak/high season in one week?" and "do you see this number increasing/decreasing or staying the same over the next five years in your rangers patrol area?" Some rangers include both taking live branches and deadfall gathering in the same category as logging in their estimate of what constitutes a visit to the park.

¹⁵²Lawless (*UB Post*: 1998) also reported illegal logging inside the Bogd Khan Uul in the spring of 1998 in one of several stories in the *UB Post* report on incidence of illicit logging on the north slopes of the park. I also witnessed active logging inside Bogd Khan Uul during a hike in 1998 and in winter 1997-98 spotted 'log trails'—basically compact snow paths, akin to sled marks—at high elevations above Zaishan

and Khuush valleys.

¹⁵³Both a ranger and a translator, who resides in Yarmag, (a suburb of Ulaanbaatar in proximity to Bogd Khan Uul's north slopes) suggest that loggers of the north slopes fall trees for desperately needed income, for personal use and for sale as heating fuel.

¹⁵⁴He indicated how the closure of a local sawmill (that apparently sources wood from outside of protected areas) resulted in a large number of unemployed men and claims that some of these apparently engage in illegal logging.

¹⁵⁵Another ranger, R9, commented that, "many families without permission," resided near his *ger* and that the problem is that, "because of livestock overgrazing all the animals didn't have a place to graze."

¹⁵⁶Data are derived from August 2000 short survey questions #4a and 4b "Approximately how many grazers would you estimate are in your ranger patrol area during the peak/high season in one week?" and "do you see this number increasing/decreasing or staying the same over the next five years in your rangers patrol area?"

¹⁵⁷Reports about grazing both in and near settlements and urban areas in Mongolia also indicate increased wind and water erosion pressure on steppe biomass during the 1990s. Several researchers emphasize the types of threats that Bogd Khan Uuls' ecosystems face including Muller and Bold 1996: 42; Honhold 1995: 81; Campi 1996: 54.

¹⁵⁸Statistics from the Mongolian State Statistical Office (Spring 2001) that I included in a story on urban sprawl in Ulanbaatar (*Momentum Magazine*, June-July 2001) indicated that there were approximately 40,000 registered vehicles in Ulaanbaatar and around 2,000-2,500 additional new vehicles each year. These not only added to the high level of pollution in the airshed but contributing to multitracking on the nearby steppe, including areas adjacent to Bogd Khan Uul.

¹⁵⁹Results are derived from the August 2000 short survey questions #11, #12 and #13, respectively "What is the total annual estimated income for your family from all sources?" "Besides your work as an employee for Bogd Khan Uul, what other income sources does your family have?" "Please describe a little about your family's assets..."

¹⁶⁰The impacts on the steppe from the 1999-2001 *Tsuud* (winter drought) were not as evident near Ulaanbaatar as they had been in rural *aimags* (provinces) where sparse grass growth, hay shortages, large winter animal mortalities and long distance relocations were reported. R2 does mention that, "the law says no grazing but [there is] no rain—if there is no rain then cattle come [into the park]". R17 comments that while grazing is, "illegal in practice [its] difficult to enforce."

¹⁶¹He identifies Torkhurkhyin Gol, Shavaart, Shajin-Khurkh and Khurhree Valleys as most problematic.

¹⁶²This increase included a total of 36,426 additional cattle, sheep and goats.

¹⁶³Campi in Bruun (1996:55) defines 'carrying capacity' as "the equilibrium between animals and vegetation indexed by the density of animals." She refers to the term as a function of management, water location, trampling, availability and amount of nutritious plant species, competition and animal behaviour.

¹⁶⁴R15 reports on the effective use of a fence across a portion of the lower valley in his patrol area and suggests that numbers of grazers have "decreased in recent times."

¹⁶⁵The free movement of livestock was permitted within Ulaanbaatar city limits and the sight of cattle grazing in small watersheds and parks in the central city during winter 1997-98 was not unusual.

¹⁶⁶Nomadic traditional herding practises had been long suppressed under Mongolia's former central planning system. The system emphasized targets emanating from the centre to *aimags* (provinces), to *som* and *bag* (local) and to the *neg dels* (state cooperatives) (see Fernandez-Giminez 1997). In this system the state exercised full *de jure* control over grazing management including access and withdrawal rights, rights related to the transferability of land or alienation rights and exclusionary rights. Any other rights given to *neg dels* (cooperatives) or individuals were discretionary and subject to revocation without recourse or appeal to the state apparatus. 'Rights' become a misnomer under such a system. An anomaly was the existence of nomad-herders who were neither members of cooperatives, nor state enterprises, but who were able to enjoy historic access to the steppe while enjoying the universal benefits provided to Mongol. With the collapse of Soviet financial and technical aid in 1990, the low entry costs to herding and few employment prospects in rural areas, significant numbers of individuals chose to begin undertake a nomadic-pastoral lifestyle, herding sheep, goats, horses, cattle and bactrian camels, while accessing *res publicae* resources such as water, wood, fish, game, plants and berries, and those state benefits (schools, pensions, etc.) that had not already been subject to cuts or elimination.

¹⁶⁷At Bogd Khan Uul this is the outermost zone of the park.

¹⁶⁸Data are derived from August 2000 short survey questions #2a and 2b "Approximately how many berry pickers would you estimate are in your ranger patrol area during the peak/high season in one week?" and "do you see this number increasing/decreasing or staying the same over the next five years in your rangers patrol area?"

¹⁶⁹Wild rhubarb, strawberries, raspberries and numerous other wildberries—while not necessarily originating from Bogd Khan Uul—happen to be sold in the food markets of Ulaanbaatar.

¹⁷⁰During the pilot survey trip in August 1999, and on a trip with park staff in July 2000 we noticed wild rhubarb and wild strawberries, along with numerous alpine wildflowers.

¹⁷¹R12 affirmed Ulaanbaatar-based berry pickers are a problem with up to 400 weekly visiting his area in the high season. Another ranger, R5, suggested July to September is high season; R10 suggested July to mid-September, particularly for raspberries and strawberries; Ranger F suggested both summer and autumn; while Ranger K noted that along with *Samar*, berry picking is heavy into the fall in his area.

¹⁷²Data were derived from the August 2000 short surveys question #6a and 6b "Approximately how many weekend [data are from week totals instead] tourists would you estimate are in your ranger patrol area during the peak/high season in one week?" and "Do you see this number increasing/decreasing or staying the same over the next five years in your rangers patrol area?" Overall low numbers of campers were reported with a mean of 15 and median of 30 weekly estimated visits to the Bogd Khan Uul (short survey question on camping, August 2000).

¹⁷³Internationally organized foreign tourism for east bloc nationals at Bogd Khan Uul dates to 1954 (Badarch, Memo Jan.18: 2001). *Julchiin* facilities at Bogd Khan Uul included the Nukht Valley resort and the Manchir Hiid *ger* camp (north of Zuunmod near Machir Hiid Monestary) and the Chinggig Khan *ger* camp (in the Turgan Valley).

¹⁷⁴The administration identifies 1180 summer cottages and 1500 gers located in 17 distinct places inside Bogd Khan Uul in 1962 (Badarch Memo 1/18/01).

¹⁷⁵I could not find any evidence of residents being ejected from their homes inside the periphery of the park and it appears that most of the dwelling removals were the traditional small cottages or dachas that are found scattered around the outskirts of Ulaanbaatar (for example north of the city near Hangat). No doubt some of these dwellings would have served as temporary housing for some families and likely some migrants used the park as a staging ground before moving into Ulaanbaatar.

¹⁷⁶These were largely concentrated in 3 valleys (Nukht, Zaishan and Manchir Hiid or Zunmod), along with a handful of *ger* camps (Timurhuu, Aug.24, 2001).

¹⁷⁷According to R20 the former Russian army barracks (on the North-eastern slopes of the park) is now being operated as *Osoriin Ochid* or 'future forester's children's camp' and the Monnar Camp in the Turgen Valley, is also used as a summer camp.

¹⁷⁸Apparently there is the possibility for "up to 25 licensed [tourist] operations" to exist in the conservation zone, according to Ranger M. My discussions with the Park Manager indicates he was considering including "up to 40 *ger* camps have permission to develop" although he later commented that this would be under consideration in the management plan. Apparently the Ministry would prefer to license 30 camps instead (Pers. Comm.Chinzorig August 27, 2001).

¹⁷⁹For example a web search for 'Bogd Khan Uul' identified the itineraries of several tour companies that visit the Bogd Khan Uul or tour camps that are located inside the Strictly Protected Area (Google Websearch, Feb.8: 2002).

¹⁸⁰Several U.S. Peace Corps ecology volunteers were involved in using flagging tape to mark portions parts of the Zaishan-Manchir Hiid trail in 1999.

¹⁸¹This same operator indicates that their company signed a 60-year lease for a *ger* camp with the Bogd Khan Uul administration and state government. They indicated that this camp was responsible for tourism improvements, safety features and planting vegetation (Pers.Comm, Aug.4, 1999).

¹⁸²Sourced from comments by R22 and Rangers N, M, O. While there do exist "buffer zone committees" which cooperate with the Bogd Khan Uul Administration these are divided up amongst different Ulaanbaatar District governments (3 separate groups) and a separate group for Tov Aimag. According to one informant they are ineffective in resolving land use and tax disputes to date (Pers.Comm.Chizorig, Aug.27, 2000).

¹⁸³One solution observed in the northeast portion of the park was to place visible rocks along braided roadway tracks in order to concentrate the flow of traffic along a single route.

¹⁸⁴Nine rangers (56% of respondents) supported special recreational zones as one response to growing interest in wilderness and outdoor sports like biking and paragliding in Mongolia and at the Bogd Khan Uul.

¹⁸⁵Tourist codes of conduct are behavioural codes that can guide visitors, developers and operators in a specific location. A code might include ecological, social and economic guidance and encapsulate the local rules or norms. Codes of conduct not only serve to protect an ecosystem and reduce frictions between park users and local communities and enforcement agents, they can provide be visitors with guidance in supporting local economies and ecological restoration.

¹⁸⁶Heightened tourism will impact the Bogd Uul since Ulaanbaatar is the key gateway for travel in Mongolia, and the protected area is part of local travel and accommodation circuits. Research on the tourism potential of Mongolia's national parks is generally optimistic on the potential for ecotourism visits in a variety of locations throughout this vast country (Steinhauer-Burkart 1999; JICA 2000; EU-TACIS 2000; Strasdass & Steinhauer-Burkart 1997; Eberherr & Liegl 1999).

¹⁸⁷Odgaard suggests that "to be poor is to fall below the minimum accepted standards of one's society, to live in shame, to be indecent, to be unable to participate fully in the life of the community" (1996: 113). I intentionally use the term "material poverty" to imply that Mongolia's riches are typically *not* included in standard measures that drive international norms for "development" or "progress" and that in spite of the possible shame and hopelessness associated with the cycle of material poverty, Commonly accepted notions of wealth which tends to decouple the intangible wealth of family and extended flexible networks

of family and kin, community, local wisdom, nature, spirituality, language, artistic works, countryside traditions and technology, sport, stories, song, dance and in general, tradition or customs, including resurgent Shamanist-Buddhist spirituality complement Mongol's spirit of independence. If measured by these cultural riches Mongolia would be considered a wealthy nation.

¹⁸⁸Related to nature protection and poverty see Adyasuren 1998: 91; Humphrey and Sneath 1999: 303.

