# COUNTRY PROGRAMME LANDSCAPE STRATEGY FOR COMMUNITY DEVELOPMENT AND KNOWLEDGE MANAGEMENT FOR THE SATOYAMA INITIATIVE (COMDEKS)

## PROTECTION OF THE NATURAL COASTAL ECOSYSTEMS OF ISSYK-KUL LAKE

GEF-SGP/COMDEKS, UNDP, KYRGYZSTAN

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**COMDEKS COUNTRY PROGRAMME LANDSCAPE STRATEGY, KYRGYZSTAN**

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**Technical support and development of the CPLS:** Tien-Shan Policy Center of the American University of Central Asia

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ACRONYMS

| | |
|---|---|
| CBO | Community Based Organizations |
| COMDEKS | Community Development and Knowledge Management for the Satoyama Initiative Project |
| CPLS | Country Programme Landscape Strategy |
| GEF | Global Environmental Facility |
| NGO | Non-Governmental organizations |
| NSC | National Steering Committee |
| SCBD | Secretariat of the Convention on Biological Diversity |
| SGP | Small Grants Programme |
| SEPL | Socio-Ecological Production Landscape |
| TSPC of AUCA | Tien-Shan Policy Center of the American University of Central Asia |

COUNTRY PROGRAMME LANDSCAPE STRATEGY FOR COMMUNITY DEVELOPMENT AND KNOWLEDGE MANAGEMENT FOR THE SATOYAMA INITIATIVE (COMDEKS)

**Country: KYRGYZ REPUBLIC**

**Executive Summary**

The Satoyama Initiative focuses on the sustainable use of natural resources and protection of biodiversity in agricultural communities in Japan and around the world. It was formally adopted at the Conference of the Parties to the Convention on Biological Diversity (CBD COP10) in October 2010. In June 2011, UNDP, in partnership with the Ministry of the Environment of Japan, the Secretariat of the Convention on Biological Diversity and the United Nations University, launched the implementation of the Community Development and Knowledge Management for the Satoyama Initiative (COMDEKS) Project. The project is funded by the Japan Biodiversity Fund and has been designed to support local community activities to maintain and rebuild socio-ecological production landscapes and seascapes (SEPLS), and to collect and disseminate knowledge and experiences from successful actions for replication and up-scaling in other parts of the word. The project aims to develop sound biodiversity management and sustainable livelihood activities with local communities by providing small-scale finance to local community organizations.

The project is implemented by UNDP, and delivered through the Global Environment Facility's Small Grants Programme. The Global Environment Facility's Small Grants Programme in Kyrgyzstan joined the COMDEKS project in 2013, with the support of the UNDP country office.

The natural ecosystem and productive landscape of the coastal zone of Lake Issyk-Kul has been selected as the pilot area for the implementation of the Community Development and Knowledge Management for the Satoyama Initiative (COMDEKS) Project in Kyrgyzstan, following a decision by the National Observatory Steering Committee of GEF SGP / UNDP in Kyrgyzstan of June 10, 2013.

The Implementation Strategy for the Community Development and Knowledge Management for the Satoyama Initiative (COMDEKS) Project in Issyk-Kul Oblast is designed to identify the program's main approaches and priorities, as well as to determine the criteria for a portfolio of related projects.

The strategic priorities for the COMDEKS Project in Kyrgyzstan are:

- Protection of the natural coastal ecosystems of the Issyk-Kul lake;
- Promotion of the principles of sustainable agriculture and innovative "cyclic" natural resources management practices on the farms;
- Jointly management of natural resources through cooperation of stakeholders;
- Promotion of the local green business and green economy development, as well as promotion of environmentally-friendly local products;
- Support for socially vulnerable segments of the population, enabling environmental leadership among women and the youth;
- Development of cooperation among the communities in protected natural territories of Issyk-Kul Oblast;
- Information and knowledge sharing, creation of a database of traditional environmental knowledge and successful innovative practices.

The Strategy was developed with the involvement of all stakeholders, including local communities of Issyk-Kul Oblast as well as government organizations, scientific, public, business communities. Its development was carried out by the GEF/SGP Office in Kyrgyzstan with the support of the Tian Shan Policy Center at the American University of Central Asia (TSPC/AUCA).
The document includes a description of the pilot area, its environmental issues; key expected results and indicators, a description of possible model projects, a monitoring and evaluation plan, as well as a knowledge management plan.

## 1. Priority Area

The target landscape area is located in Issyk-Kul Oblast of the Kyrgyz Republic and represents a coastal strip around Lake Issyk-Kul (see Annex 1).

Lake Issyk-Kul is the biggest lake in Kyrgyzstan, closed-type and ranking among the 25 largest lakes of the world and the 7th in the list of the deepest lakes. It is located in the north-eastern part of the country, between the mountain ranges of the Northern Tien Shan at an altitude of 1,609 m above sea level. Being an inland lake, there are up to 80 smaller tributaries running into it. Water is saltish (salinity of water comprises 5.90 ‰). The water volume equals 1,738 km³, the water mirror area is 6,236 km², the coastline extends for 688 km, the average depth is 278 m, the maximum depth is almost 2.5 times the average and equals 702 m. Lake Issyk-Kul extends from West to East for 182 km, and from North to South for 58 km. Lake Issyk-Kul is the the second most transparent lake in the world after Lake Baikal.

The selected pilot area is limited by the surf line on one side and the highway circuit around the lake on the other. The narrowest part of the pilot area ring is about 0.5 km, and the widest (in some places on the South coast) is up to 25 km (see Annex 1).

The landscape is of mosaic type and includes natural coastal ecosystems of Lake Issyk-Kul and the surrounding areas of community household land.
7 sections of the Lake's basin, as well as 10 plots of land along its coast are under the protection of the Issyk-Kul State Reserve as wintering for 40 to 60 thousand waterfowls. Wetland and ornitological complexes of the lake are protected under the Ramsar Convention.

