Sacred Sites: Opportunity for Improving Biocultural Conservation and Governance in Ysyk-Köl Biosphere Reserve, Kyrgyz Republic

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ABSTRACT

Sacred sites in Ysyk-Köl area of Kyrgyzstan represent areas of land and bodies of water which are spiritually and culturally meaningful for local people. The present study mapped about 130 sacred sites, which are conserved-through-use by local communities and represent traditional model of conservation. The entire territory of Ysyk-Köl region is a formal protected area as a UNESCO Biosphere Reserve. Thus, sacred sites, as traditional model of community conserved area, are embedded in the formal government-run Biosphere Reserve. The study scrutinizes how these two models of conservation (sacred sites and the Biosphere Reserve) co-exist in the same territory and interact with each other. Results indicate that these two models are parallel. However, recognition of sacred sites can improve formal conservation by: a) providing a complementary culture-based set of incentives for conservation, b) fostering a biocultural approach, and c) serving as a communication hub for YKBR managers and local communities.

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And last but not least, I express my gratitude to all informants who participated in the study and thank all visible and invisible forces for making this research happen. I do hope that the findings and thoughts reflected in the thesis will help in relinking society and nature and contribute to the well-being of local communities in Kyrgyzstan and worldwide.

CONTENTS

List of Tables

List of Figures

List of Plates

List of Boxes

CHAPTER 1. INTRODUCTION

1.1 Introduction

Sacred sites have been an important part of many indigenous cultures around the world (Verschuuren et al. 2010). Sacred sites are culturally important in their own right, that is, they have intrinsic value (Aitpaeva 2007). Besides their intrinsic value, sacred sites as Indigenous and Community Conserved Areas (Borrini et al. 2004) are seen to have an instrumental value for biocultural diversity conservation.

Sacred natural sites, usually defined as 'areas of land or water having special spiritual significance to peoples and communities' (Verschuuren et al. 2010, p. 1), officially entered the international protected areas agenda at the Fifth World Parks Congress, held in Durban, South Africa in 2003. Since then international conservation organizations such as IUCN and WWF have incorporated sacred sites in their conservation work. This makes perfect sense because sacred sites have been protected by local communities around the world for centuries (Verschuuren et al. 2010). In some communities (for instance, across Asia and Africa) sacred sites have been better protected than most of the official protected areas (Dudley et al. 2005). Moreover, some formally protected areas were established around existing areas that had been already protected by local communities through traditional 'conservation practices, including some elaborate and effective systems' (Borrini et al. 2004, p. 20). However, establishment of a formal protected area would then trigger the 'replacement' of traditional conservation strategies by strategies defined by the government (Borrini et al. 2004).

Ysyk-Köl State Reserve, the oldest formally protected area in Kyrgyzstan, was established in 1948. Ysyk-Köl is the name of the lake as well as of the province in Kyrgyzstan where the lake is situated. At the end of the 1990s, the entire territory of Ysyk-Köl province was declared a Biosphere Reserve with a total area of 43,100 km^2 (4,314,400 hectares) (Ysyk-Köl Biosphere Reserve Statute, 2000). Ysyk-Köl and Sarychat-Eertash State Reserves as well as Karakol National Park made up the core zones of the Ysyk-Köl Biosphere Reserve YKBR). The newly established Biosphere Reserve was included in UNESCO's List of Biosphere Reserves and designated as a Ramsar site (UNESCO 2012).

Plate 1. View on Ysyk-Köl Lake from Saimaluu-Tash [a field of stones with ancient petroglyphs]

The Ysyk-Köl Biosphere Reserve (YKBR) encompasses Ysyk-Köl Lake which has been sacred for Kyrgyz people from time immemorial. It is also a big tourist destination in

Kyrgyzstan due to its natural characteristics. Ysyk-Köl is located at an altitude of 1607 meters above sea level and surrounded by two mountain ranges: the Kunghei Ala-Too (4,770 m) in the north and Terskei Ala-Too (5,200 m) in the south. Ysyk-Köl Lake's length is 178 km, its breadth is 60 km, and the maximum depth is 668 meters, which makes it the world's fifth deepest as well as second-largest high-altitude and second-largest saline lake (De Batist et al. 2002, Klerkx and Imanackunov 2002, UNESCO 2012).

In 2007, Aigine Cultural Research Center (henceforth Aigine), a local NGO, surveyed local communities and listed more than 100 sacred sites in Ysyk-Köl province (Aitpaeva 2009). The current study builds on that initial survey and elaborates on instrumental value of sacred sites for biocultural conservation. Understanding governance as 'the setting, application and enforcement of the rules of the game' (Kjær 2004, p. 12), sacred sites appear to have traditional governance system as they require the pilgrims to follow certain rules and observe taboos, violation of which can cause pilgrim harm (Premauer 2013). Sacred sites are community conserved areas (Borrini et al. 2004) and represent a 'traditional' model of conservation in YKBR.

Given the growing international interest in the role of Indigenous and Community Conserved Areas (ICCAs) including sacred sites in nature conservation, this study attempts to examine how community conserved sacred sites interact with formal conservation in the Ysyk-Köl Biosphere Reserve, and how these two models of conservation, i.e., sacred sites (being a traditional community-based model) and the Biosphere Reserve (being a formal government-run protected area) can reinforce each other. The research findings provided more generalized insights on how sacred areas (and local institutions that ensure protection

of these areas) can contribute to improvement of conservation in formal protected areas such as biosphere reserves.

1.2 Research goal and objectives

The main question guiding the research is **how sacred sites might fit into formal conservation strategies in the Ysyk-Köl region**? To answer this question, the following research objectives were set:

- Objective 1 is *to investigate what kinds of sacred sites exist and whether sacred sites are being employed in existing governance and conservation strategies in Ysyk-Köl Biosphere Reserve*
- Objective 2 is *to analyze the governance structure and current formal conservation practices in Ysyk-Köl Biosphere Reserve (YKBR)*
- Objective 3 is *to examine whether sacred sites can be used as an instrument for formal conservation, stewardship and governance in Ysyk-Köl Biosphere Reserve.*

1.3 Research methods

Case study research strategy determined the choice of field methods. Main data collection methods are listed below and discussed in more detail in the Methodology section:

- **Document analysis** focused on Kyrgyzstan's legislative acts pertaining to the protected areas in general and the YKBR in particular. In 2013, YKBR submitted the 2nd Periodic Review to the MAB, reporting on progress and challenges in the Ysyk-Köl Biosphere Reserve. Document review also included the analysis of

existing unpublished qualitative data that gathered by various NGOs, which have implemented culture and environment-related projects in the Ysyk-Köl area.

- **Semi-structured interviews** and **focus group discussions** were the major methods of data collection. I have conducted 49 semi-structured interviews with representatives of three main stakeholder groups: a) state officials involved in the governance and management of the YKBR; b) traditional practitioners (e.g., sacred sites' guardians) and local communities; c) local and international scholars and NGO experts working on environmental issues. I have conducted one focus group discussion with the sacred site guardians and attended four group discussions facilitated by other moderators (Chapter 2).
- **Participant observation** was conducted during my stay in the YKBR. I visited a number of sacred sites identified by Aigine (Aitpaeva 2009) and mapped them.

Research methodology was approved by the Joint-Faculty Research Ethics Board of the University of Manitoba. All informants have granted prior and informed consent to participate in the research. All research participants were informed about guaranteed anonymity and confidentiality. In some cases, informants explicitly waived their right to be anonymous and requested the investigator to give credit to the informant.

Snowball sampling technique was used to select informants. To reduce the risk of disclosing informants, I used generic reference terms for all representatives of the same stakeholder group, without providing a code number. For example, I quoted 'conservation manager' to mark the opinions expressed by the state officials involved in the governance and management of the YKBR, which included YKBR managers and rangers, the staff and

rangers of protected areas within the YKBR, and employees of the State Agency of Environmental Protection and Forestry.

1.4 Study area

The Ysyk-Köl Biosphere Reserve (also referred as Issyk Kul Biosphere Reserve) is located in Kyrgyzstan (Figure 1.1). Kyrgyzstan is a former Soviet Union Republic with a GDP of 7.226 billion USD (in 2013). The country gained independence in 1991. Kyrgyzstan covers an area of 198, 500 km^2 and its population is 6 million. The population is ethnically diverse, comprising about 80 ethnic groups. Kyrgyz, Uzbek, Russian and Dungan ethnic groups make up respectively 72.6%, 14.4%, 6.4% and 1.1% of the population. Kyrgyz is the state language, whereas Russian has the status of an official language.

YKBR is the largest protected area in Kyrgyzstan. It encompassed a number of pre-existing protected areas and gained international designation in 2001 (MAB 2002, UNESCO 2011, 2012). The Ysyk-Köl Biosphere Reserve Statute (2000) set the Reserve's coordinates from 41°08' to 42°59'N and from 75°38' to 80°18' E. The YKBR contains four zones and various land cover types and habitats for a number of species (Figure 1.2; Table 1.1). Lake Ysyk-Köl is a keystone element of the YKBR (Table 1.2).

Figure 1.1 Map of Kyrgyzstan. Source: BBC

Table 1.1 General characteristics of the YKBR (MAB 2002)

General characteristics	
Total area	4,311,588 hectares (43,100 km^2)
Core areas	145,072 (of which water surface is: 16,678)
Buffer zone	3,501,516 (of which water surface is: 457,145)
Transition areas	665,000
Major ecosystems and habitat types	
Altitude range (meters above sea level)	+1,609 to +7,439
Semi-desert and desert ecosystems, steppe ecosystems, meadows and agricultural lands in foothill zone	1,600-2,400 m above sea level (masl)
Juniper and spruce forests	2,000 - 3,000 masl
Alpine and sub-alpine meadows	2,600 - 4,000 masl
High mountain *syrt* zone (high mountain tundra)	2,700 - 3,500 masl
Water ecosystems (Ysyk-Köl Lake, mountain rivers, and numerous glacier lakes and glaciers)	1,600 – 7,000 masl
Species	
Total number of species	335 species
Amphibians	3 species
Reptiles	11 species
Mammalia	54 species
Birds	267 species
Species included in the Red Book of Kyrgyzstan	39 species

Ysyk-Köl region is also recognized by other international entities for its notable biodiversity. For example, Ysyk-Köl Lake is a designated Ramsar site, a Freshwater Ecoregion of World (#627), and some parts of the lake are recognized as an Important Bird Area by Birdlife International. Mountains in the Ysyk-Köl region are recognized as biodiversity hotspots by Conservation International. World Wildlife Fund (WWF) included the Ysyk-Köl area in Global 200 Ecoregions as the 'Tian Shan Montane Steppe and Meadows' (Wunderlich et al. 2014).

Table 1.2 Main characteristics of Ysyk-Köl Lake (De Batist et al. 2002; Shabunin et al. 2002)

Approximate age	10 million years
Type	Closed and warm monomictic lake
Length	182 km
Width	Up to 60 km
Depth (max)/(average)	668 m/278m
Water surface area	6,236 km^2
Coastline length	668 km
Water volume	1,736 km^3
Water salinity	5.968g/kg
Number of tributary streams /Source of water /Major inflow /outflow rivers	120/melt-water from snow and about 830 glaciers (from an area of 650 km^2)/Jyrgalang and Tup Rivers /0

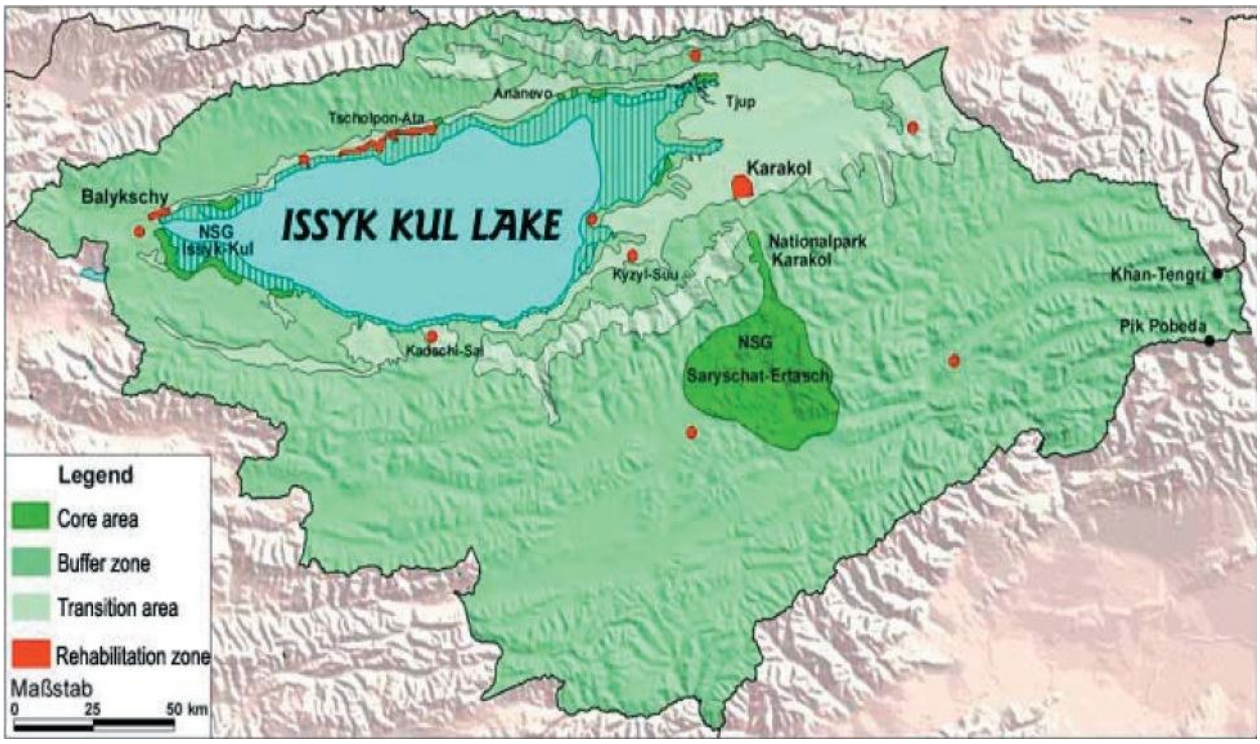


Figure 1.2 Map of YKBR (Baetov 2006)

About 450, 000 people live on the territory of the YKBR with 99% of the population residing in the coastal area of Ysyk-Köl valley. Seventy-five percent of the population lives in rural areas, whereas the urban population is concentrated in three cities, namely Balykchy, Cholpon-Ata and Karakol. Ethnic groups within the YKBR are: Kyrgyz (86%),

Russian (8%), Kazakh (1.5%), Uyghur (0.9%), Kalmyk (0.9) and Dungan (0.7%). Main economic activities include livestock farming (sheep, cattle, horses, yaks, poultry); agriculture (wheat, potatoes, barley, sunflowers) and horticulture (apricots, apples, pears, and various berries); and hospitality (mostly in the northwestern part of the lake during tourist season). Annually, during the short summer tourist season, about one million tourists visit the Biosphere Reserve (YKBR 2nd Periodic Review 2013).

1.5 Theory

A linked social-ecological systems approach lends itself well for analysis of governance and conservation practices in the YKBR. The concept of socio-ecological systems (SESs) promotes the concept of 'humans in nature' and emphasizes that the separation between social and ecological systems is artificial and arbitrary (Berkes 2012). Anderies et al. (2004, no page) defined SES as 'an ecological system intricately linked with and affected by one or more social systems.' Scholars argued that humanity has been changing nature throughout history and likewise, nature has been shaping the development of human societies (Berkes 2012, Berkes et al. 2000). Thus, SES approach discards the concepts of natural pristine systems (Gomez-Pompa and Kaus 1992) and social systems without nature, while promoting the idea of dynamic coevolution of humanity and nature (Norgaard 1994, Berkes and Folke 2002, Berkes 2012).

The SES approach has influenced Protected Areas' design and management approaches (Schwartzman et al. 2000). Growing recognition of SES contributed to evolution from people-free or 'fortress conservation' to more people-centered conservation approaches (Terborgh 2000, Wilshusen et al. 2002). This trend was also reflected in expansion of PA

management objectives and IUCN Protected Area categories (Dudley 2008, 2012). The Biosphere Reserve (BR) concept is consistent with the SES concept and sets a goal of improving people's relationship with their environments across the world (Isacch 2008). The BR concept was originated as an alternative to the national park model, had an explicit aim to make parks and reserves community conscious (Ishwaran 2008) and emphasized the need for reconciling livelihood needs and conservation as well as interlink between biological and cultural diversity conservation (MAB 2002).

Integrating social and ecological dimensions in SESs has different implications than analyses of social or ecological systems alone (Ludwig et al. 2001, Westley et al. 2002, Folke et al. 2005). SES attributes such as multiple temporal and spatial scales and levels, worldviews, drivers and feedback loops as well as resilience and thresholds need to be taken into account during the SES analysis (Berkes et al. 2003). SES concept was supplemented by the references to commons theory (Ostrom et al. 1999, Rutte 2011). Resilience and thresholds were beyond the focus of this study and therefore, only concepts of scales, levels, worldviews, drivers and feedback loops are employed for understanding governance and conservation practices in the study area.

1.6 Significance of the proposed research

This study has both theoretical and practical significance. It addresses a gap in the literature related to a) protected area governance and biodiversity conservation in Kyrgyzstan and b) the role of sacred sites in formal conservation and protected area governance. The study analyzes 'key ingredients' which make sacred sites community conserved areas in Ysyk-Köl area. The research also identifies ways in which recognition of sacred sites can

improve governance and conservation in the YKBR. Given similarities in cultural, social and historical contexts, those recommendations may be applicable to other protected areas in Kyrgyzstan and possibly in Central Asia. As a part of the Community Conservation Research Network (CCRN), the current research contributes to a better understanding of how community-based conservation may improve formal conservation practices in the Protected Areas in general and the Biosphere Reserves in particular.

1.7 Structure of the thesis

Thesis consists of seven chapters. Introduction is followed by a methodology chapter that describes my worldview, data collection methods and data analysis techniques. Chapter 3 is dedicated to a literature review relevant to major themes presented in the study. Chapters 4 and 5 present major results of the study and are built around Objectives 1and 2 respectively. Chapter 4 describes sacred in Ysyk-Köl area as a network of community conserved areas. Chapter 5 discusses governance and formal conservation in the Ysyk-Köl Biosphere Reserve (YKBR). Chapters 4 and 5 describe two parallel models of conservation that ex-exist in the Ysyk-Köl area: a) 'traditional' community based conservation model represented by sacred sites and b) formal, i.e., government-run conservation represented by the Biosphere Reserve. Chapter 6 is built around objective 3 and synthesizes major findings and suggests the ways in which sacred sites can improve formal conservation in the YKBR. Each of these three chapter has its own short introduction, presentation of study findings pertaining to a particular objective, discussion and conclusion. The final conclusion chapter revisits research objectives, highlights overall contributions and insights of the research and suggests topics of further research.

Plate 2. *Syrt* areas [alpine tundra] of Ysyk-Köl Biosphere Reserve

CHAPTER 2. METHODOLOGY AND RESEARCH DESIGN

This chapter explains in detail the worldview, the research design and strategy, and field methods used during field research in June-November 2014. The chapter provides researcher's personal statement, philosophical worldview and describes sampling technique and data verification procedures, and reports on topics covered through interviews and focus group discussion.

I was born and raised in Ysyk-Köl area, which in 2011 acquired a status of the UNESCO Biosphere Reserve. Hence, I was well familiar with local worldviews, social institutions and livelihood practices. Before starting the Master's program I was involved in the research of sacred sites in other regions of Kyrgyzstan, namely Batken, Naryn and Chui regions. There were two factors that allowed me to counterbalance potential biases that may arise from being too familiar with the study are: a) the territory of the YKBR is very large (43,100 km^2) and is home for about 500,000 people. As a result, despite the fact that I was born and raised in the area, my knowledge was limited to the community I grew up in; and b) my research experience on sacred sites in other regions of Kyrgyzstan gave me a valuable baseline data against which I could cross check my findings (Aitpaeva 2013).

2.1 Philosophical worldview

Creswell (2009) identifies empowerment, issue and change orientation, the collaborative and political nature of research to be the main features of the participatory worldview. This study assessed whether sacred sites as community conserved areas are being employed (and/or how they can be employed) in conservation strategies in Ysyk-Köl Biosphere Reserve of Kyrgyzstan. The study's focus on sacred sites as community conserved areas

can help to draw scholars', practitioners', and the general public's attention to the phenomenon of sacred sites in Kyrgyzstan, and thus empower local communities that have sacred sites. This research examined two conservation paradigms: 1) formal conservation exemplified by government protected areas and 2) traditional forms of conservation exemplified by sacred sites. The research discussed features of both systems and analyzed whether these two paradigms should be merged into one holistic system or whether they should remain separate for more efficient and effective biocultural conservation. Thus, this study is issue and change oriented. The research calls for collaborative work with the stakeholders involved in formal and community conservation in Ysy-Kol Biosphere Reserve. Hence, this study also falls into the participatory research paradigm.

2.2 Research design

Qualitative research design is well suited to achieving the study objectives. Corbin and Strauss (2008, p.17) define qualitative research as a type of research that generates findings without using 'statistical procedures or other means of quantification.' Qualitative research explores experiences and feelings, opinions and understandings of individual people and/or groups (Groenewald, 2004) i.e., 'elucidating human environments and human experiences within a variety of conceptual frameworks' (Hilary and Rofe 2010, p.5). Qualitative research gathers data in natural settings without a need for an experimental type of design (Hancock, 2002). Woods (2006) pointed out five features of qualitative research: a) a focus on natural settings; b) interest in meanings; c) consideration of perspectives and understandings; d) emphasis on process; and e) bias towards inductive analysis.

Plate 3. Interview with a conservation manager

Plate 4. Interview with Dr. Shukurov E.J., a key informant

The research employs case study research strategy and a combination of non-participatory (document review) and participatory (key informant interviews, semi-structured interviews, focus groups and participatory observation) research methods. Participatory methods involve research participants as contributors to the research. The research participants receive an opportunity to direct the research to make it more reflective of the participant's opinions on problems and issues affecting their community (Berg and Lune 2004). An emphasis on participatory qualitative methods allows research participants to voice and channel their values and aspirations into relevant forums (Wang and Redwood-Jones 2001). Moreover, participatory methods allow the researcher to establish rapport, and in some cases participatory methods can become a tool for research participants' empowerment (Pink 2013).

A frequently cited limitation to qualitative research is its lack of generalizability. Due to usually small samples and selection of subjects on a non-random basis, it may be difficult to extrapolate study findings and results to a larger population and area (Hancock 2002). The issue of generalizability is addressed in more detail in the Research Strategy subsection.

2.3 Research strategy

I have adopted the case study approach for the purposes of this research. Yin (2009, p.18) argues that a case study strategy is a method of empirical inquiry that enables a researcher to generate answers to the 'what?', 'how?', and 'why?' questions by using multiple sources of evidence for examining 'a contemporary phenomenon within its real-life context when the boundaries between phenomenon and context are not clearly evident.' At the same time, a case study itself, being a bounded system of interrelated elements, should have clearly

identifiable boundaries (Stake 2006, p.1). Well-identified distinctive characteristics of a case study, i.e., boundaries, distinguish a case study from a study with small sample size (Stake 2006, p.1). The current case study represents a bounded system and has clearly identified boundaries – geographical and managerial. Geographically the case study is limited by the boundaries of the Ysyk-Köl Biosphere Reserve: the study focuses on formal and community conservation strategies and practices. Management-wise the case study encompasses management and governance arrangements in the Biosphere itself as well as respective State agencies located outside of the Reserve, in the capital of the country.

Stake (2005) distinguishes three types of case studies, namely intrinsic, instrumental and collective case studies. Collective case studies are also known as multiple case studies (Stake 2006, Yin 2009). The intrinsic case study looks at the dynamics of a given situation and attempts to understand those dynamics within the context of a particular case. My work on governance and biocultural conservation in Ysyk-Köl Biosphere Reserve is a single case study, which is used to provide answers for the research questions (Stake 2005, Creswell 2009, Yin 2009). This case study investigates current management arrangements in Ysyk-Köl Biosphere Reserve and attempts to explain them within a local context. Therefore, from one perspective this study can be classified as intrinsic.

The instrumental case study is used to represent other cases to generate a more comprehensive understanding of broader questions about given systems (Stake 2005). Yin (2003) distinguishes exploratory and explanatory sub-types within the instrumental type. Exploratory case studies focus on building a theory, while explanatory case studies focus on testing a theory (Bassey 1999). Even though my study aims to investigate the particular

case of Ysyk-Köl Biosphere Reserve (where two parallel conservation practices co-exist, i.e., formal and community conservation), the case study also aims to address a broader question about the pros and cons of incorporating community conserved areas into formal conservation strategies. This fact makes the current case study fit into the instrumental type as well. Within the instrumental type, the current study falls into the exploratory, theory seeking sub-type.

Research comprising a number of coordinated case studies makes a collective case study (Stake 1995, 2005, 2006; Yin 2003). My research also fits into this case-study type because it is a part of the Community Conservation Research Network (CCRN). The CCRN focuses on 'how local communities initiate and participate in environmental conservation and stewardship, notably in coastal areas of Canada and beyond' (CCRN p.1) and brings together scholars, universities, NGOs, First Nations and young researchers from Canada and all over the world (CCRN p.1). The CCRN aims to achieve its goal 'by comparing 'study sites' on the east and west coasts of Canada (Nova Scotia, Labrador and B.C.) and in eight other nations in the Americas, Asia and Africa' (CCRN 2013, p.1). the current study is the ninth international case study within the framework of the CCRN.

Being part of a broader research network helps to address certain limitations of intrinsic case studies. Gerring (2004) pointed out that it may be difficult to generalize case study findings; however, the CCRN platform allows exploring similarities and differences across cases. Moreover, CCRN plans to produce joint publications that will attempt to coordinate, aggregate and synthesize the evidence from individual case studies. This enhances the

current study's claims for generalizability (Johnson & Christensen, 2008, p. 408), which can take several forms (Cohen et al. 2007):

- From the single instance to the class of instances that it represents (for example, insights on governance and conservation in Ysyk-Köl Biosphere Reserve can be applicable to other biosphere reserves in the same geographic region);
- From features of the single-case to a multiplicity of classes with the same features (for example, the fact that ICCAs are not recognized in Kyrgyzstan's legislation can provide insights as to why ICCAs are not recognized in other countries);
- From the single features of part of the case to the whole of that case (for example, traditional conservation practices and taboos used in ICCAs can provide insights for improving protection of formally protected areas).

Thus, the intrinsic nature of this case study and its clearly defined boundaries provided valuable context-rooted, case-specific insights, which made the research findings more valuable for local stakeholders. On the other hand, the study's instrumental nature and its being part of a collective case study increased findings' generalizability.

2.4 Research methods

Document analysis, semi-structured interviews, key informant interviews, participant observation and focus groups were used as primary field methods to meet research objectives (Table 2.1). The following paragraphs explain in detail each of these methods.