¹⁸⁹Both human development indicators such as infant mortality rates, rural poverty, employment and GNP (as cited in UNDP 2000) and citizen's outlook regarding their personal and family life level situation indicates that at the time of writing most Mongols felt their personal circumstances were not good. According to a Sant Maral-Barents Group LLC nationwide opinion poll conducted just before my fieldwork in March 2000 of 1177 residents, 53% think their life level is 'bad or very bad' while 12% regard it as 'good or very good' and 34% suggest 'partly good and partly bad'.

¹⁹⁰Particularly illicit logging, firewood gathering, harvest of *Samar*, wildberries and medicinal plants, overgrazing and animal poaching. With poaching one ranger noted that this problem tended to be caused by sport hunting by wealthy outsiders rather than for the dietary needs of neighbouring residents.

¹⁹¹These figures are derived from the Living Standard Measurement Survey (LSMS) conducted by the Mongolian National Statistical Office in 1998. The rural poverty line was calculated as Tgs 13800-16400/month (1999) and the urban poverty line was Tgs 17600/month in 1999 (UNDP:54).

¹⁹²Drawing from a wide range of human development indicators and sources, Odgaard (1996: 103-134) cites key aspects of Mongolia's descent into poverty from 1990-94, including a significant drop in public expenditures; the breakdown of family safety networks of barter and exchange; a decline in caloric intake (25% over 3 years); the increase in proportion of household budgets spent on food (up to 60%); hyperinflation causing cash poverty (251% in 1992; 183% in 1993); removal of base subsidies on necessities (bread, heating and rent) in 1993; self-assessed reports on the state of life (36% could not buy essential foodstuffs; 84% lacked funds until the next payday; 23% could not afford supper; 1/5 could not afford warm clothes); child health that (42% of all children in the early 1990s suffered from malnutrition; the doubling of maternal mortality rates from between 1990-1992); an entirely new set of social problems manifest on the streets (street youth, crime, begging, scavenging, prostitution); the drop in real wages by ½ in 18 months and pensions by 60% from 1991-94; the severe impacts on the marginalized (a potentially lost generation of youth, orphans, disabled, pensioners, single moms, large poor families and unemployed); the spike in unemployment (up to 25% of workforce in 1994) and much higher in rural areas; the drops in and collapse of wages, state safety nets and social systems (school and hospital closures, welfare erosion) the emergence of illiteracy, new diseases and energy interruptions, the ecological degradation (cited in parts of this study); the growth in rural poverty (weakened social networks, *Neg Del* [collectives] breakdown, transportation collapse) and the government's rapid decentralization (budget mismanagement, inexperience; and ill-equipped or corrupt local governments); and dependency upon an entirely new set of international aid rules, conditions and outside advisors and technical systems (with the shift from Soviet to western aid and multilateral relations).

¹⁹³Odgaard (1996: 103-111) cites four key factors triggering Mongolia's descent into poverty: hyperinflation, loss of the CMEA (Soviet) transfer, shocks of market entry and removal of price controls (particularly their affect on food staples).

¹⁹⁴I adopt Cohn's usage of the term "keystone international economic organizations" (2000: 26) to refer to the International Monetary Fund, The World Bank group and the General Agreement on Trade and Tariffs (GATT), [now under the auspices of the World Trade Organization (WTO)].

¹⁹⁵In simplified terms economic 'shock therapy' is an explicit approach involved a focus on so called market fundamentals at the cost of other priorities including price controls on food, access to education and health services. Shock therapy as it was instituted in Mongolia (and several other East Bloc nations,

including Poland) in the early 1990s involved floating currency, tight monetary policy (low interest rates) elimination of wage and price controls and subsidies on basic food staples, vast reductions to public sector services, widespread privatization of state enterprises and asset, as well as the decentralization of government activities. Direct and indirect references are made to this model's implementation or its impact on Mongolians in UNDP (2000: 12; Rossabi (1999: 12) Bruun (1996). According to the Sant Maral-Barents March 2000 nationwide survey of 1177 Mongolians on privatization, few thought that ordinary people gained from privatization (29%), while 51% believed they gained nothing, while 20% were indifferent or had no opinion (Sant Maral 2000: 26).

¹⁹⁶Impacts included hyperinflation (particularly on foodstuffs), massive unemployment (as high as 70 per cent in some rural aimag centres), loss of protection for local products, services and manufacturers, increased dependency on imports and upon tied foreign aid money. Additional impacts included reduced or eliminated services and access to schools and hospitals, and in turn increased incidence of material poverty, family violence, alcoholism, nutritional deficiencies, and physical and mental disease, along with reductions in stable circulating forms of income like pensions and assistance to the youngest and most vulnerable, and an overall dispirited populace leaving a focus on the day-to-day rather than long-term (UNDP 1997; UNDP 2001; Agriteam Canada 1997; Odgaard 1996; Rossabi 1999).

¹⁹⁷This is distinct from the pre-revolutionary period where, in spite of the massive inefficiencies (and issues cited in the study) individuals had guaranteed employment and 'safety nets' for life.

¹⁹⁸Survey question #12 in the August 2000 short survey used in this study.

¹⁹⁹Researchers have documented the importance of kin connections and how mutual support networks assisted with survival during this harsh economic period in Mongolia (Odgaard 1996: 129; Pederson 1999). Sneath (2000) identifies how local support networks have been cornerstones of survival on the Mongol steppe. Since the rangers had stable employment they were seen as an important support for direct relations, kin and friends.

²⁰⁰Odgaard (1996: 129), notes the importance of *Idesh* (*literally meat for the winter*) as an institution that serves as a "traditional exchange of goods and services between close relatives living in towns or *sum* (county) centres and the countryside."

²⁰¹Yarmag's housing consists largely of wooden buildings (sometimes with adjacent *gers*) located within small square compounds or *hashaas*. Neighbourhood blocks consist of a grid of dirt streets and *hashaas* punctuated by confectionary-food stands (*tuutz*) several schools, a district office, police station, bars, small stores and snack-bar restaurants, known as *guanz*. Water in Yarmag is provided via truck as well as from the Tuul River while pit latrines typically handle sanitary wastes. Employed residents rely-upon public transit and private minibuses for commuting to and from commercial-industrial and administrative districts in Ulaanbaatar. Few can afford automobiles, motorcycles or what would be considered luxury items like televisions or telephones. In Yarmag most residents homes and *guanz* use coal or wood to heat their space, akin to the situation with at least half the populous of Ulaanbaatar (UNDP 2000: 37).

²⁰²Several of the rangers live in or near Yarmag, including the park's head ranger. These informants were aware of the trouble with impoverished residents seeking wood from inside the protected area.

²⁰³Questions asked in the Mongolian Gender Centre Survey included residency, profession, schooling, employment, income generating activity, main income activity, health care, frequency of meals, type of food intake, daily activities and personal concerns.

²⁰⁴Incomes also included child benefits (Tgs 9,000 per month), elder's pensions of (Tgs 15,000 per month) and subsidies for gifted individuals (Tgs 11,000 per month).

²⁰⁵The difficult mothering conditions in this neighbourhood have many parallels to the situation throughout rural Mongolia. (see Bruun 1996 and corroborated by research conducted by Mongolia's

Population Research Centre and United Nations Population Fund and World Health Organization, and UNICEF Mongolia.

²⁰⁶Confidential identifiers refers to the Mongolian Gender Centre Study (summer 2000) survey data from members of the same family---thus N25a, N25b, N25c represents different individuals from the same family (N25 in this case) in that particular survey.

²⁰⁷New press freedoms affecting radio, television and newspapers were instituted in the early 1990s as part of the widespread democratic and consitutional reforms (UNDP 1997).

²⁰⁸R10 suggests that in the pre-communist era Mongolia used to have what he referred to as 'Yellow Buddhism' [meaning the yellow hats or Gelugpa Order, the dominant sect at that time], however today "there are 200 plus religions and there is no specific religion related to nature."

²⁰⁹Sneath makes reference to the Mongol *ger* (yurt-like residence) in his discussion on the symbolism of the household as a "system of meaning" (Sneath 2000: 216). In the fieldwork for this research during visits to rangers' households we were offered homemade seasonal foods, including *tsagaan idee* (lit: white food or dairy foods) like *tarag* (summer yoghurt), milk curds (*aaral and aarts*), and later in the summer *airag* (horse mare's fermented milk). We were also fortunate to witness activities of daily extended family life, from putting up a *ger*, to making (*boov*) traditional pastry, drying meat for the winter, making hay and tending horses, and so forth.

²¹⁰The notion of sacrifice is inanimate in the sense that it represents ritual offerings or dedications to nature or deities of nature—typically in the form of offering dairy products such as airag (fermented horse mares milk), vodka and money—to *Tangor*, *Nutgen*, *Lus Savdag* and other spirits in nature, as well as to ancestors (Merli 1999: 62; Hurelbaatar 2000: 85; Sneath 2000: 28, 235-44).

²¹¹*Khadag* are often used to demarcate important springs or other water sources (Shagdar 1997:49).

²¹²The trips involved in circling the *ovoo* may be derived from the Mayahana Buddhist emphasis on 'three jewels' referred to as Buddha (teacher), Dharma (teachings) and Sangha (community of practitioners).

²¹³The clean up of this particular *ovoo* involved the voluntary efforts of a local Boy Scout troop and World Wide Fund For Nature volunteers. The dedication involved monks from Ghandan Monastery reading and chanting a *ovoo* mantra dedication, followed by the audience making offerings or dedications, usually *airag* (horse mares milk) and white goods (dairy products) and white candies. I published a story in the *Mongol Messenger* about this specific ceremony (Aug.9, 2000, 3).

²¹⁴The shrines at Tsetsee Gun were apparently destroyed during the nation-wide suppression of traditional practises and local knowledge systems during the 1930s "Purges" (MNE 1997: 37).

²¹⁵The decree apparently stored in an archive in Hohot, Nei Mongui (Inner Mongolia) (Pers.Comm Bhum Yalagch, Aug.1999) is dedicated to the veneration of Bogd Khan mountain and states, "according to legislation, the veneration of the sacred Mountains and stone piles is by incense and silk as perceived. The veneration of the "Khan" mountain is a good deed. " The legislation was announced in pursuance with Sanjaadorjis declaration and asked that subordinate bodies, twice in every year apparently in spring and autumn, sending and handing incense and silk to Sanjaadorjis and usable materials for the ceremony have to be prepared at the place where veneration should be completed with the presence of kings, princes and rulers. This decree, which was to be strictly followed, by commanders and consultant ministers of Uliastai was delivered and handed by escorts to Shangadav—the venerable enlightened Khan of Khutugta monastery, the head of the forum of four Khalkha provinces and sub-commander." (1778) (MNE1998).

²¹⁶At a shamanic ceremony I was fortunate to attend in summer 1999, we stopped at a low mountain pass—north east of Ulaanbaatar—with several large trees and an *ovoo*. One large tree—referred to as

udgan mod or *boo mod*—was wrapped in the silk blue *khaddag* and the shaman made dedications to the spirits of the forest and nature (*lus savdag*). After a lengthy ceremony, that included the shaman drumming and the audience literally hugging the tree, food was shared amongst the group of visitors. This ceremony may be similar characteristics to those that take place inside the protected area including dedications to *ongon* trees. These types of ceremonies are more fully described in Humphries and Sneath 1998, Merli 1998 and 1999, Germeraad and Enebish 1996.