***Reasons for choice of the landscape***

The basis for the selection of the pilot area was the fact that **Issyk-Kul Oblast** possesses rich natural resources, landscape and biological diversity. A unique feature of the Oblast is its salty Lake Issyk-Kul which, since ancient times, has been renowned for its inimitable and unique beauty. Lake Issyk-Kul is also famous as the world's historical region with surviving monuments of antiquity.

Each year, the lake is visited by a great number of tourists from many countries. Due to the spontaneous development of tourism, the problem of the lake's preservation, especially its overly strained coastal ecosystems, has been getting most acute in recent times.

In order to improve the ecological situation in the Issyk-Kul hollow, a Biosphere Reserve was established in 1998 by a decision of the Government of KR. Within the framework of the UNESCO "Man and the Biosphere" programme, in September 2001, the "Issyk-Kel" Biosphere Territory (the only one of the kind in the territory of Central Asian countries) was included in the World Network of Biosphere Reserves.
Bio-refugiums' peculiarity is in that only environmentally-friendly economic activities are allowed in their territories. For this reason, key priorities in the development of Issyk-Kul Oblast are: sustainable agriculture, production of environmentally-friendly products, eco-tourism, conservation of biodiversity and restoration of forests and degraded lands.
This is fully in line with the objectives of the Satoyama Initiative, so implementing the COMDEKS project in Issyk-Kul Oblast may secure the most meaningful results.

***Relation to other SGP and UNDP projects in the area***

The COMDEKS project shall also contribute to the implementation and strengthening the results of the UNDP "Improving the effectiveness of the scope and management of specially protected natural areas in the mountains of the Central Tien-Shan" project supported by grant funding from the Global Environment Facility. The project will be implemented in Issyk-Kul Oblast from 2013 to 2016 jointly with the State Agency for Environment Protection and Forestry under the Government of the Kyrgyz Republic. The expected results of this project are largely related to Issyk-Kul Oblast's biodiversity conservation and an increased public awareness about the practices of sustainable natural resources management.

Implementation of the COMDEKS project in Kyrgyzstan largely meets the priorities of the GEF/SGP Country Strategy for its 5-th operating phase (January 2011-June 2014). Rehabilitation of degraded land and biodiversity conservation are the key thematic areas of this Strategy.
Implementation of the COMDEKS project is promising in terms of development and improved results sustainability of GEF/SGP projects in Kyrgyzstan aimed at the lake's biodiversity

conservation. Examples of such projects include initiatives to protect coastal ecosystems of Lake Issyk-Kul in the Balykchy City bay area and maintain populations of whooping swans (Cygnus musicus) and other wetland birds. Equally noteworthy is a pilot project for the establishment of an Issyk-Kul red-book and endemic plants nursery based on the existing Tree Park of the village of Kara-Oi located in the vicinity of the lake.

In addition, systematic collection, analysis and aggregation of the experience of best practices under the Satoyama Initiative will help to improve the results of the GEF/SGP in the upcoming GEF-6 operational phase.

## 2. Situation Analysis (threats and opportunities)

Within the framework of the Strategy's preparation, the GEF/SGP Office in KR organized field trips of experts and population surveys. The expert group included specialists on biodiversity and pastures assessment, as well as on sustainable agriculture, irrigation and renewable energy. In parallel, work was also carried out by a group of sociologists. The COMDEKS landscape baseline assessment (see more at www.gef.sgp.kg) was also carried out at the seminar held in the city Karakol in October 2014 with the participation of local communities and environmental NGOs of Issyk-Kul Oblast.

***The condition of natural ecosystems***

The majority of the population surveyed indicated a significant deterioration in all ecosystems, but particularly high-level worsening of the condition of Lake Issyk-Kul and its tributaries has taken place over the past 50 years. Experts estimate that degradation of some coastal ecosystems has reached critical values and, without urgent protection and restoration measures, degradation will become irreversible.

One of the major problems is that of destruction of natural ecosystems in the coastal zone (thickets of sea-buckthorn, bulrushes and the wetlands) that play an important role in the purification of the lake's surface and ground waters that bring in various impurities from all over the surface of the lake basin. Sanatory and agricultural development of the coastal area of Lake Issyk Kul involved tree felling and inappropriate uprooting and burning of the sea-buckthorn. As a result, the area of sea-buckthorn thickets now comprises only a few thousand hectares, and, with small area left as this, they have been severely tampered with. Considerable damage is inflicted to thickets in harvesting the sea-buckthorn, when they cut off the plant's whole branches while picking up its berries. The preserved sea-buckthorn and wetland belt areas should be urgently taken under protection.

In these circumstances, community-based nature reserves and protected areas need to be created in the coastal zones bordering on productive landscapes, with their full withdrawal from economic use.

Currently, a threat is posed by the uncontrolled fish farms, i.e. nurse-ponds from where the predatory fish species find their way into the lake, damaging the population size of *the chebak* (rudd) and other endemic fish. Studies have shown that Lake Issyk-Kul is vulnerable to the industrial-scale use of its fish resources and that only recreational fishing is permissible here. To provide fish to the population, it is feasible to develop environmentally friendly pond farms having no connection with the lake.

The majority of the respondents also agreed with the statement that, over the past 50 years, there had also been a deterioration of floodplain forests situated along the rivers flowing into the lake. On the whole, it has been noted that the pace of felling of trees exceeds that of reforestation activities, resulting in the forest area's shrinking. The situation has been also worsening with the greening of the coastal zone. In order to reduce deforestation and conserve more forests, it is important to train people in the use of renewable energy sources which have been in use on Lake Issyk-Kul since the Soviet times. In addition, it is feasible to establish nurseries of the fast-growing species, as well as endemic and red-book species of Issyk-Kul Oblast.