Plate 5. Interview with Kadyrbek Jakypov, guardian of Manjyly-Ata sacred site

Plate 6. Interview with a ranger at a core area of Ysyk-Köl Biosphere Reserve

2.4.1 Documents analysis

Document analysis is a ‘systematic procedure for reviewing or evaluating documents’ (Bowen 2009, p. 27). Documents contain information that has been recorded without a researcher's intervention (Bowen 2009). Document analysis requires eliciting, examining and interpreting data from the documents to obtain meaning and understanding of the issue under investigation (Corbin and Strauss 2008). Documents are socially produced constructs, which are created, circulated and used in socially organized ways (Atkinson and Coffey 2004).

Bowen (2009, p. 29) argues that document analysis is ‘particularly applicable to qualitative case studies’ because it helps to produce rich descriptions of a given phenomenon. Document analysis can yield useful qualitative data such as excerpts, quotations, or entire passages (Labuschagne 2003), set a context for the research and provide insights for interviews, focus groups and other methods, and verify findings through triangulation (Love 2003, Bowen 2009).

In my research, I reviewed primary government documents (laws and regulations) pertaining to protected areas in general and the YKBR in particular. Also, I reviewed published and unpublished qualitative data related to sacred sites and traditional ecological knowledge. I also took pictures wherever possible to document sacred sites or my observations. All the pictures published in this work are mine except where they are credited to some other source.

Plate 7. Participant observation with YKBR managers and rangers during anti-poaching raid

Plate 8. Focus group with sacred site guardians

2.4.2 Participant observation

Bernard (2006, p.344) states that participant observation 'puts you where the action is and lets you collect data.' As a participant observer I was part of YKBR's two week anti-poaching raid. During this raid I was assigned to the group that patrolled *syrt* zones of southern Ysyk-Köl. Also, as a participant observer I visited sacred sites in the Ysyk-Köl area, which are summaries in the Table 4.1 of Chapter 4). Using Aigine's survey of sacred sites in Ysyk-Köl area (Aitpaeva 2009) as baseline data: a) I mapped sacred sites for the first time and b) I identified what kind of biophysical elements were there in these sacred sites. The descriptive survey of 120 sacred sites conducted by Aigine served as a sampling pool for the 29 sites I visited during this study. I attempted to visit at least one sacred site that contained a particular biophysical element (Table 4.1).

During fieldwork, a researcher may act in one of three roles (Bernard 2006), namely, complete participant, complete observer, and participant observer. Being a complete participant implies making observations of the group without telling the group that one is conducting research. Being a complete observer implies recording group behavior with as little interaction with group members as possible (Bernard 2006). Neither a complete participant nor a complete observer role lent itself to the purposes of this research. I could not assume complete participant role (i.e., observing a group without informing it and obtaining its permission) due to research ethics; and a complete observer role would provide little qualitative data. That is why I relied on the participant observer role, which allowed me to participate in some activities of a group and make observations both as an insider and/or an outsider (Bernard 2006).

Bernard (2006, p.344) emphasizes the importance of 'establishing rapport and learning to act so that people go about their business as usual when you show up.' Being from the research area, speaking the local languages (Kyrgyz and Russian) and understanding cultural specificities made it unproblematic to establish rapport.

2.4.3 Semi-structured interviews and key informant interviews

During the study 49 people were interviewed (Table 2.2). The interviews followed a semi-structured format and used an interview guide (Table 2.3), that is, a list of issues to be covered in the interview (Dunn 2005). The choice of an interview guide versus an interview schedule was stipulated by the flexibility of the former (Dunn 2005). The interview guide allows the 'natural' flow of the conversation but requires a researcher to direct the conversation to cover topics of interest (Dunn 2005). Interviews consisted of primary and secondary questions. Dunn (2005, p.83) defines primary questions as 'opening questions to initiate a discussion on a new theme or topic' and secondary questions as 'prompts that encourage the informant to follow up or expand on an issue already discussed.'

Table 2.1 Objectives and field methods

Objective	Methods used for the objective	Triangulation
1	Semi-structured interviews Focus group discussion	Document review Key informant interviews
2	Semi-structures interviews Key informant interviews Focus group	Document review Key informant interviews
3	Semi-structures interviews Key informant interviews Participant observation	Document review

Among the interviewees, three key informants were interviewed several times. Sofaer (2002) identifies key informants as the individuals who possess specific skills, knowledge, experience, and/or expertise in particular issue(s) related to the research project or project

participants. Two of the key informants were local scholars who also had affiliations with local NGOs and the third key informant was a sacred site guardian. The strength of the key informant interview method was in providing insider information closely related to the issue under investigation, which was difficult to gather by other methods (Mack et al. 2005).

Table 2.2 Number of interviewed people from different stakeholder groups

Stakeholder group	Number of interviewed people
Government officials/conservation managers	23
Local community members and sacred site guardians	15
Local scholars and NGOs	11

Table 2.3 Interview themes for the respective groups targeted in the research

Groups to be interviewed	Main questions and probes
Government officials	➲ What are the strengths and weaknesses of current governance arrangements? ➲ Please, tell me how the governance patterns in the YKBR have changed over time? o What are the differences between Soviet-era and modern governance structure? ➲ What are the ways for improving the governance arrangements? ➲ Who are the stakeholders involved in governance and biodiversity conservation? o Which stakeholders *should* be involved? ➲ Currently, what role are local communities playing in governance and biodiversity conservation? o What role *should* communities play in governance and biodiversity conservation?
Sacred site guardians and local community members	➲ Are there some traditional institutions/mechanisms for environmental conservation? ➲ Who are the main stakeholders involved in governance and biodiversity conservation? ➲ How do people/communities act towards sacred sites? Why? ➲ What are the rules about sacred sites? ➲ What role do sacred sites play in your everyday life? ➲ How does a sacred site become such? ➲ Why are certain places called sacred and others are not?

	➲ What is the role of sacred sites in environmental conservation? o Can sacred sites be used for conservation? How? ➲ Who is the *karoolchu* (the guardian/custodian of a sacred site)? o What are the functions of the *karoolchu*?
International and local scholars and NGO representatives	➲ What kind of work/research related to conservation practices in general and protected areas in particular has been done by you/your organization? ➲ Who are the major stakeholders in environmental conservation in Kyrgyzstan? What are their roles? What should their roles be? ➲ Are local communities involved in governance and biodiversity conservation in the YKBR? ➲ Are there any local community-based conservation models in the YKBR?

2.4.3.1 Interview sampling technique. The research employed non-probabilistic sampling technique, i.e., sampling that does not involve a random selection process (Yin 2009). Snowball sampling is commonly used in qualitative research (Atkinson and Flint 2001). The non-probabilistic sampling method does not imply that it is non-representative of a population and is used when a proper sampling frame of the population is absent (Doherty 1994, Faugier and Sargeant 1996, Atkinson and Flint 2001). This research involved a number of stakeholders such as government officials, traditional practitioners, civil society activists and scholars who were involved in biodiversity conservation in the Ysyk-Köl area. The diversity of stakeholders made it difficult to develop an adequate sampling frame. For this reason, the research used a snowball sampling technique, which implies that every sample unit leads to another similar unit, i.e., the next sample unit (Faugier and Sargeant 1996, Golafshani 2003). Following the 'principle of saturation', I stopped seeking out new informants from each stakeholder group when interviews ceased yielding new information and insights (Cameron 2008).

2.4.4 Focus group discussions

The focus group method involves small group discussion on a topic or issue identified by the researcher (Cameron 2008, Creswell 2009). The researcher introduces the topic and invites and moderates discussion from the group, which usually consists of 6-10 members (Hancock 2002, Cameron 2008). A focus group can produce data related to depth and gravity of opinions regarding the issue, differences in stakeholders' perspectives and interactions between the participants (Mack et al. 2005). Focus groups can also be used to validate the findings of a study (Hancock 2002).

In my research, one focus group discussion was conducted with sacred site guardians (Table 2.4). Cameron (2008) points out that, depending on the goal of the research, the focus group can gather together people with similar characteristics or people with different characteristics. Taking into account the differences in perception and interaction culture between members of the stakeholder groups, the focus group gathered participants with similar characteristics using the snowball recruitment technique (Cameron 2008). The focus group discussion brought together sacred site guardians not only from Ysyk-Köl but also from all over the country. There were two reasons for including sacred site guardians from other regions: a) I was able to find only 3-4 sacred sites in the Ysyk-Köl region that have permanent guardians and b) traditional knowledge related to sacred sites across the country is mostly similar and sacred site guardians as well as pilgrims from other regions frequently visit sacred sites in the Ysyk-Köl region. The focus group discussion was used to explore questions related to Objectives 2 and 3 as well as to validate the data gathered through participatory observations and semi-structured interviews.

Besides the focus group discussion with sacred site guardians, I also attended a number of group discussions organized and/or facilitated by other people (Table 2.4). These discussions were not audio recorded, and I took notes on opinions and views that emerged over the course of those discussions.

Table 2.4 Topics, number of participants and date and location of a focus group discussion (FGD) and group discussions (GD) carried out during the field research

Title/subject	Participants	Date and location
FGD: Role of sacred sites and their guardians in conservation	15	Bishkek, October 26, 2014
GD: Nurturing, preserving and losing sacredness	50	Bishkek, October 27, 2014
GD: Meeting of government officials with local community leaders on establishment of Khan-Tenir National Park	70	Karakol, July, 2017
GD: Meeting with traditional practitioners on indigenous research ethics at Aikol Orgo	35	Kok Jar village, October 1, 2017
GD: Spiritual practices and livelihoods in sacred sites in mountainous areas	30	Bishkek, October 28, 2017

2.5. Data analysis, validity and verification

Before starting the data analysis, I conducted data management by transcribing the interviews and an audio recording of a focus group discussion and typing up field notes. Interviews were transcribed in the language the interviewee spoke during the interview, which was either Kyrgyz or Russian or sometimes a combination of both. Field notes were taken in Kyrgyz language. After having audio files and field notes transcribed, I read though the transcribed texts a number of times to identify emerging themes. Ryan and Bernard (2008) define themes as fundamental concepts and/or ideas a research tries to describe and highlights four main steps in thematic analysis: a) identifying themes and subthemes, b) deciding which themes are important in the particular study, c) building hierarchies of themes and d) linking those themes to a theory.

I employed two techniques for identifying the themes: a) I looked for recurring topics in the transcribed texts (Bernard 2006) and b) I looked for terms and expressions that are frequently used by informants but equivalents of which do not necessarily exist in English (e.g., terms *kasiet baguu – kasiet kachuu*, lit. nurturing of sacredness – escape of sacredness). For convenience's sake, local terms are put in Italics when transliterated into English.

The hierarchy of themes and connections among them were done by hand on sheets of paper. Narratives and quotes from the transcribed text that illustrated most comprehensively a particular idea were selected to be included into the thesis. In cases, where there were varying opinions on the same topic, quotes reflecting each opinion were provided one under another.

Creswell (2007) point out that validation of data is important for ensuring the credibility the findings. Validity is the result of the researcher's efforts to achieve accuracy of the presented data and themes. The research employed triangulation and member checking techniques for ensuring internal validity and data verification (Anfara et al. 2002, Stake 2005).

Triangulation allows cross-referencing data obtained through different methods and from different sources. The information pertaining to formal conservation was checked whenever possible against official documents and independent reports. Serving as verification method, member checking was implemented through reiteration and paraphrasing of information during interviews and the focus groups (Creswell and Miller 2000) to ensure that I grasped informant's opinion correctly.

Plate 9. A group conversation with sacred site guardians

Plate 10. Pilgrimage to the shore of Ysyk-Köl with a traditional practitioner

CHAPTER 3. LITERATURE REVIEW

3.1 Sacred Sites and Traditional Ecological Knowledge (TEK)

Sacred Natural Sites (SNS) are places of special spiritual, religious and cultural significance to peoples and communities (Verschuuren et al. 2010). The term 'natural' in this definition is used to contrast areas which are mostly natural from the human-made sacred sites 'with little or no nature (e.g., mosques, churches or temples)' (Verschuuren et al. 2010, p. 2). The current study has revealed that in the case of Ysyk-Köl Biosphere Reserve many sacred sites contain both natural as well as human-made elements (Samakov & Berkes, in press), and that is why in this work I use more inclusive definition of sacred sites as 'areas of land and bodies of water, as well as constructions and items, which are spiritually and/or religiously meaningful for local people and where sacral practices are performed' (Aitpaeva 2013, p.7).

Sacred sites are diverse and are encountered in various cultures around the world (Verschuuren et al. 2010). Particular elements of nature such as mountains, gorges, trees, springs and stones as well as entire landscape and seascapes such as groves and lakes can be considered a sacred area (Aitpaeva et al. 2007, Aitpaeva 2009, Verschuuren et al. 2010). Sacredness i.e., spiritual or religious significance of a particular site is often rooted in worldviews, beliefs and traditional ecological knowledge (TEK). TEK is 'a cumulative body of knowledge, practice, and belief, evolving by adaptive processes and handed down through generations by cultural transmission, about the relationship of living beings (including humans) with one another and with their environment' (Berkes 2012, p.7). TEK comprises both the ways of knowing (knowing as a process) and information (knowledge per se) (Berkes 2012).

Sacredness of a place can be manifested in a form of tribute to ancestors or saint people, access to supernatural dimensions (Aitpaeva et al. 2007), and respect of spiritual entities and gods that reside in the area (MacDonald 2003, Schaaf and Lee 2006). Aitpaeva et al. (2007) observed that there is usually an element of power attached to sacred sites. Sacred sites are believed to possess a power that pilgrims are in need for. For example, pilgrims may go to sacred sites to ask for health in general and cure for a particular disease, some may go to ask for success in business and luck in a particular undertaking (Aitpaeva et al. 2007). Anderson et al. (2005) stated that species endemism and high ethno-botanical importance may be another reason for the existence of sacred areas.

Existence of sacred sites usually implies existence of social institutions (rules and norms) that regulate human behavior at a particular sacred area. These institutions include rules related to access and use (MacDonald 2003), desirable dress-code and behavioral restrictions (such as prohibition to drink alcohol or smoke) (Aitpaeva et al. 2007) and site-specific taboos (Verschuuren et al. 2010, Premauer and Berkes 2012, Premauer 2013). Schaaf and Lee (2006) concluded that restrictions and taboos on sacred sites related to access and use, and acceptable human behavior and practice may result in conservation of important refuge for different species. Conservation may be promoted indirectly as a result of social institutions' ability to enforce resource use regulations (Tengö et al. 2007), and the fear of supernatural sanctions for improper behavior (Aitpaeva et al. 2007, Aitpaeva 2010, Premauer and Berkes 2012). Thus, sacred sites that restrict and regulate access and use of particular areas can be considered as traditional protected areas. However, in the eyes of many traditional societies, their whole territory is sacred (Verschuuren et al. 2010) and thus the whole territory should be protected and treated with care and respect.

Social institutions that govern sacred sites are similar to institutions governing common-pool resources (Rutte 2011). In recent years, numerous types of shared resources have been recognized as commons (Hess 2008), and these are usually referred to as 'new commons.' In the classification of new commons, sacred sites fit into the subcategory of 'spiritual commons' within the broader category of 'cultural commons' (Hess 2008).

Sacred sites in Kyrgyzstan are not well represented in the international literature (Dompke & Musina, 2004, Aitpaeva 2006, Usubalieva-Grishchuk 2012, Samakov & Berkes, in press). Local scholars and research centers such as Aigine Cultural Research Centre have conducted large-scale research on sacred sites and related traditional knowledge. Aigine conducted a large scale survey of sacred sites in the Ysyk-Köl are in 2007 and identified about 120 of them. These studies focus on intrinsic cultural importance of sacred sites. However, the role of sacred sites within formal protected areas has not been thoroughly investigated. The current study aims to fill in that gap.

3.2 Indigenous and Community Conserved Areas (ICCAs)

Sacred sites fit into the broader concept of Indigenous and Community Conserved Areas (ICCAs). ICCAs incorporate such concepts as bio-cultural heritage sites, community reserves, indigenous protected areas, community forests, sacred groves, and the like (Borrini et al. 2004, Oviedo 2006, TILCEPA 2008). Emergence of the ICCA concept demonstrates increased global recognition of local community-based conservation, in which local and indigenous governance mechanisms are seen to contribute to formal conservation objectives and goals (CENESTA 2009), and biological and cultural diversity are treated as a unit (Gavin et al. 2015).

The concept of ICCAs acknowledges a plurality of conservation practices, including indigenous conservation-through-use practices (Berkes 2007, 2009), sacred sites and species protection through taboo systems (Premauer 2013), and conservation for other cultural/spiritual reasons (Posey 1999, Colding and Folke 2001). Kothari (2006) concluded that communities' incentives to establish and/or maintain ICCAs may be related to livelihood security, spiritual, aesthetic and/or cultural survival and self-defense. The concept of ICCAs brings together acknowledgement of fundamental indigenous rights (Borrini et al. 2004), biodiversity conservation, livelihood protection and human well-being (Oviedo 2006, TILCEPA 2008). Kothari (2006) defined ICCAs as areas, which have been self-initiated, protected, and governed by local, mobile or Indigenous Peoples. Compete definition is given in Box 3.1

Box 3.1 The defining features of ICCAs (Source: CENESTA 2009)

ICCAs are natural and/or modified ecosystems containing significant biodiversity values, ecological services and cultural values, voluntarily conserved by Indigenous Peoples and local communities, both sedentary and mobile, through customary laws or other effective means. ICCAs can include ecosystems with minimum to substantial human influence as well as cases of continuation, revival or modification of traditional practices or new initiatives taken up by communities in the face of new threats or opportunities. Several of them are inviolate zones ranging from very small to large stretches of land and waterscapes. Three features can be taken as defining characteristics of ICCAs:

- A community is closely connected to a well-defined ecosystem (or to a species and its habitat) culturally and/or because of survival and dependence for livelihood;
- The community management decisions and efforts lead to the conservation of the ecosystem's habitats, species, ecological services and associated cultural values (even when the conscious objective of such management may be different than conservation per se, and be, for instance, related to material livelihood, water security, safeguarding of cultural and spiritual places, etc).
- The community is the major player in decision-making (governance) and implementation regarding the management of the site, implying that community institutions have the capacity to enforce regulations; in many situations there may be other stakeholders in collaboration or partnership, but primary decision-making rests with the concerned community.

ICCAs are the products of particular cultural and historical contexts and as a result they are very diverse in terms of age, size and scale, biodiversity value, management practices and legitimacy of governing institutions (CENESTA 2009). ICCAs management practices include norms and rules, worldviews, values and beliefs, and community decision-making mechanisms such as traditional institution of sacred sites guardians in Kyrgyzstan (Aitpaeva 2007), or newly established collective institutions (e.g., community forests in Oaxaca) (Robson 2007). ICCAs tenure status may differ, they can be owned by private individuals, the government, corporations or by community (Kothari 2006). As a result, 'communities might legally own the land and its resources, or have the legal right to use the resources, or they may have only de facto control' (Premauer 2013, p. 20).

Government recognition of ICCAs is a controversial issue (Borrini et al. 2004, TILCEPA 2008). Government recognition can limit communities autonomy in decision-making (Newing and Wahl 2004, Martin et al. 2009, Sheridan 2009, Hoole and Berkes 2010) or even cause displacement of inhabitants out of a formally protected area (TILCEPA 2008). On the other hand, government support can be necessary to ensure conservation of ICCAs provided that stakeholders manage to build effective collaboration (Brockington et al. 2008).

Only some ICCAs have explicit biodiversity conservation goals and optimal conservation outcomes (Borrini et al. 2004, TILCEPA 2008). At the same time ICCAs can contribute to conservation indirectly: by conserving critical or ecosystem services, by transmitting and promoting conservation values, and by complementing official protected area systems (Oviedo, 2006). ICCAs case studies from several regions, documents and publications as

well as up to date recommendations for policy and research are available at the ICCA Consortium website (ICCA Consortium 2014).

In sum, the concept of ICCAs (including sacred sites) seems to be a viable complementary tool that can improve the formal conservation practices. Sacred sites (and ICCAs in general) maintain and foster ties between communities and their environments (Ramakrishnan 1998, Verschuuren 2010), which increases the likelihood for effective conservation. Recognition of ICCAs importance in formal conservation practices is likely to promote understanding and designing of conservation practices through the lens of linked and dynamic social-ecological systems lens.

3.3 Protected Area (PA) Governance

IUCN defines a protected area as 'a clearly defined geographical space, recognized, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values' (Borrini-Feyerabend et al. 2013, p. 5). PA governance is a complex term that describes principles, policies and rules regarding decision-making in running PAs (Borrini et al. 2004). Graham et al. (2003) identified governance as interactions among structures, processes and traditions that determine how decisions are made, power and responsibilities are shared, and stakeholders are involved in the managing a given PA. Thus, the notion of PA governance combines the components of PA and governance definitions.

When establishing the Program of Work on Protected Areas (PoWPA), the Parties to the CBD explicitly identified 'poor governance' to be a hindrance for achieving protected areas objectives around the world (CBD 2004). Armitage et al. (2012, p. 247-248) noted that

conventional notions of governance including ‘good’ and ‘poor’ governance are shifting and identified five key emerging concepts in environmental governance: (1) recognition of the importance of fit and scale; (2) fostering adaptiveness, flexibility, and learning; (3) coproducing knowledge from diverse sources; (4) understanding the emergence of new actors and their roles in governance; and (5) changing expectations about accountability and legitimacy.

Borrini et al. (2004) named some major pillars for analyzing the PA governance such as identification of key actors (i.e., stakeholders and rightsholders) and levels of decision making (global – international – national – subnational – particular PA – units of a particular PA). Examining available governance instruments (such as legal, financial, social, and informational) and stakeholders’ powers and rights is cornerstone element of PA governance analysis (Graham et al. 2003). Depending on who makes decisions and holds responsibility, it is possible two distinguish four governance types. In some cases, a PA of given governance type can be ‘nested’ within another type (Borrini-Feyerabend 2013).

PAs are established for a variety of reasons and with various purposes. Dudley (2008) identified ‘must’ objectives that any PA in all six categories should be aiming to fulfill. Based on PA’s main management objectives, which should apply to at least three-quarters of the protected area (the 75 per cent rule), IUCN identifies six PA categories (Borrini-Feyerabend 2013). The ’75 % rule’ was also included into Kyrgyzstan’s Law on Protected Areas (Signed on May 28, 1994 № 1561-XII). Similarly to the nested structure of PA governance types, different management categories can be nested within one another (Dudley 2008) (Table 3.1).

Table 3.1 Types of Protected Area governance by IUCN (Borrini-Feyerabend et al. 2013, p. 29)

Governance Type	Sub-types
Type A. Governance by government	○ Federal or national ministry or agency in charge ○ Sub-national ministry or agency in charge (e.g., at regional, provincial, municipal level) ○ Government-delegated management (e.g., to an NGO)
Type B. Shared governance	○ Transboundary governance (formal arrangements between one or more sovereign States or Territories) ○ Collaborative governance (through various ways in which diverse actors and institutions work together) ○ Joint governance (pluralist board or other multiparty governing body)
Type C. Private governance	Conserved areas established and run by: ○ individual landowners ○ non-profit organizations (e.g., NGOs, universities) ○ for-profit organizations (e.g., corporate landowners)
Type D. Governance by indigenous peoples and local communities	○ Indigenous peoples' conserved territories and areas – established and run by indigenous peoples ○ Community conserved areas and territories – established and run by local communities

Current list of PA management objectives and accepted governance types is a result of complex process of changing attitudes towards conservation approaches (Dudley 2008, 2012). Since the 1980s, the IUCN has been advocating for the diversification conservation approaches by expanding PA management objectives and broadening the range of legitimate stakeholders who should be involved in managing PAs (Premauer 2013). As a result of IUCN advocacy, Protected Landscapes and Protected Sustainable Use Areas (Categories V and VI) were added to PAs management categories (Premauer 2013). Within a broader global trend to expand the constituency of conservation, making conservation more pluralistic and cross-cultural governance regimes were further expanded to include private, co-management (including trans-boundary) and community-based forms of governance as well as wider range of legitimate social actors including aboriginal groups

and local communities (Brown 2002, Berkes 2004, 2006). The most recent approach for PA governance is Indigenous and Community Conserved Areas and Territories (ICCAs). ICCAs aim to better engage local people in conservation efforts thus improving conservation results as well as securing indigenous and local peoples' livelihoods and rights (Oviedo 2006, TILCEPA 2008).

3.4 UNESCO Biosphere Reserves

The statutory framework of the World Network of Biosphere Reserves (UNESCO 1996, p. 4) defines biosphere reserves as 'areas of terrestrial and coastal/marine ecosystems or a combination thereof, which are internationally recognized within the framework of UNESCO's Program on Man and the Biosphere (MAB).' MAB describes biosphere reserves (BRs) as 'learning sites for testing and demonstrating innovative approaches to sustainable development that aim to reconcile conservation of biological and cultural diversity with social-economic development through promoting partnerships between people and their environments' (Box 3.2) (UNESCO 2011). The UNESCO Man and the Biosphere Program (MAB), was initiated in early 1970s and proposed an interdisciplinary research agenda and capacity building effort with a goal of improving the humanity's relationship with the environment. MAB Program's website describes its aim to be a promotion of sustainable development based on local community efforts and sound science (UNESCO 2011).

Originally, the biosphere reserve concept was developed in 1974. Then in the UNESCO General Conference of the Statutory Framework and the Seville Strategy for Biosphere Reserves substantially revised the concept in 1995 (UNESCO 1996, Price et al. 2010). The

key element for MAB's concept of BRs is the World Network of Biosphere Reserves (WNBR) – a platform for knowledge sharing, research and monitoring, education and training, and participatory decision-making (Isacch 2008). As of 2015, the WNBR unites 651 biosphere reserves in 120 countries, including 15 trans-boundary sites (WNBR 2015).

Box 3.2 UNESCO Biosphere Reserves Main Functions and Characteristics (Adopted from the UNESCO BR webpage)

Biosphere Reserve's functions:

- Conservation function prescribes to preserve cultural and biological diversity and securing services provided by such diversity.
- Development function requires fostering environmentally and socially sustainable, as well as culturally appropriate economic and human development.
- Logistic support function entails support for environmental education, training, and research, demonstration projects, and monitoring related to conservation and sustainable development issues on local, national and global scales.

Biosphere Reserve's characteristics:

- Achieving the three interconnected functions: conservation, development and logistic support;
- Outpacing traditional confined conservation zones, through appropriate zoning schemes combining core protected areas with zones where sustainable development is fostered by local dwellers and enterprises with often highly innovative and participative governance systems;
- Focusing on a multi-stakeholder approach with particular emphasis on the involvement of local communities in management;
- Fostering dialogue for conflict resolution of natural resource use;
- Integrating cultural and biological diversity, especially the role of traditional knowledge in ecosystem management;
- Demonstrating sound sustainable development practices and policies based on research and monitoring;
- Acting as sites of excellence for education and training;
- Participating in the World Network

Biosphere Reserve Zoning

- **Core area(s):** securely protected sites for conserving biological diversity, monitoring minimally disturbed ecosystems, and undertaking non-destructive research and other low-impact uses (such as education). In addition to its conservation function, the core area contributes to a range of ecosystem services which, in terms of the development functions, can be calculated in economic terms (e.g., carbon sequestration, soil stabilization, supply of clean water and air, etc.). Employment opportunities can also complement conservation goals (e.g., environmental education, research, environmental rehabilitation and conservation measures, recreation and eco-tourism).
- **Buffer zone(s):** zones, which usually surrounds or adjoins the core areas, and is

used for cooperative activities compatible with sound ecological practices, including environmental education, recreation, ecotourism, and applied and basic research. In addition to the buffering function related to the core areas, buffer zones can have their own intrinsic, 'stand alone' functions for maintaining anthropogenic, biological and cultural diversity. They can also have an important connectivity function in a larger spatial context as they connect biodiversity components within core areas with those in transition areas.