²¹⁷While questions remain about whether these ceremonies represent an appropriation of customs for demonstration to wealthy foreigners, the fact that much needed hard currency was shared amongst practicing shamans and amongst a tourist business network (in this case a type of tourist co-operative), and that funds were locally retained, indicates a positive outcome for some Mongolians. It could be argued that the performance of the ceremony itself represents a revival of ritual and show of pride.

²¹⁸Merli's Copenhagen Paper, *Shamanism in Transition: From the shadow to the light* (1999:9) refers to the importance of shamanism in rebuilding Mongol identity. She notes that, "new NGOs appeared recently to promote religion and culture in general, in Mongolia. Some defend Buddhism, some shamanism, some both, as well as Tantrism, the cult of Gengis Khan, Mongolian poetry and history." N.L. Zhukovskaya (Neo-Shamanism in Buryatia, *Inner Asia*: 2: 1, 2000, 27) refers to the rise of Shamanism in the Russian-Mongol Buryat republic and indicates that shamans have had to be unusually public in reclaiming sacred sites and ceremonies that might be used or appropriated by other religions. Merli (1999) alludes to the fact that some Shamans "want to establish an official organization to promote shamanism, justify their beliefs and respond to foreign missionaries invading their country. They want recognition and to be accepted as an integral part of Mongolian culture. Shamanism, without the visible symbols of religion such as monasteries or monks dressed in red, usually, belongs in the shadows, to the secret realm of Mongolian identity. That is why organizing is seen as a way to be stronger and to proclaim their existence in order to counterbalance the Buddhist religion and to resist Christian proselytism."

²¹⁹The interior of the temple reconstruction includes photographs of the original complex which is named after the Buddha of Wisdom, Manjushri, whose living incarnation, a Tibetan man Tsongkhapa (1357-1419), associated with the first phase of interest in Buddhism in Mongolia. The second phase of growth is associated with Zanabazar (1635-1723) who is considered the first Bogd Khan Gegen Jebtzun Damba, considered a living Buddha.

²²⁰Adyasuren (1997: 7) also notes that mineral springs at Shavart, Nukht and Baga Tanager valleys are "used for medicinal purposes" although their properties have not been fully studied.

²²¹One long-time foreign resident residing near the north slopes of the mountain—and who herself undertook the circumambulation—informed me about the Red Hats. She indicated that Red Hat Order monks were renowned for their long journeys, apparently including walking to Lhasa in Tibet.

²²²According to the San Francisco Museum of Art (1995: 160), "Garuda, 'the devourer' comes to Mongolia, via Tibet and in turn via India an ancient Hindu sun symbol, half vulture, half-man, who served as the vehicle of the god Vishnu [the maintainer] and his wife, Lakshmi [goddess of wealth] and lived on a diet of naga (snakes) the ultimate creatures of the earth. In Buddhist belief Garuda became the vehicle of Vajrapani and paired with a twin, the symbol of the transcendent Buddha, Amoghasiddhi. Garuda eventually took on another important role in Tibetan Buddhism as well, because of his similarity to the mythical Himalayan Khyung bird. Four bull-horned Khyung protected the four directions, and a Khyong appeared in the company of mountain spirits in the sacred dances of the Bon, the indigenous pre-Buddhist religion of Tibet. With his heavenly associations and his sworn enmity to the evil forces of the earth, Garuda appealed to the Mongolian Buddhists, whose own native Shamanism honoured the sky above all, as a logical character for their own version of the Tsam."

²²³The animal-like *Garuda* mask represents a half-animal, half-human creature preparing to take flight and grasping snakes known as *nagas* (or *nags* in Hindi). This mythical bird is a creature of

transcendence and transformation and was represented in full sized costume in local Buddhist *tsam* dance ceremonies. Apparently this mask was used during the last *tsam* dance held in the late 1930s at the Bogd Khan Gegen's winter palace (Asian Art Museum, San Francisco 1995: 160) just before such dances were apparently banned under Choiboilson's leadership.

²²⁴The number 108 having significance in Buddhism as a mantra or prayer count (memory aid) and 8, being symbolic of the 'noble path' taught to practitioners or the 'noble eight fold path' to enlightenment.

²²⁵Sneath (200: 26) refers to Bodhisattvas as being amongst "saintly persons that are reborn as such because of their extreme holiness."

²²⁶Note the similar lexicon to the modern day *Ikh Khural* or great assembly (Mongol parliament).

²²⁷At least 73% of rangers felt that incidence of all five (pine nut harvesting, tourism, logging and grazing) would stay the same or increase during the next five years (to 2005).

²²⁸This is partly because the broad research line of inquiry necessitates bridging disparate local and non-local scales and partly because the rate of change affecting individuals and institutions during the research timeframe was so rapid that it would be inappropriate for an outsider un-rooted in Mongol culture and cosmology to attach a high probability of certitude to the meaningful outcome of management recommendations. Despite these caveats, an outsider's perspective can provide inter-scale and integrative insights that may help build links to research and community-based conservation efforts elsewhere.

²²⁹The body of data on material poverty in Mongolia is significant. The Human Development Reports completed by the United Nations Development Program provide a brief overview of the issues (UNDP 1997; UNDP 2000).

²³⁰While the Bogd Khan Uul rangers enjoy secure, long-term employment, the fact that they are paid wages in line with the Mongol average per capita income (USD\$350/annum) and that nearly all rangers live in rural situations with family, or friends, makes their situation as precarious as most Mongolians. This issue is discussed further in Chapter 5.

²³¹The findings also raised questions about the traditional mode of enforcement creating separations between community and park; and how these exacerbate differences between those with financial privileges and those without. This not only heightens frictions between rangers and the public but it forgoes the opportunity to cooperate with adjacent communities in order to ensure the long-term protection of ecosystems;

²³²Acts of corruption or perception of corruption over decisions related to scarce resources can thrive in such an environment. Examples include awarding of tenders for tourism development, employment on foreign-funded projects or grazing privileges.

²³³Examples include the UN and GTZ buffer zone poverty alleviation projects: MAP-21 Aimag Sustainable Development small projects; specific projects at National Parks such as Hustain Nuruu's provision of health services and a dairy as well as numerous projects implemented under the auspices of the Mongolia-UNDP Poverty Alleviation Project and Dutch-UNDP Environmental Public Awareness Program; community economic projects implemented under the auspices of the Eastern Steppes Biodiversity Project and the Ecoger Concept test piloted in Hustain Nuruu Strictly Protected Area.

²³⁴I use the term cosmology to refer in the broadest sense to a persons or persons' worldview or sense of the universe and may include religion, philosophy, epistemology, moral law and a sense of being and understanding. Cosmology refers to the "science or theory of the universe" (Oxford English Dictionary 163: 1986). Sneath (2000: 25) makes reference to the "cosmology and the institutions of Buddhism" and how "even today the old cosmology remains an important strand in the world-view of the religious and

many elderly Mongolians.” He also identifies the importance of shamanism and shamanist spiritual entities “as having a long history in Mongolian cosmology.” (2000: 237).

²³⁵R7 suggested that protecting the Bogd Khan Uul is difficult, regardless of what management does and that neither the Ministry nor the administration have provided effective support for him during his 5 years on the job. R1 expresses concerns about the frequent turnover in management (three managers in 4 years) and their quality, noting: “many times this is changing; sometimes these are unprofessional people.” The Mongolian fast-changing employment situation in both the public and private sector is a major explanation for the rapid turnover in managerial positions. The major factor driving the turnover is the necessity to ‘chase cash’. To build ‘organizational memory’ or ‘organizational culture’ in such an environment would appear to be very difficult.

²³⁶Rather than provide rangers with a long wish list of items I wanted to gain insights into how they saw their role vis-à-vis others in the institutional constellation, namely, administration, ministry, police, local conservation groups, etc. Despite this equipment issues frequently arose in the long survey responses necessitating inclusion in the short survey question.

²³⁷Respondents were cynical and perhaps realistic about the possibility of actually obtaining new equipment. For instance, R8 suggested there is, “too much talk about getting things,” referring to discussions amongst rangers with management, adding he is, “tired about this.” R9s partner—present during our interview—commented that she was “skeptical of surveys” noting, “there is too much paperwork and not enough results.” She alludes to fire surveys saying that “people come and nothing happens.”

²³⁸R9 suggested that uniforms were needed, “to make them [rangers] distinct from ordinary people” and R19 identified the importance of having a “four season uniform,” to do their job.

²³⁹Only two rangers reported having a telephone. Mobile or landline telephones were seen as a means of establishing communications either with management in Ulaanbaatar, for police, fire fighting and other emergency services in the park as well as for family matters. R12 reported that battery charged radiophones have been in use for two years amongst 7 or 8 rangers in proximate valleys, however it was unclear how effective this system has been. R9 stated that he [did] not care if it [was] radio or mobile phone,” emphasized the need for “something to contact people in time.” At present the chief ranger, based in Ulaanbaatar, is responsible for communications for accidents, fires and other emergencies.

²⁴⁰One ranger, R9, who had one horse for cattle patrols—suggested that there had been discussion about purchasing motorcycles, however these apparently did not transpire.

²⁴¹The five staff who shared a cramped Ulaanbaatar office space have responsibility for ranger support, strategic planning, financing, operations, education, community relations, enforcement, emergencies and tourism in arguably Mongolia’s most visible and stressed protected area and one that also happens to be a UNESCO-designated Man and Biosphere Reserve.

²⁴²July 27, August 1, 2000.

²⁴³These simplifications illustrated differing views of how to handle enforcement. Some rangers may prefer combinations of improved community relations with a strengthened presence like uniforms or increased patrols. The point of the distinctions is to illustrate the different impacts that each enforcement path or model may have in the long-term management of the protected area.

²⁴⁴R10, one hawkish ranger who commented upon this issue suggested the “need to change the law...and give more rights to the rangers,” arguing for the provision of revolvers and batons. A less aggressive stance is taken by R13 who suggests acquiring a video camera for surveillance of hunters. He added that it remains difficult to counter poachers who come in vehicles, since few rangers have these. R19 argued that according to the current laws, all rangers ought to be equipped with binoculars

and guns. Ranger L, who supported fences, suggested that more collaboration is needed between police to reduce ecological threats. The same informant suggested that increased funds, particularly for communications, a vehicle and guns would assist rangers' work. Ranger M indicated that he had meetings about how to enforce the law and suggested that proposals have been written for obtaining transport and guns to fight poaching.

²⁴⁵This research has not discussed the considerable debate that exists in conservation science over whether to create fences around protected areas, particularly near urban or settled areas; since fencing can limit biotic movement or connectivity between other habits, thus reducing ecosystem diversity in a particular biogeographical unit. On the other hand some argue for fences near high-density urban areas since this can improve trespass protection and reduce factors affecting animal and plant populations.