***The condition of the productive land:***

After the collapse of the Soviet Union and due to the transition from the collective to private property type, much of the land was abandoned and withdrawn from the economic turnover, with many of the irrigation wells in there also getting unserviceable and clogged. For this reason, large areas of productive land in the pilot area are currently left unused. In order to use this land as the productive landscape once again the following is required: rehabilitation of the wells, introduction of drip-irrigation systems, reduction of cattle grazing, revival of the traditional plant cultivation knowledge, development of greenhouse farms and other measures. Alongside with these, it is necessary to protect and restore natural ecosystems adjacent to the productive land areas.

The condition of the pastures in the lake's coastal zone, according to the local population, has deteriorated over the past 50 years, too. This is largely due to uncontrolled grazing, which eventually leads to replacement of valuable forage grasses with prickly and poisonous plants. Livestock is a source of a large number of transmissible diseases and its grazing in the beach zone therefore poses an immediate threat to human health and damages the development of tourism.

In this regard, under the pilot initiatives of the COMDEKS project, it is necessary to promote organized livestock grazing, pasture improvement and implementation of rotational grazing based on the traditional experience of the nomadic people. An example of environmentally-friendly livestock farming can be set by a farming business in the village of Tepke. Also, it is

necessary to develop alternative (to livestock production) activities, such as fruit growing, beekeeping, medicinal herbs and berries cultivation, eco-tourism, etc.

The majority of the population in the pilot area use fertilizers (mainly manure.) Some improve the soil condition by introducing humus. Only a very insignificant number of respondents indicated that household wastes were recycled in compost pits. In recent years, there has been an increase in the use of chemical fertilizers and pesticides, while it is quite dangerous to use these in the Lake Issyk-Kul's basin, as these substances can be discharged in significant concentrations back into the lake as part of the returning effluents. Thus, under the COMDEKS project, it is necessary to promote wider use of practices involving composting and cyclical use of resources. It is also necessary to establish demonstration sites of environmentally-friendly soil-saving farming without pesticides. An important element of such farming is represented by the application of water-efficient methods of irrigation such as drip irrigation, various ways of rainwater collection, etc.

***Brief description of key stakeholders***

Issyk-Kul Oblast is inhabited by more than 400,000 people, most of them employed in the sectors of tourism and agriculture. Livestock production has been the mainstream activity everywhere. Most of the livestock are sheep and goats. A small percentage of the population engages in fish farming. Arable lands are located primarily in east coastal areas, however, areas of used arable land and gardens have been increasing in recent years in the western, arid part of the basin, too. They grow potatoes and other vegetables (cucumbers, tomatoes, onions, carrots, etc.); feeding leguminous crops (sainfoin, lucerne, clover), gramineous plants and industrial crops such as sunflower. Of the fruit crops, most spread are apples, apricots, cherries and black cherries, of berries - raspberry, strawberry, gooseberry and currant. Sea-buckthorn picking is a widely spread practice.

The Oblast cannot provide all of the needed foodstuff, and many products, including flour, vegetable oil, fish, meat, etc. are imported from Kazakhstan, Russia and China. Under these conditions, enhancing food security, developing local markets and promoting local products for export come as high-priority tasks.

According to the 2013 datat, the poverty rate in Issyk-Kul Oblast was lower (28.1%) than that at the national level (38%); however, in some districts the level of poverty is very high. For example, in the city of Balykchi, and in Tyup and Ton Raions of Issyk-Kul Oblast, the poverty rate is 60-70%, and in Jety-Oguz Raion, the share of the poor population reaches 75%[1].

[1] According to the relevant team of experts of the World Bank (WB), 2013.

People living in poverty rely more on local ecosystems as a source of basic resources and overall well-being. The results of excessive use of natural resources are land degradation, soil erosion, water and soil pollution, deforestation, etc.

The land in the coastal zone is divided among the settlements, and many of the plots have been rented out by the village or town councils to individuals or community organizations. Large sections of the coastal zone belong to forest farms.

Considering that the COMDEKS project can be implemented only in the territory of the land in communal property[2], the number of communities that can do immediate work to restore productive landscapes and bordering natural ecosystems is limited and does not exceed 30 villages. Special priority in implementation of the pilot initiatives will be given to those locations that adjoin the sites of the Issyk-Kul State Reserve, as this will contribute to the conservation of ecosystems in environmental conservation buffer zones.

## 3. Landscape Strategy (Outcomes and Impact indicators)

*The overall long-term objective of the COMDEKS Country Programme Landscape Strategy for Kyrgyzstan is to protect natural ecosystems and enhance local socio-ecological production landscape resilience through community-based activities in coastal area of Lake Issyk-Kul.*

***Outcomes at the Country Programme Landscape Strategy level, and appropriate indicators include:***

| *Area of impact* | *Outcomes* | *Impact indicators* |
|---|---|---|
| ***ecosystem protection (water, habitat, soil etc.) and the maintenance of biodiversity*** | Outcome 1<br><br>Degraded landscapes and coastal ecosystems of the Issyk-Kul lake restored and sustainably managed for continued provision of the ecosystem services. | Indicator 1.1 Number of hectares (area) of degraded ecosystems in the landscape and types of ecosystem restored.<br><br>Indicator 1.2 Number of hectares (area) of degraded ecosystems in the landscape brought under sustainable land/resource management.<br><br>Indicator 1.3 Number of people within the landscape communities participating in biodiversity conservation and sustainable land management activities funded by COMDEKS (disaggregated by gender). |
| ***agricultural biodiversity*** | Outcome 2<br><br>Sustainable agricultural | Indicator 2.1 Number of hectares where more sustainable land use and agricultural practices are implemented by type ( i.e. traditional and innovative |