- **Transition area:** area with a central function in sustainable development which may contain a variety of agricultural activities, settlements and other uses and in which local communities, management agencies, scientists, non-governmental organizations, cultural groups, economic interests and other stakeholders work together to manage and sustainably develop the area's resources.

National governments nominate protected areas to obtain the status of UNESCO Biosphere Reserve and the MAB Secretariat makes decision by weighing a nominated reserve against a set of criteria identified in the Statutory Framework (UNESCO 1996). MAB requires each BR to fulfill three complementary and interconnected functions (UNESCO 1996, 2011; Ishwaran 2008, 2012):

- Conservation function prescribes to preserve cultural and biological diversity and securing services provided by such diversity.
- Development function requires to foster environmentally and socially sustainable as well as culturally appropriate economic and human development
- Logistic support function entails support to environmental education, training, and research, demonstration projects, and monitoring related to conservation and sustainable development issues on local, national and global scales.

Ishwaran (2008) argued that the BR concept was originated as an alternative to the national park model and had an explicit aim to make parks and reserves community conscious. That is why BR concept strived to outpace traditional confined conservation zones by a zoning scheme that combines core protected areas with sustainable development zones (Ishwaran

2012). Physically, each BR is required to contain three zones: one or more core areas, a buffer zone, and a flexible transition area (also called an area of co-operation and which includes rehabilitation zone – a heavily damaged area that needs urgent rehabilitation) (UNESCO 1996, Heinen and Vande Kopple, 2003) (Box 3.2, p.40). Originally the BR concept envisioned BR zones to be as concentric rings nested in one another, however, in practice zoning has been implemented differently depending on local conditions and needs (UNESCO 1996, Isacch 2008).

3.4.1 Ysyk-Köl Biosphere Reserve mandate and zoning

The Ysyk-Köl Biosphere Reserve (YKBR) was established by Resolution #623 of the Government of the Kyrgyz Republic on September 25, 1998. YKBR successfully received a UNESCO Biosphere Reserve designation in September 2001 (GTZ 2002, Ter-Ghazaryan and Heinen 2006, Kojekov 2008). The Biosphere Reserve's boundaries, mission and mandate were laid out in the YKBR Statute approved by the Government's Resolution #40 on January 24, 2000. The YKBR's mandate is threefold: a) biocultural conservation, b) promotion of sustainable use of resources and c) ecological education and monitoring (Table 3.2). The YKBR Statute was developed in congruence with the following legislative acts pertaining to the YKBR: the Law on Biosphere Territories (June 9, 1999 № 48), the Law on Sustainable Development of Ysyk-Köl Ecological and Economic System (August 13, 2004 № 115), and the Law on Protected Areas (May 28, 1994 № 1561-XII) (A comprehensive list of laws constituting Kyrgyzstan's legislative framework pertaining to biocultural diversity appears in Appendix 1). The YKBR has become the second UNESCO BR in Kyrgyzstan (the first being Sary-Chelek Biosphere Reserve (SCBR) designated in

1978) (Ter-Ghazaryan and Heinen 2006). The Biosphere Reserve is governed by a Directorate General and is a departmental unit of the State Agency on Environmental Protection and Forestry (SAEPF) (Figure 3.1).

YKBR's zoning scheme is summarized in the Table 3.3. BRs can encompass areas protected under other local (such as national parks or nature reserves) and international systems (such as World Heritage or Ramsar sites) (UNESCO 1996). For example, YKBR encompasses a number of state *zapovedniki* (nature preserves) as well as Ysyk-Köl Lake, which is a Ramsar site (Table 3.4).

Table 3.2 YKBR's mandate according to its Statute (approved by the Government's Resolution #40 on January 24, 2000)

Goals as defined in Article 1	a) Conservation, rehabilitation and sustainable use of areas with rich natural and cultural legacy; b) Fostering long-term sustainable economic and social development of the areas including use for recreational purposes with a focus on conservation and rehabilitation of natural resources; and c) Long-term ecological control, monitoring and research as well as ecological education and upbringing.
Functions as defined in Article 5	a) Conserving diversity on genetic, species, and landscape levels b) Fostering economic and cultural development of the region and reconciling nature conservation and environmentally friendly sustainable development c) Conducting long-term studies and monitoring of the environment, making contributions to ecological education of the population, capacity building of conservation managers, testing and approbation of innovative technologies and methods for sustainable development
Tasks as defined in Article 6	To protect biodiversity and unique ecosystems of the region, including Ysyk-Köl Lake To develop and coordinate conservation strategies To improve a system of long-term monitoring of the environment To reconcile varying use regimes in different zones and environmentally-friendly resource use To promote applied methods of environmentally friendly land use in traditional livelihood activities To ensure cooperation among local and national agencies dealing with natural resources management and planning To develop and introduce innovative approaches to resource use that also

	support local, cultural and ethnic specificities of the region To facilitate participation of local communities and interest groups in the decision making process pertaining to natural resources management and economic development To raise funds and attract investments for environmentally friendly projects for socio-economic development To develop measures to encourage conservation and sustainable use of resource To develop indicators of sustainability in livelihood practices in buffer and transition zones To promote interdisciplinary research with special focus on local problems including restoration of degraded ecosystems, conservation of soils and water To contribute to ecological education of the population and curriculum development for sustainable development To provide comprehensive information about YKBR activities to visitors To build cooperation with other members of the MAB Biosphere Reserve To mobilize private funds and NGOs to support activities within the YKBR
Governance and rights as defined in Articles 34-40	The Directorate General is the governing, coordinating and executive body of the YKBR YKBR is a legal body which is funded from the republican budget and other sources YKBR's mandate and functions are defined in the Statute approved by the SAEPF YKBR has a right to possess and manage its property YKBR has an Advisory Board, members of which can be Directors of the State Institutions, local authorities, research organizations and NGOs. The number of Advisory Board members has to be odd and not fewer than five. Candidates to the YKBR Advisory Board are named by the Provincial State Administration with the approval of the SAEPF. YKBR Advisory Board's decisions are non-binding. The YKBR Advisory Board reviews YKBR reports and gives recommendations on YKBR's strategic development.

Table 3.3 YKBR's current zoning scheme

Zones	**Total area**	**Protected ecosystems**
Core areas	1) 19,842 ha. (Core areas of the Issyk-Kul State Reserve)	Wetlands and coastal ecosystems
	2) 72,080 ha. (Core area of Sarychat-Ertash State Reserve)	*Syrt* zone (high mountain tundra)
	3) 8,600 ha. (Core area of Karakol State Park)	Forest ecosystems on mountain slopes

	4) 59 ha. (An area on the Teskey Ala-Too range adjacent to Sarychat-Ertash State Reserve)	Subalpine, alpine and nival ecosystems
Buffer zone	3,501,516 ha, which covers: Protective Area of the Issyk-Kul State Reserve, excluding human settlements, resorts, and croplands; Issyk-Kul Lake basin, excluding one kilometer near-shore waters near ports and recreational territories; State forests on the Teskey and Kungei Ala-Too Ranges as well as State Reserve lands above the state forests; all lands southeast of Teskey Ala-Too Range up to the state border, excluding settlements, industry areas, energy and mineral areas.	Coastal, marine, semi-desert, mountain-steppe, forest, alpine, subalpine, nival ecosystems
Transition area	688,540 ha, which covers: agricultural lands and industrial sites, lands occupied by roads and other infrastructure, settlements, recreational areas, and territories not identified as buffer zone.	Ecosystems altered by human use
Rehabilitation zone	Areas such as mines, tailing sites, construction sites, dumps, which need regeneration and remediation measures	No data

Table 3.4 Protected areas within the YKBR (Adapted from Baetov 2006)

Name, Area (ha) and Year founded	**Purpose**	**Flora and fauna**
Issyk-Kul National Preserve (19,100) 1948	Protection of winter habitat, nesting grounds, stopover for waterfowl and shore birds	Whooper swan, mute swan, flamingo, white heron, white-tailed duck, Eurasian spoonbill
Sarychat-Ertach National Preserve (135,400) 1995	Protection of ecosystems, and rare/endangered species	Arkhar, Marco Polo sheep, snow leopard, Pallas's cat, golden eagle, mountain turkey, saker falcon, Lammergeier (bearded vulture)
Karakol National Park (38,256) 1997	Preservation of ecosystems unique to Karakol Gorge	Pine, fir, larch, birch, roe deer, ibex, snow leopard, bear, Siberian deer, lynx, golden eagle, kumai, saker falcon, Lammergeier
Tyup, Jeti-Oguz, Chon –Jargylchak, Ken-Suu and Ak-Suu Game Reserves (96,155), 1958 - 1989	Preservation of alpine ecosystems, wild game and rare species	Snow leopard, Roe deer, Siberian deer, wild boar, ibex, Marco Polo sheep, Pallas's cat, marten, bear, lynx, black grouse, mountain turkey, Lammergeier, black vulture, grouse and sparrowhawk

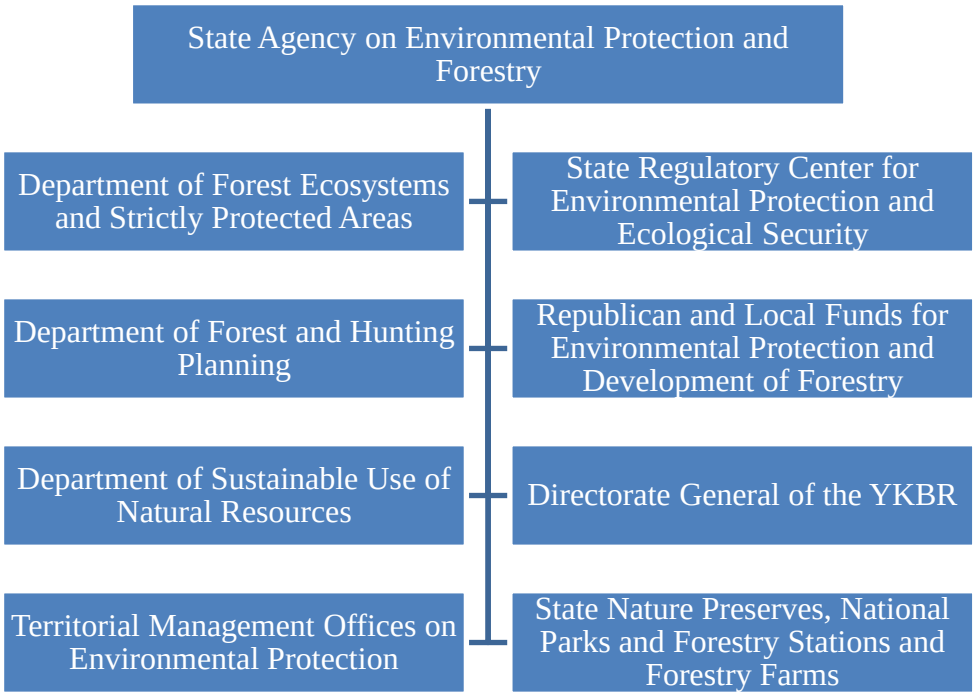


Figure 3.1 YKBR's place within the institutional structure of the State Agency on Environmental Protection and Forestry

The literature on the YKBR is scarce. Kojekov (2008) has discussed the impact of global environmental challenges such as climate change on the Reserve. Ter-Ghazaryan and Heinen (2006) examined the management structure and concluded that Soviet conservation paradigm is still dominant in conservation practices. Heinen et al. (2001) assessed the capacity of government institutions to enforce and implement international agreements on conservation (such as CBD, Ramsar) and concluded that institutional capacity and infrastructure for enforcement is lacking. Wunderlich et al. (2014) analyzed possibilities for expanding the core area of the YKBR and proposed a wildlife matrix zones as an innovative approach for conservation. Thus, there is an evident gap in literature pertaining to YKBR's current governance arrangements and biocultural conservation approaches.

CHAPTER 4. SACRED SITES: COMMUNITY CONSERVED AREAS IN THE YSYK-KÖL BIOSPHERE RESERVE[1]

4.1 Introduction

This chapter is built around Objective 1 *to investigate what kinds of sacred sites exist in Ysyk-Köl Biosphere Reserve (YKBR) and whether they are being employed in existing governance and conservation strategies of the YKBR.* To achieve Objective 1, the research sought answers to such questions as: what causes sacred sites in Ysyk-Köl to be conserved by local communities? How sacred sites are governed and managed by local communities? Do current governance approaches in the YKBR take into account sacred sites when defining and implementing conservation strategies?

This chapter uses Aitpaeva's (2013) definition of sacred sites as 'areas of land and bodies of water, as well as constructions and items, which are spiritually and/or religiously meaningful for local people and where sacral practices are performed.' Sacred sites are encountered in various cultures around the world (Ramakrishnan et al. 1998) and are related to worldviews, beliefs and indigenous knowledge (Aitpaeva et al. 2009, Berkes 2012).

Sacred sites perform functions (cultural and spiritual, educational, ecological, economic and social) that contribute to biocultural conservation (Verschuuren et al. 2010). In many cultures sacred sites manifest and forge sacred feelings toward nature. Cultures based on spiritualty that view nature as sacred have developed more sustainable resource use models than cultures based on spirituality that treats nature as an object (Verschuuren et al. 2010).

[1] A version of this chapter was accepted for publication in: *Asian Sacred Natural Sites: An Ancient Asian Philosophy and Practice with Fundamental Significance to Protected Areas* (B. Verschuuren, editor) Routledge, London and New York

Sacred sites are areas conserved by local communities (Aitpaeva 2013) and fit into a broader concept of Indigenous and Community Conserved Areas (ICCAs), which includes bio-cultural heritage sites, community reserves, indigenous protected areas, community forests, and sacred groves (Borrini et al. 2004, Oviedo 2006, TILCEPA 2008). Local community-based conservation is seen to contribute to formal conservation objectives and goals in different parts of the world (ICCA Consortium 2015). The concept of ICCAs acknowledges a plurality of conservation practices, including indigenous conservation-through-use practices (Berkes 2007, 2009), sacred sites and species protection through taboo system (Premauer 2013), and conservation for other cultural/spiritual reasons (Posey 1999, Colding and Folke 2001, Kothari 2006). This chapter describes what leads sacred sites to be conserved by local communities in the YKBR, what kinds of sacred sites exist and whether sacred sites are being employed in existing governance and conservation strategies in the YKBR.

4.2 Results: What kind of sacred sites are there in the Ysyk-Köl Biosphere Reserve?

Sacred sites in the YKBR are diverse biologically and geologically and include various species of trees and bushes, bodies of water (springs, ponds, glaciers, and lakes), rock formations (cliffs, mountains, hills) and entire ecosystems. Document analysis of existing data on sacred sites (Aitpaeva 2009) allowed identifying what kind of biophysical elements are there on sacred sites in Ysyk-Köl region. Based on that analysis a number of sacred sites have been visited during the field study. I attempted to visit at least one sacred site that contained a particular biophysical element (Table 4.1). Traditional practitioners explain the

diversity of sacred sites with the belief that every element of nature has its 'special' sacred representative:

> Everyone knows a proverb saying that 'every seventh [one] is *Khidyr*.' This proverb reflects folk wisdom that all beings in this world have their representatives with special capacities. For example, we may roughly say that six poplars may be just regular poplars but the seventh one would be 'special', i.e., sacred. And it applies to everything – to trees, springs, animals, and people (Siezdbek moldo, a guardian of Kochkor-Ata sacred site, pers. comm., 2014).

Table 4.1 Diversity of sacred sites in the YKBR with respect to biophysical elements perceived as sacred

Biophysical elements of sacred sites[1]		**Number**[2]	**Example**[3]
Vegetation	apple tree	3	Alma [apple] mazary, a site with a very old, single apple tree
	apricot tree	10	Oruk [apricot] mazar, a big, old apricot tree grows on a hill. There is no vegetation around.
	birch tree	1	Kyzyl-Jar [red cliff], a birch tree has grown on the burial place of a sheyit, an innocently killed person.
	brushwood shrubs and bushes	4	Bala [child's] mazar is part of bigger sacred site called Chungkur-Bulak [spring in the hole].
	dog rose bush	1	Chong-Kyzyl-Suu [big red water], a dog rose bush is located near the entrance to the Jyluu-Suu [Warm water] sanatorium (health spa)
	fir tree	6	Oluya Zaur Ata [oluya Zaur father] is a big fir tree with three intertwined trunks.
	Hawthorn	6	Mai-Bulak [oil spring] consist of a hawthorn tree, a boulder and a spring. Local people believe that the guardian-spirit of local land lives there.

[1] This column is created based on document analysis of existing qualitative data on sacred sites in the Ysyk-Köl area (Aitpaeva 2009). The survey of sacred sites conducted by Aigine served as a sampling pool for the sites I visited during this study.
[2] The number of sacred sites is calculated based on participant observation, interviews and analysis of existing qualitative data
[3] Sacred sites visited or seen during the fieldwork. The site marked with an asterisk (*) was not visited. The description is adopted from (Aitpaeva 2009)

	juniper bushes and trees	7	Archaluu [place with juniper] has juniper bushes and trees that grow in a hilly terrain with no other vegetation around it. Mostly people who want to have a child come for a pilgrimage.
	mountain ash tree	4	Aziz [a respectful term for snake] is a mountain ash tree with prayer flags tied to it. A white snake is believed to be the guardian-spirit of the place.
	Persian olive	1	Jiide, the site, has an old silver berry tree, also known as Persian olive or oleaster, locally called *jiide*.
	pine tree	1	Altyn-Bulak [golden spring] is a pine tree with a warm spring next to it*.
	poplar (various species)	26	Ak-Terek [white poplar] consists of six poplars and a spring. The poplars have grown bending into each other and they look like a yurt. The spring starts a little higher than the trees and flows to them.
	rowan tree	1	Sary-Bulung [yellow gulf] is the name of the village where a sacred rowan tree and a spring are located.
	sea-buckthorn bushes	3	Kessengir [mountain ridge covered with tall grass] consists of sea-buckthorn bushes and a spring at the beginning of the Kes-Senir canyon.
	walnut tree	1	Talip-Akun-Ata [father Talip Akun] consists of a walnut and a willow tree. It was named after a very wise and skilful person who built a school in olden days.
	willow (various species)	28	Mazar Bulak [mazar spring] is a cluster of old willow trees and a spring. According to local beliefs, this is one of the oldest sacred sites.
Water bodies	lakes	2	Tuzduu-Suu [salty water] is a small salty lake whose waters are known to cure skin diseases.
	ponds	3	Bakaluu-Kol [frog lake] is a pond which used to be a big lake according to folk history. Sacred white frogs were believed to inhabit this lake.
	springs	42	Manjyly-Ata [father Manjyly] contains seven springs, each of which has distinct *kasiet* [a spiritual power].
Geological	rocks and cliffs	3	Jeti-Oguz [seven oxen], a red limestone

formations			formation that resembles seven oxen.
	hills	2	Kindik-Dobo [belly button hill] is a sacred hill with a shape resembling a belly-button.
	mountains	2	Han-Tengir [Tengir is the name of the Creator] is a tall mountain with a sharp peak about 7000 meters high.
	salt formation	1	Tuz [salt] is a hole with salt crystals in it.
	stone	13	Tamga-Tash [stamp boulder] is a boulder with natural marks resembling a stamp (seal)
Ecosystems	grove ecosystem	1	Kamanduu-Kol [wild boar lake] is a grove with different kinds of trees and shrubs; springs come out from under the roots of some of the trees.
	alpine ecosystem	2	Tastar-Ata [father Tastar] is a valley named after a mountain with the same name. Alpine summer pastures are located at the higher elevations.
	lake ecosystem	1	Ysyk- Köl Lake, the second largest high altitude lake in the world, is considered a sacred site as a whole.
Human made	mausoleums	7	Karga-Ake is a recently built mausoleum for a historical figure known for his wisdom and justice.
	tombs/graveyards	12	Karakol-Ata [Father Karakol] comprises a tomb, three yellow willow trees, a poplar tree and a spring. This complex is located in a Muslim cemetery.

Sacred sites in the YKBR vary in size: some contain an individual biophysical element such as *Er-Tabyldy-Tash* [lit. a boulder of Er-Tabyldy] sacred site in *Jeti-Oguz* district, whereas others sacred sites consist of several biophysical elements. For example, *Chungkur-Bulak* sacred site located near *Oy-Bulak* village consists of willow and poplar trees, a couple of salt-water springs and brushwood shrubs. Some sacred sites in YKBR are 'purely' natural sites, whereas some include human-made structures. For example, *Mazar-Bulak* sacred site near *Kara-Oi* village consists of willow trees, a spring and a little housekeeping warehouse where pilgrims can prepare their food.

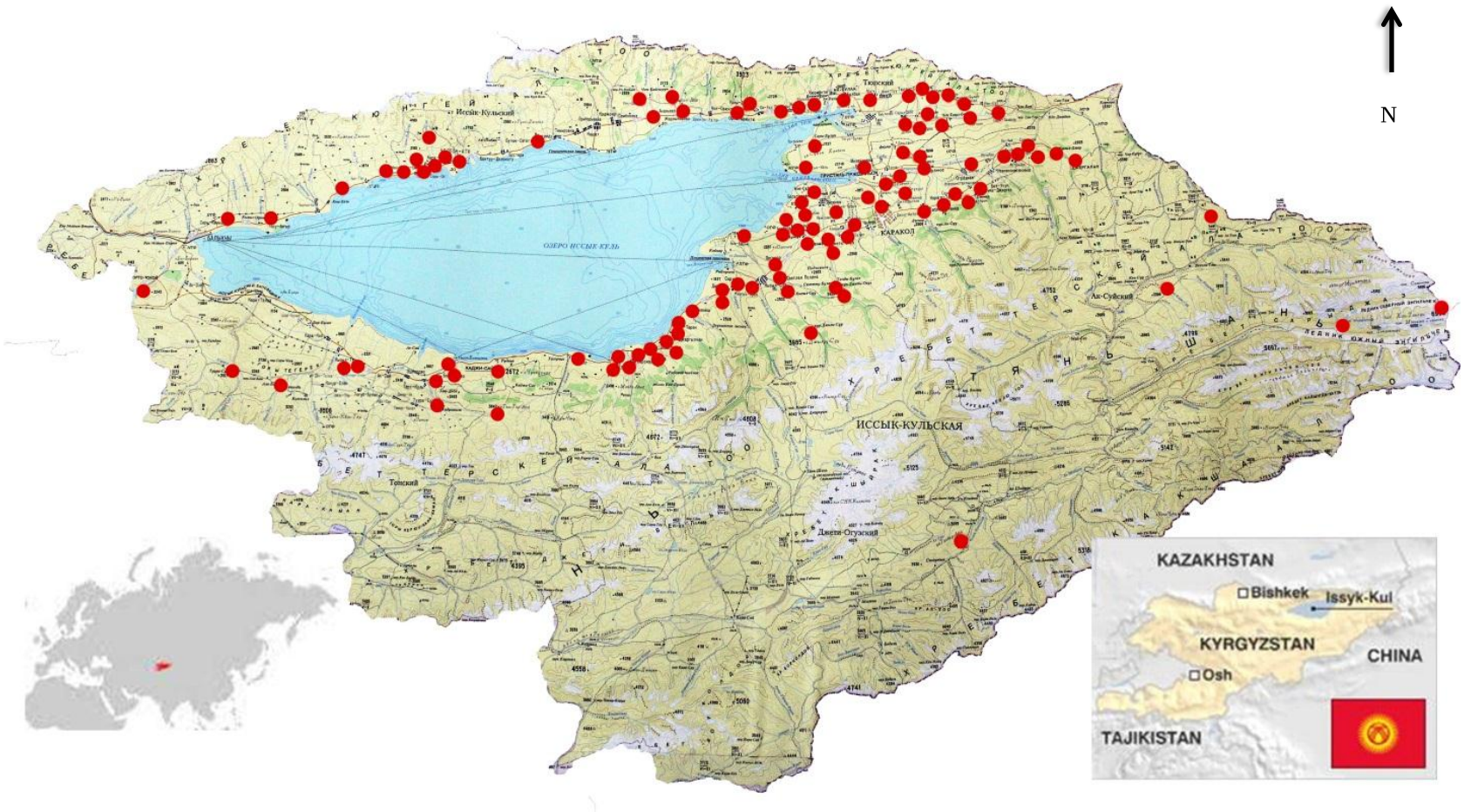


Figure 4.1 Red dots show approximate location of sacred sites within the YKBR

Most of the sacred sites in the YKBR seem to be located in the valley, not too far away from the villages and settlements. Sacred sites in YKBR were not previously mapped. I marked approximate location of sacred sites in the YKBR (Figure 4.1) based on participant observation, interviews and existing descriptive qualitative data (Aitpaeva 2009).

The exact location of sacred sites is not provided for ethical reasons. Indeed, many informants pointed out that information on exact location of sacred sites should not be published in open source because it may jeopardize sacred sites. Question about showing the exact location of sacred sites and other issues related to 'indigenous ethics' for conducting a research on sacred sites were discussed during the Group Discussion on October 1 (see Table 2.4).

> Local people know where their sacred sites are. If there are pilgrims looking for a sacred site, they can always ask local people to show the way. If the local person does not know where exactly the sacred site is, he or she will know for sure a person in the village who knows where the sacred site is. If the exact location of sacred sites is available on Internet, then outsiders can go directly to the sacred sites. Who can guarantee that they will go there with good intentions? (Traditional practitioner, field notes, 2014).

It should be noted that the provided map does not show all sacred sites existing in the YKBR. Due to the scope and timeframe of the study, and vast territories of the YKBR, I was not able to visit all villages and ask people about their sacred sites. It is quite possible that there are some sacred sites in the 'blank' areas on the map.

There are some informal rules of visiting sacred sites. These rules in Ysyk-Köl region do not differ from the rules accepted in other regions of Kyrgyzstan (Kadyrbek Jakypov, guardian of Manjyly-Ata sacred site) and can be distilled to several requirements and taboos. Before coming to a sacred site and while being on a sacred site, a pilgrim should:

- Have a good intent, respect and believe in the sanctity of a sacred site
- Conduct an ablution before visiting a sacred site
- Bring some ritual food, depending on the pilgrim's economic well-being
- Keep the sacred site clean and take care of sacred places as far as opportunities permit
- Conduct necessary rituals and ceremonies: recite the Quran, make wishes, pray, etc.
- Make a donation (as much as one can depending on his/her financial situation) if there is charity box

Taboos for visitors of sacred sites:

- Polluting and littering a sacred site
- Causing damage to a sacred site's biophysical elements (e.g., cutting the branches of the trees, or bushes)
- Taking away anything that belongs to the sacred site (e.g., pilgrims leave some dishes and utensils near a sacred site so that other pilgrims can use them)
- Doing 'dirty' things such as drinking alcohol, smoking, uttering swear words, having sexual intercourse, urinating and defecating
- Shooting firearms
- Coming with uncovered head; all intimate parts of the body should be covered
- Visiting sacred sites during one's menstrual cycle
- Tying votive rags to branches of trees and bushes on sacred sites (because this causes damage to the trees and bushes by choking them)

Plate 11. Manjyly-Ata sacred site (Credit: Aigine)

Plate 12. Kamanduu-Köl sacred site

Plate 13. Karakol-Ata sacred site

Sacred sites have a body of **traditional knowledge** associated with them. This includes traditional knowledge about the sacred sites per se, oral history of the surrounding area and communities; knowledge about spirits, people, animals, and plants as well as medicinal properties of certain plants, springs, and soil, knowledge about indigenous worldviews and philosophies. Sacred sites contain knowledge that connects local people to the land (Traditional practitioner, pers. comm., 2014).

