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Strengthening policy and regulatory framework for mainstreaming biodiversity into fishery sector

Kyrgyzstan has over 900 mountain lakes and in most of them the native fish species are seriously threatened by alien species and over fishing. The primary root causes to the predicted loss of endemic species and the associated threat of extinction are: (i) a massive increase in unregulated fishing over recent years; (ii) a virtual cessation of the artificial restocking of the lake with juveniles of the 4 commercially endemic species; and (iii) the introduction of alien predatory species that are currently not subject to any control or eradication activities. The Government of Kyrgyzstan is trying to provide a long-term prospect in promoting the sustainable development of national resources, and fisheries development in particular. However, a number of barriers constrain the attention that can be paid to integrating the requirements for endemic fish conservation into the fishery management regime. The project strategy is to address the overall concerns relating to fisheries management in Kyrgyzstan by demonstrating a new fishery management regime within Lake Issyk Kul as it relates to: (i) the conservation of globally significant biodiversity (endemic fish species); and (ii) within the context of socio-economic concerns, especially poverty and livelihoods. One of the key elements of the project is the Biodiversity Friendly Fisheries Management Regime (BDFMR) which will be a package of national laws, by-laws and regulations developed and enforced with the objective of stabilizing the endemic fish species in the lake within the framework of a viable, sustainable and enforceable commercial fishery. Stabilization will be achieved through limiting current fishing, controlling the size of introduced species, as well as restocking native species. The project will create the mechanism to ensure that the lessons learned in this project will be captured and replicated initially to other large lakes in Kyrgyzstan with high economic values for fisheries.

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Acronyms

APR	Annual Project Review
AWP	Annual Work Plan
BDFMR	Biodiversity friendly fishery management regime
CAREC	Regional Environmental Centre for Central Asia
CARNet	Environment and Sustainable Development in Central Asia and Russia – Information Network (www.caresd.net)
EA	Executing Agency (of GEF)
FAC	Fisheries Advisory Committee
FAO	Food and Agricultural Organisation (United Nations)
GDP	Gross Domestic Product
GEF	Global Environment Facility
GTZ	German Technical Cooperation
IA	Implementing Agency
IR	Inception Report
IW	Inception Workshop
LakeNet	World Lakes Network www.worldlake.org
MAWRPI	Ministry for Agriculture, Water Resources and Processing Industry
M&E	Monitoring and Evaluation
MSP	Medium Sized Project
NGO	Non-Governmental Organisation
OP	Operational Programme (of GEF)
PB	Project Board
PD	Project Director
PDF	Project Development Facility of the GEF
PIRs	Project Implementation Reviews
RCU	Regional Coordinating Unit
SAEF	State Agency of the Environment and Forestry
ToR	Terms of Reference
TPR	Tripartite Review
TTR	Terminal Tripartite Review
SAEF	State Agency on Environment and Forestry
UNDP	United Nations Development Programme
UNDP CO	United Nations Development Programme – Country Office
UNDAF	United Nations Development Assistance Framework

SECTION I - ELABORATION OF THE NARRATIVE

PART A - Situation Analysis

A.1 Environmental Context

1. The Republic of Kygyzstan's diverse range of landscape types and microclimates leads to a corresponding diversity of ecosystems. Anthropogenic systems occupy about 7% of the Republic's territory while the remaining 93% is represented by undisturbed or only moderately disturbed natural ecosystems. Despite its size, the Kyrgyz Republic has a relatively high species-richness; possessing nearly 1% of all known species in just 0.13% of the world's land mass. However, recent declines in many species have become evident, and 9.5% of bird species and 18.1% of mammal species are now considered to be at risk of extinction. Furthermore, a number of rare and valuable ecosystems have now nearly disappeared.

2. Kyrgyzstan has over 900 mountain lakes and in most of them the native fish species are seriously threatened by alien species and over fishing. Lake Issyk-Kul is the second largest high altitude lake in the world lying at 1,608 m above sea level, and is one of less than 20 ancient lakes on the planet (having an estimated age of 25 million years). Lake Issyk-Kul is a Ramsar site of globally significant biodiversity and forms part of a Biosphere Reserve. The lake contains highly endemic fish biodiversity, and some of the species, including four endemics, are highly endangered.

3. It is situated in a basin surrounded by high mountains some 150 km east of Bishkek, the capital city of the Kyrgyz Republic, and represents a major biological and economic resource to the country. The mountain ranges of Kungei Ala-Too in the north reach 4700 m, and those of Terskei Ala-Too in the south reach 5200 m. These mountains represent the major part of the Issyk-Kul catchment area which covers approximately 22,000 km^2 and which provides much of the water to the lake (Savvaitova and Petr, 1999). Many rivers flow into the lake (between 100-180), but only two of these are permanent (Konurbaev and Timirkhanov, 2003). Issyk-Kul is 108 km long and 60.1 km wide with a surface area of 6,236 km^2 and a shoreline length of 669 km. The mean depth is 278 m, and maximum depth 668 m. The major productive zone of the lake (0-100 m depth) covers nearly 40% of the lake area. This is a closed lake and hence its waters are slightly saline (around 5.9 - 6.1 $g.l^{-1}$) which means that the lake never freezes, a significant factor for associated biodiversity, and one which contributes to its importance as a stopover point for migratory birds. The lake water level is subject to considerable fluctuation, both within the same year and over longer periods. However, since 1986 the decline in water level has stopped and the lake level has started to rise again at around 15 – 20 cm per year (Savvaitova and Petr, 1999). Surface water temperature is around 19 – 24°C in summer and 4 – 5°C in winter. The water is well oxygenated as a result of regularly mixing by strong winds.

4. Issyk-Kul is rich in phytoplankton, with close to 300 taxa identified. Blue-green algae (Cyanophyceae) dominate, but their standing crop is low. Macrophytes extend to 1.5 m depth and attached algae to 30-40 m. Zooplankton includes 117 taxa and is dominated by rotifers (98), followed by cladocerans (11) and copepods (8). Zooplankton and phytoplankton distribution in the lake is uneven, with bays and shallows being richer than open water. Zoo benthos comprises 224 taxa. Most benthos occurs between the shoreline and 40 m depth. The mean annual biomass of zoobenthos is 8-10 $g.m^{-2}$. Chironomids, molluscs, gammarids and mysids comprise 6-8 $g.m^{-2}$ of the total. Three mysid species introduced into Issyk-Kul from Lake Balk hash in 1965-1968 are now permanently established in shallows, mostly in 1.5-1.8 m depth, but reaching down to 10 m. (Savvaitova and Petr, 1999).