[2] For example, resorts, private and forestry holdings that spread out for many kilometers along the coast of Lake Issyk Kul do not fit in this prioritization.

| | | |
|---|---|---|
| | practices implemented across the landscape to enhance and revive traditional conservation and production practices and adoption of eco-innovative technologies. | practices).<br><br>Indicator 2.2 Number of communities participating in sustainable agricultural practices promoted by COMDEKS at the landscape level. |
| ***Social equality and infrastructure*** | Outcome 3<br><br>Livelihood and wellbeing of target social groups within the landscape sustained and enhanced through the development of the livelihood enterprises in line with the local tradition and culture. | Indicator 3.1 Increase in household income and assets as a result of supported activities.<br><br>Indicator 3.2 Number and type of livelihood enterprises and./or alternative income sources established and sustained. |
| ***Knowledge, learning and innovation*** | Outcome 4<br><br>Strengthened institutional capacity at the landscape level to revitalize the goal of integrating conservation and production in the management of the target landscape. | Indicator 4.1 Number of institutions (or participatory governance mechanisms) created or strengthened who are engaged in integrated landscape management.<br><br>Indicator 4.2 Number and type of plans and decisions relevant for the target landscape agreed and implemented.<br><br>Indicator 4.3 Number of COMDEKS lessons learned and best practices captured at the programme level. |

## *4.* Typology of potential community-based projects and criteria for project selection

***The main criteria for the selection of projects are:***

- *Ability to achieve socio-ecological production landscape resilience and contribute to the CPLS' outcomes*
- *Project activities should include a description of how they might address ecosystem functions (water, habitat, carbon, soil, etc.) and conservation of biodiversity, local livelihoods, agricultural production, and institutional structures.*
- *Project activities include either revival of traditional conservation or production practices and the adoption and development of new techniques.*
- *Strategic importance of the project for the target landscape (i.e. biodiversity value and hotspots); projects that address multiple threats or needs.*
- *Ability of the project to affect the entire site through replication;*
- *The projects has evidence for linking income generation to conservation;*

- *The projects that address innovative areas and address policies are desirable;*

***Possible eligible projects will include:***

1. Example of eligible activities under *Outcome 1 - Degraded landscapes and coastal ecosystems of the Issyk-Kul Lake restored and sustainably managed for continued provision of the ecosystem services.*

- *restoration of degraded land in the coastal zone of the lake taking into account climate change adaptation measures;*
- *forest restoration activities (protection and restoration of riparian tugai forests and bushes) in order to enhance landscape connectivity and increase landscape resilience;*
- *re-vegetation in drylands;*
- *restoration of wetlands near the lake;*
- *zoning of the coastal areas and creation of the ecological corridors and community coastal ecosystem reserves in order to enhance landscape connectivity;*
- *creation of the nurseries of wild endemic and red-book plant species;*
- *restoration of the populations of animal and plant species of Lake Issyk-Kul's coastal zone listed in the Red Book of KR.*

2. Example of eligible activities under Outcome 2 – *Sustainable agricultural practices implemented across the landscape to enhance and revive traditional conservation and production practices and adoption of eco-innovative technologies.*

- *development of sustainable agriculture, application of methods of permaculture, bioorganic farming in the areas bordering the coastal ecosystems of the lake;*
- *sustainable pasture management in the coastal zone of the lake;*
- *protecting and enhancing ecosystem services such as water flows and water quality through restoration of forest patches and soil and water retention infrastructure;*
- *diversification of agricultural landscapes (agroforestry);*
- *low-input agriculture, soil conservation and improved water management and water efficiency (mulching, cover crops, , re-vegetation, fallow, intercropping, crop rotation);*
- *creation of the demonstration zones of the water-efficient technologies, including drip irrigation, rainwater harvesting, etc.;*
- *adjustments in crop and herd management (changes in crop and herd management).*

3. Example of eligible activities under *Outcome 3 – Livelihood and wellbeing of target social groups within the landscape sustained and enhanced through the development of the livelihood enterprises in line with the local tradition and culture.*

- *promotion of innovative practices at the pond farms to mitigate the strain on Lake Issyk-Kul such as hydroponics, restoration of populations of red-book fish species, etc;*
- *development of sustainable farming practices as an alternative to animal husbandry - beekeeping, cultivation of medicinal herbs, energy-efficient greenhouses, eco-tourism;*
- *creation of the fast-growing tree species in order to protect local natural forests from cutting;*
- *use of renewable energy sources (RES) to reduce the felling of coastal thickets of shrubs and to restore land productivity.*

4. Examples of eligible activities under *Outcome 4 – Strengthened institutional capacity at the landscape level to revitalize the goal of integrating conservation and production in the management of the target landscape.*

- *Development of the cost-valuation maps for climate change adaptation measures in the coastal zone of Lake Issyk-Kul ;*
- *Capacity building of the people in the targeted communities and raising quality of environmental education in schools ( knowledge about bioindication, restoration of ecosystem in practice, drip irrigation, use of renewable energy, eco-tourism, etc.)*
- *Creation an exhibition on the biodiversity of Lake Issyk-Kul and its conservation*
- *Issuing publications on biodiversity of Lake Issyk Kul and methods of sustainable agriculture*
- *Capturing and documentation of traditional knowledge in natural resources sustainable management*
- *Establishment of the school of sustainable farming and appropriate networking.*
- *The Issyk-Kul Oblast media has been involved in the system dissemination of knowledge and information on successful practices under the COMDEKS project.*

***Country portfolio of the possible community projects can contribute to the above mentioned COMDEKS Strategy outcomes:***