²⁴⁶This reference previously noted in the *Samar* (Pine Nut Harvest section. According to one informant the ranger in the Artsat Valley (Batsaikhan) was attacked by *Samar* nut pickers and during a visit to the Torkhurkyn Valley (Pers.Comm. Nyamsuren, Aug.24, 2000). The translator (Erdene-Arjun) noted that the ranger's family told him that Darma—who appeared to be in poor shape since our last visit—was “beaten-up by poachers recently” (Aug.18, 2000). An article in the *UB Post*, “Environmental officials to be armed in fight to protect national parklands” (*UB Post*, 1998: April 4) noted that Ikh Hural legislation was aimed at “providing environmental control officers with self-defence instruments”. The article discussed ranger-poacher conflicts at in Mongolian protected areas, including Lake Hovsgol National Park and at the Bogd Khan Uul Strictly Protected Area. The Bogd Khan Uul's communications officer also referred to an article in *Kasino* (2000: #2), “Poachers have beaten the rangers,” which referred to an attack on a ranger by poachers who work in an organized logging group sharing one saw between them. Ranger M referred to animal poaching in the Bayan Olgii Special Protected Area; Gazelle hunting in Dornod (Eastern Steppes) and the destruction of saxaul trees in the Omnigovi.

²⁴⁷The survey asked about cooperative patrols with shared duties, such as between rangers in adjacent valleys. R6 suggested that, “one vehicle between rangers,” might support shared work while R13 proposed a similar arrangement, “between five rangers” adding that organizations [tourism camps, etc.] could cover petrol costs. In contrast, both R9 and R2 argued that co-operative patrols were impractical.

²⁴⁸Ranger R13 suggested that creating a new force is, “an impractical idea since Mongolians cannot [afford to] provide police and cannot pay [fines].” This comment implied that the current budget was insufficient for police and even if there were increased enforcement, many could not afford penalties associated with a ‘hawkish’ approach. R13 suggested that creating a new force was “an impractical idea since Mongolians cannot [afford to] provide police and cannot pay [fines].”

²⁴⁹The Protected Area Manager noted that ranger's were legally responsible for a fixed territory and that given the pressures on the periphery of the park some valleys were likely in need of more than one ranger—in particular he suggests Zaishan and Zunmod (the former apparently has two stationed individuals) (Pers.Comm. Chinzorig, Aug.27, 2000).

²⁵⁰Ranger R2 affirmed that he had “too big [a] territory for one person to patrol,” while R10 suggested the need for more rangers. R9, while discussing the issue of fighting fire, noted that the military and local police were obliged to assist, but suggested they do not or were unable to. R8 affirmed this sentiment and noted that rangers have insufficient budget,” and, “no patrol if [there are] fires.”

²⁵¹Though this represented an increase over previous years' funding levels (i.e.. 8.092million Tgs in 1996; 14. 181millionTgs in 1998), it barely kept pace with 1990s inflation and cost of living increases for food, clothing and healthcare. The current Manager indicated that he had been “waiting for a reply for a year” for a Tgs14million proposal to the finance ministry for activities/equipment proposals, however the responses were that these funds were not available in the state budget (Pers.Comm. Chinzorig, Aug.27, 2000).

²⁵²He cited a conflict with the Ministry over funding a reforestation project that involved the administration of funds (from a foreign development project), along possible privatization of Nuhkt Valley resort (Pers.Comm.Chinzorig, Aug.27: 2000).

²⁵³There appeared to be few systemic incentives to put checks on levels of tourism development due to the severe revenue shortfalls at all levels of government. Thus Ministerial approval of tourism developments was seen to benefit national government, local government and local park administration (from their apportioned fees) and businesses for revenue. This may explain the rapid growth in hedging for the 60-year land leases on the boundary of the park. Over the course of my fieldwork, obtaining accurate numbers on the actual versus approved *ger* camps was difficult, and ultimately came down to triangulating findings between visual observation, ranger reports and administrative reports. The approved *ger* campsites was to be determined by Administration and the Ministry of Nature and Environment and may vary from the current 16 tourist venues (12 being *ger* camps) to as high as 40 approved sites, according to the Park Manager (Chinzorig, Pers. Comm., Aug.27: 2000). The wide discrepancy in the numbers of tourist sites available for approval is a serious cause for concern, particularly since development on the fringes of the park could have irreversible impacts on Bogd Khan Uul's ecological and cultural endowment.

²⁵⁴For example Steinhauer-Burkhart (1999) identifies fees under consideration and another study proposed a fee of \$10USD (up from \$1US day) for foreign tourists in one national park along with licensing schemes for horse trips (Draft Management Plan for Tourism at Lake Hovsgol National Park, EU-TACIS, Development of Tourism for Mongolia Project Preparation of "Model" Protected Area Management Plan EU-TACIS, EDMON 9602, Final Draft-May 1999; 20, 30).

²⁵⁵Economists and biodiversity planners increasingly favor market mechanisms for controlling and limiting resource and tourism uses in Third World protected areas. Examples may be found in Shah 1995 and McNeely 1999a.

²⁵⁶Rangers' comments also reflected several years experience collecting fees from both tourists and vehicles.

²⁵⁷This research did not survey harvesters about what proportion of berries and pine nuts collected were for commercial sale versus personal use.

²⁵⁸A key weakness is the current jurisdictional confusion about tourism. Since revenue goes to both local and state government but development approvals are handled by the Ministry and enforcement is addressed by the rangers and protected area Administration.

²⁵⁹It is important to note that the utilitarian exercise of estimating fees tends to create a focus on fees as a protection measure at the park. The danger with this assumption is that there is an inherent elegance in assuming that willingness to pay estimates by rangers equates to willingness to pay by the general public. Moreover, when asked about fee amounts there is a tendency to provide some figure on the part of the survey respondent, since to not do so may appear to be forgoing an opinion or may be felt to imply incompetence. My listing of comments about fees are important in this respect since they illustrate **substantive criticisms** by the ranger team not embedded in the binary logic (agree/disagree) evident in the surveyed willingness to pay estimates.

²⁶⁰This may also indicate a clash in worldviews, since western educated park planners and economists, even western tourists, have given expectations and understanding about fees, which may not be the case in Mongolia (in a situation of power asymmetry the burden has typically been placed on nations like Mongolia to conform to western notions). To use a different example, the Euro-American notion of collateral and loans—part of early the post-communist bank reforms—apparently clashed with the Mongol traditional "credit systems" that utilized barter, mutual aid and support networks (see Sneath 1999; Pederson 1999). The western based credit/collateral systems that partly precipitated the Mongol banking crisis in the late 1990s were seemingly not attuned to these local Mongol nuances. None the

less outside advisors persisted in arguing that local economies will (or must) eventually adapt to the externally imposed systems.

²⁶¹Humphries and Sneath (1998) argue that Mongol nomadic-pastoralism represents an inherently structured strategy. Perhaps a lay commentary by Bruce Chatwin (*The Anatomy of Restlessness, Uncollected Writings*. Eds. Jan Borm and Matthew Graves: London: Picador 1997: 86-87) describes the approach best “A nomad does not ‘wander aimlessly from place to place’ as one dictionary would have it. The word derives from the Latin and Greek meaning ‘to pasture’. Pastoral tribes follow the most conservative patterns of migration, changing them only in times of drought or disaster. The animals that provide their food; agriculture, trade or plunder are additional benefits. ‘The Nomad’ is a clan elder, responsible to the whole tribe, who parcels out the grazing for each person.”

²⁶²This conflict in worldviews was also evident in the earlier discussion on fencing. The state in the 1990s under advisement of some international development projects, had recommended steps that could be viewed as a precursor to private property systems. This remained a hotly contested issue, particularly amongst rural herders who desired strong safeguards for common access and resulted in a debate about the initial drafts of the *Land Law* in 1994-95 whose focus was: “to regulate the ownership, possession, uses and protection of Mongolia’s land resources.” (Sheehy 1996::58). An example of the how international agencies steer the tendency towards private property systems is in the generous provision of funds (particularly when governments are under severe budgetary constraints) focussed on land policy, mapping and land valuation systems. For example the Asian Development Bank in 1995-96 earmarked a \$580,000 grant for “strengthening land use policies” to “assist the Government of Mongolia in the establishment of a sound legal and institutional infrastructure for land records management that is consistent with the ownership of rights in land [and will] help lay the foundations for an efficient agricultural sector based on private rights in land and market-based land transactions” (World Bank 1997).

²⁶³The park manager (Chinzorig) identified a weakness of this particular non-profit as their lack of funds, citing the fact that they have made requests to the administration for funds. (Pers.Comm. Aug.27). Rather than focussing on tradition, he suggested a ‘special protected area conservation fund’ in which businesses could make charitable donations.

²⁶⁴My findings indicated that the fund has already participated in sponsorship of a Shamanic solstice event although it was unclear whether revenue went into the fund or it simply served as a ‘brand’ sponsor. The failed Mongolian Environmental Trust Fund (sponsored by the UNDP and Dutch Government) with a non-profit board of directors and housed in the Mongolian Ministry of Nature and Environment provides a warning about the difficulties of establishing this type of fund without a large amount of seed capital and the vagaries of fundraising including considerations like donor fatigue.

²⁶⁵The heightened pressures on resources identified in the *Site Issues Scan*, including urbanization on the fringes of Ulaanbaatar, ironically coincided with the sacred site’s designation as a UNESCO biosphere reserve. While this designation may have improved the parks notoriety and may be linked with expected increases in tourism over the next five years, there have been few tangible direct financial benefits from the designation. Due to increased tourism (possibly attributable to the UNESCO designation) there may be more impacts from *ger* camps, trail use, damage to sacred sites and nature. Both trained staff and resources will be needed to handle these impacts in future.

²⁶⁶The ‘*ecoger*’ concept in Gorki-Terelj National Park involves the park operating a number of tourist eco-friendly *gers* (through support of the GTZ Buffer Zone Project). In turn the *ecogers* provide funds for local guides and ensures a degree of economic localization. Though a recent development (with an uncertain long-term profitability), the *eco-ger* concept serve as demonstration projects for eco-friendly behavior and training of local individuals in tourism; along with being examples of channeling profits to local individuals rather than outside the community.

²⁶⁷While dropping off our first survey Erdene-Argune (translator) and myself chanced upon meeting a

Mongolian celebrity who noted his involvement in the development of a radio program about the history and traditions at Bogd Khan Uul including songs and legends. A great deal of experience with environmental public awareness in Mongolia comes from the joint Mongolia-U.N. Environmental Public Awareness Programme (Ferguson 1999).

²⁶⁸One set of comments about enforcement expresses a combination of frustration and cynicism. On another level the manifestations of how to undertake their job led the rangers to conclude that material support (weapons, uniforms, etc.) will make their task easier and raise their community presence and visibility. Another level of commentary included recognition of the difficult social conditions of the rangers themselves who lacked winter gear, telephones or vehicles to counteract all ecological threats.

²⁶⁹These competitions included 'best nature protector,' and another emphasized knowledge of the Bogd Khan Uul.

²⁷⁰I first became familiar with the breadth of the impact of the post-1989-90 economic crisis on Mongolians while drafting a 'Memorandum of Understanding' between the U.N. system and Mongolian government focussed on the Mongolia's large 'boom generation' of a cohort of youth. The text of this 1998-2001, "Agreement on Youth Issues" was supported by interviews with officials in the Mongolian Ministries of Health and Education, World Health Organization, UNICEF, UNFPA, UNESCO and UNDP and covered health, employment, education and ecological issues (see UNDP 1998).

²⁷¹As noted in the *Site Issues Scan* section on tourism, rangers expressed unanimous support for further training, courses and workshops related to tourism.

²⁷²Several short training initiatives for rangers have been conducted at Bogd Khan Uul supported by the Ministry of Nature and Environment. Ranger and tour guide training takes place in Ulaanbaatar at various colleges and institutions (Pers. Comm.Saffery, Aug.2000).