5. The lake supports a total of 26 species of fish, of which 12 are endemic to the lake and its drainage basin, 4 are central Asian endemics and ten have been introduced (these figures vary slightly according to which source is consulted). One of the introduced species, the Sevan Trout is now considered to have evolved into a subspecies. For a full list of species and their origins see Annex C.2.

6. The lake is internationally-renowned for its highly-endemic species. In October 2003 an unrecognised specimen of fish was caught by a local fisherman. The fish was later identified by a fisheries expert and Deputy-Director of the Biosphere Reserve as being the Naked Osman (*Diptychus dybowskii* Kessl.). This was of major significance as, prior to this capture, the species had been thought to have become extinct and had not been seen in the lake for more than 4 years, despite intensive efforts to catch it and to document its existence prior to attempting to restore the population. It is the introduction of the Sevan Trout that is thought to have driven the Naked Osman to the brink of extinction. The lake is generally characterised by low productivity of fish, with calculated yields of around 1.5 – 2 $kg.ha^{-1}$ reported (Konurbaev and Timirkhanov, 2003). With an area of 6236 km^2 this gives a theoretical maximum yield of approximately 900 – 1,200 $mt.yr^{-2}$ (tonnes per year). The National Biodiversity Strategic Action Plan highlights the problems of poaching, the overall reduction in fisheries as a result of lack of control and management, and the consequent decline of many fish species (including several endemics).

A.2 Socio-economic context

7. During the Soviet era, fishing was regulated by the state. The shallow zone of the lake was divided into 40 fishing sites in an attempt to spread fishing pressure across all areas. Commercial fishing is believed to have started on the lake in the 1890s; it was at first relatively disorganised and concentrated on 5 species of fish. Before the introduction of new fish species, catches were mainly composed of Chebak, Chebachok, Sazan Carp, Marinka and Sheer Osman. Chebachok was the dominant species and accounted for around 90% of the overall catch.

8. The first attempts at acclimatization of non-native species were launched in 1930 when the Sevan Trout *(Salmo ischchan gegarkuni)* was released into Lake Issyk-Kul. In the early 1950s, other non-native species began to be introduced. Between 1956 and 1958 the lake was stocked with Bream (*Abramis brama orientalis*) and Zander or Pikeperch (*Stizostedion lucioperca*), both of which migrated to the eastern part of the lake, where they found suitable habitat. Also introduced were Khramul and Carp; with them came other species, including Tench, (*Tinca tinca*) and Crucian Carp (*Carassius auratus gibellio*). In the early 1970s, efforts to reconstruct fish stocks in Issyk-Kul took a new direction. The plan was to turn the lake into a reservoir for trout and white fish, and to gradually reduce the numbers of Chebachok to a bare minimum. To this end, the Sevan Whitefish (*Coregonus lavaretus*), the Pelyad (*Coregonus peled*), and the Baikal Omul (*Coregonus autumnalis migratorius*) were introduced into Issyk-Kul. At present there is no evidence of Pelyad in the lake, but the White Fish has established itself as a major component of the Issyk-Kul ichthyofauna. The numbers of native species have diminished, and some, including the Naked Osman, are on the verge of disappearing entirely. Some introduced species, notably the Zander and Sevan Trout (voracious piscivores) and the Bream (feeding on fish eggs) have been implicated in the reduction in numbers of endemic fish in the lake (see Biological Characteristics above).

9. Annual catches in the Lake peaked around 1,200 mt at the beginning of the 1960s, which is around the theoretical calculated maximum production from the lake. At that time, an additional 500 mt per year was produced in the fish ponds surrounding the lake. In recent years, the fishing industry of the Kyrgyz Republic has experienced many dramatic changes, leading to a sharp decrease in public sector involvement and a strengthening of the private sector in both fishery and fish farming activities. Catches have declined substantially:

Table 1: Reported Annual Catches (metric tonnes) in Lake Issyk-Kul for various years between 1965 and 2003

Year	**Weight (mt)**							**Total mt)**
	Chebak	Chebachok	Pikeperch	Trout	Sig	Bream	others	
1965	3.2	125.7	2.0	-	-	-	2.6	133.5
1968	2.3	101.0	3.8	0.45	-	0.2	1.25	109.0
1975	7.7	68.6	11.2	4.7	-	0.2	0.5	92.7
1980	3.6	22.4	3.6	4.0	0.5	0.15	0.2	34.4
1985	1.4	8.6	2.2	1.3	2.3	1.5	0.1	17.4
1990	3.2	16.3	3.2	1.8	2.1	0.7	0.5	27.8
1992	1.9	9.0	2.1	0.7	1.5	1.5	0.2	16.9
2003	0.25	0.5	0.15	-	-	0.05	0.05	1.0

10. It should be noted that these figures are from official statistics and that significant quantities of illegally caught fish will have bypassed the data collection system. The NBSAP notes that most of the fishing trade is from poaching. It should further be noted that the decline in recorded fish catches also reflects a combination of weak fish stocks and weak data capture. However, it is still apparent that fish catches from the lake are at an extremely low level compared to historical values.

11. The geographical position of the Kyrgyz Republic and the distance from landing sites to the consumption and processing sites in urban areas increases costs, which places the domestic product at a disadvantage to imported products and renders the product less attractive for export. In city markets, the main commodity on offer is imported fish, mainly from Kazakhstan, although there is a reasonable demand for the local catches of more valued fish species, such as whitefish and trout. However, though the fishery sector contributes less than 1 percent to national GDP, it is important for the economy of the country, especially in some less developed areas. Unfortunately, because of the low level of state budgetary support for the sector, there is very little in the way of investments and grants in fisheries. This does not attract foreign investors (FAO, 2005).

12. Some 450,000 people live in close association with the lake. The economy of the lakeside zone is predominantly agricultural, with livestock raising, poultry, grain and horticulture being important components. It is reported to be a very poor area, though no actual figures of local per-capita income are available. Jobs are scarce and most people lead a semi-subsistence life. Consequently any sources of income or food are important, which has led to the reported increase in “illegal” fishing on the lake and within its basin. It is estimated that there are currently around 1,500 people fishing on Issyk-Kul, of which 90% are operating illegally. Enforcement is ineffective and less than transparent with unlicensed fishers frequently being allowed to continue their operations in return for financial considerations.

13. A recent household survey, carried out as part of the PDF-A for this MSP, found strong evidence that many of those involved in fishing would stop if they could find alternative employment. There are two bodies of fishers on Lake Issyk-Kul, the hereditary and the more recently established newcomers. The former have a long-term historical and cultural involvement in the sector and are aware of the problems and complexities, while the latter are mainly interested in making fast money; it is these who would leave the industry if they could identify easier and more lucrative possibilities.