***Outcome 1***

- *At least 3 demonstration projects aimed at protection of sea-buckthorn thickets growing around the lake from logging and spontaneous tourism through sustainable joint management of beach areas, restoration of damaged thickets and setting up thorned/thornless sea-buckthorn nurseries. Projects may indirectly contribute to the development of eco-tourism, environmental education and the use of RES installations for crops harvesting and promotion of eco-friendly products from the sea buckthorn. These projects can be implemented in the villages of Toru-Aigyr, Grigoryevka, Jenish, Orgochor, Ton and Manjyly-Ata.*

- *At least 1 demonstration pilot project aimed at the use of innovative methods of remediation of contaminated soils in the coastal region of Lake Issyk-Kul by using soil bacteria and fungi biocultures. A coastal stretch at the Balykchy City bay may serve as an example of a possible site for such a project's implementation, where restoration of the soil will make it possible to involve women and young people in growing medicinal herbs, currant and sea-buckthorn in the restored soils. Soil purification and protection at the site will also have a positive impact on wetland birds biodiversity conservation, including the whooping swan listed in the Red Book of KR and IUCN.*
- *At least 1 demonstration project to promote conservation of wetland ecosystems around the lake and rare amphibians through the creation of a specialized pond for their reproduction, as well as the creation of a nursery for fast-growing tree varieties to develop practices that provide an*

*alternative to cattle breeding in the coastal territories and reduce the strain (reduce deforestation) on the ecosystems.*

***Outcome 2***

- *At least 1 project for establishing a large nursery of rare, endemic species and red-book fruit plants of Issyk-Kul Oblast which will provide a basis for further distribution of these species to farms, resorts, etc. This site can also be used to showcase the benefits of drip irrigation and solar pumps. A possible location for such a project's implementation is the village of Kara-Oi.*
- *At least 1 project aimed at sustainable pasture management in the coastal zone and establishment of a community reserve for the protection of coastal thickets. A possible location for such a project's implementation is the village of Chon Sary Oi.*
- *At least 1 project aimed at setting up an environmentally-clean farm with a cyclic movement of resources, which will provide the basis for training the farmers of Issyk-Kul Oblast. A possible location for such a project's implementation is the village of Grigoryevka and Boz-Bulun village near the city of Karakol.*

***Outcome 3***

- *At least 1 demonstration project for setting up a demonstration pond farm contributing to wetland ecosystems conservation and allowing reduction of the strain on the critically endangered fish reserves of Lake Issyk-Kul. A possible location for such a project is the village of Lipenka.*
- *At least 1 project promoting the development of beekeeping in the buffer zone of the Issyk-Kul Reserve as a way to reduce the strain on local ecosystems. This project can also serve the purpose of the recovery and further spread out of beekeeping in Issyk-Kul Oblast, because previous knowledge about beekeeping has been largely lost. A possible location for such a project is the village of Ak-Dobo.*


***Outcome 4***

- *At least 1 project aimed at disseminating public knowledge about the biodiversity of Issyk-Kul Oblast, conservation practices, as well as the collection, analysis and systematization of traditional knowledge of sustainable management of productive landscapes in Issyk-Kul. Under this project, there may be proposals to publish a specialized bulletin for farmers, conduct training seminars, as well as set up exhibitions of best practices under the COMDEKS project on the basis of the City of Balykchi.*

***Criteria for NGO/CBOs selection:***

- Confirmed (documented) legal status of an NGO/Jamaat in Issyk-Kul Oblast;

- The ability to implement a community-based project that will need to meet the priorities of the strategy. (ability to deliver community projects that fit within the country programme landscape strategy) i.e. have a team that has the required project management skills and knowledge related to the project;
- Have a direct link with the community of the village where a pilot project is to be implemented; secure the respect and trust of the community members;
- The ability to mobilize additional financial, material and human resources;
- The willingness to share knowledge with other communities and to facilitate their dissemination.

***Strategies to be used to engage with NGOs/CBOs.***

In order to motivate the local non-governmental organizations and local organizations to directly participate in the implementation of the COMDEKS project, the GEF/SGP Office in Kyrgyzstan shall call for an open competition for environmental projects aimed at the development of sustainable agriculture contributing to the conservation of the coastal ecosystems of the lake.

Many initiative teams will be also interested in the idea of a "green" entrepreneurship development, testing innovative cyclic methods of natural resources management on the farms and promotion of environmentally-friendly local products. COMDEKS will also provide an opportunity to improve the quality of life of socially vulnerable groups of the population through the development of women's and youth environmental leadership;

***Expected frequency of SGP National Steering Committee meetings.***

Meetings of the NSC under the COMDEKS project will take place no less than 3 times a year in order to be able to expeditiously consider applications from local communities, provide feedback and plan projects monitoring and evaluation.

Since the composition of the GEF/SGP NSC in Kyrgyzstan includes UNDP representatives, as well as representatives of experienced and influential public organizations, this will permit the National Coordinator to involve them in the negotiations at the local and national level to mobilize additional financial and material resources.

The NSC meetings will also consider the options for promoting the achievements of the COMDEKS project at the national level and their inclusion in the relevant policies.

The NSC member for Issyk-Kul Oblast will maintain the necessary feedback from pilot project coordinators, communities and other stakeholders. NSC members from other regions will be

able to provide necessary expertise in areas such as: conservation of biodiversity, sustainable agriculture, drip irrigation, renewable sources of energy, greenhouse farming, etc.