Sacred sites have a prominent **belief** component. Beliefs regarding sacred sites shape a great deal of the behavior and perceptions of pilgrims who visit sacred sites. For example, it is believed that the sacredness of a site is manifested by its *kasiet* - special powers such as curing illnesses both spiritual and physical, bringing luck, repelling misfortunes, and easing people's burdens. The k*asiet* of a sacred site is associated with its guardian spirit, which is called *ee* (lit. owner of the site).

Kasiet, i.e., special powers, of a site may define pilgrims' incentives for visiting a certain sacred site. There is a traditional saying that explains the main purpose of visiting certain sacred sites: 'If you are longing for a child, go to Manjyly-Ata; if you are longing for livestock, go to Cholpon-Ata; if you are longing for a throne (i.e., power) go to Kochkor Ata; if you are longing for health, go to Ysyk-Ata' (Aitpaeva 2009, Usubalieva-Grishchuk, 2012). Although this saying is well-known and generally accepted, it is not followed to the letter. Pilgrims believe that one can go to a sacred site with any wish and ask for whatever one needs. Pilgrims say that the 'success' of the pilgrimage depends on the pilgrim's intent and ability to get connected to a sacred site. If a pilgrim is connected, then he/she can ask

for various things such as well-being, happiness, spiritual growth, developing some exceptional abilities and/or talents at the same sacred site (Table 4.2).

Table 4.2 Some of the main reasons why local people visit particular sacred sites[1]

Purpose of visiting sacred sites	**Example from Ysyk-Köl region**
Wellness/health	Pilgrims often come to the *Karakol-Ata* sacred site and pray for wellness and health.
Fertility related	Women and couples wishing to have children visit *Archabai (aka Archaluu)* sacred site. Some of them bring cradles with them and conduct certain rituals.
Riches, wealth-related, livestock	*Cholpon-Ata* is a *pir*[2] for sheep and that is why it is generally considered to be a sacred site where people ask for wealth of different kinds.
Power/career	*Er-Tabyldy* is named after the 18-19th century hero who fought for the Kyrgyz people.
Knowledge and wisdom	*Kalygul-Oluya* is named after a historical figure well-known as an oracle and for his wisdom.
Finding and accepting one's spiritual call (*kasiet*)	*Bugu-Ene mazary* is a site named after a mother deer that serves to provide for a person's spiritual call for healing, fortune telling, Manas reciting, etc.

Plate 14. Ak-chachuu ritual on the Ysyk-Köl Lake (Credit Aigine)

[1] This table is composed based on the interviewees responses
[2] Pir is a guardian-spirit of a person, place or animal (Aitpaeva 2013, p. 235).

It is also believed that some sacred sites are interconnected and form **networks** of various sizes. Some networks connect sacred sites in one region; there are some country-wide networks, and all the sacred sites in the world are connected to each other and form 'sacred whorls of the Earth' (Kubanychbek Tezekbaev, traditional practitioner, pers.comm, 2014). Interconnected sacred sites are said to be linked with one another by common root or an 'umbilical cord.' In some networks, sacred sites are referred to as 'brothers and sisters' to one another (Aitpaeva, pers.comm., 2014).

Practices performed on sacred sites include various rituals related to healing, the well-being of an individual or a community, and repelling misfortunes. Some of the rituals are conducted individually, and some are done as a group (Table 4.3). For example, *tuloo* ritual is often conducted to ask for rain during the draught or dry season so that crops give rich yields. Thus, sacred sites have an important connection to local people's livelihoods.

Plate 15. Tuloo ritual (Credit Aigine)

Table 4.3 Some rituals conducted on sacred sites by individuals and communities[1]

Name of the ritual		**Description**
English transliteration	**Literal translation**	
Aidar (Niyaz) chach aluu	Cutting *Aidar (Niyaz)* hair	*Aidar chach* is a lock of hair, which is left on the long-desired baby's head after the first haircut to assure well-being and protection of the baby. The ritual of *aidar chach* is usually conducted at a sacred site by healers or sacred site guardians.
Ak chachuu	Scattering the white	Traditionally, this is a ritual of pouring out something white such as milk, yogurt, or flour to appease, show respect, and drive snakes out of person's house, garden, or any other place. Sometimes it is also used to greet and show respect to sacred site guardian spirits.
Aktykty moyunga aluu	Accepting whiteness	This is a ritual of person's accepting his/her spiritual mission such as healing (physical and/or psychological conditions), fortune telling, and/or spiritual channeling. The form and content of this ritual varies from case to case, although frequently it is conducted at sacred sites.
Dem saluu	Inserting energy	This healing ritual consists of reciting *duba*, prayers and spells, which help to feed additional energy to the person in need.
Jar saluu	Singing *Jar*	This is a ritual of singing/reciting/chanting words from the Quran and inviting spirits who support you.
Jeti tokoch	Seven flat breads	*Tokoch* is a type of round fried or baked bread. It is usually prepared by pilgrims before visiting sacred sites. This ritual is done to honor the guardian spirit of a sacred site and other invisible forces.
Kudai tamak	God's sake food (*Kudai* is a word used for God in Kyrgyz language)	This is a sacrifice ritual of gratitude to God conducted by a group of people such as family, neighbors, villagers, pilgrims and others. Depending on the occasion and the wealth of the group, a goat, a sheep, a cow, or a horse is sacrificed; food is prepared and all participants share it. Some communities conduct this ritual in spring asking the Creator for good weather and a plentiful harvest, as well as in the fall to thank for the Creator for the harvest. When a couple gives birth to a child after conducting a pilgrimage to a sacred site, a family usually performs the *kudai tamak* ritual at that sacred site.
Kurmandykka chaluu	Sacrifice	This is a ritual of sacrificing livestock (such as sheep, goat, cattle, or horse) for the sake the Creator. The sacrifice is considered a ritual on its own right; however, often it

[1] This table is created based on the information gathered at the focus group discussion on October 26 (see Table 2.4)

		becomes part of other rituals such as *tuloo* or *kudai tamak*. The ritual of sacrifice is the main purpose of some Muslim holidays such as *Kurman Ait* (Eid al-Adha).
Sham jaguu	Lighting a candle	*Sham* is a ritual hand-made candle. A wisp of cotton is soaked in plant oil or animal fat and is usually wrapped around a dry reed stalk. Some candles are made without stalks. *Sham jaguu* is a ritual of lighting these candles; it can be conducted both at home and on a sacred site. The ritual may be done for various purposes such as to show respect to the sacred sites' guardian spirits, to pray, and to receive spiritual information from them in memory of the departed. This ritual is outlawed by the followers of radicalized Islam and at some sacred sites related to Islam it is prohibited.
Tilek kyluu	Making a wish	It is a ritual of articulating a wish (within the heart or aloud, on one's own or as part of a group). Making a wish is one of the key elements of pilgrimage to a sacred site.
Tuloo	Sacrifice	This sacrifice ritual is dedicated to a particular occasion. It is done to divert bad luck, overcome misfortunes, or safeguard individual or collective well-being. Livestock such as sheep, goats, cattle, and horse as well as poultry are acceptable sacrificial offerings.
Zikir chaluu	Chanting Zikr	*Zikr* is an Islamic ritual of reciting the names of Allah and glorifying his greatness, qualities, and omnipotence. This ritual is a part of other healing rituals.

Besides being a place for conducting livelihood-related rituals, sacred sites (may) serve as an additional source of income for local communities. Some traditional practitioners and local people have been promoting and the idea of developing tourism to sacred sites. For example, a local community in Kara-Oy village developed a project to protect a local sacred site, which was supported by the Small Grant Program of Global Ecological Fund (SGP GEF).

> Sacred sites are places of cultural significance to local people. No grazing is allowed there. Local people have a special attitude to those sites and try to conserve them. However, if there is no fence around the site, grazing livestock can come in and trample the site. With the support of SGP, the local community put up a fence around this sacred site, and built environmentally friendly facilities nearby so that pilgrims and tourists could cook their food, and wash their hands and dishes. With our help the local community put up a solar panel, and

> built an environmentally friendly lavatory. Thus, this project fostered ecotourism and contributed to local community's income in addition to the main goal of the project, which was biodiversity conservation of a culturally important site. The SGP does not support sacred sites per se, but in cases where biodiversity conservation goals match cultural goals, SGP supports those projects. (Evgenia Postnova, National Coordinator of SGP GEF in Kyrgyzstan, pers. comm. 2014)

I have heard three reasons that traditional practitioners use to support tourism on sacred sites: a) a belief that sacred sites' *kasiet* increases as more people visit and revere them b) a belief that tourism can educate people about sacred sites and c) the perception of sacred sites as global commons. The following three quotes best illustrate those points:

> Pilgrims come to Manjyly-Ata from all over the country. Also tourists that visit Ysyk-Köl come to see Manjyly-Ata. If there are more pilgrims, they can buy sheep for sacrifice from local villagers. Some can buy wood from locals to cook the meat. This all is a good contribution to local people's livelihoods (Kadyrbek Jakypov, guardian of Manjyly-Ata sacred site).

> Tourism to sacred sites can be a great educational and awareness raising tool. Tourists who come to sacred sites will learn the history of sacred sites, the rules of behavior on sacred sites, feel the sanctity of nature (Local villager, pers. comm., 2014).

> Powerful sacred sites, which we have here in Kyrgyzstan, were given to us by God to take care of. It was not given only to the people of Kyrgyzstan. It is entire humanity's heritage just like Mount Kailash in Tibet or Mount Ararat in Arabia (Traditional practitioner, field notes, 2014).

However, bringing tourism to sacred sites remains a controversial issue. Opponents of promoting tourism are concerned that a 'touristic' approach to sacred sites may lead to *kasiet kachuu*, i.e., the loss of the sites' sanctity, because tourists may not follow all the rules and taboos of conducting a pilgrimage. Some practitioners say that although pilgrims and tourists may be very similar from outside, the difference lies inside – that is, in the intent for visiting a sacred site. While pilgrims visit sacred sites with pure intentions and with a need for something, tourists visit them as entertainment or just as a site of interest.

Depending on the community, the majority of inhabitants may support or oppose the idea of promoting tourism to sacred sites. Some local believe that such tourism may boost local economies; other locals believe that profit-making is incompatible with sacredness. It is also worth mentioning that there are some religious/spiritual movements that are built around organized pilgrimage to sacred sites (Box 4.1).

Box 4.1 Ata-Jolu movement and pilgrimage to sacred sites (Source: Aigine archives)

Ata-Jolu (Ата жолу, lit. Father's path) is a religious and cultural movement which combines Islamic practice and traditional folk beliefs such as respect for the spirits of ancestors. Originating in Kazakhstan (in 1996, by Kuul Kytyral Tarybaev), this movement has spread to Kyrgyzstan and some parts of Russia.

Members of Ata-Jolu establish *Ordo*s (centers), that is centers, where they gather together to conduct various rituals including healing ceremonies, spiritual learning, etc. (Tacea 2011). Members of the movement mentioned that there are Ordos in all regions of Kyrgyzstan. Every Ordo has a leader who conducts ceremonies. The male leaders hold the title of shumkar (lit. falcon), whereas female leaders are called ak-kuu (lit. white swan). Other members of the Ordo are called shakirt (lit. apprentice).

One of the pivotal elements of this movement is pilgrimage to sacred sites. According to Ata-Jolu practitioners, people's physical illnesses, misfortunes and difficulties in life come from not accepting a personal kasiet, which can be understood as special power, capacity, or talent. Often this kasiet is believed to be transmitted from forefathers and a person needs to accept it by conducting pilgrimages to ancestors' sacred sites and honoring their spirits. To support their views, practitioners frequently refer to a Kyrgyz proverb stating that unless the spirits of the deceased are content, the living will not be either.

Almost every week, mostly the on weekend, members of Ordos led by their leaders visit several sacred sites and conduct prayers, healing rituals and ceremonies there. Most people come to the Ordos due to psychological or physical problems in their lives such as illness, alcoholism, dissatisfaction with life, lack of happiness, etc. Depending on health or social problems, members of the Ordos are told by Ordo leaders (i.e., ak-kuus or shumkars) to visit certain sacred sites and conduct certain rituals. Ordo members share the expense of going to sacred sites (mainly money to hire a van and to buy products for ritual food). Visiting local (and smaller) sacred sites is considered a small pilgrimage, whereas pilgrimages to larger, well-known sacred sites is considered a 'great pilgrimage' (Tacea 2011). The Turkestan area of southern Kazakhstan is considered to be a famous sacred place for great pilgrimages because the tombs of 41 saints are believed to be there. Some organize pilgrimage 'tours' to this area on a regular basis.

Ordo members are most active in (re)establishing sacred sites. Ordo leaders receive bata (a message from ancestors' spirits) about forgotten sacred sites. Upon receiving a message, people are spiritually obligated to treat a certain site as sacred. Ata-Jolu movement remains understudied from the academic perspective. Some materials can be found in Aigine's website and a book on sacred sites of the Chui province.

Plate 16. Countrywide meeting of sacred site guardians and traditional practitioners, Bishkek, October 2014

Sacred sites have a traditional institution of **guardians**, namely people who voluntarily take care of sacred sites. Sacred site guardians/custodians (called *karoolchu* or *shaiyk* in Kyrgyz) take up this responsibility of looking after particular sacred sites as a spiritual calling (Aitpaeva 2009). Some sacred site guardians are elected by communities to look after a particular site. The sacred site guardian's main responsibilities are: a) looking after a sacred site, which entails preserving the site from damage, and keeping it clean and respected b) informing pilgrims about the *kasiet* of the sacred site and the rules to be

followed, and c) reciting verses from the Quran and assisting pilgrims with conducting rituals.

It should be noted that at the time of a study, only few sacred sites in the YKBR had 'permanent' guardians. The majority of sacred sites are taken care of by pilgrims who visit those sites, because it is a responsibility of every visitor to show respect and care about sacred sites (Traditional practitioner, pers. comm. 2014).

Plate 17. Although not a recognized guardian of this sacred site, the traditional practitioner comes to Mazar-Bulak to conduct rituals and look after the place

4.2.1 Are sacred sites employed in formal conservation within the Biosphere Reserve?

Sacred sites are not recognized and employed in formal conservation strategies in the YKBR despite the fact that some core elements of the Biosphere Reserve are considered sacred by local communities. For example, Ysyk-Köl Lake, which is one of the core

elements of the Biosphere Reserve, is considered sacred (Box 4.2). Its unique characteristics such as size (it is the largest high altitude lake in Central Asia), temperature (it is warm and does not freeze in the winter), and a great number of tributary rivers with no outflowing rivers, make the Lake mysterious and sacred for local people.

> Look at the lake. It is a unique place, it is alive. There is no similar place elsewhere nearby. Kyrgyzstan is surrounded by deserts. If we did not have Ysyk-Köl Lake, it would have been a desert here too. (Kubanychbek Tezekbaev, traditional practitioner, pers. comm., 2014)

> Ysyk-Köl Lake is the ball of the universe's eye and it was given to us to preserve it as such. The lake has almost the same temperature around the year. It neither freezes in winter nor gets too warm in summer. So many rivers flow into it and none flows out. It means that all '*yrysky* and *kut*,' the well-being that comes into our area, stays here and nurtures people. (Azim Jakshylykova, a traditional practitioner, pers. comm. 2014)

Box 4.2 Legend about Ysyk-Köl Lake

Here is one of the folk legends about Ysyk-Köl Lake: back in olden times, there was a sacred pure spring where the lake is now. The entire population of a city would drink water from this spring. One day, a young woman came to the spring and washed her little child's diapers in that sacred spring. Just as a proverb says that 'a small ball of sheep dung spoils a bag of butter', the inappropriate behavior of one woman brought retaliation to the whole city. On that night the spring started expanding and kept enlarging until it covered the entire city under its waters, and became the lake we know now. Because people were crying during the flood, the lake became salty. And now, there are many people who are polluting the lake, littering its shores, selling the lake for money. If people continue maltreating the sacred lake like this, it will expand again and drown all the villages and towns around it. We are lucky that the lake is still capable of cleaning itself from all the mess we are causing to it (Azim Jakshylykova, a traditional practitioner, pers. comm. 2014).

Khan Tengir State Nature Park, which will be created within the YKBR by 2017 (SAEPF 2013), is another of sacred site becoming a core element of a PA. Khan Tengir Peak is a sacred mountain; however, its sacredness (i.e., spiritual significance for local communities) is not being taken into account in the process of establishing of the new park.

The study showed that the vast majority of conservation managers are not aware of any examples of local community-based conservation. However, three conservation managers out of 23 interviewed mentioned that local communities conserve areas, which are considered sacred:

> There are some places which are preserved and respected by local communities. For example, local people preserve *Archaluu-mazar* because locals respect it. People say that back in the day a few persons tried to cut down some of Arachaluu mazar's tree branches. Not long after that, one of those people died and the other one got seriously ill. After that no one ever tried to do harm to the place and people preserve it as an apple of the eye. People go for a pilgrimage to *Archaluu-mazar* and ask for children, and for healing from deseases. I suppose many people's wishes came true and that is why people still go there. On one occasion people from outside of this area came and asked me whether I can show them the way to *Archaluu-mazar*. I agreed and when I took them there, I saw a herd of wild goats on that sacred site. There were a few she-goats with kids and one male goat in the flock. Nobody hunts them when goats are on sacred land (Conservation manager, pers. comm., 2014).

4.3 Discussion: What makes sacred sites be conserved by local communities?

I employ the SES lens to understand what makes sacred sites be conserved by local communities. The notions of scale, drivers, worldviews and feedback in linked SES provide some valuable insights. Scale-wise, an individual sacred site represents local level conservation (Aitpaeva 2013). At the same time, traditional knowledge of local people claim that sacred sites are connected into regional, country-wide and global networks, which allows understanding sacred sites as truly international and global conservation effort.

The study identified the main drivers that foster community-based conservation of sacred sites: a) sacred sites 'peculiar', b) sacred sites are linked to individuals' and communities'

well-being c) sacred sites are 'dynamic' phenomena, and d) sacred sites are run as commons via traditional social institutions, rules and taboos. These drivers are deeply rooted in local worldviews. Indeed, SES approach highlights the importance of understanding worldviews in conservation practices (Berkes et al. 2003). I claim that combination of these four drivers results in sacred sites being preserved by local communities.

Indeed, peculiarity of sacred sites is often seen as a manifestation of the sacredness of a site. That peculiar quality can be its unusual location and properties such as shape, color, and age. For example, some trees which are considered sacred are located in places where trees do not usually grow. Springs which are regarded sacred may be located in very dry areas and may have some unique properties such as saltiness, color, taste, or smell.

> There is an ancient sacred site, which has been sacred since the time of our great ancestors. It is called *Archaluu* [a place with a lot of juniper] and is located nearby *Ak-Olong* village. The sacred site is surrounded by deserted hills, there is no water, no grass or bushes grow in that area, let alone trees. One can see the sacredness of a place in the fact that a juniper tree grows in that place, even though in a place with such conditions junipers cannot usually grow (Local villager, pers. comm., 2014).

> May-Bulak [lit. Oily Spring] is a sacred spring. The spring flows out under a big boulder and there are mountain ash and hawthorn trees growing nearby. The guardian spirit of surrounding lands dwells on this sacred site. Water of *May-Bulak* is soft and oily, hence the name (Local villager, pers. comm., 2014).

The notion of *kasiet kachuu* [lit. escape of sacredness] makes sacred sites dynamic phenomena, which influences local people's perception of the sacred sites. The major implication of the *kasiet kachuu* concept is that people should respect, conserve and use sacred sites with due care to keep the sacredness of the place. Thus, the belief that

sacredness may move to other place represents a feedback loop which motivates local communities to preserve sacred sites.

The body of traditional knowledge, rules, beliefs, practices and taboos rooted in local worldviews directly contribute to the conservation of sacred sites. For example, one of the main rules of visiting sacred sites is to 'keep the sacred site clean and take care of sacred places as far as opportunities permit.' There are also strict taboos such as prohibition for 'polluting and littering a sacred site' and 'causing damage to a sacred site's biophysical elements (e.g., cutting the branches of the trees, bushes).' Similar to sacred sites in other parts of the world (Premauer and Berkes 2012, Verschuuren et al. 2010), violations of rules and taboos are believed to have negative consequences (such as illness, misfortune or death) for the violator.

Traditional knowledge and worldview shapes the local communities behavior on sacred sites and makes the latter to be run as commons. Common-pool resources (or simply commons) are 'natural and human-constructed resources in which: a) exclusion of beneficiaries through physical and institutional means is especially costly, and b) exploitation by one user reduces resource availability for others' (Ostrom et al. 1999, p. 278).

Sacred sites combine a biophysical element such as a tree, spring, rock and others as well as cultural elements such as rules, traditional knowledge, beliefs, practices and institutions. Sacred sites are believed to exist in two dimensions – the physical world as well as *kayip duino*, the invisible world. Sacred sites with all their elements and dimensions are perceived by local people as part of *kyrgyzchylyk* – 'a complex of historically accumulated

knowledge, traditions and thinking patterns indicative of Kyrgyz people' (Aitpaeva 2013, p. 234). Traditional knowledge and beliefs related to *kaiyp duino*, the invisible world, construct the intangible dimension of sacred sites, which essential for community-based conservation of these sites and running them as commons. Without this intangible dimension, the biophysical element of a sacred site becomes just another specimen of its kind (e.g., a tree on sacred site which is conserved by local people versus 'just another' tree).

In the case of sacred sites, the 'common-pool resource' is the *kasiet*, i.e., the site's special power, which is essentially non-subtractable. The belief in *kaiyp duino*, also make a sacred site to be perceived as commons regardless of the property rights regime. Ostrom et al. (1999) identified four property rights regimes: (i) Open access, (ii) Common (group) property, (iii) Individual property and (iv) Government property. But unlike conventional commons, sacred sites have *ee* (literally: owner), a guardian spirit of a place, who holds 'property rights' over the sacred site, thus adding a fifth property rights regime.

When compared against commons definition (Ostrom et al. 1999), sacred sites meet the excludability criteria. Indeed, It is costly to exclude other users because none of the pilgrims owns a sacred site. The guardian spirit of the place is the main owner. If someone unjustly excludes other pilgrims from accessing a sacred site, one may suffer sanctions such as illness, misfortune, or even death. Thus, exclusion is possible, but costly. However, sacred sites do not quite fit the subtractability criteria because sacred sites have two dimensions: a) the physical world, in which a tangible element of a site exists (e.g., tree, spring, boulder, bushes) and b) *kaiyp duino*, the invisible world, where the *kasiet* (special

power) of a sacred site is rooted. In the physical dimension, subtractability is possible. For example, if a large enough group of pilgrims visits a sacred site and takes up all the space around it, then other pilgrims will not be able to physically access this site. Thus, exploitation by one user reduces the sites' availability for others, i.e., it is congruent with the subtractability criterion. However, if we look at the intangible element of a sacred site, i.e., its *kasiet*, the special power/guardian spirit, then it is non-subtractable. As a matter of fact, the more people come and revere a sacred site, the stronger the *kasiet* of the place becomes. Thus, in that sense there is 'increasability' meaning that the use of a resource by one user increases its availability for others.

Local communities' perception of sacred sites as collectively owned not only prevents the notorious 'tragedy of the commons' and also contributes to better conservation of sacred site. First, one of the basic rules of visiting sacred sites is conserving them. This creates a positive feedback loop and as a result, the more people visit a particular site, the more conservation effort is directed to it. Second, the more people visit sacred sites, then the more people get to know that certain places should be preserved because of their sacredness. This diminishes the chances of 'accidental' damage to a sacred site by a person or a group who did not know that a certain place was sacred. Thus, social institutions (such as sacred site guardians), social norms, rules and taboos as well as perception of sacred sites as a form of common pool resource (Rutte 2011) contribute to conservation of sacred sites by local communities and represent a traditional model of nature conservation. Given that a tradition of visiting sacred sites is deeply rooted in the local culture, it is obvious that these social institutions pertaining to sacred sites have been in place for a long time. However, if sacred sites have been preserved and respected by local people for centuries

and if the tradition is alive now, how come sacred sites are not taken into account in modern formal conservation?

I attempt to explain no/little interaction between traditional and formal models of conservation (sacred sites and the YKBR respectively) using the 'path dependency concept', which is understood as a direct effect of policy and management decisions in the past to those in the later stages (Howlett 2003). YKBR's and the whole conservation system's neglect of sacred sites can be explained by the fact that state-run institutions have always been reluctant to cooperate with spiritual/religious institutions. Indeed, during the Soviet era, sacred sites in particular and spirituality and religion in general were oppressed, and since gaining independence the state has been secular. Thus, formal, state-run conservation has never paid attention to local, cultural (spiritual) mechanisms of conservation.

Local communities, on the other hand, have never received government support in managing their sacred sites. Moreover, during the Soviet era, sacred sites were preserved despite state sanctions against those who visited them (Aitpaeva 2007). As a result, local communities have never relied on state support for managing sacred sites, even after gaining independence. At the same time, in the last ten years, traditional practitioners, sacred site guardians, and NGOs such as Aigine have been active in promoting legal recognition of sacred sites in Kyrgyzstan. Thus, informal local-level conservation model represented by sacred sites, and the formal conservation represented by the YKBR and its structural elements, co-exist on the same territory and frequently overlap. Nonetheless, these two models of conservation do not interact and are not used to reinforce each other.

4.4 Conclusion

Sacred sites within YKBR are diverse. Contrary to the division of sacred sites into 'sacred natural sites' (Vershuuren et al. 2010) and human-made ones, sacred sites in the YKBR are usually mixed, i.e., they include both natural and human-made elements (Samakov and Berkes, in press). Sacred sites are protected by local communities and represent a traditional model of nature conservation. The SES analytical lens shows that incentives (drivers) for conserving sacred sites stem from a knowledge – practice – belief concept (Berkes 2012) of local traditional knowledge. Traditional institutions ensuring the conservation of sacred sites such as rules, knowledge, beliefs, taboos and sanctions (Premauer 2013, MacDonald 2003) are present in the case of sacred sites in YKBR. The institution of sacred site guardians (people who voluntarily look after a sacred site taking it as their spiritual calling) is an important driver in sacred site conservation in YKBR (Aitpaeva 2009).