14. Tourism is increasing rapidly, though not as yet to the same levels seen during the Soviet era. Whilst this is providing some employment, it is also causing an increased demand for fish products, which are popular with the tourists. Additionally, many tourists come to the lake to fish for sport, again increasing the pressure on fish stocks. Chebak and Chebachok are the most popular fish for tourists. The main tourism season lasts around 2 months (July and August).

A.3 Institutional Context

15. The management and regulation of fisheries on Lake Issyk-Kul and throughout the rest of the Kyrgyz Republic is highly complex. Currently, as many as six organizations have some control over the fisheries of Issyk-Kul[1]. The major players are the Fisheries Inspection of the State Agency on Environment and Forestry (SAEF) Office and the Fisheries Department (established January 2005) of the Ministry of Agriculture, Water Resources and Processing Industry (MAWRPI).

16. The Fisheries Inspection within the SAEF is responsible for policing, selling fishing permits, and environmental protection and monitoring. The SAEF Office has only four fisheries inspectors but has a contract with a "private company" to carry out enforcement of fishery rules. The SAEF Office works according to a National Action Plan (2006 – 2010) but it is reported that there are no specific plans for fisheries in this plan. The Department has a joint committee with the Fisheries Department of MAWRPI (which has a Fisheries Supervision Body) and the two agencies normally function in harmony and cooperation.

17. The principal agency controlling access and activities around the Lake is the Directorate General of the Biosphere Reserve. The directorate is subordinated to the SAEF but has no government funding. The main source of revenues of the Directorate is represented by entrance and user fees Biosphere Reserve. An annual income of US$ 200,000 is reported, though this figure varies widely according to the number of tourists. The Biosphere Reserve retains only 40% of money collected. Fifty percent goes to the local administration (oblast) and 10% back to the SAEF. There are said to be 43 fisheries inspectors under the Biosphere Reserve, who operate on a 30% take of fines in lieu of salary. This obviously provides no incentive for the elimination of illegal fishing. The Biosphere Reserve Administration also has a Public Relation Division which carries out educational work.

18. The Fisheries Department in MAWRPI is responsible for the artificial propagation of juvenile fish, catching, sectoral control, the economic aspects of fisheries, and issuing fisher identity cards. There is reported to be a programme for the development of fisheries, but no further information is available.

19. The Ton fish plant on the lakeside also falls under the jurisdiction of MAWRPI as does the Scientific Fish Centre which is located in the Issyk-Kul Biological Station. The Centre provides advice to the Scientific Commercial Council on the setting of fish quotas. The Issyk-Kul Biological Station (under the Academy of Science) is responsible for monitoring of fish stocks and providing scientific advice.

20. Monitoring of water quality in Issyk-Kul is carried out by the Ministry of Emergencies – which has long-term records.

A.4 Policy and Legislation context

21. The Kyrgyz Republic formulates its fisheries development policy in accordance with the particular national and international conditions and the nature of the resources. The national objective is to manage the fisheries so as to ensure sustainable use of aquatic resources, with economic efficiency and broad social benefits. A number of important changes have taken place in the overall national economy which reflects the changes in demand as the country moves to a market-oriented economy, thereby affecting the economics of the domestic fishery system. Today, almost all fish trade is more or less private.

[1] Department of Fisheries (State Agency on Environment Protection and Forestry) – State Control; Department of Fisheries (MAWRPI) – Sectoral Control; Biosphere Reserve – Local control Issyk-Kul Reserve – Local control; Local authorities - Local control; Police and Prosecutors Office can carry out inspections if they have "reasonable grounds"

22. The Department of Fishery of the Ministry of Agriculture, Water Resources and Processing Industries has developed the Sectoral Programme on Development of Fishery in Kyrgyzstan for 2006 – 2010. Part of this Programme for 2007-2008 has been accepted by the Government for financing. Large portion of the resources under this programme (30-40%) is to be used for support of Issyk-Kul endemic fishes' conservation and reproduction.

23. The following legal acts regulating fisheries management have been prepared and submitted to government for endorsement and approval:

(i) Draft Governmental Resolution "On implementation measures of the Fisheries Act";
(ii) Draft Rules for industrial fisheries in fish farming reservoirs;
(iii) Draft Provision on fish farming in reservoirs or use of reservoirs for fishing purposes;
(iv) Draft Provision on fishing licences to fish valuable fish species in fish farming reservoirs;
(v) Draft Provision on fish and other aquaculture stocking activities in reservoirs;
(vi) Draft Provision on fish stock conservation in fish farming reservoirs.

24. This tends to highlight the need for a more integrated and consistent approach to fisheries management at the legislative and policy level. Administrative and legislative arrangements are also needed to provide control and standardization of fisheries products for both foreign and domestic markets, together with market needs research and related market development activities. Fisheries in the country create direct benefit to thousands of people and provide a per capita fish supply of about 300 g.

25. The fisheries licensing system used in the Kyrgyz Republic covers mainly private fishermen with industrial fishing operations. The main purpose of the licensing system is to establish the terms, conditions and parameters of their activities so as to be able to protect, monitor and maintain reproduction of fish stocks, including artificial fish stocking, through responsible private fishing and rural tourism in the mountainous and semi-mountainous areas.

26. The Government is trying to provide a long-term prospect in promoting the sustainable development of national resources, and fisheries development in particular. However, the limited financial sources constrain the attention that can be paid to integrating the requirements for endemic fish conservation into the fishery management regime. National economic priorities in the sphere of fisheries and fish stock conservation are: (i) poverty alleviation through food security, with availability of food with animal (fish) protein; (ii) the provision of employment in fish culture organized in reservoirs with poor fish stocks (lakes, basins); (iii) redistribution of a part of national income from exploitation of mineral and natural resources into food production, in particular fish and fishery products; (iv) natural fish resources conservation; (v) improvement of fish species genetic pools; (vi) stocking fish farms in reservoirs by means of acclimatization and use of nutritionally valued fish species; and (vii) encouraging production of genetically improved fish forms and species for commercial fish culture.

A.5 Threats, Root Causes and Barriers

Threats

27. At least four commercially targeted endemic fish species are under direct and imminent threat of extinction from fishing pressure within this unique high altitude alpine lake ecosystem. Two species are sufficiently threatened to be included in the Red Book of the Kyrgyz Republic and one species was actually considered to be extinct up until recently. Seven other endemic species are almost certainly threatened as either by-catch or are indirectly impacted by fishing activity and changes to the structure and balance of the fish population within the lake as a result of poor fishery management. In this context,

urgent and immediate remedial action is required to save it. The principal threats to the long-term survival of the lake's endemic ichthyofauna are (i) over-fishing; and (ii) increasing competition and predation from introduced species (anthropogenic manipulation of the lake ecosystem).