## 5. Monitoring and Evaluation Plan

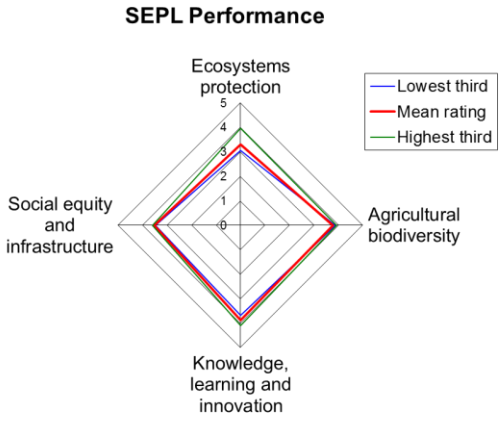
***The consultative process on the development of the Strategy involved the following steps:***

- In the first phase, the GEF/SGP National Coordinator in Kyrgyzstan with the support of TSPC/AUCA held talks with Government and international agencies such as the State Agency for Environment Protection and Forestry, the UNDP Country Office in Kyrgyzstan, UNDP's environmental programme, the UNDP democratic governance program, the UNDP project for the development of small hydropower stations, JICA, the Embassy of Japan in Kyrgyzstan, the Ellen MacArthur Foundation and others. The consultative process also involved representatives of business structures (the Kumtor operating company, "Ilim" LLC and public organizations (more than 30)). Based on the results achieved, the GEF/SGP National Coordinator in KR has compiled a list of possible joint initiatives, as well as that of local communities where COMDEKS projects' implementation can reach the best results thanks to the combination of efforts, funding and expertise.

In the second phase, TSPC of AUCA organized a group of experts, including experts on biodiversity, ecosystems productivity assessment, sustainable agriculture, sociology, as well as irrigation and the use of renewable energy. The group went on a field trip to the sites of the proposed joint initiatives around Lake Issyk-Kul. The group of experts and GEF SGP National Coordinator visited more than 50 communities around the Issyk-Kul lake. In general more than 20 presentations and small workshops about COMDEKS and Satoyama initiative were conducted. In each place the discussions were organized in focus groups, and each community delegated their representative to take place in the baseline assessment workshop. In general more than 280 people were involved into discussion and development of the priorities of the COMDEKS Country Landscape Strategy.

The baseline assessment workshop took place in the city of Karakol in October 2013. At the seminar, a landscape assessment of the pilot area using the Resilience indicators was carried out with the participation of the local communities. In general 18 people (delegates of their communities) participated in the scoring of the resilience indicators. Both men and women were presented equally. As part of the community consultation process, indicators

for Resilience in Socio-ecological Production Landscapes and Seascapes (SEPLS) were piloted in the target seascape. This piloting exercise and the feedback received will help UNDP and other IPSI members refine the overall methodology for measuring and understanding landscape/seascape resilience. The practical application of the indicators during the baseline assessment was conducted by measuring elements of SEPL resilience along four interrelated dimensions, namely, ecosystems protection and the maintenance of biodiversity; agricultural biodiversity; knowledge, learning and innovation; and social equity and infrastructure. The highest mean ratings were given to indicators in Sections "Knowledge, learning and innovation" (3.87) and "Agricultural biodiversity" (3.78). The lowest average score among the four Sections was given to the category of "Ecosystems protection" (3.32). However, it should be noted that the variation of points issued by the participants in this Section was the highest, that is, their answers were more varied compared to those in other topics. There was relatively more accord observed in responses on indicators assessment in Section "Social equity and infrastructure". Based on the results of the Workshop as well as expert studies and the recommendations proposed, the first version of the Strategy was compiled and discussed at a NSC meeting in December 2013. Upon its review by the COMDEKS Project Manager, the final version of the document was presented at a subsequent NSC meeting.

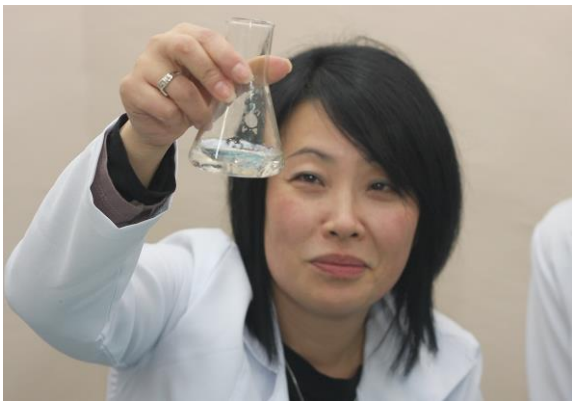



**Participation of the local stakeholders in monitoring**

At the Issyk-Kul Oblast level, talks on the priorities and cooperation were conducted with the Issyk-Kul Oblast Governor, the General Directorate of the Biospheric Territory "Issyk-Kul" and the Issyk-Kul Nature Reserve's administration. The GEF/SGP Office in KR have agreed that representatives of these agencies will be directly involved in monitoring the COMDEKS pilot initiatives and provide advisory support to the communities. The GEF/SGP Office in KR will also select a member of the National Steering Committee for Issyk-Kul Oblast who will be responsible for monitoring the COMDEKS project and maintain feedback.

***Monitoring and Evaluation plan for the portfolio of individual SGP projects***

***Monitoring of the pilot projects undertaken under the COMDEKS initiative shall include 5 levels of monitoring:***



***Monitoring the current project activity*** **-** will be implemented by project coordinators from the communities. Also, in order to ensure transparency and efficiency within each pilot initiative, a Project Management Committee shall be set up which will include all the stakeholders (representatives of local authorities, entrepreneurs, women's and youth committees, elders, etc.) Prior to project approval, each project will have to identify the specific landscape strategy outcome to which it is contributing and will monitor the corresponding indicators. Progress towards the outcome will be updated using the grantees' progress reports. Additionally, the individual project will have an indicator system aligned with GEF SGP OP5 indicators.

***Monitoring carried out by a NSC member for Issyk-Kul Oblast*** who will constantly keep in touch with the leaders of the pilot projects, local authorities, representatives of communities; regularly visit the to project sites, as well as inform the National Coordinator of emerging problems or successes achieved during the implementation of projects. NSC members from other regions of Kyrgyzstan will also be involved in the monitoring process. For this purpose, the GEF/SGP Office shall organize specialized field visits.