²⁷³Possible precursors to co-management approaches are the participatory action studies that foreign development agencies have supported in other Mongolian protected areas, including Gobi Gurvainsaikhan and Gorki-Terelj National Parks (GTZ), Hustain Nuruu Protected Area (Dutch Government & MACNE) and the Eastern Steppes Biodiversity Project (UNDP). These have involved local herders and/or residents in buffer zone participation and resident participation projects. [Batbuyan et al 1997; Galragcha 1998; Khula 1999].

²⁷⁴Ranger M suggested that at Manchir Hiid Valley (and Monastery) there was once an interest in conservation, "more for religious reasons", adding that people respected protecting the mountain during the reign of the Bogd Khan (Eighth Living Buddha).

²⁷⁵To what extent local communities are able maintain their distinct knowledge systems while adapting to external influences remains to be seen.

²⁷⁶In this example two spiritual organizations, the market operations, scientific research organizations, not to mention the underlying state apparatus influenced the activities that take place. Understanding how both formal and informal institutions work at Bogd Khan Uul is central in clarifying *who* can be capable of remedying the socio-economic issues identified in this case study.

²⁷⁷The term capacities is used since *no institution is single-handedly* responsible for the polycentric actions of human organizations at Bogd Khan Uul and since the organizations involved vary in their constituents, range of actions, stake, responsibilities and power relations.

²⁷⁸The analysis in this section draws from secondary sources, key informant interviews and observations made during work and travels in Mongolia (1997-2000).

²⁷⁹20.5 million hectares or 13.1 per cent of Mongolia's land base was under protection (as of 2000) and 49 million hectares or 30 per cent is slated for protection by the year 2015 (MNE & GTZ 2000: 5; Society for Protected Area Development 2000: 1).

²⁸⁰A draft *Law on Land Use*, apparently distinct from the 1994 *Land Law*, was under consideration during fieldwork. It may address how fees inside the buffer zones of protected areas (particularly the contentious issue of tourism fees) would be calculated (Chinzorig, Pers.Comm. Aug.27, 2000).

²⁸¹Mongolia has also ratified the *Convention to Combat Desertification* (1994), the *Convention on International Trade in Endangered Species on Wild Fauna and Flora* (1996) and the *Ramsar Convention on Wetlands of International Importance* (1996).

²⁸²This right is derived from the 1992 *Mongol Ulsyn Undsen Khuuli (Article 16, Paragraph 18)*, recognizes the freedom for Mongol citizens for movement both within Mongolia and abroad.

²⁸³This right is derived from the 1992 *Mongol Ulsyn Undsen Khuuli (Article 16, Paragraphs 15-16)*, recognizes the freedom for Mongol citizens to religion and freedom of opinion.

²⁸⁴This right is derived from the 1992 *Mongol Ulsyn Undsen Khuuli (Article 16)*, recognizes the rights and liberties of the individual, including free education, access to medical care, freedom of association, and political participation.

²⁸⁵Aside from the Administration and Ministry of Nature and Environment, separate state interests at Bogd Khan Uul include the operation of five meteorological sampling stations, a space observatory, the presidential palace complex and diplomatic compound and a range of communications and other infrastructure.

²⁸⁶The lingering concern with corruption was also identified in the Sant Maral Study on Privatization (2000) and was affirmed in other secondary sources (MNE 1997: 90; UNDP 2000: 14).

²⁸⁷The Sant Maral-Barents Group nationwide survey from March 10-31 2000 of 1177 respondents indicated a concern about corruption, about criminals manipulating the economy and government borrowing (Sant-Maral: 34). Similarly, the *Ulaanbaatar Post*, in an editorial piece (Aug.2000: 33:222, 2) identifies concerns about parliamentarians using political suasion to improve their personal situation or their friends businesses, with particular reference to the defeated coalition government at that time (Mongolian Social Democrats and Mongolian National Democrats). The articles suggested, "many of them put their own interests before those of the public and introduce and back lobbies supporting their own interests. It is common that they think anything is possible if the price is right. Business people that served in the previous parliament were not re-elected because of their involvement with embezzling state property, bribery and using state money for their bidding."

²⁸⁸These sources identify the aforementioned threats of corruption, particularly as it relates to conservation and sustainable development in Mongolia: MNE (1997a: 44-54), MNE (1997b: 20), Ferguson (1999: 64-68), METF (undated;), Khuldorj (1998: 9-11) and Shiirevdamba (1999).

²⁸⁹The following sources discuss these protected area designations in greater detail MNE (1997a: 101), Adyasuren (1998: 20); Society for National Parks of Mongolia (2000: 1).

²⁹⁰The Strictly Protected Areas Bureau in the Ministry of Nature and Environment consists of specialists who address: park management, international and transboundary cooperation, biodiversity research and bufferzone development inside Mongolia's protected areas. This Bureau supports 12 administrations across Mongolia. The remaining parks (aside from the 12) exist without staff and therefore exist as "paper parks".

²⁹¹During year 2000 fieldwork the drafting of a four-year management plan (2000 or 2001 to 2004 or 2005) was underway and this draft outline made references to a buffer zone, which could represent a new zone in addition to pristine, strictly protected, limited use. In addition to legal, geographic background and conservation background (abiotic, biodiversity, flora, etc.), the strategy includes “socio-economic development in buffer zones, Ulaanbaatar and Tov Aimag” and a future strategy focussed on “administrative structure, difficulties with management, management objectives/actions, financial resources, conservation monitoring, research and ecotourism opportunities, enforcement and public awareness, programme implementation and programme evaluation” (Pers.Comm. Chinzorig, Aug.27, 2000).

²⁹²These data are based upon the August 2000 long format survey responses to the questions about age, years of working experience and years working at Bogd Khan Uul. (10 responses from N=11). Mean age of the rangers was 52.4 years, mean work experience 29.9 years, and mean experience at Bogd Khan Uul was 6.6 years.

²⁹³Several ecological education initiatives in Ulaanbaatar included the necessary skills sets for ranger training and have been encouraged by multilateral or bilateral supported conservation projects (i.e. the Eastern Steppes Biodiversity Programme, EU-TACIS and JICA Ecotourism Initiatives, GTZ and U.S. Peace Corps environmental initiatives (Pers.Comm. Saffery 2000; UNDP 1997B).

²⁹⁴“Codes of conduct,” as a future measure for consideration, were unanimously supported by rangers %100 in favour (August 2000 survey). There was however, no opportunity to discuss the possible contents of such a code.

²⁹⁵Discovery Mongolia Tourism Network (Pers.Comm., July, 1999).

²⁹⁶Arguments can be made that neither is an organized religion—for instance some Buddhists refer to their worldview-belief systems as a philosophy. Shamanism historically has been tied to the worship of spirits in nature and apparently does not have formal root texts and institutions.

²⁹⁷Works that cite the importance of Buddhist and Shamanic connections related to nature protection and worship includes, Germeraad & Enebisch 1996, Humphrey and Sneath 1999, Fernandez-Giminez 1997, Bruun 1996, 72, Merli 1999, Sneath 2000.

²⁹⁸One difficulty with conducting research in the late 1990s was individuals’ multiple interests in N.G.O.s. While NGOs have been critical in rapidly addressing the diminished role of the Mongol state in some cases they have served as personal fiefdoms for some individuals with insiders’ knowledge. The new NGO legislations’ components on components on better transparency as well as the increased experience of Mongolians involved in this sector and may help improve the balance between personal projects and broader social aims that often dovetail with the initial formation of N.G.O.s.

²⁹⁹Through the Ministry of Environment via the Environmental Public Awareness Fund (UNDP and Dutch Government) U.S. \$2866 was earmarked for establishing the Bogd Khan Information and Public Awareness Centre. This project involved “highlighting its [the mountain’s] natural features and providing a database of endangered species in the area” (Ferguson 1999: 75).

³⁰⁰The NGO received U.S. \$4396 between May-February 1997 for its activities. These funds were provided through the Environmental Public Awareness Fund, sourced by the UNDP and Dutch Government (Ferguson 1999: 75).

³⁰¹For these projects the association received \$4044U.S. in support from the Environmental Public Awareness Fund/Dutch Government, as identified in Ferguson 1999: 70.

³⁰²In other Mongolian protected areas—Hustain Nuruu, Gobi Gurvainsaikhan and Khan Khentii National Parks—resident and community members are increasingly involved in consultation processes about

activities, priorities and poverty alleviation or small business/enterprise projects inside the parks and in their buffer zones. As reported in conservation project reports and studies such as: Batbuyan et al 1997; Galragchaa 1998; Khulan 1999.

³⁰³These networks—evident in *hot ails* and neighbourhoods—at the most local level it supported Mongol families during the severe shocks of the socio-economic and ecological crises of the 1990s (examples can be found in Bruun 1996; Pederson 1999; Agriteam Canada 1997: 12).

³⁰⁴Humphrey and Sneath (1999: 17, 26) identify cultural commodities of Inner Asian peoples cultures including: respect for age, love of song and poetry, cult of mythical heroes from epic narratives, an admiration for nature, immense generosity to guests, folk practises combined with Shamanism and Buddhism, mobile pastoralism and sharing similar attitudes to landed property, leadership, warfare and trade. They add that indigenous ways of life are manifest in herding techniques, housing, clothing, utensils, local foods, the importance of religion, knowledge of oral literature and maintenance of traditional customs.

³⁰⁵Merli (1999: 9-10) reports that at the Fifth Conference of the International Society for Shamanistic Research held in Ulaanbaatar in the summer of 1999 that a conflict erupted between several groups interested in scholarly shamanism, urban and rural shamanism. She notes: “it is kind of cold war, within, everybody tries to justify one’s shaman status, using press and publications and above all, by gaining the academic legitimacy from researchers.” She notes that part of the concern appears to be to “justify their beliefs and respond to foreign missionaries [from other religious traditions] invading their country.”

³⁰⁶It has been argued by some that Buddhism represents a philosophy, rather than a formal religion per se ((an example would be vipassana teachings, (William Hart The Art of Living: Vipassana Meditation as taught by S.N. Goenka. Vipassana Research Institute Dhammagiri, Igatpuri (Nasik) Maharashtra India, Mahabodi International Meditation Centre, 1995)).

³⁰⁷In addition, global biodiversity planning shapes management, land use planning, fees and economic incentives, enforcement and penalties, monitoring, technical support, technological systems and approaches to tourism development. International epistemic norms are partly shaped by donor nations, research and centres of research, international environmental non-government organizations and fundamentally multilateral institutions (see Ghimire and Pimbert 1997). The key problem appears to be the new dependencies created on external technology, norms and systems of support.

³⁰⁸Research on the links between global biodiversity norms, treaties and legal frameworks and their impact upon and local communities may be found in: Gupta (1997, 337); Wells (1997, 170); Miller in Stolton & Dudley (1999, 41); Ghimire and Pimbert (1997, 16-23). Manuel Castells scholarly work, *End of Millennium* (Blackwell, Oxford 1998, 355) suggests there may be a blurring of state and local sovereignty in the era of globalization. His comprehensive research suggests, “nation-states will survive, but not so their sovereignty. They will band together in multilateral networks, with a variable geometry of commitments, responsibilities, alliances, and subordinations.” He also posits that, “the global economy will be governed by a set of multilateral institutions, networked among themselves. At the core of this network is the G-7 countries club, perhaps with a few additional members, and its executive arms, the International Monetary Fund, and the World Bank, charged with regulation and intervention on behalf of the ground rules of global capitalism.”

