

# Western Tien-Shan World Heritage Site (Kyrgyz Part): From Traditional to Modern Management Challenges

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## ■ Abstract

*The Western Tien-Shan World Heritage Site (WTS WHS) includes sites in Kazakhstan, Kyrgyzstan, and Uzbekistan, in Central Asia. The Kyrgyz part of the WTS WHS includes the Sary-Chelek Nature Reserve (also UNESCO Biosphere Reserve), Besh-Aral State Nature Reserve, and Padysha-Ata State Nature Reserve. The Kyrgyz territory protected areas, that are included in the WTS WHS, are subject to existing management plans developed within the framework of the Environmental Law of Kyrgyzstan. Historically established, local, clan-based governance systems, in natural and cultural heritage sites, began to collapse during the Soviet era and, currently, they are either dispossessed or highly deteriorated. Learning from international experiences, the WTS WHS management can be improved with fresh assessments of the natural and cultural values, greater oversight to implement international standards, better promotion of tourism and pilgrimage routes, and by developing effective management at the World Heritage Site.*

**KEYWORDS:** Western Tien-Shan World Heritage, Natural Ecosystems, Biotic Regulation

## ■ 1. Introduction

### 1.1 Overview of the heritage site

The Western Tien-Shan World Heritage Site (WTS WHS) is a transboundary site that includes 13 protected areas (PAs), covering the combined area of 528,177 ha in Kazakhstan, Kyrgyzstan, and Uzbekistan. The Kyrgyz part of the WTS WHS includes the Sary-Chelek Nature Reserve (SNR, also designated as UNESCO Biosphere Reserve), the Besh-Aral State Nature Reserve (SNR), and the Padysha-Ata State Nature Reserve (SNR). These PAs are part of the Central Asian mountain system of Tien-Shan, which is one of the seven largest mountain chains in the world. The altitude of various parts of the WTS WHS ranges from 700 to 4,503 meters above sea level. This site is replete with a variety of landscapes, which are characterized by exceptionally rich biodiversity. This site is on the World Heritage

List for its Outstanding Universal Value (OUV) and was nominated under criterion (x). However, there are many cultural values that the WTS WHS is known for (Nomination Dossier Western Tien-Shan 2012). For example, there are historical and cultural monuments (e.g. Mazar St. Padyshaty from the VI to VII centuries and Koktekshe Burial), petroglyphs (e.g. Tassharbak, Tanbalytas, Tokturmas, Karazau gorge, and Chinars petroglyphs), paleontological sites, and natural monuments (e.g. Tashkesken tract, Pulatkhan plateau, natural walnut fruit forest). The Western Tien-Shan region is of global importance since it is the place of origin for a number of fruit tree species and is distinguished for a great variety of forest types and a unique flora and fauna (Shukurov, Domashov 2011; Third National Report on the Conservation of Biodiversity of the Kyrgyz Republic 2005).

The WTS WHS covers the areas of the Tolebi, Tulkubas, and Kazygurt districts in the South