28. In recent years catches of all species have declined markedly, due to a combination of overfishing, heavy predation by two of the introduced species and the cessation of restocking of the lake with juvenile endemic fish from hatcheries. Two of the endemic species (the Marinka and the Naked Osman) are considered to be in imminent danger of extinction and are included in the Red Book of the Kyrgyz Republic, while the remaining two endemic species commonly caught in the commercial fishery are considered to be under extreme pressure. The status of the populations of the rest of the endemic fish (7 recorded species) that are not commonly taken in the commercial catch is unknown, but they are likely to be under threat from the unregulated fishing that takes place on the lake and its rivers, as well as from introduced predatory species. The problems caused by predation by two of the many introduced species, the Zander and the Sevan Trout are difficult to quantify. The former is now considered to be the major problem, while the latter, although predatory on some of the endemic fish, does not reproduce in the lake and is maintained by artificial propagation; consequently its population can be relatively easily controlled by stopping introductions. It is now considered to be a subspecies of the original introduced species and could therefore be considered as an endemic. Additionally it is a very valuable and highly prized component of the commercial catch. It is reported that the population of the Zander, while probably impossible to eliminate completely, could be relatively easily controlled by remedial actions at its known spawning sites. To date no action has been taken to control or eradicate these introduced species due to lack of funding to carry out the work. This lack of funding is a reflection of the fact that the government will not provide money and there is no other financial incentive for any fisheries agency or private sector body to carry any such activities out. In fact, privately owned plants have recently been producing and releasing juveniles of the Sevan Trout.

29. According to the national reports and feedback from the national experts, all threats to fish species in Issyk-Kul lake other than the present patterns of fishing and introduction of exotics are of lesser priority and considered minimal in their influence and impact. The water quality in the lake is currently very good, and there are no pollution problems of significance affecting fish populations. It should be noted that an FAO report (FAO, 2005 in References) records the gradual increase in settlements and industries around the lake which has led to an increase in pollution. Although most enterprises have wastewater treatment facilities they are not efficient and some effluents still reach the lake. Agriculture, through the use of fertilisers and pesticides, also contributes to the lake pollution. While the large volume of 1,738 km^3 of water in the lake may have at present considerable diluting capability and with the good water mixing is also able to quickly oxidise organic matter inputs to the lake, sheltered shallows are subject to eutrophication. As the shallows are also important spawning and feeding areas for a number of fish, such eutrophication may affect especially those coldwater fish species which require pristine waters and would need to be given consideration in any fisheries management approach.

30. There are no concerns about cross border water management problems as the entire lake basin is in The Kyrgyz Republic. There are no projects or discussions to extract water from the lake for other purposes (e.g. expansion of agriculture) than the current supply to local communities. Economic activities around Issyk-Kul Lake are not of an industrial nature and the population density is low. Tourism is not currently a threat to the conservation of the lake. The number of tourists coming to The Kyrgyz Republic is still relatively low, and most of them come for trekking and/or climbing. In summary, the long-term preservation of endemic species in Issyk-Kul Lake depends on making the fishery sector biodiversity friendly. Table 2 summarizes the response needs for Lake Issyk-Kul in relation to the conservation of endemic species and the control of threatening, introduced species.

Table 2. List of Endemic and Introduced Species in Urgent Need of Management

Scientific Name	Common Name	Origin	Status	Response
Leuciscus schmidti	Chebak	Endemic	Threatened	Protect & Re-stock
Leuciscus bergi	Chebachok	Endemic	Threatened	
Schizothorax issyk-kuli	Marinka	Endemic	Threatened	
Diptychus dybovskii	Sheer or Naked Osman	Endemic	Close to extinction	
Salmo ischchan issykogegarkuni	Sevan or Issyk-Kul Trout	Introduced	Voracious piscivore	Control and Remove
Parasalmo (Salmo)mykiss gairdneri	Rainbow Trout	Introduced	Voracious piscivore	
Stizostedion lucioperca	Zander (or Pikeperch)	Introduced	Voracious piscivore	
Abramix brame oreintalis	Bream	Introduced	Fish-egg feeder	

The Root-Causes

31. The root causes of a predicted loss of endemic species and the associated threat of extinction are: (i) a substantial increase in unregulated fishing over recent years; and (ii) a virtual cessation of the artificial restocking of the lake with juveniles of the four commercially targeted endemic species, coupled with (iii) no active programmes to control or eradicate the introduce species.

Increase in Unregulated Fishing

32. The regulatory system for fishery management is inadequate and non-functioning. There is no 'regulated' fishing as such within the lake due to the almost total absence of any management strategy or resources. Even Government-backed fishing is unregulated. Subsistence fishing which forms a significant part of the illegal fishing, is not just fishing for food. Much of the fish is sold in order for the fishers to have some sort of income and to buy basics such as clothes and fuel. There are three principal reasons associated with the increase in unregulated fisheries.

33. First, fishery management and enforcement falls under the control of a number of different organisations (see Background) which leads to either repetition or, in some cases, contradiction. Regulations are complex and lack transparency and in many cases do not reflect or are not relevant to current fishery practices. Funding is inadequate or absent and the capacity of staff to carry out their duties is severely limited by a lack of equipment and training. In many cases the salaries of enforcement officials and other department staff are taken from fines levied on offenders (not necessarily always through formal process or even through the legislative or judicial system). This provides no incentive for a reduction in the level of illegal fishing and actually creates a positive disincentive thereby exacerbating this problem. The issue of granting permits and licences is complex and open to malpractice, and as a consequence many people sidestep this issue, preferring to pay their contributions by other means. Collection of fisheries data is poor and cannot monitor the extent of illegal catches.

34. In recent years there has been a large increase in the amount of cheap and effective fishing nets freely available around Lake Issyk-Kul; it was reported that one dealer has sold around 1,500 km of nets in 2005, though this figure cannot be verified. These nets are mostly imported from China, but other sources would be available if this source dried up. A recent report[4] notes that poachers used to rely on hand-tied nets which were time-consuming to produce. But now more recently mass-produced Chinese nets have become widely available, and staff at the local bio-station estimate that in December – the breeding season for many fish and the peak season for poaching – illegal fishermen cast around 10,000 nets in Issyk Kul lake every day."