³⁰⁹This appears to be the case in many Third World nations (Gupta 1998; Ghimire & Pimbert 1999).

³¹⁰CBD Treaty’s Article 8(j) calls for respect, preservation and maintenance of, “knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity”.

³¹¹Some Mongolian legislation is in place to protect the nations biodiversity from export (i.e. Law on Natural Plants 1995; Law on Natural Plant Use Fees 1995).

³¹² Selection of candidate sites is according to criterion of: conservation, sustainable development, historical, cultural, and scientific significance (UNESCO 1987: 20; MNE 2000: 26). The Bogd Khan Uul (approved 1996), Uvs Lake Basin (1997) and Great Gobi Strictly Protected Areas (1991) are included as Man and Biosphere Reserve Sites.

³¹³ The MAB asks that park management plans include designated core areas, buffer zones, transition areas, connections to broader protected area networks and research activities. Elements of this zoning approach are evident in the 3-pronged approach to zoning adopted by the Bogd Khan Uul Strictly Protected Area Administration.

³¹⁴ UNESCO's Biosphere Reserve database identifies seven research activities underway at Bogd Khan Uul, including: land use, soil contamination, dynamics of forest and vegetation cover, ecology of hooved animals, population genetics, impacts of human activities, tourism development in the transition (buffer) zone (see <http://www.unesco.org> man and biosphere reserves).

³¹⁵ These new horizontal foreign relations feature funding from key bilateral lenders and project sponsors Japan, the European Union and the United States (examples in Sheehy 1996, Bayarkhuu 1999).

³¹⁶ In the sphere of environmental protection and conservation these have included the support of the Government of the Netherlands, the United States Agency for International Development (USAID), the Canadian International Development Agency (CIDA), the German Cooperation & Technical Assistance Agency (GTZ) and the Japanese International Cooperation Agency (JICA) amongst many others (World Bank 1997; MNE 1997).

³¹⁷ According to the Ministry of Nature and Environment (MNE 1997: 70) Mongolia's four-part protection regime is "a melding of ideas from the IUCN categories and Biosphere Reserve concepts that have been adapted to Mongolia's situation and rural conditions."

³¹⁸ Though the project had uncertain results as "the trees did not take." according Chinzorig (Pers.Comm, Aug.27, 2000).

³¹⁹ While there has been support for community-based development and local knowledge systems, the bulk of foreign aid and policy advice in 1990s Mongolia has been directed to standard Euro-American western notions of what constitutes development with a focus on markets and hard infrastructure.

³²⁰ Ensuring that key decision-makers see directly with their eyes local conditions (e.g. living a day in the life of a Bogd Khan Uul ranger or resident of Yarmag) may develop a better understanding of local solutions needed amongst the well-paid and educated employees of I.F.I.s, multilateral agencies, foreign aid donors or foreign embassy staff.

³²¹ Key stakeholders include, amongst others: rangers, Admin. (Bogd Khan Uul Administration), Ministry (Ministry of Nature and Environment), adjacent residents (Ulaanbaatar suburbs, Khonhor, Zuunmod, Sergelein, Nailakh..) and hot ails/herders, Ikh Hural (Parliament), ENGOs (Mongolian non-government environmental organizations), Buddhist organizations (Yellow Hat and Red Hat order institutions), Shamanic organizations (Golomot Shamanic centre, autonomous urban and rural shamans), tour operators (ger camps, hotels and local/foreign tourism operators), international supporters (foreign ENGOs and individuals), donors (international financial organizations and bilateral aid development agencies), bilateral projects (internationally-supported environmental projects already underway in Mongolia).

³²² The institutional analysis asks whether there are emergent institutions that might support ecological and cultural restoration. Inevitably this leads to the question: will these institutions respect and mediate stakeholder interests by ensuring regular access to sacred places and periodic resources use for local residents?

³²³This is linked to the “precautionary principle” which states that in the absence of convincing data that caution should be exercised until firm scientific proof can be made about a particular phenomenon. The principle is commonly used as the basis for international environmental treaties and as an argument that the burden of proof should remain on the proponents of developments to ensure that irreversible harm to human or ecosystems health does not occur.

³²⁴From a risk assessment perspective this conservative strategy (precautionary approach) makes sense given the history of the past decade’s events in Mongolia, including three significant socio-economic and ecological instabilities; the 1989-90 democratic revolution, the material poverty stemming from the 1992 economic collapse and the 1999-2001 severe winter droughts, known as *Tsuud*.

³²⁵These 3 paths are drawn from the key findings in the *Site Issues Scan, the I.O.C.A.* frame outcomes and from a cross-scale secondary literature analysis of protected areas in Mongolia.

³²⁶Examples of co-management processes include jointly designated and managed parks, revenue sharing arrangements, shared resource management arrangements, shared land use planning arrangements.

³²⁷An example of membership on such a board might include possible stakeholders such as elected politicians, herders, civil servants, lamas and shamans, park rangers and managers, social and natural scientists, adjacent residents, conservationists, historians, tour operators and foreign supporters. Another path could involve Mongolia’s growing NGO community. For example the Union of Mongolian Environmental NGOs, formed in 2000 as an umbrella of over 40 environmental NGOs focuses on “increase[ing] public interest in environmental protection, restoration and optimal use of natural resources, and coordinat[ing] activities of environmental NGOs and liase[ing] with governmental organizations.” (electronic mail contact address: wwfmon@magicnet.mn).

³²⁸Once example of cultural site restoration comes from July 1999 when the World Historic and Cultural Places Safeguarding Foundation, based in New York, donated US \$100,000 to Mongolian Khan’s Fund to “restore the main temple at the Bogd Khan’s former Winter Palace” and the Nogoos (Green) Lavrin Temple (*Mongol Messenger*, July 21, 1999, 29:419, p.8).

³²⁹How Mongolia’s institutions have adapted to threats and systemic shocks is of great importance since these adaptations may prove to be crucial in withstanding future potential human-induced and natural instabilities such as global climate change, severe drought and desertification and commodity price swings, macro-economic and political instability.

³³⁰One specific path to supporting local community networks would be to involve *hot ails* and neighbourhoods on the protected area periphery. These could be targeted for the provision of basic needs and projects focussed upon health and micro-finance support, along with cultural and ecological restoration initiatives.

³³¹Carefully studying local knowledge systems may help shape IFI (international financial institutions) loan and aid policy, development programming and structural reform requirements. Localized knowledge might also warn of the dangers—particularly for Post-Soviet nations in transition—of possible institutional design failures. Amongst the key lessons being that instituting market reforms without respecting local knowledge and actively supporting indigenous systems of survival is misguided and potentially dangerous.

³³²Local financial tools and funds already in use in Mongolia, like the buffer zone projects of UNDP and GTZ; the failed Mongolian Environmental Trust Fund, the Aimag sustainable development MAP-21 funds, National Poverty Alleviation Project and the U.N.D.P.s Micro Finance initiative provide examples and lessons of how to create financial support for communities adjacent to protected areas.

³³³Economic localization features integrating ecological, social justice and worker rights, while maintaining the possibility of fair trade. Examples abound worldwide for how communities have created sustainable systems of economic localization that can weather economic and ecological uncertainty: consumer and worker cooperatives, credit unions, union-sponsored pension and venture capital funds, community-based education systems and so forth. There is a vast diversity of intentional and experimental communities and autonomously organized collectives and networks worldwide. For example the Mondragon movement in Spain, featuring the use of a Casa Laboral (Central loan fund/credit union), training institutes and enterprise development initiatives to support nested enterprises; the Solidarity Fund in Quebec; both atheist and spiritual affinity communities such as the Hutterites, Mennonites, Dukhobours and Amish, Kibbutzes in Israel; co-housing, permaculture and appropriate technology 'experimental' communities are amongst numerous examples as diverse as humanity itself (see examples in Fellowship for Intentional Community (2000), Mollison (1990), Roseland (1998), Shuman (1998), and <http://www.ic.org/resources> or Intentional Communities Directory, (2002).

APPENDIX A—Bogd Khan Uul Action Assessment

The three suggested pathways for implementing changes at Bogd Khan Uul (as proposed in Chapter 6 herein), namely: co-management, ecological and cultural restoration and economic localization-(x-axis) are tied to four types of institutional clusters (y-axis) in the assessment matrix below. Stemming from the SIS findings and IOCA findings, the four types of organizations are *subjectively* assessed for their potential to implement, initiate or manage local knowledge applications at Bogd Khan Uul, evaluated as *high, medium or low* potential.

Assessing three pathways for change

Bogd Khan Uul Institutional Clusters	Instigating Co-Management	Ecological/Cultural Restoration	Economic Localization
<i>THE STATE</i>			
BKU Park Rangers	////////////////////		
BKU Administration	////////////////////	////////////////////	
Local Government		////////////////////	////////////////////
Ministry of Nature&Env.	////////////////////	////////////////////	////////////////////
<i>Ikh Hural</i> (Parliament)	////////////////////		////////////////////
<i>MARKET</i>			
Tour Camps		////////////////////	
Tourism Firms	////////////////////		
<i>CIVIL SOCIETY</i>			
NGOs			
Shamanism (NGOs)	////////////////////		////////////////////
Buddhism(local groups)	////////////////////		////////////////////
<i>Hot-Ails</i>		////////////////////	////////////////////
<i>MULTILATERALS</i>			
Conventions	////////////////////		
Treaties	////////////////////		
Multilateral Orgs.			////////////////////
Donors (bilateral)	////////////////////	////////////////////	
International NGOs	////////////////////	////////////////////	

Subjective institutional assessment scale for change at Bogd Khan Uul:

High potential	for acting on local ecological knowledge applications
/// Moderate potential	//////////////// for acting on local ecological knowledge applications //////////////////
Little potential	for acting on local ecological knowledge applications

APPENDIX B—Key Mongolian Nature Conservation Literature

The following literature, cited in the bibliography, was used in this case study's literature review, historical analysis and throughout the Site Issues Scan.

Mongolia literature themes	References (cited in case study bibliography)
Local Ecological Knowledge	Fernandez-Gimenez 1997a,b; Germeraad & Enebisich 1996; Griffin 1993; Humphrey & Sneath 1999; Enkhee 1998?; Khuldorj 1999; Ligaa 1994
Spirituality & Nature protection	Baatar & Watanabe 2000; Merli 1999
Conservation and development norms	Adyasuren 1998; MNE 1997a,b; Baatar 2000
Human development reports	UNDP 1997-99
Poverty in rural Mongolia	Agriteam Can 1997; Mong.Gender Centre 2000
Buffer zone development issues	Batbuyan 1997, Debonnet 1998; Gansukh 1999; Garibaldi 1998; Kamal 1998,1999
Tourism	Discovery Initiatives 1998; Eberherr & Liegl '99; Johnstad 1999; Shagdar 1997; Steinhauer-Burkart 1999; Strasda & Stenhauer Burkhart 1997
Environmental Public Awareness	Ferguson, 1999
Community-based resource management	Johnstad 1999
Participatory Rural Appraisals	Kamal 1998, 1999; Khulan 1999;
Sustainable Development	Khuldorj 1998; Shiirevdamba 1999;
Environmental Problems & Issues	Kohn 2000a, b,c; Lawless 1998; UB Post 1998, 2000a
Pastoral Issues	Fernandez-Gimenez 1997a, b; Meanrs 1995; Bruun 1999; Rosabi, Morris 1999; Rosabi, Mary 1999; Sneath 1999; Goldstein & Beall 1994
Land use & nature protection	MNE 1994
Legal Aspects of Protection	MNE 1996a, 1996b; Wingard 1997
Biodiversity Planning & protected areas net	MNE 1997a; Myagmarsuren 2000
Endangered Flora & Fauna	MNE 1997b; Reading et al 1999
Geographic Info. Systems & Conservation	Tiller 1998
Foreign Policy, Foreign Relations	Sheehy 1996; Bayarkhuu 1999; Tumurchuluun 1999;
Forestry	World Vision 1997

APPENDIX C—Chronology of research in Mongolia

The following table provides background context about the principal investigator's previous and simultaneous work in Mongolia and key associations with the subject matter of the case study.