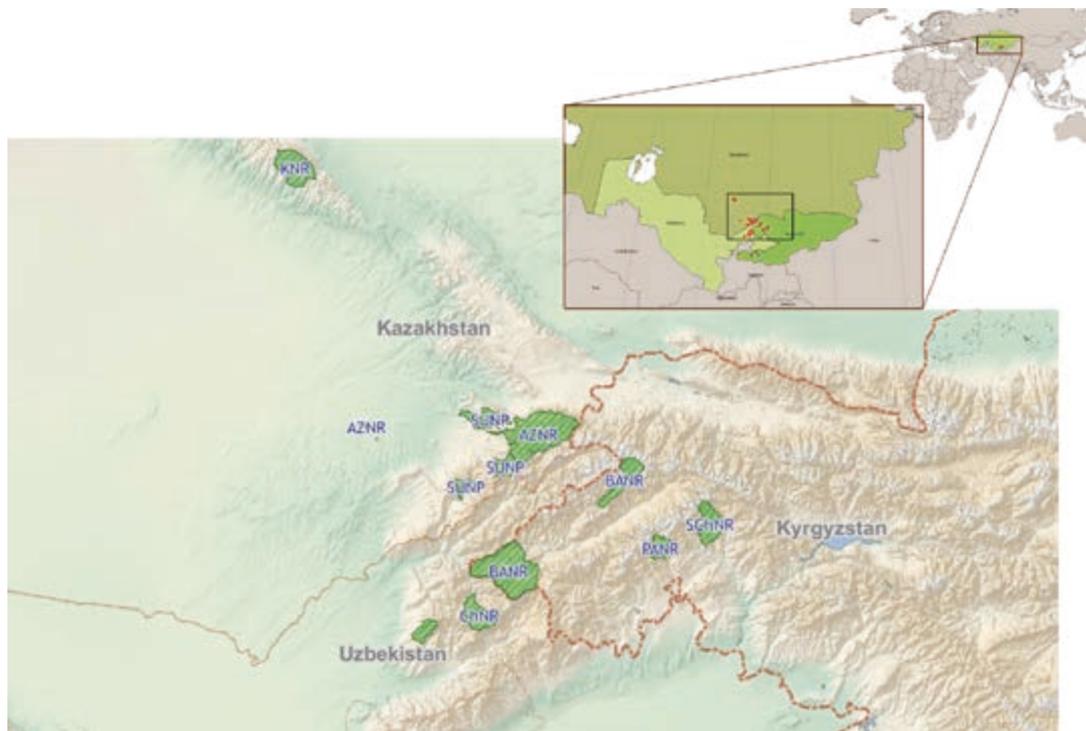


Figure 1. Overview map of WTS WHS. On the map: AZNR - Aksu-Zhabagly Nature Reserve; BANR - Besh-Aral Nature Reserve; ChNR - Chatkal Nature Reserve; KNR - Karatau Nature Reserve; PANR - Padysh-Ata Nature Reserve; SChNR - Sary-Chelek Biosphere Nature Reserve; SUNP - Sairam-Ugam National Park

Kazakhstan region, and the Zhualyn district of the Zhambyl region in the Republic of Kazakhstan, the Aksiy and Chatkal districts of the Jalal-Abad region in the Kyrgyz Republic, and the Bostalyk and Parkent districts of the Tashkent region in Uzbekistan [Fig. 1].

The three specially protected natural areas included in the Kyrgyz part of the WTS WHS encompasses unique mountain landscapes and ecosystems of the Chatkal range, which represents the biological and landscape diversity of the Western Tien-Shan with its rich flora and fauna (Nomination Dossier Western Tien-Shan 2012).

## 2. The socio-cultural heritage and sacredness of the territory

This territory has a rich history and holds important cultural values. Humans have inhabited the territory of the Western Tien-Shan since the Neolithic period. In the area of the river Kyzyl-Suu, there are structural remains of places where ancient people lived. Additionally, during different time periods, the worldviews and ideologies of Zoroastrianism, Buddhism, and Islam dominated this area. For

instance, in Sary-Chelek SNR there were hermit areas for Buddhist monks. At the end of the 8th and beginning of the 9th centuries, Islam arrived in the Western Tien-Shan, marking the appearance of holy places for Muslims. The Western Tien-Shan was on the main trade routes and was the center of cultural ties of the nomadic pastoralists and sedentary agricultural tribes of Central Asia. One of the main branches of the Great Silk Road passed through these mountains. From this area, they exported walnuts, furs, Chatkal silver, ammonia, mercury, cattle, and other trade items.

In the Southwestern part of the Kyrgyz Republic the world's largest mass of walnut-fruit forests are located, which currently provides sustainable income for the local population, particularly those living in the Sary-Chelek SNR and its buffer zone. The sale of nuts, apples, herbs, and honey provides the local people with a livelihood (Orolbaeva 2003). This is possible thanks to the favorable water regime and the rich natural resources of the territory.

The Padysha-Ata SNR is famous for its

historical sacred places of pilgrimage, in particular the shrines of Padysha-Ata and Baba-Ata [Fig. 2].

### ■ 3. Management, public access, and protection

#### 3.1 Historical mechanisms for landscape management in WTS

people, they influence and maintain the high quality of their horses' pedigree today (Shukurov 2008).

Clans defended their territories in Kyrgyzstan, particularly in the Western Tien-Shan. Conflicts over the land arose quite often among the clans. Depending on the level of social organization, land was distributed among the local population. For



Figure 2. Padysha-Ata one of sacral Muslim place of WTS WHS (Anna Lodygina <https://fotki.yandex.ru/users/anka-lodygina/> (5.07.2017))

For a long time, in the Western Tien-Shan, there existed a historically established system of interactions between humans and nature. This system was closely connected with the social structures formed in this region.