35. The easy availability of this fishing gear means that no traditional skills such as net making are required in order to enter the fishery and consequently there has been a large increase in the numbers of people engaged in it. This leads to a reduction in catch rates and a consequent increase in the number of nets required in order to make a living. Many of these nets are lost during fishing, but they continue to catch fish. These so called "ghost nets" pose an unquantified but serious threat to the sustainability of fish stocks in Lake Issyk-Kul. Fishing commonly takes place in spawning areas where large congregations of mature fish can be found. These areas are in theory protected by law, but little can be done to enforce these regulations. As one fisherman stated "The lake is large and the night is very dark"

36. The second reason for the increase in unregulated fishing is that poverty is widespread in communities around the lake, employment opportunities are scarce and many people are practicing what is virtually a subsistence economy. Consequently any opportunity to provide food or money will not be missed, whether legal or not, particularly if there is little chance of being caught by the enforcement authorities or if the penalties are less than the value of the catch. A recent report from the region confirm this situation[2]. 'Poaching has now soared to massive levels so that some species have practically disappeared from the lake….Poachers themselves say that the level of poverty in the region means that they are prepared to risk getting caught in order to support their families. Others say that corruption aggravates the problem and many inspectors are themselves involved in poaching". Also 'Poachers simply seek to avoid getting caught by working at night and fishing in groups. "*When we fish in groups the inspectors are afraid to come near which saves us from unnecessary problems"* said one young fisherman who admitted that confrontation between poachers and inspectors can result in violence. Observers say that the poachers are prepared to take risks simply because of the level of poverty in the region, especially in the winter months. "*We have nothing to eat, quite apart from the fact that we need to buy clothes"* said one poacher "*I have 5 children…how will I feed them if there is nowhere for me to work"*. There is sympathy for the poachers even among those whose job it is to stop them. Obviously poverty is not the only variable in the function but it is clearly a primary driver.

37. The third reason for increased unregulated fishing effort is that the level of awareness of the uniqueness of the endemic fauna of Lake Issy-Kul and the threats which currently face it is low. Although the people of the Kyrgyz Republic are proud of Lake Issyk-Kul and see it as an integral part of their culture and heritage, there seems to be little public knowledge of its real value. It should also be noted that this lack of awareness and insensitivity to the plight of endemic species, in association with increased and uncontrolled fishing effort, extends also into areas within the government sector including the policy and decision-making level.

Low levels of artificial breeding and restocking of the lake with juveniles of the 5 endemic species

38. Historically, population levels of fish in Lake Issyk-Kul have been kept high through the artificial propagation, rearing and release into the lake of juvenile fish. It is likely that the biological reasoning behind restocking with juveniles is that while the natural production of plankton in the lake is low, the production of macrobenthos is relatively high. Consequently there is a "trophic bottleneck" where newly-hatched fish have a very limited food-source (i.e. plankton) which constrains their growth but, once past a certain stage in development where they change their feeding pattern to larger bottom-dwelling organisms, such constraints disappear and food is increasingly available to the young fish. Little information is available regarding how this restocking affected the balance between endemic and introduced species. Initially this re-stocking included both endemics and introduced species so the gains to the endemic species were questionable. This restocking activity went part of the way to countering the effects of the high commercial catches of all species. At no point was the re-stocking programme aimed at raising the numbers of endemics in support of biodiversity management and conservation. Numbers were enhanced to support commercial fishing

[2] 'Poverty and corruption behind poaching that threatens Kyrgyz fish stocks' See References.

39. There are three major fish breeding plants around the lake; two are privately owned and one is under MAWRPI. The two privately owned plants are also important companies involved in catching fish; consequently the reduction in commercial catches over recent years have left these two plants in an unprofitable position where they cannot breed and release fish.

40. The state owned plant on the Ton River has suffered from under-funding for a number of years and consequently has done little or no restocking of the threatened endemic species. In fact, this plant and one of the privately owned plants have been producing and releasing juveniles of the Sevan Trout, which is a highly predatory species and is contributing to the decline in endemic species. It is reported that the artificial propagation of the most highly threatened species, the Naked Osman, ceased in 1985, but the plant and the expertise to carry this out still exists. One other species that could benefit from artificial propagation is the Marinka, while the other two threatened species (Cheback and Chebachok) require protection at their spawning sites and a moratorium on catches.

Absence of control measures and eradication programmes for introduced species

41. A number of highly predatory exotic species (such as Zander and Sevan Trout) have been introduced into the lake. These were introduced as part of the same historic re-stocking programme as that carried out for the endemics and the aim was commercial rather than biological or with any focus on conservation. Now there is a need to gain control over these predatory introduced species and to swing the advantage toward their endemic prey species. It would be beneficial if the continuing demand for fish from the lake could be met through a more targeted effort focused toward preferential catching of these introduced species. It is also possible that certain measures could be tanked to disrupt their life-cycles.

Barriers

42. The Threats and Root Causes Matrix (Annex C.3) identified key management issues and barriers to the mainstreaming of the requirements for the endemic fish conservation into the fishery sector. These barriers fall under the following overarching concerns:

Systemic and institutional barriers

43. National economic priorities in the sphere of fisheries and fish stock conservation are: (i) poverty alleviation through food security, with availability of food with animal (fish) protein; (ii) the provision of employment in fish culture organized in reservoirs with poor fish stocks (lakes, basins); (iii) redistribution of a part of national income from exploitation of mineral and natural resources into food production, in particular fish and fishery products; (iv) natural fish resources conservation; (v) improvement of fish species genetic pools; (vi) stocking fish farms in reservoirs by means of acclimatization and use of nutritionally valued fish species; and (vii) encouraging production of genetically improved fish forms and species for commercial fish culture.

44. Existing fisheries management and administration are disorganized, poorly integrated and duplicative. The laws regulating the fishery management are numerous and overlapping and don't take into account the requirements for biodiversity conservation. There is no 'regulated' fishing as such within the lake due to the almost total absence of any management strategy or resources. Subsistence fishing which forms a significant part of the illegal fishing, is not just fishing for food. Much of the fish is sold in order for the fishers to have some sort of income and to buy basics such as clothes and fuel. Fishery management and enforcement falls under the control of a number of different organizations which leads to either repetition or, in some cases, contradiction. Regulations are complex and lack transparency and in many cases do not reflect or are not relevant to current fishery practices. In many cases the salaries of enforcement officials and other department staff are taken from fines levied on offenders (not necessarily always through formal

process or even through the legislative or judicial system). This provides no incentive for a reduction in the level of illegal fishing and actually creates a positive disincentive thereby exacerbating this problem. The issue of granting permits and licenses is complex and open to malpractice, and as a consequence many people sidestep this issue, preferring to pay their contributions by other means.