Principal Investigator's activities in Mongolia

September 1997—April 1998—internship with Mongolian Action Program for the 21st Century (a sustainable development strategy for the state and 21 aimags/provinces);

December 1997-April 1998—writer and part-time editor with *Ulaanbaatar Post*, included a follow-up story on logging at Bogd Khan Uul;

April-June 1998—consulting work with United Nations Development Program, including crafting the U.N.-Government of Mongolia Agreement on Youth Issues 1998-2001;

December 1998—developed proposal in REM 801 “Protected Areas and People in the Post-Soviet Era: Case Studies of Tourism in Mongolian Host Communities”;

May 1999—SFU ethics approval for pilot survey work on tourism in Mongolia's national parks;

June-July 1999—temporary editor *Ulaanbaatar Post*; scoping research possibilities Gobi Gurvansaikhan and Lake Hovsgol National Parks and met in Ulaanbaatar with ENGOS, tour operators & government;

August 1999—met with Bogd Khan Uul Manager Batdulam—develop initial proposals for research in conjunction with Mongolian Ecotourism Association working with translator Otgonnasen;

August 1999—conduct pilot survey at Bogd Khan Uul on broad issues related to nature protection—formulate initial research hypotheses/questions working with translator Batbayar;

November 1999—present paper, “Tourism Development in Mongolia—Emerging Frictions With Mongolian Traditional Ecological Knowledge: The Case of Mongolia's Protected Areas” on tourism frictions with protected areas to “Mongolia: From Countryside to City Conference”, Copenhagen, Denmark;

January-May 2000—submitted research proposals for funding; conduct ongoing literature review on Mongolian work;

May 2000—decision to return to Mongolia self-funded (with help of friends & family)—revised research focus included logging, pine nut harvest, grazing, tourism, poverty, local knowledge (proposed 3 phase study);

June 2000—SFU Ethics Review Committee approval for phase 1 of survey, “The roles of tradition and community in the management of Bogd Khan Uul (Mt.) Biosphere Reserve, Mongolia”;

June 2000—met with new Bogd Khan Uul parks director, Chinzorig to review fieldwork plans ;

June 2000—worked with translator Hosbayer and developed ‘long format’ survey for rangers ;

July 2000—reviewed draft survey with chief Bogd Khan Uul ranger Purevdorj, working with translator Otgonnasen;

July 2000—introduced research aim, ethical issues and questionnaire and dropped-off survey to rangers at 21 ranger stations on horseback (translator Hosbayer);

July 2000—independent work with North Eastern Asian HIV-AIDS office in Ulaanbaatar on *NEA Newsletter*;

August 2000—scaled-down questionnaire and developed ‘short survey’—interviewed rangers (translator Erdene-Arjune) picked-up questionnaires throughout the month;

August 2000—developed proposal on Mongolian attitudes to nature public opinion poll with Sant Maral Foundation, and later WWF Mongolia;

August 2000—obtained GIS overlay sheets from Ministry of Environment's Information Computer Centre for ranger stations/valleys for use with ranger survey—later abandoned for use in this case study;

August 2000—interviewed Bogd Khan Uul management team and key contacts (translators Otgonnasen and Undargaa);

August 2000—gathered reports, studies on Mongolian nature conservation from Ministry-WWF-GTZ-UNDP Joint Conservation Collection and from UNDP Information Centre;

Fall-Spring 2000-2002—data analysis; transcribed transcripts; literature/theoretical review; drafts to committee;

APPENDIX D—Fieldwork Translation Assistance

Without the expertise and cultural interpretations of a team of highly skilled Mongolian translators, this work would not have been possible. The table below identifies the translator, their specific role in this case study, and their particular expertise.

<i>Translator</i>	<i>Case Study Role</i>	<i>Expertise</i>
Otgannasen	Liaison with Park Administration (1999, 2000) Reviewed pilot and long survey materials (1999, 2k) Assisted with travel, official and cultural protocol.	Language instructor Foreign Lang. University B.A. Central European Univ. (Budapest).
Batbayar	Field translation during pilot survey (1999).	Spoken and written translation; foreign development project translator—spoken English, Russian, Japanese, Czech and Puthuangwa.
Hosbayar	Long survey development and drop-off to rangers (2000).	Ecotour guide; foreign project translation and small business operator.
Erdene-Arjune	Short survey and interview translations (2000).	Ex-Mongol border patrol Yarmag Lotus Infant and Mothering Centre employee, foreign traveller.
Undarga	Long survey written translation & survey translations (2000).	Environmental Studies and languages graduate; former translator with Cambridge University Social Anthropologist.

APPENDIX E—Pilot Survey Questions. August, 1999

The following questions were included in the pilot survey tested in August 1999 on the periphery of Bogd Khan Uul. Introductions and core questions, including the Simon Fraser Research Protocol, were read aloud by the translator. Discussions (Q.30-33) represent open-ended questions, formulated to solicit wide opinions.

- =====
1. Name of subject(s)
 2. Location
 3. Employed since?.....before (previous)?.....year round?
 4. Background/Training
 5. Describe your job: tasks/Activities/Day-to-day (work)
 6. What are your main jobs related to protection of nature?
 7. What are your main jobs related to protection of culture?
 8. What # of visitors do you encounter in peak tourist months (June-Sept) (off-season)?
 9. Describe problems with collecting fees and management:
 10. Describe logging problems:
 11. Describe poaching problems
 12. Describe grazing problems
 13. Describe hunting problems
 14. Describe food gathering issues
 15. Describe camping problems
 16. Describe other activities (paragliding, etc.)
 17. Discuss crowding (ideas on #s/hectare) as being too crowded for Mongolian's/Foreigners (1-3/4-10/11-15/+15)
 18. What are the biggest differences between Mongolian and foreign visitors?
 19. What are the reasons most visitors have for coming to Bogd Khan Uul? (e.g. Nature, camping, exercise, etc.)
 20. What background do you have in: tourism, ecology, hunting, science, policing, grazing, etc.?
 21. Describe your encounters/relations with tour companies: IF SO 22
 22. Do they (companies) come by jeep (#s) with guides, self-equipped to camps?
 23. How could local communities relate to parks better—give input?
 24. How could local communities get tourism revenue?
 25. What physical improvements are needed to the park (infrastructure)?
 26. Regarding the current fees—could/should these be increased?
a.\$3 b.\$4 c.\$5 d.\$6...\$10; and rate for Mongolians?
 27. How do Mongolians perceive [the concept of] parks?
 28. In your opinion talk about the parks future and future tourism opportunities
 29. In your opinion what could BKU management do to help you [do your job]
 30. Discuss the importance of local knowledge/tradition ecological knowledge...
 31. Discuss the current role of BKU management...
 32. Discussion about maps/guides/signs...
 33. Discussion about visitor codes of conduct...
 34. Perceptions: what do you think is being protected by a national park (as opposed to sacred site protection)?
 35. Perceptions: what do you think visitors to a national park think about protection?
- =====

APPENDIX F—Long survey format (Mongolian) and English synopsis

After the fieldwork in 1999, a long survey questionnaire was developed and delivered to the rangers in the summer of 2000. This survey—while not a central contribution to the data used in the case study—did provide useful data and experiences (see Chapter 3).

A consent form (original in the Mongolian language) was read aloud and left with the ranger to review and sign at their convenience. These forms were subsequently retrieved in conjunction with written completions. A translation of this form and the survey follows:

*Simon Fraser University Research Protocol
(business card of principal investigator)*

The aim of this research is to provide Bogd Khan Uul Park Management , Protected Areas Bureau (Mongolian Ministry of Nature and Environment) and Mongolian N.G.O.s and researchers with a review of current issues at Bogd Khan Uul (Mountain) in order to improve long-term nature protection and community benefits.

Input will not only be of use to Mongolian park managers, but of international importance.

Informed consent—that the informant understands the purpose and contents of the research—anonymity (in the written research) and confidentiality is offered and guaranteed (to the signatory).

Researcher Sadoway will make every attempt to retain ongoing communications/access to the research effort with the Mongolian counterparts.

Return visits may be arranged for follow-up during the Mongolian portion of my fieldwork.

Archeological or spiritual sites and other sensitive information (e.g. nesting locations) other than that noted on existing G.I.S. mapping will not be identified on maps or in conjunction with still pictures or videos in the published thesis dissertation.

Signed and dated by informant. _____

Signed by investigator. _____

(long format survey translated from Mongolian original)

Section 1—Ranger training, skills, perceptions...

- name:
- education:
- original residence:
- total working experience:
- work experience at Bogd Khan Uul (BKU):
- time analysis (table) of daily activities by season (spring, summer, fall, winter)
- perception of roles in: fee collection, traffic monitoring, plant conservation, wildlife management, tourism/traffic control, local education, tourism education;
- which of the above require technical/financial support (rank) ?
- explain/specify your role in each of the above activities...
- have you given input into land use or management planning at BKU?
- what is your role in visitor education?
- what are the key future management issues in your valley and at BKU?
- what are other key future priorities at BKU?

Section 2—Role of local community in park use...

- can you explain the nature of community role or activities by season and by activity (matrix) by season (summer, autumn, winter, spring) (matrix chart)
 - herding or grazing
 - food harvesting
 - spiritual purposes
 - recreational hiking/horse riding
 - domestic/foreign tourists
 - others

Section 3—Management of local community/tourist uses...

- describe if each of these activities occur in your patrol area:
 - logging
 - food harvesting
 - spiritual site damage or theft
 - horse trips / camping
 - tourism impacts
 - site issues
 - waste issues
 - water impact issues
 - traffic issues
 - vegetation impacts
 - impacts from camping
 - recreation (e.g biking, paragliding, etc.)
 - others-

Section 4—Role of community in management...

- In your experience do adjacent communities help or hinder your role in management?
- can you provide examples of good management involving communities from elsewhere in Mongolia?
- discuss and rank these 5 management tools:
 - moral suasion/authority
 - fines systems
 - entry fees
 - police
 - use or user permits
- what other management approaches are you aware of that may work in Mongolia?

Section 5—Opinions on alternative park management practices...