This social structure is based upon clan group organization. Clans not only lived in a certain territory but also identified with it. In most cases, there were rituals that ensured the unity of human beings, nature, and the land. For instance, there is a legend about the Sary-Cherelek lake concerning underwater horses that descended from a legendary horse named Tulpar, which belonged to the hero Manas. These mythical horses not only symbolize the sacred forces of nature, but also, according to the local

example, a family relied on only a small piece of land whereas the clan-based management had a larger territory. In each clan there were traditional authorities who directed the use of land and its management, taking into account previous pressures on the grass (i.e. grazing), weather conditions, and other factors (Shukurov 2008, Domashov 2011, Traditional Forest-Related Knowledge 2012).

These clan-based management mechanisms were the basis for the interactions between human beings and nature before Kyrgyzstan joined the USSR. The local governance structures partially survived during the Soviet period in Kyrgyzstan. Now, in the post-Soviet era, these historical management mechanisms of clan ownership have been

completely eliminated in the process of economic neoliberalization, resulting in the exploitation of natural resources and the desacralization of nature.

### *3.2 Modern protection system of this territory as natural and cultural heritage*

According to the Regulations on PAs in Kyrgyzstan, each area is managed as a whole and indivisible as a nature conservation area. In addition, there are national laws on PAs, which also regulates the activities within the PAs, including those areas that are part of the WTS WHS.

In these PAs, economic activities are not permitted. Only activities that are related to the performance of environmental services are allowed. In specially selected areas some workers and groups that live within the boundaries of the PAs are allowed to develop certain activities related to nature, such as haymaking, harvesting of nuts and berries, beekeeping, or limited grazing. The scale of any economic activity in the adjacent territories is limited by national law. Some concerns include the violation of these protective laws by poachers, who illegally hunt wild animals or harvest valuable plants, and mining in adjacent territories, which is considered a future risk.

All PAs in Kyrgyzstan are financed by the State Agency for Environmental Protection and Forestry under the Government of the Kyrgyz Republic. Due to the economic problems of the country, PAs have a deficiency in financial resources.

Extrabudgetary funding comes from international donor organizations and is supported by a portion of visitor's entrance fees, which is used for the management of the natural parks. In addition, ecotourism and visits to holy places contribute to the development and financing of the PAs. It is a characteristic, for example, of the Sary-Chelek SNR and Padysha-Ata SNR that funding is derived from tourism. Research organizations and visitors are also allowed to enter the PAs for environmental education. The number of visitors is gradually increasing every year (Nomination Dossier Western Tien-Shan 2012).

In the contemporary management of the

WTS WHS there is a problem in that the PAs' ideology is still based upon the Soviet's nature management approach which holds that nature is primarily for the expansion of extractive economies. An example of this is how science is used to justify incursions, such as mining. Within the new management systems, the approach is that natural ecosystems are important and in need of conservation for all of the ecosystem services that they provide in the local and global arena. In Kyrgyzstan, as in other countries, there remains an open discussion about defining the idea of natural ecosystems and the limits of their transformation. According to some researchers, the widespread definition of the ecosystem, that it "means a dynamic complex of plant, animal and micro-organism communities and their non-living environment interacting as a functional unit"(CBD, Article 2), needs to be reviewed. Authors Shukurov and Gorshkov note that the concept of an ecosystem should be based primarily on the biotic regulation activities that it provides (Makarieva, Gorshkov 2007, Shukurov 2008). The concept of biotic regulation offers quantitative proof supporting the statement that an environment remains suitable for life owing to the impact on life itself. The stabilizing environmental impact of natural ecosystems is proportional to the area they occupy. It then follows that natural ecosystems, protected from human exploitation, should be allowed to operate in sufficiently large global areas, such that their cumulative impact is sufficient to keep the global environment and climate in a stable state. When the stability threshold of natural ecosystems is overcome by human interference, the environment will degrade to an unsuitable habitable level, irrespective of whether we humans continue to directly pollute it or not (Makarieva, Gorshkov, Startsev 2017). This new understanding of ecosystems will help strengthen the conservation base of the WTS WHS.