Absence of Alternatives to Illegal Fishing

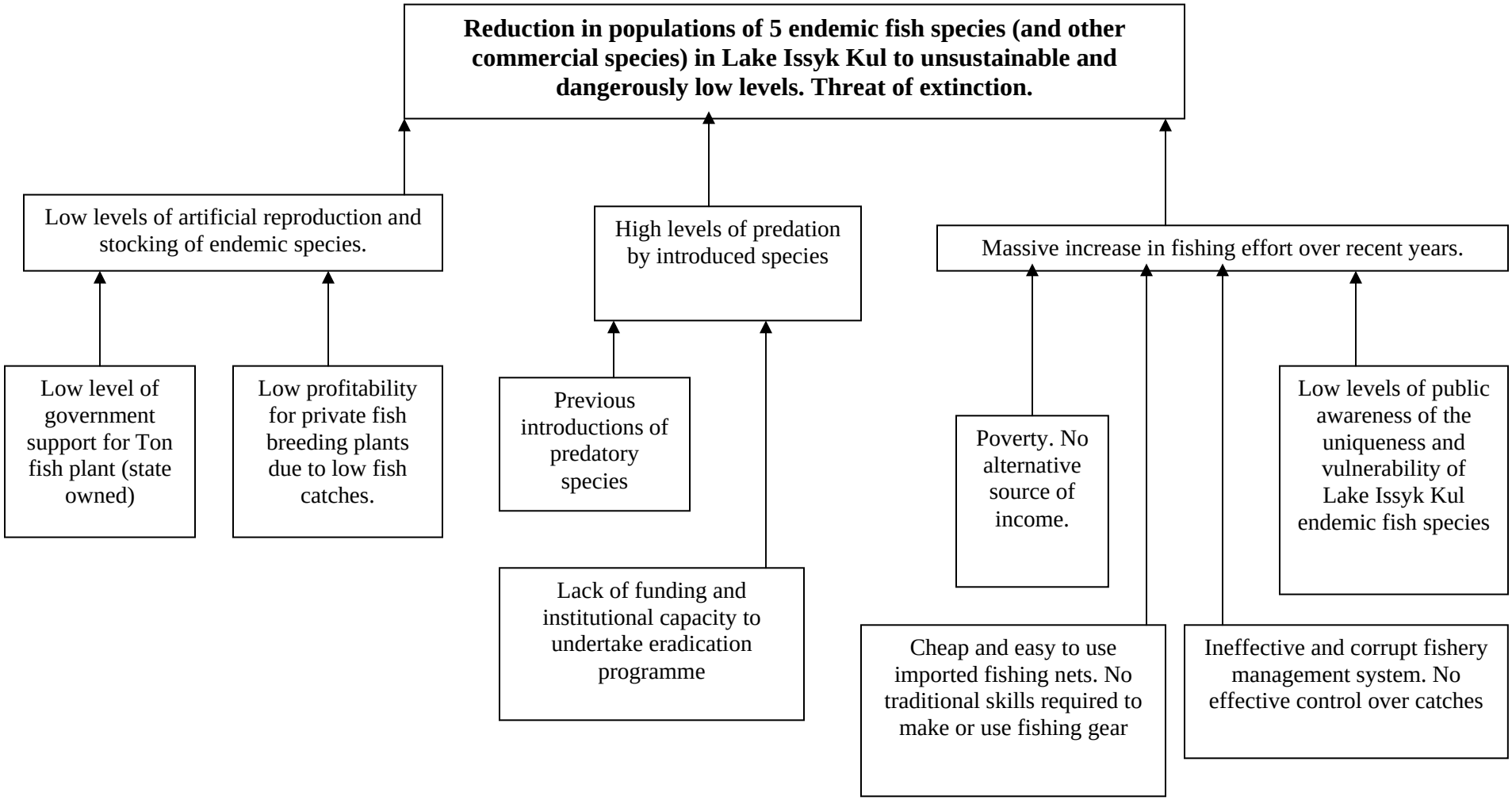
45. The high level of poverty-related illegal subsistence fishing (both for direct consumption and for sale) is a reflection of the lack of alternative sources of income and livelihoods. Dependence on fisheries is essential regardless of any penalties and disincentives. Absence of options and/or lack of awareness of options serves to promote and continue this situation. Consequently any opportunity to provide food or money will not be missed, whether legal or not, particularly if there is little chance of being caught by the enforcement authorities or if the penalties are less than the value of the catch

No strategies on re-stocking of Endemics and Controlling Alien Introductions

46. Currently there are no programmes or strategies for controlling or eradicating alien species introduced over the past few decades, and there is generally little awareness of the interaction between aliens and endemics and the problem this is causing within the lake. This situation is made worse by the fact that there has been a reduction in government support to the state-owned breeding plants that used to re-stock the lake with endemics. Furthermore, where the commercial fishing operations use to invest in the lake by way of breeding and re-introduction programmes, this has now ceased due to lack of sufficient profits from a dwindling fishery. As a consequence fewer endemics are being introduced through re-stocking programmes while more are falling to predation by uncontrolled alien species. Clearly any re-stocking programmes would need to be finite in nature where possible with a view to providing a ‘kick-start’ to increasing numbers of endemics.

47. The Threats, Root Causes and Barriers Analysis can be summarized into a more specific Problem Statement as follows:

THE PROBLEM


Reduction in populations of 5 endemic fish species (and other commercial species) in Lake Issyk Kul to unsustainable and dangerously low levels. Threat of extinction.
Low levels of artificial reproduction and stocking of endemic species.
High levels of predation by introduced species
Massive increase in fishing effort over recent years.
Low level of government support for Ton fish plant (state owned)
Low profitability for private fish breeding plants due to low fish catches.
Previous introductions of predatory species
Lack of funding and institutional capacity to undertake eradication programme
Poverty. No alternative source of income.
Cheap and easy to use imported fishing nets. No traditional skills required to make or use fishing gear
Ineffective and corrupt fishery management system. No effective control over catches
Low levels of public awareness of the uniqueness and vulnerability of Lake Issyk Kul endemic fish species

PART B - Strategy

B.1 The baseline: what will happen without GEF

48. The principal agency controlling access and activities around the Lake is the Directorate General of the Biosphere Reserve. Their main source of revenue comes from user fees and a percentage (30-40%) of these is used for awareness activities for local populations, water quality monitoring and ichthyofaunal studies within the Lake. The actual percentage varies with the amount of fee collected annually. The Issyk-Kul State Reserve provides a Ranger Service with 18 Rangers patrolling specific areas around the Lake. A substantial part of their salary comes from fines so there is no real incentive for compliance (as in reduced illegal activities), only in enforcement (catching people at such activities. State Agency on Environment and Forestry from the merger of the State Forestry Office with the Ministry of Ecology and Emergencies and includes the Biosphere Reserve administration.