Sacred sites in the YKBR are perceived and run as commons by local communities (Rutte 2011), which contributes to the preservation of sacred sites. Traditional practitioners' perception and rules of visiting sacred sites prevents 'tragedy of the commons' scenario on sacred sites. Conversely, the more people visit a sacred site, the better that site is preserved. Despite the fact that sacred sites represent a model of community-based conservation, and some core elements of formally protected areas are also sacred places, sacred sites are overlooked in formal conservation strategies within the YKBR. The reasons for this may be twofold: first, most of the conservation managers seem to be unaware of sacred sites and second, state institutions have little experience working with local spiritual, cultural or religious institutions, including sacred sites and their guardians.

CHAPTER 5. GOVERNANCE AND BIOCULTURAL DIVERSITY CONSERVATION IN THE YSYK-KÖL BIOSPHERE RESERVE

5.1 Introduction

Chapter 5 is built around Objective 2 '*to analyze the governance structure and current formal conservation practices in Ysyk-Köl Biosphere Reserve (YKBR).'* To achieve this objective the research sought answers for such questions as: What are the current governance arrangements in the YKBR? What are the current challenges in formal conservation within the YKBR? Are there provisions to include stakeholder participation?

Graham et al. (2003) identify governance as interactions among structures, processes and traditions that determine how decisions are made, power and responsibilities are shared, and stakeholders are involved in managing a given protected area (PA). A governance system comprises rules, institutions, organizations and networks (Biermann et al. 2009) which are shaped by various historical and cultural factors (Lee and Perl 2003). Governance systems include the interactions of actors and multiple (usually nested) tiers of institutions (i.e., local, sub-national, national and international levels) and are the result of 'developing and exercising authority and responsibility over time' (Borrini-Feyerabend et al. 2013, p. 26).

YKBR comprises the oldest protected area in Kyrgyzstan, Ysyk-Köl State Reserve, which is over 65 years old. Lee and Perl (2003) concluded that institutions (and systems of institutions) can learn and accumulate historical experience which shapes and influences governance mechanisms. Ter-Ghazaryan and Heinen (2006, p.25) claim that contemporary governance approaches in the YKBR are not much different from those of the Soviet period and that the Reserve 'continues to run according to the Soviet paradigm.' Indeed, many

people who now run the Biosphere Reserve (BR) and develop conservation and governance strategies belong to 'the old Soviet school' (Conservation manager, pers. comm., 2014), while young professionals are not willing to work for the Reserve due to low salaries and wages (Ter-Ghazaryan and Heinen 2006). Thus, modern governance structure and actors' interactions in the YKBR display 'path dependency', a concept interpreted by Howlett (2003) as the direct effect of policy and management decisions in the past to those in the later stages.

This chapter looks at YKBR's governance system through a social-ecological systems (SES) lens, which suggests that effective governance systems and institutions should a) match complex social-ecological systems in the YKBR, b) adapt as these systems change over time, and c) help steer these systems towards sustainability (CCRN 2015). This analytical framework is broad enough to incorporate some key emerging concepts in environmental governance such as (1) recognition of the importance of fit and scale; (2) fostering adaptiveness, flexibility, and learning; (3) coproducing knowledge from diverse sources; (4) understanding the emergence of new actors and their roles in governance; and (5) changing expectations about accountability and legitimacy (Armitage et al. 2012).

First, this chapter presents results related to the governance and conservation practices in the YKBR. Then, follows a discussion of the particular governance features of the YKBR that shape and influence the conservation challenges in the YKBR and analysis of YKBR's current governance approaches weighed against 'key ingredients' for governing complex SES (CCRN 2015).

5.2 Results: Governance and biocultural conservation in the YKBR

'Token' role of the YKBR in conservation, its 'artificial' nature was a biggest theme that emerged from interviews and participant observation. For example, informants from various stakeholder groups (including some conservation managers themselves) characterized YKBR as a 'non-working', 'poorly performing' institution and/or an agency 'that exists only on paper', 'unrelated to conservation.' This big theme consisted of five smaller subthemes described in a greater detail in this section: 1) frequent change in YKBR's institutional structure, 2) lack of highly skilled staff, 3) outdated and not clearly defined zoning, 4) lack of finance and 5) interactions with local communities. In addition to those five themes, there were some other emergent themes (Table 5.1); however, I deliberately excluded them from the current work because they have been discussed in other studies and reports.

Plate 18. A sketch in the YKBR office (by Dr. Shukurov, E. J)
A bird on the left: - *Where is the rest?*
A bird on the right (with a stick instead of a body and two tags 'Issyk-Kul Biosphere Territory' and 'Directorate': *On paper and in words!*

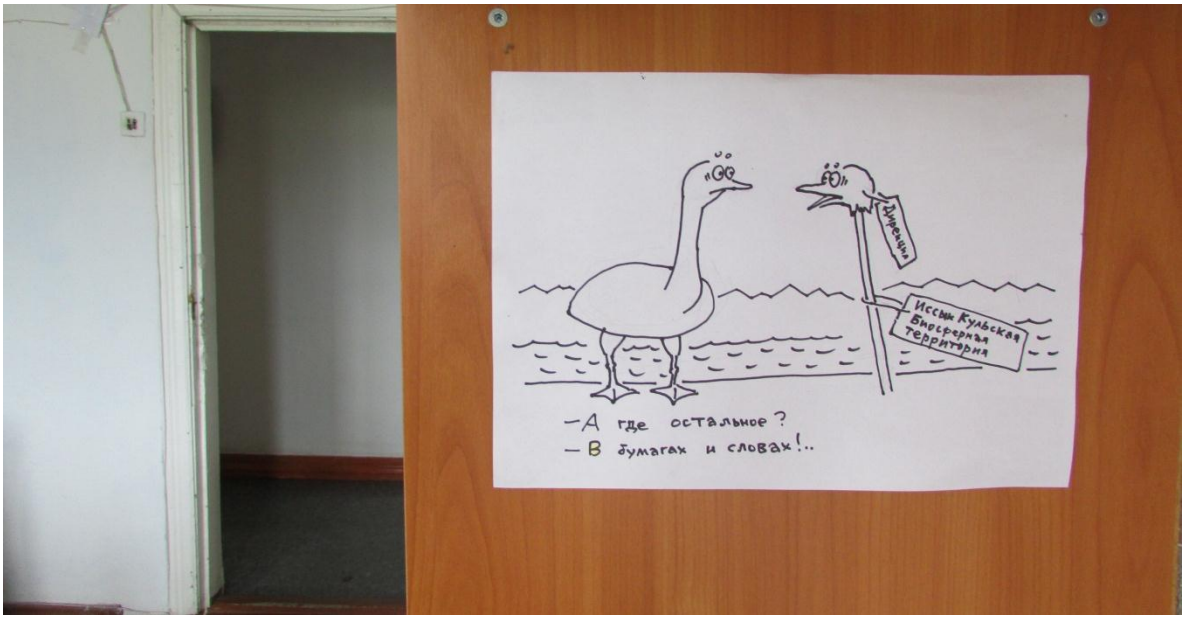


Table 5.1 Threats to biodiversity conservation in the YKBR: these themes emergent during the research but were excluded from the present study

Threats and/or challenges	Short description of the threat/challenge
Poor waste water treatment and sewage as well as solid waste disposal facilities	There are no facilities for solid waste disposal in the region and no comprehensive recycling programs. The sewage systems of three major cities (namely Karakol, Cholpon-Ata and Balyksshy) are in poor condition. Although resorts are obliged to have water treatment facilities, local settlements have no sewage system. All the waste water goes under ground and after mixing with ground waters poses a threat to the Lake's ecosystem (YKBR Periodic Report, 2013).
Kumtor Gold mining company	It has been a controversial issue to identify the scale and scope of the environmental damages incurred due to mining operations and to compare costs and benefits of this mine. However, the mine has an obvious negative effect on conservation due to the following facts: a) it is an open pit gold mine (second-largest open pit gold mine in the world), b) the ore is located under the glacier, so that the glacier is removed as an overburden, c) the mine and its tailings are in the watershed of the Ysyk-Köl Lake, and any leakage from tailing ponds may have adverse effects on the lake ecosystem and d) the mine is located in close proximity to the Sarychat-Ertash State Reserve (Conservation manager, pers. comm., 2014). Also see Wunderlich et al. (2014), Kojekov (2008), Baetov (2006).
Weak law enforcement	'There are many good laws regarding environment conservation but they mostly remain on paper. There will be no environmental problems we are facing now, if only half of the laws were being enforced effectively' (Conservation manager, pers. comm., 2014). See also Kojekov (2008), Baetov (2006), Ter-Ghazaryan and Heinen (2006).
Glacier melting	In last 50 years, Kyrgyzstan's area covered by glaciers has shrunk by 25% from 80.000 km^2 to 60.000 km^2 (UNDP 2011).
Degradation of natural coastal ecosystems	Ysyk-Köl Lake's coastal zones are under intensive use, which leads to degradations of unique coastal ecosystems represented by sea-buckthorn bushes and the narrow strip of wetlands in certain areas of the lake. The types of use include: grazing of livestock due to limited pastures nearby villages, b) intensive construction of recreational facilities (especially in north western part of the lake). The buckthorn shrubs are under threat due to their removal for building recreational facilities and non-sustainable harvesting methods of the buckthorn berries (Wunderlich et al. 2014).
Wildlife and fish population decrease	The number of large herbivores, which are hunted animals, has decreased over the last 25 years (Conservation manager, pers. comm., 2014). Fish stocks in the lake have been overexploited and some endemic species of fish such as chebachok (*Leuciscus bergi*), chebak (*Leuciscus schmidti*), Issyk Kul naked osman (*Diptychus dybowskii*

	lansdelli), Issyk Kul marinka (*Schizothorax issykkuli*), Issyk Kul gudgeon (*Gobio gobio latus*) and Issyk Kul minnow (*Phoxinus issykkulensis*) are nearly extinct (FAO 2013).
Lack of control over use of chemicals in agriculture	'The farmers now can use any pesticides or chemicals they want or can afford to buy. No government agency is monitoring or controlling it properly. Pesticides will have a long-lasting effect on the lake and mountain ecosystems' (Conservation manager, pers. comm., 2014).

1. Frequent change in YKBR's institutional structure was a frequently emerging theme. It is seen by most informants as a factor that has been negatively affecting conservation practices in the YKBR. This institutional restructuring of the YKBR was embedded in frequent institutional reforms of the State Agency on Environmental Protection itself. For example, SAEPF has been institutionally changed eight times since its inception in 1991 and evolved from a 'State Committee' to a 'Ministry' and then to a 'State Agency' (Table 5.2).

Table 5.2 Changes in institutional structure of the State Agency of Environmental Protection and Forestry[1]

Name of the State Institution responsible for Environmental Protection	**Approved by the following legal act:**
State Committee for Environmental Protection	Government Resolution N 111, March 27, 1991
State Committee for Environmental Protection	Government Resolution N 156, April 16, 1992
State Committee for Environmental Protection	Government Resolution N 71, February 16, 1994
State Committee for Environmental Protection	Government Resolution N 349, August 11, 1995
Ministry of Environmental Protection	President's Decree N УП-45, March 4, 1996
Ministry of Environmental Protection	President's Decree УП N 92, April 3, 1998
Ministry of Ecology and Emergency Situations	President's Decree №363, December 28, 2000
State Agency for Environmental Protection and Forestry	President's Decree № 462, October 15, 2005
State Agency of Environmental Protection and Forestry	President's Decree №425, October 26, 2009

[1] This table was created on the basis of Governmental and Presidential decrees accessed via Ministry of Justice's Centralized Law Database URL: http://cbd.minjust.gov.kg/ru-ru/npakr

Although YKBR's institutional changes were meant to optimize its work and improve nature conservation, according to some informants these frequent reforms instead had a negative impact on YKBR by a) diverting human and financial resources from conservation work per se to administrative work related to structure change, b) not providing enough time for team-building within the units of the YKBR, c) not providing enough time for building horizontal cooperation with other state institutions, and d) creating an undesirable image of the YKBR as 'a puppet organization that is tossed around' (Conservation manager, pers. comm., 2014).

> Upon establishment of the YKBR, there were three departments within it, namely Biodiversity Conservation Department, Department of Landscape Planning, and Rangers Department. Then, these departments were transformed into Biodiversity and Ecosystem Conservation Department and the Department of Environmental and Land Use Monitoring. The latter department then was transformed into a Department of Science, Ecological Monitoring and Registration of Bioresources. Our institutional structure changes too frequently. And those changes mostly come from the higher-level institution. For example, at one point YKBR was under a Ministry of Emergency Situations. After the current merging of the SAEPF's Territorial Office and the Hunting department into the YKBR, our structure will change. The new institutional structure has not been approved yet (Conservation manager, pers. comm., 2014).

> Constantly changing structure prevents the YKBR team from focusing on their actual work, building up a good team and connections with other stakeholders. The frequent renaming of departments within the BR does not bring about any change. Also, YKBR Directors change so often. I guess during the 15 years of YKBR's existence, it had about 11-13 Directors. All this diminishes credibility of the YKBR among other institutions and creates an image of a 'not serious organization' (NGO representative, pers. comm., 2014).

At the time of this study, there were some structural reforms underway in the YKBR. Other departmental units of the SAEPF in the region such as the Territorial Management Office on Environmental Protection, the Ysyk-Köl office of the Hunting Department, and forestry

offices in the Ysyk-Köl region were being transformed into departmental units within the YKBR Directorate General. Protected areas that form the core of the YKBR, namely Ysyk-Köl State Reserve, Sarychat-Ertash State Reserve and Karakol State Park now report to the YKBR General Directorate (as opposed to reporting directly to the SAEPF as formerly). These Protected Areas retained a certain degree of autonomy and have their own governing bodies. These institutional reforms in the YKBR aimed at bringing all SAEPF subdivisions in the Ysyk-Köl area under the YKBR management umbrella. Although there were some informants who were concerned that this reform is done for gaining more power and influence, the majority of informants viewed this reform as necessary and potentially very useful.

> It is good that conservation agencies are coming together under the same roof. Before we had the BR, the Territorial management on Environmental Protection as well as State Reserves, Forestry departments doing work on their own, and now BR can coordinate all the work (Conservation manager, pers. comm., 2014).

> The original idea when creating the Biosphere Reserve in Ysyk-Köl was to unite all conservation institutions under the same umbrella. Back in 2011, State Reserves in the region and SAEPF's Territorial Office in Ysyk-Köl were part of the YKBR but in 2002 they were transformed into a separate unit. YKBR started working under the Ministry of Emergencies, whereas the Territorial Office joined with the State Forestry Agency. Now, we are coming back to that original idea. Before the current reform, protected areas (PAs) within the YKBR used to report to the SAEPF's Territorial Office. Both SAEPF's Territorial Office and the YKBR did similar, almost the same work but were independent of each other. Now PAs must report to the YKBR and I think it is correct because these PAs constitute core zones of the BR. SAEPF's Territorial Office is now joining the YKBR as a department but there was some opposition because Territorial Office wanted to keep its autonomy. The conservation experience of all these years of work shows a need for unification and cooperation among conservation institutions, which are doing similar jobs (Conservation manager, pers. comm., 2014).

Parallel to structural reform of the YKBR, a new national park is being established within the YKBR and it will become another core area of the Biosphere Reserve. Khan-Tenir National Park, covering approximately 178,000 ha) is expected to protect habitats of endemic and endangered species in the alpine and nival ecosystems of Ak-Suu district in the YKBR. The new national park will be connected to the Sarychat-Eertash State Reserve by ecologic corridors. The establishment of the Khan-Tenir National Park is being administered by the SAEPF with technical and financial support of UNDP and GEF. The project's time frame is 2013-2017 with an overall budget of 5 million USD (SAEPF 2014).

2. Hiring highly-qualified staff for the BR has been another challenge due to low wages for job positions. The rangers' average salary is about 30-80 CAD per month (1500-4000 KGS), whereas other managerial monthly salaries are about 80-140 CAD (Conservation manager, pers. comm., 2014). The government has developed some additional reward mechanisms for rangers: 30% of fines for poaching and illegal use of resources goes as a bonus payment for the ranger(s) who catch the poacher.

> We lack young professionals. None wants to come and work for such a low pay. Only those who are 'wacky' about conservation or those who will take just any job agree to work in such conditions. Even if a young professional comes, he/she is constantly looking for opportunities to get a better paid job (Conservation manager, pers. comm., 2014).

> Giving 30% of fines to the rangers who arrest poachers is a good idea taking into account rangers' low salary. Let's just look at numbers: a fine for illegal hunting of a mountain sheep is 400, 000 KGS now, 30% of which is 120,000 KGS. In other words, this bonus is equivalent to 40 months of salary, given that average salary is 3,000 KGS. However, such big fines may have drawbacks as well. On one hand, a ranger who catches a poacher does not get money before the poacher is found guilty in court, so there is an element of uncertainty. On the other hand, a poacher may be more willing to bribe a ranger on the spot with an amount of money that

> is less than the overall fine. In 3-5 years, we will see how effective this new system is (NGO representative, pers. comm., 2014).

The latest reforms in the YKBR are expected to increase the wages for conservation managers because all BR employees including rangers will hold government worker status. The status of government worker implies higher pay but it comes with higher requirements for job candidates as well. As a result, even rangers are now required to have a university degree in ecology, biology or another related field, which most of the current rangers do not have.

Another change that came with the recent reforms was the consolidation of the PAs' scientific units under the YKBR Directorate General. The Ysyk-Köl State Reserve and Sarychat-Ertash State Reserve used to have their own science departments, which carried out scientific research and monitoring in the PAs. After the reform, all the research positions have been reallocated to the YKBR (Balykchy town), as a result of which most of the previous researchers lost their jobs because it was not economically feasible for them to move to Balykchy town. The rationale behind consolidating the science units under the YKBR was to increase the quality of the conducted research.

> Frankly speaking, scholarly research has not been done properly in the scientific units of the PAs. The leading scholars published high-quality works but other researchers didn't. Now, when all scholars will be in the same place, there will be more control over the quality and quantity of the produced work (Conservation manager, pers. comm., 2014).

3. YKBR's zoning, according to most informants, is: a) outdated and not precise and b) not clearly identified on the ground. Current YKBR zoning scheme was developed almost twenty years ago before establishment of the YKBR.

> My PhD research was a part of the project that gave recommendations on creation of the YKBR. Zonation was made based on our findings but social-ecological systems in the region have changed since: population has grown, livelihood activities have changed, new settlements and developments have been put in place. Indeed, almost 20 years have passed since then. The current zonation system was well defined in theory and on maps but unfortunately has never been marked on the ground. Zonation should be revised and YKBR must make sure that boundaries between zones are clearly marked on the ground. It will allow us to better enforce usage regimes in every zone. (Dr. Tolkunbek Asykulov, Director of NABU in Kyrgyzstan, pers. comm., 2014).

All the available maps showing YKBR zoning are not detailed and often are not comprehensive (Wunderlich et al. 2014). Another challenge is that boundaries between zones remained on maps but have never been marked and established in the field (NGO representative, pers. comm., 2014). The fact that three out of four core areas (except for #4 in Table 3.3) coincide with core areas of other PAs within the YKBR makes it feasible to clearly identify most of the core zones of the YKBR, whereas the boundaries between buffer, transition and rehabilitation zones are blurred. Even with YKBR's core areas per se, there are some gaps and inconsistencies with the legislation, e.g., the core area of Sarychat-Eertash State Reserve makes up only 50% of the entire Reserve, whereas the Law on Protected Areas sets a minimum at 75%.

The conservation managers pointed out that YKBR's current capacity is enough for focusing on management of the core areas only. The buffer, transition and rehabilitation zones remain mostly neglected. For example, at the time of the research, there were big debates going on in the province about '*inturohota*', the Foreign Tourist Hunting. The situation was that almost all buffer zones around the YKBR's core areas were leased out to private companies that attract foreign hunter tourists (Table 5.3). These hunters purchase

licenses from SAEPF's Hunting Department for hunting some big game, including certain red-listed species such as Marco Polo sheep (*Ovis ammon polii*), which violates provisions of the Wildlife Act that prohibit hunting and any other actions that decrease the population or degrade the habitat of red-listed species.

Plate 19. A former camp site of MK Travel Foreign Tourist Company in the core area of Ysyk-Köl Biosphere Reserve

NGO representatives (pers. comm., 2014) pointed out that mismanagement of buffer zones diminishes the effectiveness of conservation in core areas. Local communities are mostly against '*inturohota*' because the hunting companies and the conservation managers cannot ensure financial and procedural transparency of hunting activities (Local villager, pers. comm., 2014).

The YKBR managers confirmed that they are well aware of zoning problems and that they are working on revising YKBR's zoning scheme. Revised YKBR zoning is expected to be created using modern GIS technologies and to reflect up-to-date livelihood interests of local communities.

Table 5.3 Hunting companies that received a permit to use assigned areas in the buffer zones of the YKBR for Foreign Tourist Hunting[1]

Lot #	Districts within the YKBR	Area in ha	Name of the hunting company
1	Ak-Suu district (eastern part of the YKBR)	66,042.5	Ashuu-Tor & Co Ltd
2		61,565.2	Central Asian Safari Club Ltd
3		80,707.2	Central Asian Safari Club Ltd
4		62,964.0	Tour-Khan-Tengri Ltd
5		65,005.7	Issyk-Kul-Intour Ltd
6	Ton districts (south-western part of the YKBR)		Not assigned yet
7		128,406.7	Sevian Ltd
8			Not assigned yet
9		76,313.8	Felis Ltd
10	Jeti-Oguz district (south-eastern part of the YKBR)	75,572.9	Society of Sport Hunting
11		74,540.9	Karasay-Syrt Ltd
12		72,156.4	MK-Travel Ltd
13		77,456.1	Fortuna Travel Ltd
14		108,924.4	Chakyr-Korum-Trophy Ltd
15		78,650.8	Kalkan & Co Ltd
16		74,005.6	Diana-Travel Ltd
17		78,061.2	Bulat-M Ltd
18		79,312.4	Ala-Too Adventure Tour Ltd

4. Financing, or rather lack thereof, was named one of the major reasons for halting YKBR's planned projects and initiatives. All funding comes from the national budget. Up until 2013 an entrance fee for entering YKBR was another major source of funding. The entrance fee was collected at 'eco posts' from vehicles coming into YKBR. Vehicles of local people and some other categories of visitors were exempt from paying the fee. There were three eco posts located on three main entry points to YKBR: a) Ysyk-Köl Eco Post,

[1] This table is adapted from the official minutes taken at the Decision Panel meeting on allocations of lots in the Ysyk-Köl region to the Foreign Tourist Hunting companies, 24-27 June 2014.

the main post located in the western part of YKBR near Balykchy town, b) Kyzyl-Ompol Eco Post, located on the road from the Kochkor district of adjacent the Naryn region and c) Karkyra Eco Post, located in the eastern part of YKBR on the state border with Kazakhstan. Twenty per cent of the revenue from eco posts went for local taxes, 10% went to the National Fund for Wildlife Protection, 20% was spent for administrative expenses of the YKBR, and 50 % was reserved for scientific research and monitoring. Revenue in 2010, 2011 and 2012 totaled 4.7, 8.6 and 11.6 million KGS respectively (Conservation manager, pers. comm., 2014). The eco posts were eliminated by Government Resolution #279 on May 23, 2013 'to ensure an unobstructed access of people to the Ysyk-Köl Biosphere Reserve.' Study participants clarified that the major reason for eliminating eco posts was the inability of the YKBR to ensure the transparency of the funds being collected. SAEPF has proposed establishing ecological posts on state borders with other countries, although mechanisms for collecting fees and their distribution among governmental conservation institutions have not yet been developed.

Plate 20. Ysyk-Köl Ecopost in Balykchy town

Some parliament members have suggested reopening eco posts because they were a good source of revenue for the YKBR, but most conservation managers believe that at this time, it is more beneficial not to do so.

> The eco post brought a considerable amount of revenue. But it was more of a curse than bliss. There were always some stakeholders who were dissatisfied by the way money was distributed. As a result,

> Director Generals of the YKBR were able to stay in office for one year on average and then they were forced to resign. If I am not mistaken, there were 10 or 11 Director Generals since 2001. The YKBR was more busy compiling reports and having audit check-ups than with doing their actual job. Also it gives a wrong impression to people: they think 'YKBR just collects money.' If the eco posts reopen it will just start over again (Conservation manager, pers. comm., 2014).

5. YKBR's engagement with local communities is considered by the majority of study participants as far from desirable. Local communities seem to lack knowledge and understanding of the YKBR mission and mandate; there have been some conflicts between local communities and conservation managers over access to resources; and there is a feeling of mutual mistrust between conservation managers and the local communities. The fact that public awareness of the Biosphere Reserve's purpose and functions is low is acknowledged both by the BR managers themselves and by local community members.

> Many local people think that BR is an ecological check-point, where BR employees collect a fee for entering the YKBR. They do not know what kind of an institution the YKBR is, what its functions and goals are, what the BR does (Conservation manager, pers. comm., 2014).

> I see the sign that says that it is a Biosphere Reserve but I don't know what exactly they do besides charging fees to tourists for entering the Ysyk-Köl. It is just another way of earning money, I guess. (Local villager, YKBR, pers. comm. 2014)

Conservation managers emphasize that local communities are heterogeneous with regards to responsible use of natural resources and understanding the need for conservation. Whereas some local people think only of economic benefits and livelihoods, others are concerned about conserving nature to make sure that 'their grandchildren are able to see what their grandparents have seen' (Local villager, pers.com. 2014). Community recreational and livelihood activities have been expanding in recent years which has

resulted in local communities contesting the rights of conservation institutions to manage land and other resources in PAs. Local communities' claims that they should have rights to access the resources within PAs create conflicts with conservation managers. Despite these conflicts, both parties acknowledge that they have to work together to solve both conservation and livelihood problems.

The attitude of local communities toward conservation managers is rather distrustful. This negativity is based on some cases of conservation managers' misconduct, such as forging wildlife monitoring data, violation of usage rules within the Reserves, and involvement in professionally-organized poaching (Local villager, pers. comm., 2014). Locals blame rangers for grazing their own private livestock in PAs (Local villager, pers. comm. 2014, Wunderlich et al. 2014), where no grazing should be allowed. Such activities cause locals to see conservation managers as another group of resource users, ones who misuse their powers to get access to resources and exclude other users.

> They say we cannot graze our livestock on the land of protected areas. But how come rangers can graze their livestock there? How is my livestock different from theirs? (Local villager, pers. comm., 2014)

> I worked in conservation for 17 years during the Soviet time and early independence. Back then we did a good job. Nowadays, conservationists pretend as if they are working. For example, some conservation managers don't go out to the field to do proper monitoring. They sit in their homes and fill out the forms (Local villager, pers. comm., 2014).

Local people consider it common knowledge that conservation managers are involved in poaching in two major ways: a) establishing informal connections with illegal resource users (e.g., fisherman and hunters) and providing patronage for a certain reward and b) illegally using resources (e.g., hunting, fishing, cutting and selling timber) on their own.

> I wonder if the Biosphere Reserve [i.e., its employees] does any work. They know how to collect money, that's it. They are supposed to protect nature from poachers but they are 'number one' poachers themselves' (Local villager, pers. comm., 2014)

> The entire conservation system is corrupt. Poor rangers have to make a living and that's why they use resources they were supposed to protect. We understand that. However, some higher ranking officials do not respect the law. For example, [name of a high ranking official] was building a huge two-story cabin at the shore of the lake. Where do you think that official got timber from? Using authority, he/she just called to the conservation managers and told that he/she needs that much cubic meters of high-quality timber (Local villager, pers. comm., 2014).