## ■ 4. Recommendations for strengthening natural and cultural relations in Western Tien-Shan management

Based on the experiences and knowledge gained during the Capacity Building Workshop on Nature-Culture Linkages in Heritage Conservation in Asia and the Pacific 2017, a number of recommendations could be proposed in order to improve the protection of the natural and cultural heritage in the

WTS WHS. These recommendations are addressed to the national government, local authorities, communities, NGOs, and other stakeholders. Such recommendations suggest that:

- The national government promotes the identification of natural and cultural heritage in the country and evaluates their state of conservation.

- The national government takes appropriate measures so that the assessment of ecosystems' conditions is conducted in the WTS WHS, in order to define priority areas and determine the necessary measures for environmental protection, including the involvement of local people.

- Local authorities, communities, and PA specialists speed up the process of identification and certification of the local cultural values of the territories of the WTS WHS (including sacred values, recreation, tourism, health and others).

- The government and international organizations take appropriate measures to harmonize national and international management systems (e.g. to integrate the IUCN vision for PA management). Currently, the national law is not sensitive to local communities' needs and the national environmental law should comply with international standards.

- PA administrations, in conjuncture with NGOs and independent specialists, ensure the development of pilgrimage routes to some of the sites in the WTS WHS (such as Lake Sary-Chelek or Mazar Padysh-Ata). Future projects should focus on the development of a visitors' management strategy that are supported with the latest technologies, such as GPS.

All of the previously proposed efforts are aimed at improving management efficiency within WTS WHS which will create favorable conditions for the development of environmentally friendly nature usage and ensure the protection of its natural and cultural heritage for future generations.

■ Literature cited

Bocharnikov V., Laletin A., Domashov I. et al. 2012. Russia, Ukraine, the Caucasus, and Central Asia. In J.A. Parrotta, R.L. Trosper (eds): *Traditional Forest-Related Knowledge: Sustaining Communities, Ecosystem and Biocultural Diversity*, pp 251 – 280. Springer Science + Business Media B.V.

Domashov, I.A. 2011. Overview of traditional knowledge for sustainable use of nature of Kyrgyzstan and Central Asia. In Laletin A., Parrotta JA., Domashov I. (eds.): *Traditional Forest-Related Knowledge, biodiversity conservation and sustainable forest management in Eastern Europe, Northern and Central Asia*, IUFRO World Series 26: pp 21-26. Vienna: International Union of Forest Research Organization (IUFRO)

Makarieva A. M., Gorshkov V. G. 2007. Biotic pump of atmospheric moisture as driver of the hydrological cycle on land. *Hydrology and Earth System Sciences Discussions, European Geosciences Union, 2007, 11 (2)*: pp.1013-1033. <hal-00305066> <https://hal-insu.archives-ouvertes.fr/hal-00305066/document> [accessed 10 January 2018]

Makarieva A.M., Gorshkov V.G., Startsev A.A., 2017. New goals for fundamental science. On the occasion of the Year of Ecology 2017 in Russia. / *Biotic Regulation for Everyone*. <http://www.bioticregulation.ru/life/ecol17.php> [accessed 20 April 2018]

Nomination Dossier Western Tien-Shan., 2012. (Republic of Kazakhstan, Kyrgyz Republic and Republic of Uzbekistan). Proposal for inscription on the UNESCO World Cultural and Natural Heritage List. <http://whc.unesco.org/uploads/nominations/1490.pdf> [accessed 6 August 2017]

Orolbaeva, L., 2003. *Mountain herbs: medicines, dyes, spice*, pp. 69. Bishkek: CAMP.

Shukurov E.J., Domashov I.A. 2011. Potential forest vegetation and its geographic distribution in Kyrgyzstan. In Laletin A., Parrotta JA., Domashov I. (eds.): *Traditional Forest-Related Knowledge, biodiversity conservation and sustainable forest management in Eastern Europe, Northern and Central Asia*, IUFRO World Series 26: pp 56-62. Vienna: International Union of Forest Research Organization (IUFRO)

Shukurov, E.J. 2008. *Compositions*: Bishkek. 406p.

State Agency on Environment Protection and Forestry under the Government of the Kyrgyz Republic. 2005. *Third National Report on the Conservation of Biodiversity of the Kyrgyz Republic*. Bishkek.

United Nations Convention on Biological Diversity. 1992. <https://www.cbd.int/doc/legal/cbd-en.pdf> [accessed 20 April 2018]