49. Under the 'business-as usual' scenario, fishing would continue at the current rate with little by way of increased surveillance and enforcement and without a clear strategy for management within the Lake. There is a political will to develop such a management regime but this is tempered by the realisation that for any such management regime to be effective there would need to be considerable effort put into reforming institutional arrangements, building capacity, strengthening data collection and information management, and raising awareness at all levels. With the government generally attempting reforms across the board, and with the adoption of a new State Agency responsible for the welfare of environmental issues within the lake, there is an ideal opportunity to attempt to address these needs. However, in light of the need for reforms across the various government sectors and agencies, funding is a serious constraint. There is a very real risk that any attempt to create a new management regime for the Lake would become purely a paper exercise resulting in very little by way of on-the-ground improvements while nurturing a fall sense of security that 'something has been done'. Efforts are being made to try to and improve the status of the fish populations within the Lake. Part of the problem recently has been the significantly reduced effort toward breeding and re-stocking. Two privately owned fishery plants have responsibility for fish reproduction and re-stocking as part of their licence agreement to fish the lake. Their efforts have been greatly reduced of as a result of falling returns related to reduced catches The Department of Fishery is committing resources to support fish reproduction through the State-owned Ton fishery plant, as well as supporting a limited monitoring programme for the fish populations within the lake.

B.2 The GEF Alternative

50. The following factors have been identified, the presence of which help to provide an enabling environment for the project:

(i) The State Agency on Environment and Forestry provides the project with the opportunity of working with a organisation and being able to provide assistance at an early stage in its development;
(ii) The government commitment to reform the fishery sector illustrated in the sectoral program for fishery development;
(iii) Effective and widespread environmental NGOs operating in the Kyrgyz Republic;
(iv) The desire of a number of fishers to leave the sector if alternative employment were available;
(v) The high regard held by the Kyrgyz people for Lake Issyk-Kul;
(vi) No plans for industrial development on lake shore;
(vii) High water quality with low threat of pollution;
(viii) Skills and facilities for artificial propagation still exist.

51. Kyrgyzstan has committed to a two-pronged approach to conserving the Issyk Kul lake biodiversity. One is to establish and strengthen the Issyk Kul Biosphere Reserve and the other is to mainstream biodiversity conservation into the fishery sector. This proposal addresses the later of these two approaches, as the first one has been addressed over the past ten years in cooperation with GTZ. The project strategy is to address the overall concerns relating to fisheries management in Kyrgyzstan by demonstrating a new fishery management regime within Lake Issyk Kul as it relates to: (i) the conservation of globally significant biodiversity (endemic fish species); and (ii) within the context of socio-economic concerns, especially poverty and livelihoods. The project will create the mechanism to ensure that the lessons learned in this project will be captured and replicated initially to other large lakes in Kyrgyzstan with high economic values for fisheries. The targeted lakes are Son-Kul, Chatyr-Kul and Sary Chelek, covering 500 km^2.

52. The key expected biodiversity impacts of the BDFMR are: (i) the ratio of endemic fish species to non-endemic species will be at least 60/40 by 2009, and 90/10 five years after project completion; and (ii) the productivity of key endemic species should be Naked Osman and Marinka 40 tons per lake each; Chebak 150 tons per lake. Further indicators, the details on the management tools, and the expected impact of the BDFRM on the Kyrgyz lakes' biodiversity are outlined in Annex E *Project tracking tool* and Annex A *Project results framework.*

53. The project is expected to result in global environmental benefits through stabilisation and long-term conservation of identified endemics within the productive landscape of the Kyrgyz lakes, such Chebak *Leuciscus schmidti,* Chebachok *Leuciscus bergi,* Marinka *Schizothorax issyk-kuli,* Sheer or Naked Osman *Diptychus dybovskii,* and 7 more endemic fish species. For these species, the project strives to demonstrate effective management of an altered ecosystem incorporating breeding and re-stocking, as well as the transfer of livelihoods away from exploitation and impact of endemics toward continuing market supply under a sustainable management regime. Replicable lessons and best practices for fisheries management reform will be gathered within the discrete, over-exploited fishery which is threatening the survival of endemic species and disseminated across the country, or similar situations particularly in other countries in transition which are attempting to embrace good governance practices and more effective management of their natural resources[3].

54. The project objective is to strengthen the policy and regulatory framework to integrate requirements for endemic fish conservation into the fishery management regime. The project will develop a biodiversity friendly regime for fisheries within Lake Issyk-Kul that both protects and conserves the endemic fish species while facilitating opportunities for sustainable alternative livelihoods for the local fishery-dependent communities and individuals. This model will be replicated to the other 900 lakes, rivers and water reservoirs of Kyrgyzstan. The project is expected to result in global environmental benefits through stabilization and long-term conservation of identified endemics within the productive landscape of the Issyk-Kul lake basin. Replicable lessons and best practices for fisheries management reform will be gathered within the discrete, over-exploited fishery which is threatening the survival of endemic species and disseminated across the country, or similar situations particularly in other countries in transition which are attempting to embrace good governance practices and more effective management of their natural resources.

55. <u>The project proposes to achieve its objective through the following outcomes:</u>

(i) Strengthened systemic and institutional capacity for biodiversity friendly fisheries Management Regime for Kyrgyzs lakes, validating the approach at Issyk-Kul, and

[3] Further elaboration of the project design is the subject of Part B "Strategy" of the UNDP Project Document. This part of the UNDP Project Document also contains a detailed discussion of project sustainability and replication.

(ii) Sustainable fisheries demonstrated which contribute to the conservation of endemic fish species and improving livelihoods.

Outcome 1. Strengthened systemic and institutional capacity for biodiversity friendly fisheries Management Regime.

Output 1.1. A biodiversity friendly fishery management regime developed and tested at Lake Issyk Kul

56. One of the key elements of the project is the Biodiversity Friendly Fisheries Management Regime (BDFMR) which will be a package of national laws, by-laws and regulations developed and enforced with the objective of stabilizing the endemic fish species in the lake within the framework of a viable, sustainable and enforceable commercial fishery. Stabilization will be achieved through limiting current fishing, controlling the size of introduced species, as well as restocking native species. The BDFRM will be elaborated by Fisheries Advisory Group (FAG) - a working group of national and international experts, as well as lawyers, legislators, fish breeders and representatives of the fishing communities[4]. The elaboration will be highly participatory and once the new fishery management regime for Lake Issyk Kul is cleared by the key stakeholders (governmental, private, local communities) it will be presented to the Kyrgyz Parliament for adoption. The BDFMR will provide for an adaptive management framework based on ecosystem approach to remove the pressures on the endemic fish species. This will consider:

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(i) establishing new set-aside areas to protect spawning grounds of the endemic fish species, where fishing will be prohibited. The total area to be set-aside is 56,000 ha. Specifically, in Issyk-Kul this will envisage a five-year fishing moratorium for spawning areas in: (i) the western bank shallow area (current fishing plots ## 1-10) in the vicinity of the Balytchy town; and (ii) in the eastern bank shallow area (current fishing plots ## 31, 33, 35, 37, 40) in the vicinity of the Tup village. These areas used to be characterized by the highest natural productivity of endemic fish species (catches of up to 40 – 50 t of chebak/ month) and in the past decades experienced an alarming drop in number of endemic fish, as a result of high fishing quotas set in 1940s.