> The salary of the rangers is very low (on average 2000-4000 KGS [40-80 CAD] per month). They have to use resources illegally to sustain themselves and their families because the state does not provide enough money and resources. Difficult economic conditions also make conservation managers team up with or provide supervision and support to the poachers to make a living for themselves and their families (NGO representative, pers. comm., 2014).

Lack of trust between conservation managers and local communities creates challenges for the YKBR managers to effectively engage locals in conservation and to enforce the law pertaining to conservation. Locals are reluctant to abide by the laws when they see that officials, who are supposed to protect nature and enforce the law, are violating the law themselves.

> We conduct a number of events such as cleaning up the shore of the lake, the March of Parks, round table meetings and discussions to raise local people's ecological awareness. However, it seems like they [local people] forget everything we talked about during the event as soon as the event is over (Conservation manager, pers. comm., 2014)

> It is not possible to make local people abide with the provisions of the law when people who are responsible for enforcing it break those laws themselves. It is not a problem peculiar to conservation only, it is the problem with the law enforcement system in general (NGO representative, pers. comm. 2014)

The main reasons for conservation managers' misconduct are considered to be low salaries and poor working conditions. At the same time, changing values are also named as one of the reasons for the environmentally non-friendly behavior of both local people and conservation managers.

5.3 Discussion: Characteristics of governance and conservation in the YKBR

Many conservation problems in PAs are rooted in their governance systems (CBD 2004). To understand whether YKBR's governance system matches complex SES, I will analyze YKBR's current governance arrangements. My main claim is that some key features of current governance system in the YKBR contribute to the persistence of challenges described in the Results section.

When talking about conservation practices, many informants referred to 'Soviet times' as a baseline against which they compared current biodiversity conservation practices and their effectiveness. The current conservation system is often referred as 'just what's left from the strong nature conservation institutions that existed during Soviet times' (Conservation manager, pers. comm., 2014). Overall, conservation during Soviet times is perceived as 'exemplary' and modern day conservation is deemed far less effective (Local villager, pers. comm., 2014). Congruent with 'path dependency' concept (Howlett 2003), current conservation practices inherited some features of the Soviet system, but these practices have not proved effective after the social, economic and political changes wrought up by the disintegration of the Soviet Union (NGO representative, pers. comm., 2014).

Now I will discuss some of those 'inherited' features of current approaches to nature conservation in the YKBR and provide some recommendations. Based on participatory observation, interviews, focus group discussions and document analysis, I identified the following characteristics of conservation practices in the YKBR: 1) command and control approach to governance and 2) conservation approaches, with five features such as: a) core area based approach, b) a biodiversity approach with a focus on species diversity, c) sanction-focused approach, d) lack of cooperation among stakeholders and e) outdated approaches to the public outreach.

5.3.1 Command and control approach. Current governance structure and decision making are characterized by a top-down approach and low public participation. Most of the decision making has been done in Bishkek, the capital of the country; and YKBR has been mostly an executive institution, although the latest reforms in its governance structure are expected to give the YKBR more decision making power.

The governance structure is centralized with certain mechanisms of public participation (such as an Advisory Board) in decision making and planning. Although YKBR's Statute sets up an Advisory Board as a mechanism of public participation in decision making, this Board mostly functions as a token institution. Its members are proposed by the Government's Plenipotentiary Representative in the Ysyk-Köl region and approved by SAEPF, and the Board's decisions are advisory in nature (Table 3.2). Weak public participation in YKBR governance was mentioned in MAB's feedback on YKBR's second periodic review (provided at the 25th session of the international coordinating MAB council, May 2013), which emphasized the need to develop a governance structure and

management plan that facilitates participatory decision making processes in the YKBR (MAB 2013, p. 16). Thus, YKBR's current governance system does not display understanding the emergence of new actors and their roles in governance.

The project to establish the Khan Tenir National Park in the YKBR serves as an example of the government's attempts to collaborate with various actors, stakeholders and rightsholders. The project is taking place in the YKBR, it is managed by the SAEPF and funded by GEF/UNDP. As a part of the project, local communities were consulted in identifying the boundaries of the prospective PA. Government officials mentioned that such extensive public consultations regarding establishment of a PA were held for the first time in the modern history of Kyrgyzstan.

> We should acknowledge that it is the first time in modern history of our country when local communities are involved and are participating in the decision-making regarding the establishment of the PA. Back in the day, a PA would have been just created from the Center and then locals would have been notified (Conservation manager, pers. comm., 2014).

One of the main issues that came out of the public consultations was the need to ensure the livelihood rights of local people. Local community representatives insisted that the prospective National Park's Statute should reflect the interests of local people and ensure certain rights to resources.

> We are concerned that after establishment of the National Park, we will lose our pasture lands. Even if they promise to give the pastures in the buffer zone for lease, we won't be able to take it. For example, in the Karakol National Park one rich person (who has thousands of sheep) rents almost all the land. A group of poor people cannot pay as much as one rich man and that's why the park managers are interested in renting the land to the rich. They say it is a market economy and rent the land to anyone who pays more (Local villager, field notes, 2014).

Being present at one of the public consultations, I asked a government official to comment on the possibility of going beyond mere consultations and involving local communities in co-managing the PAs. The government official mentioned that there have been some co-managed forests throughout the country, and this co-management experience will be used to eventually shift towards co-managing PAs as well.

Recent institutional reform in the YKBR that gives it more decision making power may help to build a more bottom-up governance system. I claim that more bottom-up governance can help the YKBR to foster its adaptiveness, flexibility, and learning as well as to address its current problems with zoning and staff recruitment. For example, Article 4 of YKBR's Statute stipulates that 'reconsideration of the Biosphere Reserve boundaries, zoning schemes, rules of resource use in core areas and buffers zones, and abolition of the YKBR is done by the Resolution of the Government of the Kyrgyz Republic.' Proposals for such changes can come from the SAEPF, other ministries, state agencies and commissions as well as from the State Administration of the Ysyk-Köl Region. Some informants believe that the YKBR should have more rights in defining the zoning scheme in the Biosphere Reserve.

> Zoning is approved by the resolution of the government, while it should be decided on a local level. First of all, taking decisions on the government level is more difficult and requires more time. Zoning should be adaptive and should change as ecosystems change (Conservation manager, pers. comm., 2014).

Giving more rights to the YKBR in defining zoning is likely to make zoning more adaptive. At the same time the YKBR Statute stipulates that only state agencies and government institutions can propose changes in BR's zoning and conservation regime in each zone,

whereas local communities or NGOs have no such right. Meaningful participation of all stakeholders and rightsholders (such as local communities, government agencies and NGOs) in identifying the boundaries between zones can make the zoning scheme clearer. In turn, clear boundaries between BR zones and the public's participation in delimiting the zones can make it easier for conservation managers to enforce resource use rules in various zones.

More decision making authority can also help the YKBR to address the challenge of recruiting personnel and fighting poaching. Currently, under the provisions of the law on government workers, conservation managers (including rangers) are required to have a university degree. Rangers are the people who interact with locals most and they are the link connecting the management system with local communities (Pinto 2015). Although possessing rich local and traditional knowledge, many experienced rangers do not have a university degree, which jeopardizes their job positions. Some informants believe that YKBR should be allowed to hire TEK holders for ranger positions, even if the latter do not have a formal university degree.

5.3.2 The YKBR's approaches to conservation

YKBR's approach to conservation can be characterized as one that a) focuses on core areas management with an emphasis on biodiversity conservation on a species level, b) employs sanctions against violators as a primary tool for conservation, c) lacks cooperation mechanisms with other governmental and non-governmental institutions, and d) employs outdated public outreach approaches.

Core area based approach. YKBR's main activities and focus are related to BR's core areas, whereas buffer, transition and rehabilitation zones are mostly neglected. One of the objective reasons for focusing on core areas is the vast territory of the BR and YKBR's limited personnel. The SES lens reveals that notions of 'fit' and 'scale' are neglected in the current governance structure. Many informants pointed out that the effectiveness of overall conservation is dependent on the well-being of the buffer, transition and rehabilitation zones and thus, these 'non-core' zones of the YKBR should be better managed.

Biodiversity approach. The YKBR's conservation strategies focus on biodiversity conservation. Although the founding documents and acts acknowledge importance of biodiversity conservation on genetic, species and ecosystem levels, in practice, the major focus is on species-level diversity while genetic and ecosystem level diversity are underplayed. The link between biological and cultural diversity (Maffi and Woodley 2010) is not explicitly recognized in legal documents; and in conservation practice, cultural diversity is not taken into account whatsoever. Consideration of cultural diversity can have twofold benefits for the YKBR: a) it will allow the YKBR to better meet one of the MAB Biosphere Reserve criteria: to 'integrate cultural and biological diversity' (MAB 2002) and b) to employ culturally-rooted mechanisms of conservation such as sacred sites (more detail in Chapter 6).

Sanctions-focused approach. Conservation strategies in the YKBR seem to be sanctions-centered, that is, there is a belief among conservation managers that stricter sanctions ensure better conservation. Indeed, the BR managers noted that the recent significant

increase in fines (by the factor of 3-15) (Table 5.4) reduced the number of poachers in the YKBR.

> The increase of sanctions gave a good effect especially in halting illegal hunting. Now it is more economically reasonable for locals to buy cattle then to pay fines. The locals do not hunt because of the huge fines. For instance, if they poach and get caught they pay the price of ten cows. (Conservation manager, pers. comm., 2014)

At the same time, a number of measures aimed at toughening the sanctions and further restricting the use did not prove effective. For example, a 2008-2013 five-year Moratorium on Artisan and Commercial Fishing in Ysyk-Köl Lake (Conservation manager, pers. comm., 2014) and fishing bans for catching certain species of fish were unable to effectively preserve these species and stocks (Alamanov and Mikkola 2011, Konurbaev et. al. 2005) because resource users continued fishing even during the moratorium period. Ilibezova et al. (2005) distinguished two types of fishermen in the Ysyk-Köl region: a) hereditary fishermen, usually fishermen in second or third generation who have been fishing for 10 years or more and b) new fisherman, those who has been fishing for less than five years and was previously occupied in other agricultural activity but fisheries. 'Hereditary' fishermen possess traditional knowledge about fish species and the ecosystem and are willing to preserve the lake and the fish stocks for their children and grandchildren, whereas 'new fishermen' usually lack this knowledge and are not concerned about long term preservation of ecosystem. For the former income is not the only reason for fishing, whereas 'new fishermen' are very money oriented. Despite this difference, both groups are 'poachers' from the legal perspective since many fishermen do not have licenses (Ilibezova et al. 2005).

Table 5.4 Fines (in KGS) for poaching some endangered species (set by the Government's Resolutions #7 signed on Jan 9, 1995 and #224 signed on May 3, 2013)

Species	**Fines in KGS[1] as of:**	
	1995	**2013**
Mammals		
Snow leopard (*Uncia uncia*)	15,000	500,000
Himalayan Brown Bear (*Ursus arctos isabellinus*)	12,000	400,000
Mountain sheep (*Ovis ammon*)	10,000	400,000
Red deer (*Cervus elaphus*)	6,000	400,000
Goitered gazelle (*Gazella subgutturosa*)	6,000	400,000
Otter (*Lutra lutra*)	6,000	200,000
Pallas's cat (*Felis manul*) and Eurasian lynx (*Lynx lynx isabellinus*)	5,000	25,000
Dhole/Red wolf (*Cuon alpinus*)	3,000	25,000
Birds		
Gyrfalcon (*Falco rusticolus*)	10,000	100,000
Peregrine falcon (*Falco peregrinus*)	10,000	70,000
Great bustard (*Otis tarda*)	5,000	25,000
Fish		
Pike asp (*Aspiolucius esocinus*)	1,000	3,030
Osman (*Diptychus dybowskii*)	100	3,030
Marinka (*Schizothorax pseudoaksaiensis issykkuli*)	15	505

Considering existing diversity among resource users, sanctions seem to be an effective tool to discourage poaching when users try to exploit a resource without considering the adverse environmental effects (e.g., 'new fishermen'). At the same time, conservation incentives created by government institutions for responsible users such as 'hereditary fishermen' may be more effective then fines alone (Local villager, pers. comm. 2014).

> The strict sanctions must be in place for those who violate the rules of using resources. At the same, sanctions should be complemented by incentives for responsible users. Now, there is a 'stick', but there is still a need for a 'carrot' (NGO representative, pers. comm., 2014).

Lack of cooperation among stakeholders. A multi-stakeholder approach to conservation is one of YKBR's goals under the MAB program. Effective governance should incorporate

[1] Approximately 50 KGS are worth 1 CAD

understanding the emergence of new actors and their roles in governance as well as coproducing knowledge from diverse sources (Armitage et al. 2012). However, according to many informants, so far the YKBR has not been able to build cooperation with PAs within the BR and with regional branches of other government institutions such as the State Ecological Inspection Agency, the State Agency on Geology and Mineral Resources, Ministry of Natural Resources, Ministry of Agriculture, Ministry of Tourism, Ministry of Culture, and Ministry of Emergency Situations.

> There is not much cooperation between government entities. They do their own work, we do ours. Although I believe that if we cooperated, conservation would have been more effective (Conservation manager, pers. comm., 2014).

As a matter of fact, the Ysyk-Köl region is a popular venue for various cultural and ecological events; however, the YKBR is often left out of them. For example, in summer 2015, Ysyk-Köl hosted the first World Games of Nomads, which gathered more than 400 athletes from 19 countries. Akthough these games were aimed at reviving the spiritual consciousness and traditions of nomadic peoples of the world and showing their unity with nature, the YKBR was hardly ever mentioned in spite of the fact that one of its goals is preserving cultural diversity.

The YKBR has managed to build partnerships with some international nongovernmental entities such as Global Ecological Fund (GEF), Nature and Biodiversity Conservation Union (NABU), Snow Leopard Trust (SLT), and Asian Development Bank (ADB). While some joint projects with the abovementioned non-state actors have been implemented, YKBR managers have a rather distrustful attitude to local NGOs.

> These local NGOs seem to be project dependent and their activity lack sustainability in the sense that everything ends as soon as a project

> shuts down. Local NGOs get funds to conduct some seminars and round tables but these events do not have much impact on conservation. Sometimes they invite us to those round tables, we go, talk, have a coffee-break and then leave. Projects with more practical implications for conservation are needed (Conservation manager, pers. comm., 2014)

Stakeholders who are formally and informally involved in conservation practices in the Biosphere Reserve (namely, government agencies, NGOs and local communities) seem to be little aware of each other's activities (Table 5.5).

Table 5.5 Informants' responses to the question regarding the main stakeholders in Biosphere Reserve conservation

		Q: Who are the main stakeholders in conservation?		
		Government agencies	**NGOs, including international**	**Local communities and sacred sites**
Representatives of the interviewed groups	Government officials (n=23)	23	9	2
	NGOs and local scholars (n=11)	11	11	8
	Local community members (n=15)	15	5	12

Outdated approaches to public outreach. The YKBR has three main outlets for public outreach: a) Ak-Kuu [lit. white swan] a quarterly newsletter, b) YKBR staff visits to schools and meetings with local authorities, and c) public events such as March of Parks. The Ak-Kuu newsletter aims to inform the public about activities in the YKBR. About 2,000 copies of the newsletter are published every three months.

> The YKBR disseminates the newsletter through local authorities. YKBR also target schools and other educational institutions. When the YKBR staff goes out to expeditions, they always take copies of the newsletter to give it to local communities (Conservation manager, pers. comm. 2014).

When there is money in the YKBR budget, some staff members go on educational expeditions and visit schools and universities in selected districts of the Ysyk-Köl region.

Almost every year, the YKBR participates in an international March of Parks (officially known as International Days of Protected Areas and National Parks). These marches are intended to raise public awareness of environmental issues.

However, the fact that many local people have little awareness of YKBR activities shows that YKBR's public outreach activities don't cover large segments of the population. Some informants pointed out the limitations of YKBR's current public outreach strategies:

> YKBR mostly distributes its newsletter among local authorities and other governmental institutions. People who work in those institutions may read it, but the vast majority of the population remains left out of this outlet. As for public events, administrative leverages are used to mobilize people. For example, YKBR or other parks may ask universities to help mobilize students. Universities, in turn, simply oblige some students (e.g., from ecology, biology, and geography departments) to participate in the event. So even when mobilizing people, they use a very top-down approach (NGO representative, pers. comm., 2014).

YKBR managers pointed out that poor communication and little public outreach make it harder for them to build trust with local communities. YKBR managers often lack legitimacy in the eyes of local communities (Conservation manager, pers. comm., 2014). Some conservation managers are advocating for using cell phones to take pictures of their activities and submitting them as their work reports.

> Locals think that the BR managers do not do any work and just receive money. We are doing the best we can but people simply don't know about it. Once, some herders saw me putting out salt for the wild ungulates and doing wildlife monitoring in the gorge nearby the village. When I talked to them, they said 'You are doing a good job! We thought that you, conservation managers, just get paid. Now we see that you are doing something.' (Conservation manager, pers. comm., 2014).
>
> I was telling our rangers to buy a cell phone with a camera. And then they can take pictures of the poachers they catch or of the wildlife they see. Some rangers started doing it already. And then we can attach

> these pictures to our reports, so everyone can see what is being done (Conservation manager, pers. comm., 2014).

Indeed, using new media for public outreach seems to be a very logical and cheap option to improve communication with local communities. As a matter of fact, the YKBR does not have its own website, nor does it use social networks or existing environmental communication platforms to disseminate information. A simple website for YKBR could be a multi-faceted tool for both reaching out to the public and for involving local communities in conservation activities such as wildlife and anti-poaching monitoring. Box 5.1 summarizes services and informational outlets that can improve YKBR's public outreach. Besides these new information-technology-based approaches, the YKBR could use some traditional 'communication hubs' such as sacred sites (more detail in Chapter 6) to disseminate information.

Box 5.1 Complementary public outreach outlets for the YKBR

Website. YKBR may create it is own website to enhance its public outreach. Creating and maintaining a website is relatively cheap. As an alternative option, YKBR may create a webpage within SAEPF's website (http://www.nature.gov.kg/).

Social media. To enhance public awareness of its activities, the YKBR may create accounts in the most popular social media platforms, such as:

- **Facebook** (www.facebook.com) is one of the most popular social networks with over 1.18 billion monthly active users. Many institutions, agencies, and international organizations working in nature conservation have Facebook pages. Facebook would allow YKBR to reach out to the general public and establish contacts with other conservation-focused actors.
- **Odnoklassniki** (www.odnoklassniki.ru) is a Russian social network service for classmates and old friends, which is particularly popular in Kyrgyzstan. YKBR may use this network to reach out to school students in the Ysyk-Köl region.
- **Vkontakte** (www.vk.com) is the largest Russian social network, which is popular in a few post-Soviet Union countries such as Russia, Ukraine, Belarus, Kazakhstan and Kyrgyzstan. This service can be used to disseminate information about YKBR activities and establish contact with conservation institutions in post-Soviet Union countries.
- **Twitter** (www.twitter.com) is a micro-blog social networking service with more than 500 million users. Although this service is not very popular in Kyrgyzstan, it can be used by YKBR to follow international conservation organizations such as

IUCN, WWF, etc.

- **LinkedIn** (www.linkedin.com) is a professional networking service, which is used by more than 360 million users around the world. This outlet may be used to find professionals for vacant job positions in the YKBR.

The YKBR can also use existing mailing lists and communication hubs such as:

- **Ecological Information Center** (www.ekois.net) works to enhance the capacity of environmental NGOs in Kyrgyzstan by addressing environmental issues through information, exchange of experience, and improved access to environmental information
- **Mountain Partnership Central Asia Hub** (mountainpartnershipinca@gmail.com) has an extensive mailing list.
- **Climate Action Network of Kyrgyzstan** (http://www.infoik.net.kg/) is a voluntary, self-governing, non-profit network of social organizations focusing on environment conservation and climate change adaptations. This network can be used by YKBR to reach out to local NGOs.

5.5 Conclusion

YKBR has been facing challenges in biodiversity conservation such as ecosystem degradation, decrease in biodiversity, and illegal use of resources (Baetov 2006). Some of these challenges stem from large-scale processes such as climate change (Kojekov 2008), glacier melting (Baetov 2006), and socio-economic fluctuations, whereas others are rooted in YKBR's top-down governance system (Ter-Ghazaryan and Heinen 2006). The CCRN Governance Working Group has identified four key ingredients for successful governance of complex social-ecological systems: a) the presence of 'multi-level institutions', b) partnerships among state and non-state actors, c) appreciation of diverse perspectives and knowledge, and d) shared learning and social processes that provide opportunities for adaptability (CCRN 2015). In the case of the YKBR, multi-level institutions are in place; however, the other three 'key ingredients' seem to be missing. Indeed, partnerships among various stakeholders and rightsholders remain weak, traditional and local ecological knowledge is not taken into account, and there are no platforms for shared learning. Indeed, command and control approach to governance restricts YKBR's ability to understanding

the emergence of new actors (such as sacred site guardians) and their roles in governance. YKBR's current level of decision making power and capacity does not fit the scale of complex social-ecological systems present within the YKBR. I claimed that greater decision making power would help YKBR to foster adaptiveness, flexibility, and learning (for example, with updating YKBR zoning). More innovative approaches to public outreach are likely to foster co-production of knowledge from various sources and meet local communities' expectations for accountability and legitimacy.

YKBR appears to be still employing old approaches to conservation, and the Soviet conservation paradigm is still dominant (Ter-Ghazaryan and Heinen 2006). Although the Soviet conservation paradigm itself is seen to be effective by the majority of informants, it is acknowledged that socio-economic and environmental conditions have changed so much that the Soviet paradigm is no longer effective. Thus, the current governance system in YKBR seems to lack the capacity to match complex social-ecological systems in the YKBR and adapt as these systems change over time. I claim that employing more innovative, cutting edge approaches to conservation and using mechanisms rooted in local culture (see Chapter 6) can contribute to YKBR's capacity to meet UNESCO Biosphere Reserve characteristics (Box 3.2, p.40) and help steer social-ecological systems in the YKBR towards sustainability (CCRN 2015).

CHAPTER 6. SACRED SITES AS A TOOL FOR IMPROVING CONSERVATION IN YSYK-KÖL BIOSPHERE RESERVE

6.1 Introduction

This is a synthesis chapter organized around Objective 3 '*to examine whether sacred sites can be used as an instrument for formal conservation, stewardship and governance in Ysyk-Köl Biosphere Reserve.*' The chapter provides answers for such questions as: Is the model of traditional conservation represented by sacred sites complementary or contradictory to a formal conservation model? How can sacred sites improve conservation within the YKBR? What is the motivation for conserving sacred sites? How can sacred sites promote conservation in non-sacred sites? What are the potential limitations or drawbacks in employing sacred sites to improve formal conservation?

Co-evolution of social and ecological systems (Berkes 2012) created institutions (rules and norms) that regulate human behavior at sacred sites (Aitpaeva 2007). These institutions include rules related to access and use (MacDonald 2003) and site-specific taboos (Verschuuren et al. 2010, Premauer and Berkes 2012, Premauer 2013). Sacred sites around the world are known to contribute to biodiversity conservation both directly and indirectly. Direct conservation is feasible in cases where sacred sites are large enough to be a sufficient habitat for certain species, such as sacred groves in India (Ramakrishnan et al. 1998). Schaaf and Lee (2006) concluded that restrictions and taboos on sacred sites related to access and use, and acceptable human behavior and practice may result in conserving important refuge for different species. Traditional institutions such as supernatural sanctions for improper behavior (Aitpaeva et al. 2007, Aitpaeva 2010, Premauer and

Berkes 2012) can be effective in enforcing resource use regulations (Tengö et al. 2007) on sacred sites.

When sacred sites are not large enough to have direct conservation value, they can contribute to conservation by maintaining and fostering ties between communities and their environments (Ramakrishnan et al. 1998, Verschuuren et al. 2010), which increases the likelihood of effective conservation. Moreover, traditional institutions related to sacred sites can link biological and cultural diversity conservation. Four 'bridges', namely beliefs and worldviews, practices and livelihoods, knowledge bases and languages, and norms and institutions that link biodiversity and cultural diversity (Pretty et al. 2009) are present in YKBR's sacred sites.

Chapter 4 showed that sacred sites in the Ysyk-Köl region represent a community-based conservation model which is geographically embedded in a formally protected Biosphere Reserve. However, sacred sites are not taken into account in YKBR's formal conservation practices (Chapter 5). Considering the direct and indirect contribution of sacred sites to biocultural diversity conservation (Ramakrishnan et al. 1998, Shaaf and Lee 2006), should sacred sites in YKBR be incorporated into formal conservation practices in the YKBR?

Incorporating sacred sites and other community-conserved areas into formal conservation has been a controversial issue. Borrini-Feyerabend et al. (2013) argue that in some PAs formal governance approaches and customary governance patterns for managing community-conserved areas (CCAs) may be complementary or contradictory to one another. Recognition of CCAs by formal conservation (e.g., in the form of a legal act) may limit local communities' access to and control over the sacred sites and autonomy in

decision-making (Martin, pers.comm. 2014, Borrini et al. 2004, TILCEPA 2008). Newing and Wahl (2004) point out that legal or any other type of government involvement in CCAs is likely to diminish local communities' autonomy in decision-making due to governmental bureaucratic procedures. Legal recognition (and thus government involvement) of sacred sites can undermine practices that constitute the strength of community conserved areas (Kothari 1996, Martin et al. 2011, Robson and Berkes 2010). The controversy surrounding government involvement in managing CCAs has been highlighted in a number of studies around the world such as communal preserves in Peru (Newing and Wahl 2004), sacred groves in northeastern Namibia (Sheridan 2009), *mestizo* community conserved areas in Oxaca, Mexico (Martin et al. 2009), CCAs in northern Namibia (Hoole and Berkes 2010), *agdal* gardens in Morocco (Martin, pers.comm., 2014). Still, government support can be necessary to ensure the conservation of ICCAs, provided that stakeholders manage to build effective means of collaboration (Brockington et al. 2008).

Recognizing intrinsic value of sacred sites, this chapter examines whether sacred sites as community conserved areas (CCAs) can be used as an instrument for enhancing formal conservation practices. It describes complementarity of formal conservation model (represented by the YKBR) and community-based conservation (represented by sacred sites). Then, the chapter highlights in nine points, main conclusions of the thesis regarding the ways in which sacred sites can improve conservation within the YKBR, describe varying motivations for conserving sacred sites and their limitations. This chapter does not have a separate 'Results' section and mostly focuses on overall discussion and conclusions of the thesis.

6.2 Two models of conservation: ways of reinforcing conservation in the region

Most of the sacred sites in YKBR are relatively small in size and contribute to biodiversity conservation in an indirect way. That is why sacred sites as community-conserved areas and formal conservation do not have competing interests, which makes these two models of conservation complementary in nature. The major difference between these two models lies in their governance systems: on sacred sites governance is predominantly bottom-up and resemble institutions for managing commons (Rutte 2011), whereas the governance system of the YKBR and the state reserves within it, is mostly top-down with little involvement of local communities in decision-making and management (see Chapter 5).