***Monitoring by the GEF/SGP National Coordinator*** who shall make regular field visits to the project implementation sites, meet with interested partners, attract additional funds, as well as ensure the achievement of the key objectives of the project as per COMDEKS indicators.

***Monitoring carried out by the representative of the UNDP country office*** in Kyrgyzstan who shall contribute to the achievement of synergy projects in the territory, the efficient use of resources, exchange of information, improving opportunities for the expert examination, as well as the development of cooperation between GEF/SGP and UNDP at the regional and national levels. It is planned that this type of monitoring shall be conducted no less than once in a year.

***Monitoring carried out by the representative of the State Agency for Environment Protection and Forestry of KR–*** will serve the purposes of ensuring the COMDEKS project's openness and transparency for the State structures, as well as promote the initiative's positive results in the relevant national policies. It is planned that this type of monitoring shall be conducted at least 2 times per year.

***Country Programme Landscape Level M&E*****:** The SEPL scorecard will be utilized at a defined timeframe annually to measure and document change against the baseline assessment values generated in November/December 2013. A final assessment of SEPL indicators will take place at a workshop financed by a grant. This will serve as a final evaluation of the Country Programme Landscape Strategy.

## 6. Knowledge Management Plan

***Plans for capturing, sharing, and disseminating the lessons learned and good practices identified through the project***

In order to ensure the collection and documentation of positive practices and lessons learned during the implementation of the COMDEKS initiative, each of the pilot initiatives in the program's portfolio shall include knowledge management measures. Since knowledge management is a primary component of COMDEKS, significant effort will be placed into external communication of the lessons learned from the project. Each community project is required to allocate a portion of its budget to knowledge management, and the production of knowledge management products (i.e. videos, publications etc.).

The experience of each pilot initiative shall be drawn in the form of a brochure describing the experience acquired and containing photos, measurements, etc. Where appropriate, video materials shall be produced.

The GEF/SGP Office shall also act to set up a network of Issyk-Kul Oblast NGOs that will be involved in the process of dissemination of brochures, providing advice to the public, including farmers.

It is planned to formalize the positive experience of the initiative also in the form of a permanent exhibition for the public and tourists at the entrance to the city of Balykchi in Issyk-Kul oblast.

In addition, the COMDEKS project posters shall be placed in the Issyk-Kul State University (the city of Karakol), as well as in the building of the General Directorate of the Issyk-Kul BiosphereTerritory "Issyk-Kul" (the city of Balykchi).

All information materials shall be also available on the GEF/SGP website.

***Ways on how the SGP Country Programme will use knowledge to inform and influence policy at the local, regional and national levels***

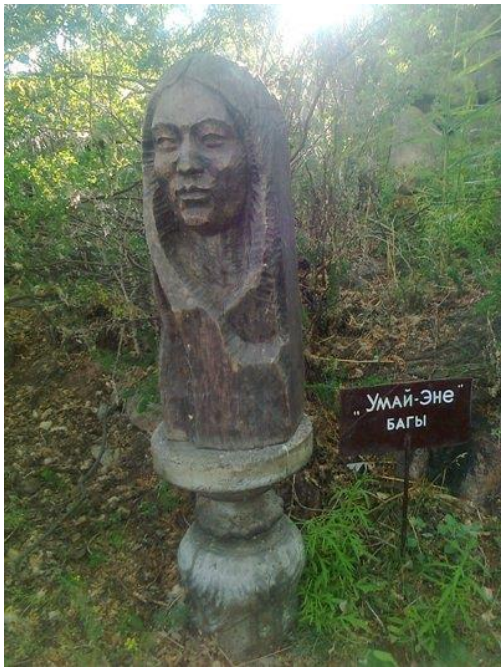
***At the local level,*** under the pilot initiatives of the COMDEKS project, informational and educational meetings with the population shall be held, including representatives of local authorities, community leaders, farmers' and water users' Association, pasture committees, women's and youth groups, etc. The best experience under the program shall be set forward as an example for wide distribution and inclusion in the local development plans of villages of Issyk-Kul Oblast.

Also, within the framework of GEF/SGP's cooperation with the Embassy of Japan, posters shall be circulated among all rural districts administrations throughout 2014 and 2015 on coastal

ecosystems conservation measures, biodiversity of Lake Issyk-Kul, as well as a leaflet on the ecology of the Lake.

***At the Oblast level,*** the GEF/SGP Office shall cooperate with the administration of Issyk-Kul Oblast, informing the Governor and his team on the positive examples and lessons learned during the implementation of the initiative. The best experiences under the COMDEKS project shall be offered as examples for the wide dissemination and integration into the development plans of Issyk-Kul Oblast, as well as the Strategic Plan for the Development of the "Issyk-Kel" Biosphere Territory.
To liaise with the public, it shall be feasible to create a specialized electronic mailing system for NGOs in Issyk-Kul Oblast so as to ensure a widespread and timely dissemination of information on the COMDEKS project news to the public.

In cooperation with the National Centre of Climate Change the project shall also develop Issyk-Kul Oblast's landscape forecasting maps inclusive of climate changes; a map of of climate change adaptation costs has been compiled already along with practical recommendations on adaptation and mitigation.




At the national level, the COMDEKS project shall contribute to the implementation of the objectives within the National Strategy for Sustainable Development of Kyrgyzstan for the period of 2013-2017, where sustainable agricultural development has been set as a national priority.

***Ways on how the SGP Country Programme will use knowledge to replicate and up-scale COMDEKS good practices and lessons learned at the country, landscape, community and farmers levels.***

To replicate and promote the COMDEKS project's experience, the GEF/SGP Office shall organize within its GEF-6 operating phase educational seminars for communities and farmers in other six oblasts (Chui, Talas, Naryn, Osh, Jalalabad and Batken).
It shall be appropriate to disseminate information on best practices under the COMDEKS project through the field offices of UNDP in the Kyrgyz Republic, as well as other international organizations.
GEF/SGP will also encourage visits to share experiences in Issyk-Kul Oblast within the framework of the GEF-6 operational phase.