- How should tourism impacts be handled or reduced in these areas?
 - trails
 - horse travel
 - accommodations/site management
- Please suggest alternatives to the current system of fines/penalties:
 - changes in amounts
 - volunteer or community stewardship projects
 - logging or poaching penalties (stiffer?)
 - clean-ups, etc.
- Would these alternatives work?
 - codes of conduct or voluntary rules
 - community-based patrols (e.g. previous Mongol 'green guards')
 - community research/monitoring (of ecosystems)

Section 6—Solving problems/abating issues

- In the following 'problems areas' describe a. when the issue occurs (season) b. where in your valley/or in park c. possible steps to amelioration:
- water pollution
 - plant/vegetation damage
 - logging
 - traffic/tourism
 - waste management
 - animal overgrazing
 - spiritual site damage
 - other issues

Section 7—Local knowledge

- Describe some of your favorite stories or teachings about these activities at Bogd Khan Uul:
 - stories about the mountain
 - songs about the mountain
 - site pilgrimages taking place in the vicinity of the mountain
 - special customs at the mountain
-

APPENDIX G—Short survey format

The following questions were read aloud by the translator during the short surveys used in Summer 2000. The signed consent forms from the long-survey were used in conjunction with these surveys. This survey serves as the basis for the SIS findings in Chapter 4, as well as the basis of the IOCA frame in Chapter 5.

Bogd Khan Uul Park Ranger Survey Questions

Extra Questions to First Survey—August 2000

David Sadoway ~ Simon Fraser University, Canada

filled out by: _____

name: _____

ranger patrol area (valley): _____

Please take the time to complete the following questions:

Questions about resource/nature use in Bogd Khan...

1a Approximately how many pine nut pickers would you estimate are in your ranger patrol area during the peak/high season in one day or one week?

of pickers/day _____

of pickers/week _____

b Do you see this number increasing/decreasing or staying the same over the next five years in your ranger patrol area?

increasing / decreasing / staying the same (*circle one only*)

2a Approximately how many berry pickers would you estimate are in your ranger patrol area during the peak/high season in one day or one week?

of pickers/day _____

of pickers/week _____

b Do you see this number increasing/decreasing or staying the same over the next five years in your ranger patrol area?

increasing / decreasing / staying the same (*circle one only*)

3a Approximately how many loggers would you estimate are in your ranger patrol area during the peak/high season in one day or one week?

of pickers/day _____

of pickers/week _____

b Do you see this number increasing/decreasing or staying the same over the next five years in your ranger patrol area?

increasing / decreasing / staying the same (*circle one only*)

4a Approximately how many cattle grazers/herders would you estimate are in your ranger patrol area during the peak/high season in one day or one week?

of pickers/day ___
of pickers/week ___

b Do you see this number increasing/decreasing or staying the same over the next five years in your ranger patrol area?

increasing / decreasing / staying the same (*circle one only*)

5a Approximately how many campers would you estimate are in your ranger patrol area during the peak/high season in one day or one week?

of pickers/day ___
of pickers/week ___

b Do you see this number increasing/decreasing or staying the same over the next five years in your ranger patrol area?

increasing / decreasing / staying the same (*circle one only*)

6a Approximately how many weekend tourists would you estimate are in your ranger patrol area during the peak/high season in one day or one week?

of pickers/day ___
of pickers/week ___

b Do you see this number increasing/decreasing or staying the same over the next five years in your ranger patrol area?

increasing / decreasing / staying the same (*circle one only*)

7. Please rank the most serious problems in your area from the above 6 activities (rank 1 as the most serious problem to nature and 6 as the least important problem)

__ pine nut picking
__ berry picking
__ cattle overgrazing
__ logging
__ camping
__ tourists state any other problems: _____

Questions management of the Bogd Khan Park:

8. If you had the choice—which would you recommend as your most important equipment purchase for your work? (please rank in order from 1 to 7 with 1 as the most important and 7 as the least important).

__ radio communications for daily work
__ mobile telephone for daily work
__ guns for patrolling and policing
__ binoculars for wildlife counts

__ education posters/pamphlets for residents & tourists
 __ horse for patrolling and policing
 __ other equipment, please name _____

9. Which of the following patrol power/authority to control poaching, logging and other illegal activities makes the most sense to you?

(choose THREE ONLY and rank these from 1 to 3, with 1 being the most important and 3 the least important)

- a. increase the role of nearby police in Bogd Khan management__
 b. increase the power of the UB Bogd Khan managers as patrol__
 c. organizing cooperative patrols between current rangers__
 d. giving more authority/power to a voluntary local community patrol__
 e. creating a new mobile/roving ranger force__

10a If there was more control (fence or police) what would be an appropriate fee/license or tax for the following over the next five years (state an amount in tugrigs for one time use only fee):

- 1) pine nuts/KG __ is a fee appropriate? YES or NO
 2) berries/KG __ is a fee appropriate? YES or NO
 3) tourism fee __ (INCREASE/DECREASE or stay the SAME—100 TGS)
 4) vehicle fee __ (INCREASE/DECREASE or stay the SAME---300 TGS)
 5) other fees __

10b. To handle the increases in tourism which of the following should be instituted? (yes, no or uncertain)

- 1) more training for park rangers to work with tourists..(YES)(NO) (UNCERTAIN) choose one
 2) more staff for Bogd Khan Uul to work with tourists....(YES)(NO) (UNCERTAIN) choose one
 3) no more development of tourist facilities for 5 years.....(YES)(NO)(UNCERTAIN) choose one
 4) a code of conduct for visitors to the park, including visitors (YES)(NO)(UNCERTAIN) choose one
 5) more strict enforcement of tourism entry into the park.....(YES)(NO)(UNCERTAIN) choose one
 6) increased fees for tourists entry into the park.....(YES)(NO)(UNCERTAIN) choose one
 7) increased annual fees for tourist camps, based on annual income (YES)(NO)(UNCERTAIN) choose one
 8) improved trail systems for hiking and horse riding.....(YES)(NO)(UNCERTAIN) choose one
 9) special zones for recreational sports like biking or paragliding...(YES)(NO)(UNCERTAIN) choose one

11. What is the total annual estimated income for your family from all sources?

TGS _____ in one year

12. Besides your work as an employee for Bogd Khan Park what other income sources does your family have? (please list in order of importance & estimate percentage of total family income in # 11).

- 1 _____ most important and __ percentage of the total in 11
 2. _____ second most important and __ percentage of total in 11
 3. _____ third most important and __ percentage of total in 11
 4. _____ four most important and __ percentage of total in 11
 5. _____ fifth most important and __ percentage of total in 11

13. Please describe a little about your family's assets (please estimate as accurately as possible):

#cattle__ #sheep__ #goats__ #of horses__ #of other animals__ vehicle__ motorbike__ radio__ television__ other important assets__

Q u e s t i o n s about your family and community (hot ail):

14. How many family members live near your ger?

____please estimate

15. How many friends live near your ger?

____please estimate

T h a n k you for taking the time
Ikh Bayarlaa !

APPENDIX H—Differentiating between rank and weighted scores

The tables of rankings in the case study use both rank (unweighted) and weighted scores. Each draws out different central tendencies within the data—used for making generalizations about the survey responses. The unweighted rank score simply represents the sum of all responses divided by the number of responses (mean) with the lowest number being ranked as number 1 and the next lowest number 2 and so forth.

The weighted rank used the top three scores and gives the greatest weight to the top score (3), the next greatest to the second score (2) and a value of 1 for the third ranked score. As the table below shows, the rank score is useful where the data set is complete, whereas the weighted score has the tendency to identify the most important trend in the data while de-emphasizing outlier responses. The tables shows examples of the difference between rank average and weighted average for SIS and IOCA.

Site Issues Scan (SIS) Example:

Site Issues Scan Select issue	#1 rank	#2 rank	#3 rank	Weighted average.score (rank)	unweighted avg. score (rank)	N=?
Pine nut (Samar)	6	4	3	29 (1)	2.44 (1)	16
Logging	5	3	3	24 (2)	2.87 (3)	15
Grazing	3	3	7	22 (3)	2.75 (2)	16

Institutional Constellation & Obstacles Analysis (IOCA) Example:

Enforcement Paths Select issue	#1 rank	#2 rank	#3 rank	weighted average.score (rank)	unweighted avg. score (rank)	N=?
+UB-based support	5	7	2	31 (1)	1.79 (3)	14
+police support	4	7	2	28 (2)	1.85 (4)	13
+co-op actions	2	2	9	19 (3)	2.54 (5)	13
volunteer support	2	0	1	10 (4)	1.50 (2)	4
Create new force	3	0	1	7 (5)	1.25 (1)	4

APPENDIX I—Changes in case study axioms and research hypotheses

Throughout fieldwork changing ideas influenced the key questions being asked. This section serves as an illustration of several of the key changes in axioms that shaped the use of different survey tools from 1999 to the end of fieldwork in 2000. The examples track changes in working propositions (with sources noted).

Fieldwork working propositions/axioms:

- (1) the revival of religion or spiritual practices and sacred laws may provide an alternative means of enforcement for preventing ecological damage at Bogd Khan Uul (memo, R10 interview, Aug.2000).
- (2) some type of tourism management plan is needed since the park is experiencing a significant impact from new tourist ger camp development (memo, R11 interview Aug.2000).
- (3) the most significantly stressed valleys (in terms of logging, overgrazing, berry/pine nut harvest, tourism) appear to be those in closest proximity to Ulaanbaatar (memo, R12 interview, Aug.2000).
- (4) if privately owned ger camps develop their own recreation and private trails this will lead to the further degradation of Bogd Khan Uul (memo, Ranger P interview, Aug.2000).
- (5) resolving the conflict in park jurisdiction (particularly on the tourism issue) taxes and fees should go to the park budget. (memo, Ranger Q interview, Aug.2000).
- (6) uniforms [for rangers] may be a cost effective approach to raising self-esteem or creating change of perception in the community (memo, R1 interview, Aug.2000).
- (7) the Ministry [of Nature & Environment] just provides the law, but does not provide proportionate responsibility or incentives/disincentives (memo, R2 interview, Aug.2000);
- (8) resource extraction, illicit acts such as logging or grazing occurs at shifting entry points into the park raising the issue of whether control/enforcement is possible or whether some other system needs to be devised (memo, R5 interview, Aug.2000).
- (9) the combination of controls and fees on resource extraction may provide sufficient disincentives for so-called trespasses into the park. (memo, R9 interview, Aug.2000).
- (10) a cooperative horse patrol may provide a practical means of shared enforcement (memo, R10 interview, Aug.2000).

Post-fieldwork working research hypotheses:

- (1) tourism as it is being developed at the Bogd Khan Uul (and other parks) will create frictions with local communities; (1999 research proposal; Copenhagen Conference Paper 1999).
 - (2) co-management represents an ideal approach for community-based management planning at Bogd Khan Uul (2000 ethics proposal to SFU).
 - (3) traditional ecological knowledge needs to be better incorporated into Bogd Khan Uul's management plan (2000 ethics proposal to SFU).
 - (4) local ecological knowledge applied by local, national and global institutions can be used to resolve Bogd Khan Uul's ecological problems (fall 2000).
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Postscript

"Facing everything, let go and attain stability. Stay with that just as that. Stay with this just as this. That and this are mixed together with no discriminations as to their places. So it is said that the earth lifts up the mountain without knowing the mountain's stark steepness; a rock contains jade without knowing the jade's flawlessness. This is how truly to leave home, how home-leaving must be embodied."

—Dharma words of Monk Hongzhi Zhengjue of Mount Tiantong in Ming Province (below Taipei Peak), compiled by Monk Puqung. (Source manuscript unknown)