From a conservation perspective, sacred sites may improve conservation practices in the YKBR by: 1) making the concept of biosphere reserves more understandable for local communities, 2) improving ecological monitoring, 3) indirectly conserving species and areas, 4) improving BR zoning, 5) providing a complementary culture-rooted set of incentives for conservation (in addition to rational incentives), 6) fostering a biocultural approach to conservation, 7) collecting and using TEK in conservation, 8) serving as a communication hub for YKBR managers and local communities, and 9) serving as a platform for local communities' capacity building.

6.2.1 Sacred sites as a tool for communicating the concept of BRs. YKBR managers pointed out that local people's knowledge and understanding of the YKBR's mission and goals are low (see Chapter 5). This lack of understanding leads to lack of legitimacy of formal conservation mostly manifested as local communities' poor cooperation and collaboration with the YKBR managers. The concept of sacred site can be used to explain

the notion of the 'biosphere reserve' to local people because these two concepts have several elements in common. Moreover, if the YKBR starts recognizing sacred sites in formal conservation strategies, then YKBR will become more meaningful in local people's eyes because YKBR will be also protecting what is culturally important for local communities. The closer comparison of the Biosphere Reserve (BR) concept and local communities' perception of sacred sites reveals similarities in three areas:

1. Reconciliation of livelihoods and conservation. The BR concept attempts to reconcile conservation with social-economic development and livelihoods. Similarly, well-being of sacred sites and local communities are seen as interconnected in traditional knowledge. According to traditional beliefs, the social, economic, and personal well-being of community members is directly related to protection of sacred sites. The more people care about sacred sites, the more sacred sites bestow '*kut*'[1] on the local community. Various rituals and ceremonies related to economic, physical and psychological well-being of an individual and communities are conducted on sacred sites.

2. Biocultural approach. BR concept emphasizes biocultural approach to conservation i.e., recognizes importance of both biological and cultural diversity. Sacred sites are biocultural hybrids, meaning that besides a biophysical elements (tree, spring, rock, etc.), they include cultural elements (i.e., a body of traditional knowledge, beliefs and practices). The biophysical element traditional beliefs and practices associated with sacred sites are seen holistically and are equally protected.

3. Idea of zoning. The BR concept's key element is zoning (core area, buffer zone, transition area) with certain rules applicable for each zone (UNESCO 2011). Sacred sites

[1] *Kut* is a complex traditional concept which symbolizes well-being in general (including wealth, heavenly grace, and happiness).

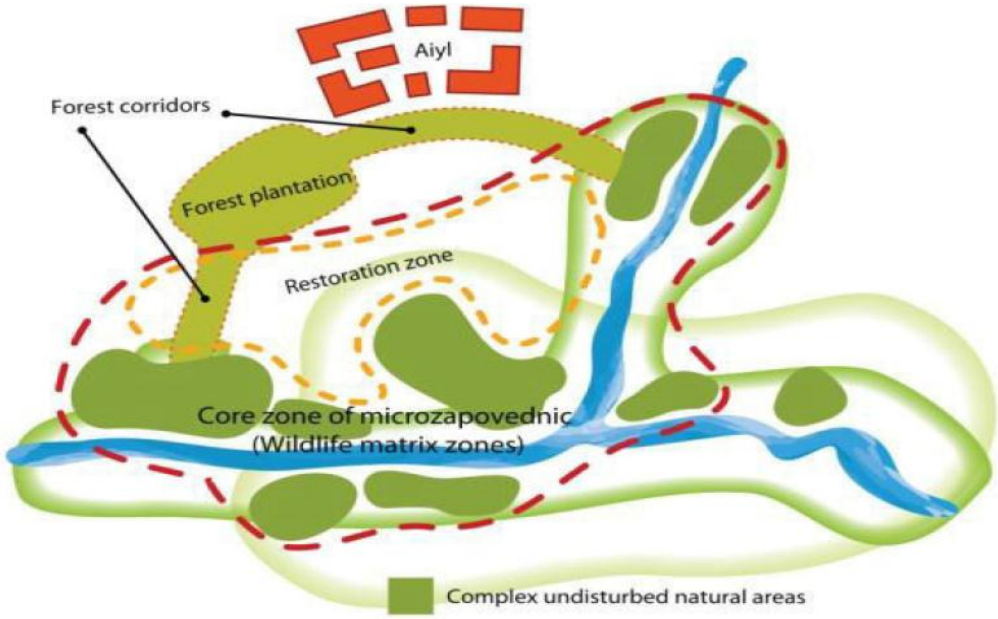
also have a set of rules and taboos (Aitpaeva 2007, Premauer and Berkes 2012).Some sacred sites have a kind of zoning: the core element of the site is strictly protected, the area around the core element is 'allocated' for conducting rituals. Some sacred sites have '*tulookana*' - housekeeping premises where pilgrims can conduct sacrifices and cook their food.

6.2.2 Sacred sites can be used as checkpoints for local ecological monitoring. Sacred sites are diverse and cover patches of various ecosystems (Table 4.1 in Chapter 4). Given that sacred sites are deliberately conserved by local communities and are least disturbed by livelihood activities, the ecological monitoring information gathered at sacred sites can be used as a baseline for assessing the health of the entire ecosystem. The YKBR staff is not large enough to do a comprehensive monitoring throughout the biosphere reserve. Collecting information at sacred sites can help to fill the gap in monitoring data. It can also serve as a tool for enhancing local communities' participation in the YKBR's activities by involving them in ecological monitoring.

6.2.3 Indirect conservation. A network of about 130 community-conserved sacred sites in YKBR indirectly contributes to overall conservation by preserving species of plants and geophysical formations located at the sacred sites. The size of most sacred sites is not large enough to be a viable habitat for wildlife. However, some studies show that sacred sites can be incorporated into wildlife matrix zones (mini reserves) which are being proposed as an innovative approach for protecting the environment and reconciling local communities livelihood needs in YKBR (Box 6.1) (Wunderlich et al.2014).

Box 6.1. Wildlife matrix zones (mini reserves). Adapted form Wunderlich et al. (2014, p. 33-35)

Wildlife matrix zones, also micro reserves or micro zapovedniks, are innovative approaches to support natural succession processes and to rehabilitate local hotspots of biodiversity. The approach combines these prior targets with the maintenance of local population needs. […] In the center of interest is the unaffected development of a natural habitat that still represents the typical features, as for instance soil condition, species, vegetation community, genetic varieties of a species, micro climate and so on. The size and location of the wildlife matrix zones need to be sufficiently large to comply with environmental objectives. […] The wildlife matrix zone functions then as a genetic pool and source for distribution of seeds, pollen, pollinators, and rhizomes into neighboring human-affected territories (the restoration zone). Forest plantations with natural species facilitate the rehabilitation of habitats and function as additional migration corridors at the same time – ecologic corridors. […] The protection of the wildlife matrix zone and the restoration zone, as well as the forest plantations or re-vegetation areas (where eligible) should be provided by the local population in their own interest (functioning of ecosystem services and access and benefit sharing). Environmental and cultural functions can also serve the nature conservation target especially in the area of investigation. For instance **holy places** (not bolded in the original text) can serve as a very strong incentive to protect a site. […] The approach includes the general and broad idea of the Seville strategy and can be understood as a mini biosphere reserve in the biosphere reserve itself. It is also a testing site that is innovative and could be expanded within the biosphere reserve or even into other areas worldwide if successful.



6.2.4 Improving Biosphere Reserve zoning (**network of sacred sites**). In Chapter 5, it was mentioned that YKBR's current zoning system is outdated. YKBR has plans to update and reconsider zoning to make it better fit current ecological conditions and local communities' needs. Since local people conduct pilgrimages and perform rituals on sacred sites, I claim that sacred sites should be taken into account while updating YKBR zoning to ensure local communities access to their sacred sites. This will prevent possible conflicts between conservation managers and local communities in the future.

6.2.5 Sacred sites provide a complementary culture-rooted set of incentives for conservation. Formal conservation strategies mostly appeal to resource users' reason by emphasizing rational incentives for preserving the environment. For example, formal conservation uses the notions of ecosystem health, species' instrumental value, food-chains, and costs and benefits of conservation (Conservation manager, pers. comm., 2014).

> We wish that our state was wealthy and strong enough to enforce the laws and use some market-based instruments for promoting conservation in addition to enforcement. That would have made conservation way more effective (Conservation manager, pers. comm., 2014).

Top-down investment instruments (which are used by a number of governments and environmental NGOs) have been successful in some cases (Sodhi et al. 2011) and unsuccessful in others (Acheson 2006, Rokström et al. 2009). Likewise, market-based instruments that place a monetary value on ecosystem goods and services (Rosales 2006, Rands et al. 2010) work relatively well in some cases, for example, carbon trade (Hepburn 2007); while in other cases they lead to the exploitation of natural resources (Demeritt 2001, Hobbs and Harris 2001, Van Houtan 2010). To address the shortcomings of existing instruments, scholars have been examining possibilities for complementary means that

would focus on shaping people's ethical attitudes and would promote more pro-environmental thinking and lifestyles (Tilman 2000, Van Houtan 2006). For example, Mikusinski et al. (2013) argue for a greater role of religions in biodiversity discourse, since religions shape people's and communities' basic beliefs and can ethically influence people's behavior.

Sacred sites influence and shape people's behavior by fostering spiritual and intangible ties between people and the environment (Verschuuren 2010), thus appealing to 'heart-induced' incentives, that is, to intuitive, emotional, spiritual, belief-based incentives for conservation (Anderson 1996). For example, the notion of sacredness implies that sacred sites in particular and the environment in general are inhabited by guardian-spirits. These spirits bring prosperity and repel misfortunes when people treat nature with due respect and care. These spiritual, belief-based incentives complement and reinforce rational incentives for conservation, thus nurturing a caring attitude to nature through the notion of sacredness.

Usually acknowledging that 'sacredness' may be a good reason for local communities to preserve sacred sites per se, conservation managers often ask how sacred sites can promote conservation on 'non-sacred' sites? Traditional practitioners point out two mechanisms by which the notion of sacredness may promote people's caring attitude to the environment as a whole:

1. Groups of sacred sites in Kyrgyzstan and around the world are interconnected (spiritually and transcendentally) and are perceived as networks (Aitpaeva, 2013). These smaller networks are interconnected among themselves and make up a 'sacred network' that covers the whole planet. Sacred sites mark the power-whorls of that network, but the network also consists of all the territories which are in between sacred

sites. Thus, the fact that the whole network is sacred makes all lands and waters covered by it sacred as well. That is how the notion of 'sacredness' may motivate people to treat 'non-sacred' sites with great respect.

2. Local communities' understanding of the source of sacred sites' sanctity is based on two intertwined notions: a) all lands and waters intrinsically have 'sacredness' in them and have *ee*, a guardian spirit and b) people's attitude to and interaction with sacred places affect the sanctity of that place. Sacredness is perceived not as something rigidly fixed but rather as dynamic; sacredness can 'migrate' from one place to another. Sacred sites can lose their sacredness and new sacred sites can emerge. The emergence of sacred sites is documented in other parts of the world as well (Verschuuren et al. 2010).

   'Migration' of sacredness implies that if the local community does not take good care of a sacred site, its sacredness may migrate to a 'better place.' If a site loses its sacredness, it consequently loses its spiritual and ritual powers (to heal, to grant wishes, etc.). Thus, local communities are interested in taking good care of sacred sites, which is an additional incentive for conservation. The belief that new sacred sites can emerge may motivate people to treat all lands and waters with great care, because all lands are potential places where sacredness can emerge.

For example, traditional practitioners' attitude to mountains illustrates how 'non-sacred' sites can be treated with great respect as if they were sacred. There are several mountains in the YKBR which are considered sacred, e.g., Khan Tengir and Tastar Ata Mountains. Although not all the mountains are sacred according to local beliefs, there is a notion that all the mountains should be treated with great respect.

> Mountains are up high. Being on elevated places, one gets pure thoughts. Only a few people (such as herders or geologists) actually go high into the mountains; there are no idle people. Mountain tops are pure places because few people set foot on them. I personally do not go onto the very top of the mountain. When I do pilgrimage to sacred mountains, I go only to the side of it and almost never set my foot on top of the mountain. Just like we do not let the strangers who come to your home to enter into our personal spaces, one should not go directly to the top of the mountain; otherwise one will suffer the consequences. The person coming to a sacred site should have done ablution, have straight and pure intentions. (Traditional practitioner, pers. comm. 2014)

> Mountains are sacred. Indeed, many Holy Scriptures were bestowed on mountains, for instance, the Old Testament was given on Sinai Mountain, while the Quran was given on Arafat Mountain. It was by Allah's power that sacred sites are connected to beautiful places. One of the responsibilities of the sacred site guardians is to preserve that beautiful nature on sacred sites. Mountains are the wonder that was given to the Kyrgyz people by nature. It was not a coincidence that our *kalpak*'s [traditional felt hat] and yurt's shape resemble that of mountains. We should respect and take care of all mountains because they are a precious gift for us (Abdrasul ake, guardian of Padysha-Ata sacred site, pers. comm. 2014).

6.2.6 Sacred sites can foster biocultural approach to conservation. In Chapter 5, I stated that YKBR's conservation strategies mostly focus on biodiversity conservation, although one of the BR's statutory goals is the integration of biological and cultural diversity conservation. Pilgrimage to sacred sites is a part of traditional local culture and sacred sites have a vast body of traditional knowledge, beliefs, and practices associated with them (Aitpaeva 2009). Recognition of sacred sites by YKBR can foster a biocultural approach to conservation in the YKBR and thus contribute to meeting the reserve's statutory goals.

6.2.7 Sacred sites as hubs for collecting and using TEK in conservation. UNESCO Biosphere Reserves emphasize the role of TEK in biocultural diversity conservation (UNESCO, 2011). Sacred sites are often the places where TEK is transmitted through

stories, rituals and ceremonies (Aitpaeva, pers. comm. 2014). TEK can complement scientific knowledge in conservation strategy planning (Berkes 2012). However, TEK is not being taken into account in YKBR's conservation strategies. Since the YKBR may not have the financial resources to collect local TEK through extensive surveys in local communities, sacred sites can be used as hubs for collecting TEK and further incorporating TEK in formal conservation.

6.2.8 Sacred sites as a communication platform for Ysyk-Köl Biosphere Reserve managers and local communities. In Chapter 5, it was mentioned that YKBR's public outreach outlets fail in covering the general public. Besides using new media for improving public outreach, YKBR can use sacred sites as a platform for communicating with local communities. Pilgrims and local communities share knowledge and information with one another, and conduct ceremonies and rituals which are connected to their everyday lives and livelihoods. There is a widespread informal communication network among pilgrims as well as sacred site guardians. These informal communication channels may be employed by conservation managers to disseminate information among local communities. Such communication channels can also work the other way and local communities may communicate their knowledge, concerns and opinions to conservation managers. Thus, sacred sites can serve as broad communication platforms for linking formal and informal conservation and improving communication between local communities and YKBR managers.

6.2.9 Capacity-building for communities on sacred sites. In some communities, sacred sites serve to foster ties between community members through traditional ways of self-help

(Sadur uulu, pers. comm.). This self-organizing capacity of sacred sites can be used to build up local communities' capacity for co-managing resources in the BR. At the same time, effective co-management requires that government institutions also have the necessary capacity (Pomeroy and Berkes, 1997). I claim that a number of events for bringing together YKBR managers, sacred site guardians and local community members should be organized to enrich these stakeholders' knowledge about each other.

6.3 Limitations on employing sacred sites in formal conservation

Chapter 4 discussed the cultural and institutional elements of sacred sites in the Ysyk-Köl region, which make them community conserved areas. Further analysis of local communities' motivation for preserving sacred sites provides insights into limitations on employing sacred sites in formal conservation. Local people's motivation for conserving sacred sites comes as a combination of reward and penalty-based incentives:

- Reward-based incentives are based on the notion that if one treats sacred sites properly and with due respect, one gets spiritual and well-being related benefits such as a cure from illness, wealth, and success in career and life, etc.
- Penalty-based incentives are based on the notion that if one violates sacredness, one will suffer retaliation in the form of illness, misfortune, and even death.

Local communities in YKBR are not homogeneous in terms of their belief and values systems. Motivation for conserving sacred sites differs among social subgroups based on their attitude towards sacred sites. The sacredness of a site can be both the main reason for conservation and a reason for vulnerability/destruction, depending on the person's or community's stance on the scale below (Figure 6.1).

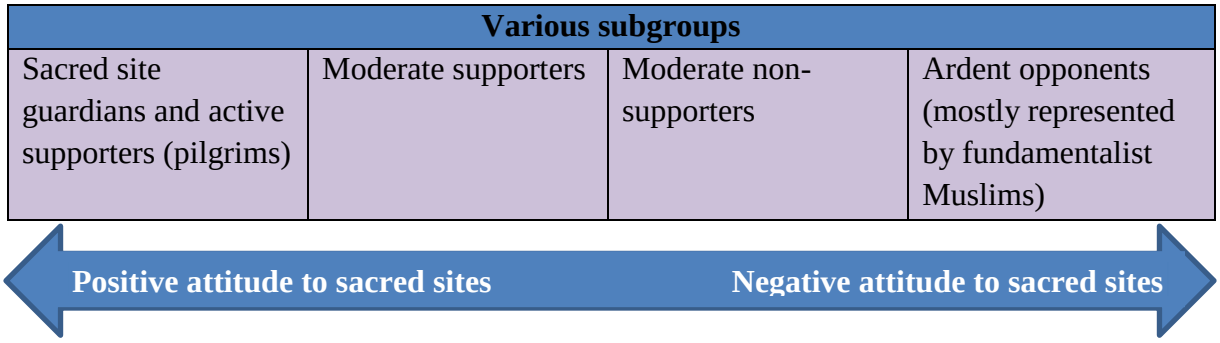


Figure 6.1 Scale of social subgroups based on their attitude to sacred sites

Sacred site guardians are the people who voluntarily look after particular sacred sites as their spiritual calling. It should be noted that there may be some debate about the 'voluntariness' of people becoming sacred site guardians. As a matter of fact, many sacred site guardians say that invisible forces made them become custodians (Aitpaeva 2007). Sacred site guardians have even stronger incentives for preserving sacred sites because they see preservation of sacred sites as their personal mission and as one of the main goals in their lives:

> My life was very complicated. I had many health problems, no meaning in life. When I became a guardian of this sacred site, I felt like I found myself, my calling and mission in this life (A sacred site guardian, pers. comm., 2014).

> I saw an *ayan* (dream) in which a sacred site was calling for me. It said that it was being polluted and neglected. I woke up in the morning and set off to look for that site. I did not know where it is located, I knew what it looks like as I saw it in a dream. I travelled through a dozen villages but could not find it. At last, after asking local villagers, I found a big willow tree. It turned out that the sewage ditch from one house was bringing dirty water to it. I cleaned it up and told the members of that household that they need to divert the ditch. They agreed to do so but apparently they did not divert it. A month later a mother of the family got paralyzed and the husband came to me asking to heal her. I said that I cannot and that they should divert the ditch away from a sacred site. After that they did so and the woman recovered (A traditional practitioner, pers. comm., 2014).

Plate 21. Pilgrims on Manjyly-Ata sacred site (Credit Aigine)

Active supporters (pilgrims) are those people who conduct pilgrimages to sacred sites on a regular basis and conduct rituals and ceremonies there. Pilgrims preserve and care for sacred sites because they believe that pilgrimage to sacred sites can improve their well-being, their health, and provide whatever they are in need of (Table 4.2 in Chapter 4). At the same time, pilgrims are aware of sanctions for violating the rules when visiting sacred sites. Thus for this social subgroup both reward-based and penalty-based incentives for preserving sacred sites are in place.

> People go to sacred sites being in need for something. If pilgrims observe the rules and behave respectfully towards the site their wishes will be granted. If someone mistreats a sacred site, i.e., pollutes it, breaks or damages something that is there, then that person will face retaliation in a form of disease and suffering. Sometimes retaliation may come to a violator through his/her children, who would either turn out bad or be sick (Local villager, pers. comm., 2014)

Moderate supporters are those people who are aware of sacred sites and agree with the main principles and beliefs associated with them. This subgroup may not be actively

involved in conducting pilgrimages and rituals. However, the notion of retaliation for violating the sanctity of sacred sites prevents them from damaging those sites:

> Our ancestors used to worship sacred sites but now we don't. There is a sacred site with a spring and a few willow trees nearby our village. We know it is sacred and that whoever mistreats it will get sick or even die. Back in the day during the Soviet times, some Russian tractor drivers tried to cut down the sacred tree. First, their tractor broke down several times while they were trying to cut it. But they did not stop and they started seeing some things and hearing voices. They got scared and ran away leaving all their equipment. That is why even now, no one tries to cut its branches for wood (Local villager, pers. comm., 2014).

Moderate non-supporters are those people who neither support nor oppose the practice of visiting sacred sites. Some representatives of this subgroup believe visiting sacred sites is a remnant of old, animistic religion. For this subgroup, sacred sites are 'just regular' sites. thus, moderate non-supporters have no special incentive for conservation of these sites.

> Worshipping trees or boulders is a superstition that stayed from the times of ancient men. People were afraid of the power of nature and that is why they would worship it. And even now some people believe in it. How can a so called 'sacred' tree help you with your business? It is just a tree (Local villager, pers. comm., 2014).

Ardent opponents of sacred sites are those people who see sacred sites as a negative phenomenon. This subgroup is mostly represented by radicalized Muslims who see sacred sites as a threat to purity of religion. Some representatives of this subgroup simply condemn/discourage others who conduct pilgrimages to sacred sites, whereas some take action to destroy sacred sites.

> We have a sacred spring not far away from a road. Some people tie strips of cloth on the bushes around this spring. A few months ago, a group of villagers including me were standing nearby the spring and talking. And we saw a man in a Pakistani style outfit walking along the road. When he saw a bush with the strips of cloth, he came to us and asked whether we have an axe. He wanted to cut down a tree. I asked him why he is going to do it if other people hold it sacred. He

> replied that it is a sin to worship sacred sites. None of us gave him an axe and he continued on his way. (A villager, pers. comm., 2014)
>
> In our village we had a sacred spring. People who thought that going to sacred sites was a sin, destroyed it. They say that worshipping anything else but Allah is the greatest unforgiveable sin (A local villager, pers. comm., 2014).
>
> Going to sacred sites is idolatry. The prophet destroyed the idols in Mecca. We should tell people that going to sacred sites is a big sin because they worship a spring, a tree or a boulder instead of Allah. If they don't understand, then these idols should be destroyed (A local villager, pers. comm., 2014).

Opponents of the tradition of visiting sacred sites see pilgrimage to sacred sites as a great sin called *shirk*, that is attributing partners to Allah (Samakov, field notes, 2014). Pilgrimage to sacred sites violates the core principle of Islam, namely *tawhid* - the 'Oneness of God' (strict monotheism) (A villager, pers. comm., 2014).

The majority of people visiting sacred sites associate themselves with Islam. Pilgrims claim that visiting sacred sites is a legitimate part of traditional Islam, which has been practiced in the region for many centuries. Sacred site guardians and pilgrims note that opponents of sacred sites are predominantly the followers of 'newly imported fundamentalist Islamic movements' (as opposed to traditional Islam) that is, Islamic schools of thought and movements that flooded the country after the collapse of the Soviet Union (Sacred site guardian, pers. comm., 2014).

Contradictions about sacred sites between the representatives of so-called 'imported Islam' and 'traditional Islam' have to do with interpretations of Islam's core principles. Both sides seem to have theological evidence that supports their perspective. Although opinions among local people vary, I have attempted to summarize a few main contention points and respective responses regarding pilgrimage to sacred sites (Table 6.1).

Table 6.1 Local people's main arguments for and against visiting sacred sites[1]

Arguments against visiting sacred sites	**Responses of traditional practitioners to the arguments against sacred sites**
By visiting sacred sites, one adds partners to Allah by worshiping trees, stones, and other elements of nature that are on sacred sites. Muslims must revere and pray only to Allah because it is only He who grants wishes. Muslims can pray to Allah from anywhere; there is no need to go to special 'sacred' place. For collective prayers, Muslims should go to the mosque, which is 'the house' of Allah (Samakov, field notes, 2014).	Pilgrims go to sacred sites to worship Allah and not trees, springs or boulders. Allah has created sacred sites and given them some *kasiet*, a special power/capacity, so that people can benefit. Allah is the greatest and his greatness is not contested by smaller powers He himself has created. For example, gravitation is also a power Allah has created but it does not undermine Allah's power. Similarly, *kasiet* of sacred sites does not contradict the power of God but rather proves it. Pilgrims revere Allah by visiting and acknowledging the sanctity of sacred sites He has created. Sacred sites are pure and strong places where pilgrims can focus and pray to God. Sacred sites can be perceived as mosques under an open sky. Some people claim that Muslims should go to mosques instead of sacred sites. Pilgrims do go to mosques but they also go to sacred sites. Mosques are built by men, whereas sacred sites are created by God himself. So why should mosques created by humans have more value than sacred sites created by Allah? Both sacred sites and mosques should be respected and visited by Muslims. Conducting pilgrimage to Mecca is one of the five main requirements of Islam. During this pilgrimage to Mecca, people visit sacred sites such as Arafat mountain, Zamzam water, etc. Allah created similar sacred sites in different parts of the world and we should respect all sacred sites just as we all respect those sacred sites in Mecca. (Samakov, field notes, 2014).

[1] This table is put together using the researcher's field notes

Although people who go to sacred sites may have an intention to worship Allah, adding an intermediary such as an object or a sacred site between a person and God will eventually divert person's attention from God to that intermediary. Eventually, pilgrims will forget about Allah and start worshiping boulders or trees on sacred sites and regard them as a deity. So even if pilgrimage to sacred sites does not start as idolatry, it is a path that leads to it. (Samakov, field notes, 2014).	Although there is a chance that some pilgrims may end up forgetting Allah and start worshiping an object at a sacred site, this cannot be a universal trend. Most pilgrims set a pure and strong intention of praying to God before going to sacred sites. As a matter of fact, the chance that pilgrimage to sacred sites may become idolatry, makes pilgrims to ensure that they are setting pure intentions and always worship Allah and not what is there on a sacred site. (Samakov, field notes, 2014).

Not all pilgrims visiting sacred sites associate themselves with Islam. There are people who are attempting to revive traditional pre-Islamic beliefs and practices (sacred sites being one element). This group of people is generally referred to as *Tengirchi*, i.e., the followers of *Tengir,* the supreme God. There have been several conflicts between representatives of 'imported' Islam and *tengirchi;* some conflicts made it to court but was never resolved. It should be noted that the *tengirchilik* movement (the way it is now) is just as new to Kyrgyzstan society as 'imported' Islamic movements. It is traditional Islam that combines elements of both Islamic and pre-Islamic beliefs (Traditional practitioner, pers. comm., 2014). For example, in traditional Islam the words for God such as *Tenir*, *Kudai* [God], *Allah, Jaratkan* [Creator], *Jaratuuchu* [Creator] are used interchangeably.