***Annex 1*** *The map of the project landscape and proposed location of subprojects in Issyk-Kul Oblast of the Kyrgyz Republic*


| | | |
|---|---|---|
| Bioremediation | Permaculture | Dendroparks |
| Sea-buckthorn nurseries | Central Asian frog protection | Appletrees growing |
| Ramsar convention | Beekeeping | Environmental education |
| Birds watching | Fisheries | Ethno-tourism |

**Annex 2 Project planning matrix**

| *Area of impact* | *Outcomes* | *Impact indicators* | *Eligible projects* |
|---|---|---|---|
| ***ecosystem protection (water, habitat, soil etc.) and the maintenance of biodiversity*** | Outcome 1<br><br>Degraded landscapes and coastal ecosystems of the Issyk-Kul lake restored and sustainably managed for continued provision of the ecosystem services. | Indicator 1.1 Number of hectares (area) of degraded ecosystems in the landscape and types of ecosystem restored.<br><br>Indicator 1.2 Number of hectares (area) of degraded ecosystems in the landscape brought under sustainable land/resource management.<br><br>Indicator 1.3 Number of people within the landscape communities participating in biodiversity conservation and sustainable land management activities funded by COMDEKS (disaggregated by gender). | • *restoration of degraded land in the coastal zone of the lake taking into account climate change adaptation measures;*<br>• *forest restoration activities (protection and restoration of riparian tugai forests and bushes) in order to enhance landscape connectivity and increase landscape resilience;*<br>• *re-vegetation in drylands;*<br>• *restoration of wetlands near the lake;*<br>• *zoning of the coastal areas and creation of the ecological corridors and community coastal ecosystem reserves in order to enhance landscape connectivity;*<br>• *creation of the nurseries of wild endemic and red-book plant species;*<br>• *restoration of the populations of animal and plant species of Lake Issyk-Kul's coastal zone listed in the Red Book of KR.* |
| ***agricultural*** | Outcome 2 | Indicator 2.1 Number of hectares where more sustainable land use | • *development of sustainable* |

| | | | |
|---|---|---|---|
| ***biodiversity*** | Sustainable agricultural practices implemented across the landscape to enhance and revive traditional conservation and production practices and adoption of eco-innovative technologies. | and agricultural practices are implemented by type ( i.e. traditional and innovative practices).<br><br>Indicator 2.2 Number of communities participating in sustainable agricultural practices promoted by COMDEKS at the landscape level. | *agriculture, application of methods of permaculture, bioorganic farming in the areas bordering the coastal ecosystems of the lake;*<br>• *sustainable pasture management in the coastal zone of the lake;*<br>• *protecting and enhancing ecosystem services such as water flows and water quality through restoration of forest patches and soil and water retention infrastructure;*<br>• *diversification of agricultural landscapes (agroforestry);*<br>• *low-input agriculture, soil conservation and improved water management and water efficiency (mulching, cover crops, , re-vegetation, fallow, intercropping, crop rotation);*<br>• *creation of the demonstration zones of the water-efficient technologies, including drip irrigation, rainwater harvesting, etc.;*<br>• *adjustments in crop and herd management (changes in crop and herd management).* |
| ***Social equality and infrastructure*** | Outcome 3<br><br>Livelihood and wellbeing of target | Indicator 3.1 Increase in household income and assets as a result of supported activities. | • *promotion of innovative practices at the pond farms to mitigate the strain on Lake Issyk-Kul such as* |

| | | | |
|---|---|---|---|
| | social groups within the landscape sustained and enhanced through the development of the livelihood enterprises in line with the local tradition and culture. | Indicator 3.2 Number and type of livelihood enterprises and./or alternative income sources established and sustained. | *hydroponics, restoration of populations of red-book fish species, etc;*<br>• *development of sustainable farming practices as an alternative to animal husbandry - beekeeping, cultivation of medicinal herbs, energy-efficient greenhouses, eco-tourism;*<br>• *creation of the fast-growing tree species in order to protect local natural forests from cutting;*<br>• *use of renewable energy sources (RES) to reduce the felling of coastal thickets of shrubs and to restore land productivity.* |
| ***Knowledge, learning and innovation*** | Outcome 4<br><br>Strengthened institutional capacity at the landscape level to revitalize the goal of integrating conservation and production in the management of the target landscape. | Indicator 4.1 Number of institutions (or participatory governance mechanisms) created or strengthened who are engaged in integrated landscape management.<br><br>Indicator 4.2 Number and type of plans and decisions relevant for the target landscape agreed and implemented.<br><br>Indicator 4.3 Number of COMDEKS lessons learned and best practices captured at the programme level. | • *Development of the cost-valuation maps for climate change adaptation measures in the coastal zone of Lake Issyk-Kul ;*<br>• *Capacity building of the people in the targeted communities and raising quality of environmental education in schools (knowledge about bioindication, restoration of ecosystem in practice, drip irrigation, use of renewable energy, eco-tourism, etc.)*<br>• *Creation an exhibition on the biodiversity of Lake Issyk-Kul and its conservation* |

| | | | |
|---|---|---|---|
| | | | • *Issuing publications on biodiversity of Lake Issyk Kul and methods of sustainable agriculture*<br>• *Capturing and documentation of traditional knowledge in natural resources sustainable management*<br>• *Establishment of the school of sustainable farming and appropriate networking.*<br>• *The Issyk-Kul Oblast media has been involved in the system dissemination of knowledge and information on successful practices under the COMDEKS project.* |

Annex 3 Map of the "Issyk-Kel" biosphere reserve