Thus, there is diversity among local communities in the YKBR regarding their attitude to sacred sites, which ranges from strong support to strong opposition. Sometimes conflicts arise among these groups with different attitudes towards sacred sites. Frequently during such conflicts, sacred sites become most vulnerable because they are not protected by formal law.

> Those radicals who say that visiting a sacred site is a sin think that they can just destroy our sacred sites. That is how conflicts with them start. At this point, sacred sites are not mentioned in any formal law, which means that someone can do anything against them. For example, if they [sacred site opponents] break a boulder at a sacred site, we cannot take that person to court because there is not such a clause in the Criminal or Administrative Code prohibiting violation of sacred sites (Traditional practitioner, pers. comm., 2014).

6.4 Protection of sacred sites through formal law

As was mentioned earlier, sacred sites' reward- and penalty-based conservation mechanisms are limited to those who associate themselves with traditional beliefs. For those who don't support sacred sites, alternatives mechanisms should be in place, such as formal laws on sacred sites. Aigine Cultural Research Center, a local NGO based in Bishkek, along with sacred site guardians and other stakeholders has been lobbying for legal recognition of sacred sites. Dr. Aitpaeva, Director of Aigine, (pers. comm., 2014) pointed out that there have been attempts to get recognition for sacred sites in two ways: a) drafting and lobbying for a Law (Act) on Sacred Sites and b) lobbying for amendments to the existing Law on Protection and Use of Historical and Cultural Heritage (passed on June 29, 1999 № 91). As a result of these efforts, several versions of a draft law have been developed with the participation of sacred site guardians, lawyers, and other stakeholders. Sacred site guardians have passed several resolutions at their countrywide meetings, the most recent of which took place in Bishkek in October 2014 (Appendix 2).

Traditional practitioners understand that government recognition of sacred sites can limit communities' autonomy in decision-making regarding these site. Indeed, government involvement limit local communities rights over using their sacred sites in other regions of the world (Martin et al. 2009, Hoole and Berkes 2010, Premauer 2013). Nonetheless,

almost sacred sites in Kyrgyzstan believe that legal recognition of sacred sites is needed (see Appendix 2) to protect them from possible violators and to legally back local communities' rights for accessing and using these sites (Samakov, field notes, 2014). Aitpaeva (pers. comm, 2014) points out that the main priority in lobbying for a law on sacred sites in Kyrgyzstan is ensuring that provisions of such a law would be congruent with and complementary to customary rules and traditions related to sacred sites.

CHAPTER 7. CONCLUSION

In this chapter, I will revisit research objectives and summarize key findings and insights pertaining to each objective. I will also reiterate how SES lens helped to interpret and understand the research findings and suggest topics for further research.

Objective 1 was to investigate what kinds of sacred sites exist and whether sacred sites are being employed in existing governance and conservation strategies in Ysyk-Köl Biosphere Reserve. The study findings show that sacred sites are diverse in terms of size and biophysical elements. For example, a sacred site can be represented by a single element such a spring, a tree, a boulder or it can be an entire ecosystem such as Ysyk-Köl Lake or Khan Tenir Mountain. Sacred sites comprise a various types of vegetation (such as trees and bushes), water bodies (such as lakes, ponds, and springs), rock formations (such as mountains, cliffs, and boulders) and human made elements (such as tombs and other structures).

Sacred sites are conserved by local communities via knowledge-practice-belief complex. The core principles ensuring sacred site conservation are rooted in the body of traditional ecological knowledge (TEK) in particular and indigenous knowledge in general. The rules of visiting sacred sites and taboos stem from TEK and ensure direct and indirect conservation of sacred sites. A traditional institution of sacred site guardians also contributes to conservation. Sacred site guardians are people who voluntarily take a responsibility of taking care of a particular sacred site. They see that responsibility as a spiritual calling and do not formally get paid for serving as a guardian.

Linked social-ecological systems concept is congruent with how local people perceive, understand and engage with sacred sites. At sacred there is no artificial separation between social and ecological systems, or society and nature. People (re)establish and reinforce their spiritual connection with land through rituals, ceremonies and beliefs. Indeed, sacred sites serve as a good example of SES by showing mutual influence and co-evolution of human societies and their environments.

Local communities' worldviews and beliefs are what drive sacred site conservation by local communities. Although sacred sites as CCAs in YKBR do not include purely biodiversity conservation goals, they contribute to conservation by transmitting and promoting conservation values and emphasizing the link between nature and culture as well as between well-being of communities and their environments. The SES lens reveals that sacred sites are the place where culture, nature and livelihoods are seen holistically by local communities, which explains why sacred sites in YKBR do not have purely biodiversity conservation goals.

The SES lens emphasizes importance of scale and levels (Berkes et al. 2003). Sacred sites represent community-level conservation model rooted in local culture. All the sacred sites in the Ysyk-Köl region are embedded into the Ysyk-Köl Biosphere Reserve (YKBR), which represents conservation on a higher level. At this point sacred sites are not taken into account in formal conservation. It can be explained by the fact that historically sacred sites have never been supported by state institutions. Moreover, during Soviet era sacred sites and pilgrims were prosecuted and suppressed. This lack of interaction between formal

government institutions and informal institutions such as sacred sites created 'path dependency', which lead to no/little interaction at present time.

Objective 2 was to analyze the governance structure and current formal conservation practices in Ysyk-Köl Biosphere Reserve. YKBR has been facing a number of challenges in their effort to achieve their statutory goals such as a) reconciliation of environmental conservation and economic development; b) conservation of both biological and cultural diversity; and c) incorporation of various types of knowledge including TEK in decision-making and planning. The major theme that emerged from the interviews and participatory observation is that YKBR is viewed by local communities as token institution that does paper conservation. More specific challenges include 1) frequent change in YKBR's institutional structure, 2) lack of highly skilled staff, 3) outdated and unclear zoning, 4) lack of finance and 5) lack of interaction with local communities. Current conservation approaches in YKBR displayed following distinctive features: 1) command and control approach 2) core area based approach, 3) a biodiversity approach with a focus on species diversity, 4) sanction-focused approach, 5) lack of cooperation among stakeholders, and 6) outdated approaches to the public outreach.

Some key concepts from the SES approach provide insights to understand why YKBR can be considered as paper conservation institution. For example, SES stresses the importance of worldviews in conservation practices; however, sacred sites as part of local communities' worldviews are not taken into account in formal conservation.

Objective 3 was to examine whether sacred sites can be used as an instrument for formal conservation, stewardship and governance in Ysyk-Köl Biosphere Reserve. Thus, these two

models of conservation, sacred sites on one hand and Biosphere Reserve on the other hand, co-exist on the same territory; however they barely interact. The study results show that sacred sites in the YKBR, as a model of local community-based conservation, are complementary to formal conservation. Moreover, sacred sites can improve formal biocultural conservation in a number of ways, which include improving ecological monitoring and zonation in the YKBR, enhancing communication and mutual understanding with local communities and providing more legitimacy for formal conservation.

The current study showed that incorporation of sacred sites can improve biocultral conservation in YKBR in nine ways: 1) making the concept of Biosphere Reserves more understandable for local communities, 2) improving ecological monitoring, 3) indirectly conserving species and areas, 4) improving BR zoning, 5) providing a complementary culture-rooted set of incentives for conservation (in addition to rational incentives), 6) fostering biocultural approach to conservation, 7) collecting and using TEK in conservation, 8) serving as a communication hub for YKBR managers and local communities, and 9) serving as a platform for local communities' capacity building.

Stakeholders in YKBR realize that effective conservation should employ a variety of conservation instruments. Conventional sanctions-based instruments for conservation have been complemented by a number of market-based instruments (e.g., 30% of fines for poaching are transferred to conservation managers as a bonus reward). Literature review showed that market-based instruments for conservation around the world are effective in some cases (Sodhi et al. 2011, Rosales 2006, Rands et al. 2010) but ineffective in others

(Demeritt 2001, Hobbs and Harris 2001, Acheson 2006, Van Houtan 2010). To address the shortcomings of existing instruments, scholars have been examining possibilities for complementary means that would focus on shaping people's ethical attitudes and would promote more pro-environmental thinking, lifestyles, and ethics (Tilman 2000, Van Houtan 2006, Mikusinski et al. 2013). Sacred sites in YKBR appear to be an effective instrument for shaping people's environmental ethics and thinking by providing culture-based complementary 'heart-induced' incentives for conservation (in addition to rational incentives). Sacred sites as a tool for conservation appeal to people's 'hearts' (Anderson 1996) as opposed to sanctions and market-based incentives that appeal to peoples' 'minds and reason.'

The concept of UNESCO Biosphere Reserve emphasizes the importance of linking biological and cultural diversity conservation (UNESCO 2011). A biocultural approach to conservation recognizes the interrelation, co-evolution, and interdependence of biological and cultural diversity within complex social-ecological systems (Maffi and Woodley 2010). It emphasizes that human beings have always been an intrinsic part of nature and have been modifying their environment throughout history (Maffi 2001, Gunderson and Holling 2002, Heckenberger et al. 2007, Pretty et al. 2007). Likewise, the environment has affected and shaped human cultures (Maffi and Woodley 2010) within intrinsically linked and interconnected adaptive social-ecological systems (Berkes et al. 2003, Berkes 2012). Sacred sites lend themselves well to bridging cultural and biological diversity conservation, which are currently disconnected in YKBR's conservation strategy.

However, sacred sites are not cure-all. Sacred sites should not be seen as a panacea for all biocultural diversity conservation challenges in the YKBR. Conservation incentives induced by sacred sites and social institutions related to those sites are limited to groups of people who share traditional beliefs and value systems. Local people within the YKBR are diverse. Based on their attitudes regarding sacred sites, various groups can be placed on a spectrum with strong supporters (sacred site guardians and traditional practitioners) at one end, and strong opponents (predominantly fundamentalist Islamic groups) on the other end. The majority of the population is likely to be somewhere in between these polar opposites.

Despite some limitations, sacred sites appear to be an effective complementary tool for improving conservation in the YKBR. Traditional knowledge, beliefs and practices related to sacred sites nurture a caring attitude to the environment through the notion of sacredness (Oviedo and Jeanrenaud 2007). To employ sacred sites for improving conservation within the Ysyk-Köl Biosphere Reserve, a plan should be developed to recognize sacred sites as community conserved areas. This recognition could be done in the form of legislation which recognizes sacred sites and leaves enough governance 'space' for local communities to practice their traditions (Samakov and Berkes, in press). Recognition of sacred sites will allow potentially linking of formal and informal models of conservation within the YKBR and protecting sacred sites from intruders intending to damage them.

Sacred sites are not limited to the territory of the YKBR. As a matter of fact, there are more than 1,100 documented sacred sites across Kyrgyzstan (Aitpaeva 2013). Thus, the current research findings regarding sacred sites' contribution to biocultural conservation can be generalized to other protected areas in Kyrgyzstan, as well as to 'non-protected' areas.

Given that sacred sites around the world have similarities in their institutional structure, rules of use and taboos (Vershuuren et al. 2010), the current study provides new evidence on sacred sites' contribution to biocultural diversity conservation.

As a possibility for future research I would highlight three potentially interesting and understudied topics. First topic is tourism on sacred sites. As mentioned in Chapter 4, some sacred site guardians see tourism as a tool for a) educating people about sacred sites and their importance, b) as a source for improving livelihoods of local villagers around sacred sites through providing services to pilgrims and c) some practitioners perceive sacred sites as global commons, as places of power given not only to people of Kyrgyzstan but to the entire humanity. At the same time, there are concerns that poorly organized tourism can undermine the sanctity of sacred sites and lead to *kasiet kachuu*, the loss of sacredness. Thus, analyzing sustainable ways of organizing tourism on sacred sites can be a potential research topic. Second, there are some emergent social movements such as *Ata-Jolu* (Box 4.1) which place pilgrimage to sacred sites at the core of their worldview. Such social movements remain largely under investigated. Research could provide some insights on modern social functions of sacred sites. And last but not least, the notion of sacred site networks requires more attention. According to traditional beliefs, the networks of sacred sites vary in size, and some of them are of global nature. The network of sacred sites is somewhat similar to global networks of PAs such World Network of Biosphere Reserves. The comparative analysis of these networks of formal and informal protected areas can provide more insights on improving conservation within and outside of formally protected areas.

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APPENDIX 1: Kyrgyzstan's legislative framework pertaining to biocultural conservation

Table A: A list of international treaties and conventions ratified by Kyrgyzstan

№	Conventions / treaties (date a treaty entered into force)	Date ratified in Kyrgyzstan
1.	Convention concerning the Protection of the World Cultural and Natural Heritage (December 17, 1975)	08.06.1995
2.	Convention on Biological Diversity (Rio, December 19, 1993).	26.07.1996
	• Cartagena Protocol on Biosafety to the Convention on Biological Diversity (Montreal, September, 11 2003)	6.08.2005
	• Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity (Nagoya, October 12, 2012)	05. 02. 2015
3.	Convention of the European and Mediterranean organization on plants protection	12.04.1999
4.	The United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa, UNCCD (Paris, December, 1996)	21.07.1999
5.	UN Convention on protection new varieties of plants (1968, 1972, 1991)	14.01.2000
6.	The UNECE Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters (the Aarhus Convention) Aarhus, June 25, 1998	January 12, 2001
7.	Convention on Wetlands of International Importance, especially as Waterfowl Habitat (Ramsar, December, 21 1975)	10.04.2002
8.	Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), Washington, July 1 1975	30.11.2006
9.	Convention on the Conservation of Migratory Species of Wild Animals (CMS), Bonn 1983	24-10-2013 (Jan 1, 2014)
10.	Convention on the Protection and Use of Transboundary and International Lakes, aka Water Convention, Helsinki, October 6, 1996	Not signed
	Agreements	
11.	Agreement between the CIS countries on cooperation in field of plant quarantine, Moscow	12. 11.1992

13.	Agreement on Cooperation in field of environmental protection • the Almaty's Declaration of the Presidents of Central Asia	1997-2002 1997
	• the Tashkent's Declaration of the Special UN Programme for Central Asia	1998
	• the Dushanbe's Declaration	2002
14.	Agreement between the Government of the Kyrgyz Republic, the Government of the Republic of Uzbekistan and the Government of the Republic of Kazakhstan on Cooperation in field of conservation of biodiversity of the Western Tien-Shan, Bishkek	17.03.1998
15.	Agreement between the Government of the Republic of Kazakhstan, the Government of the Kyrgyz Republic, the Government of the Republic of Tajikistan and the Government of the Republic of Uzbekistan on Cooperation in field of plant quarantine, Astana	08.06.2000
16.	Agreement between the Ministry of Agriculture, Water Resources and Processing Industry of the Kyrgyz Republic and the Ministry of Agricultural Policy of Ukraine on Cooperation in field of testing and protection of the plant sorts, Kiev	28. 03. 2003

Table B. Kyrgyzstan's national laws pertaining to biocultural conservation

National Laws Enacted in Kyrgyzstan	Date (dd/mm/yyyy) and number
Act 'On livestock-breeding'	18.12.1992, № 1124-XII
Act 'On water'	14.01.1994 № 1422-XII
Act 'On protected areas'	28.05.1994 № 1561-XII
Subsoil Law	02.07.1997 № 42
Act 'On seeds'	19. 06. 1997 № 38
Act 'On fisheries'	25.06.1997 № 39
Act 'On plant quarantine'	02.06.1998 № 26
Act 'On Legal protection of selection achievements'	13.06.1998 № 79
Act 'On potable water'	25.03.1999 № 33
Act 'On use of chemicals and protection of plants'	25.01.1999 № 12
Act 'On Biosphere Territories (Reserves) in Kyrgyzstan'	09.06.1999 № 48
Act 'On protection of atmosphere'	12.06.1999 № 51
Act 'On environmental protection'	16.06.1999 № 53
Act 'On ecological (environmental) assessment'	16.06.1999 № 54

Act ‘On wildlife’	17.06.1999 № 59
Act ‘On protection and use of historical and cultural heritage’	29. 06.1999 № 91
Act ‘On protection and usage of flora’	20.06.2001 № 53
Act ‘On mountainous areas of Kyrgyzstan’	01.11.2002 № 151
Act ‘On sustainable development of Ysyk-Köl ecological and economic system’	13.08.2004 № 115
Act ‘On prohibition of logging, purchase and sale, usage, export and import of especially valuable (walnut and juniper) forests’	12.02.2007 № 15
Act ‘On traditional knowledge protection’	31.07.2007 № 116
Act ‘On prohibition of catch, transportation, purchase and sale of especially valuable as well as endemic species of fish in Ysyk-Köl and Song-Kol Lakes’	04.08.2008 № 191
Act ‘On tariffs and fares for use of flora and fauna’	11.08.2008 № 200
Act ‘On pastures’	26.01.2009 № 30
Act ‘On general technical regulations for ensuring ecological safety in Kyrgyzstan’	08.05.2009 № 151
Other environmental Laws with secondary importance for biocultural diversity	
Act ‘On industrial wastes and consumption residue’ 13.11.2001 № 89 Act ‘On tariffs and fares for environmental pollution’ 10.03.2002 № 32 Act ‘On tailings facilities and spoil banks’ 26.06.2001 № 57 Act ‘On population’s radiation safety’ 17.06.1999 № 58 Act ‘On energy savings’ 07.07.1998 № 88 Act ‘On renewable source of energy’ 31.12.2008 № 283 Act ‘On protection of ozone layer’ 18.12.2006 № 206 Act ‘On government regulation of greenhouse gas emissions’ от 25.05.2007 № 71 Act ‘On general technical regulation regarding safe exploitation and recycling of machinery and equipment’ 29.12.2008 № 280 Act ‘On industrial safety of hazardous industrial facilities’ 19.11.2001 № 93	

Table C. Kyrgyzstan’s Legal Codes pertaining to conservation

Name of a Code	Date and #	Short description
Land Code (code of land laws)	02.06.1999 № 45	Defines main principles of land use and ownership in Kyrgyzstan. Regulates acquisition, sale, regimes of use, tariffs and fares, and activities for ensuring protection and restoration of lands

Forestry Code	08.07.1999 № 66	Defines legal norms for sustainable use, protection and reproduction of forests as well as improvement of forests' ecological and resource potential
Water Code	12.01.2005 № 8	Defines the main principles of water use, protection of water resources (including ground water), duties and mandate of governmental institutions in managing water resources. Regulates rules of irrigation and tariffs and fares for water use.
Criminal Code	01.10.1997 № 68	Chapter 26 (265-279) defines sanctions for ecological crimes
Code of administrative violations	04.08.1998 № 114	Chapters 11-19 (articles 97-210) define administrative sanctions and fines related to violations in use of resources, protection of cultural and biological heritage and conservation of environment and wildlife.

APPENDIX 2. Resolution of sacred site guardians accepted at the National Meeting of Sacred Site Guardians, October 27, 2014, Bishkek

Recognizing Kyrgyzstan's ethnic, biological, linguistic, religious, cultural and political diversity and supporting every citizen's inalienable right for freedom of language, culture, religion and political beliefs, We, the guardians of sacred sites in Kyrgyzstan, strongly emphasize the importance of existing diversity and need for its conservation.

We believe that the network of sacred sites, which forms the Sacred Geography of Kyrgyzstan, is a vivid example of and a mechanism for such diversity. Sacred Geography is not limited by the boundaries of individual states and serves a uniting spiritual principle via recognition of diversity.

We testify that sacred sites perform important social functions on the level of individuals, families, communities and countries. Those social functions include but not limited to: a) improvement of physical and psychological well-being of individuals, b) support of family institution and c) contribution to community well-being. Traditional knowledge of many centuries and cultures is accumulated and the time-tested wisdom is passed down from generation to generation on sacred sites. Sacred sites also become the non-violence zones during social conflicts.

We would like to draw everybody's attention to the potential of sacred sites for understanding and promoting diversity in nature, history, epic heritage, culture and religion. We believe that models of behavior on sacred sites can help to harmonize nature and culture, rational and spiritual aspects of human beings and to develop sustainable ways of interacting with bioculturally diverse environemnt.

Кыргызстандын ыйык жерлеринин кароолчулары жана сактоочулары Жыйынынын Угузары

27 октябрь 2014 ж.
Бишкек

Биз, Кыргызстандагы ыйык жерлердин сактоочулары жана кароолчулары, Кыргызстанда орун алган табигый, улуттук, тилдик, диний, маданий жана саясый көп түрдүүлүктү көңүлүбүзгө алуу менен, өлкөбүздүн ар бир жараны тил, маданият, дин тандоо эркиндигине жана ар кандай саясый көз-караштарга ээ болуусун колдоп, бул көп түрдүүлүктү сактоо маанилүү жана баалуу экендигин белгилеп кетебиз.

Биз, Кыргызстандын ыйык жерлеринен түзүлгөн касиеттүү жаратылышын көп түрдүүлүк сакталышынын бирден-бир даана көрүнүшү жана аны ар тараптуу колдоонун таасирдүү усулу экендигин ырастайбыз. Ыйык табият мамлекеттик чек

аралар менен чектелбейт, ал көп түрдүүлүктү тааныу аркылуу руханий өсүүгө кызмат кылат.

Ыйык жерлер адамдык, үй-бүлөлүк, коомдук жана өлкөлүк деңгелдерде салмактуу милдеттерди аткарып жаткандыгын ырастайбыз. Алардын коомдук милдеттери төмөнкү кызматтар кирет: адамдын руханий жана денелик саламаттыгын оңдоо жана чыңдоо; үй-бүлөөнү сактоо жана бекемдөө; жамааттын бакубаттыгын жогорулатуу. Албетте, милдеттер булар менен чектелбейт. Ыйык жерлердин айланасында нечендеген доордогу жана ар түрдүү маданияттагы билимдер калыптанган. Ыйык жерлерде кылымдардан кылымга, муундан муунга даанышмандыктын түздөн-түз берилиши жүрөт. Чыр чатактар учурунда ыйык жерлер зордук-зомбулуксуз жерлерге айланары далилденди.

Биз ыйык жерлерлердин, тарыхтын, маданияттардын, диндердин, табигый байлыктардын көп түрдүүлүктөрүн изилдөөдө алардын кубаттуу даремети бардыгына ынандык жана ага зор көңүл бурууга чакырабыз. Биз ыйык жерлердеги адамдардын жүрүм-туруму жаратылыш менен маданиятты, акыл менен сезимдерди шайкештикке келтире турганына күбө болуп, азыркы коомдогу сый жана сабырдуу мамилелердин түзүлүшүнө, көп түрдүүлүктө жашоо жолдорун иштеп чыгууга өбөлгө болоруна ишенебиз.

Резолюция Съезда смотрителей и хранителей сакральных мест Кыргызстана

27 октября 2014
г. Бишкек

Мы, смотрители и хранители сакральных мест Кыргызстана, принимая во внимание этническое, биологическое, языковое, религиозное, культурное, политическое разнообразие, существующее в Кыргызстане, поддерживая право каждого гражданина страны на свободный выбор языка, культуры, религии, политических убеждений, хотим подчеркнуть ценность существующего разнообразия и важность его сохранения.

Мы утверждаем, что сеть святых и священных мест, образующая сакральную географию Кыргызстана, является одним из наглядных проявлений разнообразия, а так же действенным механизмом сохранения разнообразия. Сакральная география не ограничивается государственными границами и служит принципам духовного единения через признание разнообразия.

Мы подтверждаем, что святые и священные места выполняют важные социальные функции на уровне человека, семьи, сообществ и стран. Социальные функции включают в себя, но не ограничиваются поддержанием и укреплением психического и физического здоровья человека, сохранением и укреплением института семьи,

поддержанием благополучия общин. Вокруг святых мест аккумулируются знания разных эпох и культур, на святых местах происходит передача из поколения в поколение мудрости, проверенной веками. Сакральные места часто становятся зонами ненасилия в периоды конфликтов.

Мы призываем обратить внимание на мощный потенциал святых мест для изучения многообразия природы, истории, эпического наследия, культуры, религий. Мы верим, что модели поведения на сакральных местах могут способствовать гармонизации природного и культурного, рационального и духовного начал, формированию терпимых и уважительных отношений в современном обществе, выработке моделей взаимодействия с разнообразием.

APPENDIX 3 Informed Consent Form

UNIVERSITY OF MANITOBA

Natural Resource Institute
70 Dysart Rd,
Winnipeg, Manitoba
Canada R3T 2N2
General Office (204) 474-7170
Fax: (204) 261-0038
http://www.umanitoba.ca/academic/institutes/natural_resources

Research Project Title: Governance, Stewardship and Biocultural Conservation in Ysyk-Köl Biosphere Reserve

Researcher: Aibek Samakov

The text of the consent form will be in both Kyrgyz and Russian languages

I am a graduate student at the Natural Resources Institute, University of Manitoba, (Canada) and I am conducting a field research for my Master's Thesis. My research focuses on conservation practices in the Ysyk-Köl Biosphere Reserve. Ysyk-Köl Biosphere Reserve comprises some of the oldest protected areas in Kyrgyzstan as well as sacred natural sites, which are considered to be traditional protected areas. The purpose of the research is to understand how sacred sites fit into formal conservation strategies in Ysyk-Köl Biosphere Reserve. This research is being sponsored by the Community Conservation Research Network (Halifax, Canada) and Dr. Fikret Berkes, Canada Research Chair in Community-Based Resource Management, Natural Resources Institute, University of Manitoba, Canada. The study has already been approved by the Joint-Faculty Research Ethics Board at the University of Manitoba (Canada).

This consent letter, a copy of which will be left with you for your records and reference, is part of the process of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you would like know more details about something mentioned here, or information not included here, please feel free to ask for clarifications. Please take the time to read this carefully and to understand this information.

In the course of the research you will be asked a series of questions that will help me understand the issues related to conservation strategies in the Ysyk-Köl Biosphere Reserve such as existing governance structure, approaches to conservation, and traditional models of conservation. You will be requested to participate in an interview session that will last for 45 – 60 minutes. If more time is required, a subsequent meeting can be arranged at your convenience. These interviews may be conducted at your place of work, home, or at another location of your preference. After the interview, if the need arises, you may be contacted for further clarifications.

The interview will be recorded on a digital recorder provided that you do not have any objections. Your name and contact information will be kept in secure location and will be destroyed upon completion of the study. If you wish to receive an integrated output of the study, you can indicate your email and you will receive an email when the preliminary results are ready. Your feedback on integrated results will be highly appreciated and will be taken into account while preparing the final results. The data provided by you will be used to complete a progress reports, my Master's thesis, and will potentially be published in an academic journal. You will not be identified by name in any such publications unless you explicitly waive your right for confidentiality and anonymity.

You are free to decline to participate in this research, withdraw from the study at any time, and/or choose not to answer any questions you may not be comfortable with. If you do decline to participate in the study or answer any questions, you will not face any negative consequences. If I have not explained the study clearly, please feel free to ask for clarifications or additional information at any time throughout your participation.

My cell phone number is [removed from this version] and my email is [removed from this version].

If you have any complaints or further questions about the nature of this research, your concerns may be directed to:
The Human Ethics Secretariat at the University of Manitoba
Phone: +1 204- 474-7122
E-mail: research@umanitoba.ca

or to my advisor:
Dr. Fikret Berkes
Phone: **[removed from this version]**
E-mail: **[removed from this version]**

Please be advised that the staff at these offices speak only English (and maybe French).

Do you understand and agree to the terms described here?