(ii) developing the fishing licensing scheme initially for the 12 fishing plots along the south-western and northern banks where the productivity of endemic species has dropped substantially and further extended to include the spawning grounds after the end of the moratorium. The license will be given for at least 10 years, thus creating a long-term interest of the user in conservation of the endemic species and preventing short-term poaching interests. The licenses will be different for the commercial and for the subsistence fishing. This will enable smaller fishermen to participate in the competition for licensing as it

[4] Please see Annex 4 for the outline of the Terms of Reference of the national and international consultants.
[5] Please see Annex C for the outline of the Terms of Reference of the national and international consultants.

should eliminate the current discrimination when fishing license can only be obtained by an entity which is engaged in commercial restocking. Many local fishermen can maintain the population using traditional knowledge or by partnering with restocking specialists, but because such schemes do not qualify as commercial restocking, local fishermen are currently barred from participating in the official license procurement process, and poverty drives them into poaching as a result. For commercial fishing, the license should include requirements for re-stocking based on the calculated ratio between the desired population size of endemics/introduced species and the desired state of lake ecology. The licensing framework will incorporate a system for assessing the bidder's fishing qualification record, including the assessment of local knowledge and will further assess the capacity of the user to maintain the endemic species' populations at a stable or increasing level through the 10 year period, through restocking, biological and ecological plot improvement works, etc;

(iii) regulating fishing practices across the lake: The current fishing regulation prescribes the maximum permissible mesh size for all species (including endemics), and the maximum quantity of nets to be used by one fishermen. Currently, fishing regulations do not prescribe the length of the net. Nets up to 100 m long have come to be used by poachers, and while invasive species have not suffered a substantial loss (due to their higher population size) the endemics have been put under real threat. The BDFMR will establish a limit for the net length, probably 25 m per net. In parallel to standardizing the net length, appropriateness of the mesh size (currently 17 mm for Chebachok and 32 mm for Chebak) will be re-considered given the disappearance of these species.

(iv) institutional assignment, training and enforcement mechanisms: At present there are 7 bodies which have some interest in regulation of fisheries in Kyrgyzstan. The project will develop a legal proposal on restructuring, refinancing and retraining of whichever bodies are finally going to be responsible for the overseeing of the BDFMR. The proposal will be based on a thorough legal review and a selection of country-tailored mechanisms for the enforcement of the BDFMR at the national and site levels.

58. The project will support a formal review of existing fisheries policy, legislation, monitoring, control and surveillance procedures and activities to provide a synopsis of current management practices and responsibilities including a set of recommendations for reforming the fishery management. This would include reviews of other potentially appropriate biodiversity friendly fisheries management regimes that may be applicable in this current situation. The review will be conducted in the project inception stage and will involve as wide a range of stakeholders and administrators as is possible. From this process it can be decided which is the most feasible route for management of fisheries in Issyk-Kul, so as to ensure that the requirements for the conservation of the endemic fish species are taken into account.

59. The project will facilitate the establishment of Fisheries Advisory Group a working group composed of scientists, administrators, legislators, fish breeders and representatives of the fishing communities. This working group will formulate a draft biodiversity friendly Fisheries Management Regime for discussion and input by all stakeholders, and for subsequent submission to the appropriate government policy-making body for endorsement. One priority for management *must* be the conservation of endemic fish species in the lake within the framework of a viable, sustainable and enforceable commercial fishery.

60. The development of a new Fisheries Management Regime which is biodiversity friendly will result in a practical set of rules that will fall within the mandate and legal remit of the Biosphere Reserve. These rules will clearly define allowable target species, seasonal or geographic closures, equipment restrictions, gear types, mesh sizes, areas with the aid of detailed knowledge of the fishery, the lake ecology and the socio-economic conditions that prevail around the lake. A particular attention will be paid to the issue of fishing rights and permits. While it is obvious that the current "free for all" situation is untenable, there is much thought and debate required before allocating fishery rights to any individuals or group. At present, the

companies who are proposing to restock the lake with endemic fish species are requesting that they get a monopoly on fishing rights. This is not necessarily a desirable situation, nor would it be enforceable. In addition, the new Regime will provide clear and unambiguous guidelines on compliance and penalties. Another issue that will be addressed through the formulation of the Regime is the elimination or significant reduction in population of the highly predatory and undesirable species, such as Zander, from the lake. The setting of quotas for each species will still be carried out by the existing bodies but the Regime would provide a tool for allocation of quota, along with a means to monitor long-term efficacy and to ensure compliance. The biodiversity friendly fisheries management Regime must be adaptive with changing environmental and developmental circumstances and dynamic, and it will be based on the feedback from scientific data and technical expertise. In view of the intention to capture lessons and best practices for wide dissemination the draft will be shared also with FAO and with LakeNet which is an organisation that is working with the Ramsar Convention under a Memorandum of Cooperation with the aim of improving conservation and sustainable development of the Lake and its drainage basin. The process will be highly participatory and once the new fishery management regime for Lake Issyk Kul will be cleared by the key stakeholders (governmental, private, local communities), it will be presented to the Cabinet for review and adoption.

Output 1.2. The capacity to deliver and implement the biodiversity – friendly fishery management regime is strengthened

61. The Fisheries Advisory Group will be strengthened to act as the key provider of advice and information for managers and policy makers for fine-tuning and improving fisheries management on the Lake, so it is considering the requirements for the conservation of endemic fish species. It would also act as a conduit for reacting to the needs of decision-makers with respect to the capture of specific data necessary for evolving policy decisions. Whilst this body may not have the power to create or enforce regulation, it should be the major source of advice for these functions. The Fisheries Advisory Group would also work with a technical expert to develop of a capacity building and institutional strengthening strategy and work-plan in support of the Fisheries Management Regime, and associated reforms. Before any meaningful changes are made to existing regulations on the catching and post-harvest sectors, it is vital that a means of enforcing any regulations at all is in place. This will involve a restructuring, refinancing and retraining of whichever bodies are finally going to be responsible for the overseeing of fisheries regulations. At present there are a large number of bodies (as many as seven) who have some interest in regulation of fisheries.

Output 1.3. Financial mechanism for the implementation of the biodiversity friendly fishery management regime is in place

62. The project will support the identification of financial mechanisms to sustainably support management of fisheries within the lake so as to contribute to the conservation of the lake's endemic ichtyophauna. The project will contract a team composed of a national and international specialists with expertise in financial mechanisms for fisheries. These experts will explore a number of options which will include more obvious sources of revenue including access and licensing fees, greater allocation from central revenue (based on a demonstration of cost-benefits), fines and penalties, revenues from tourism, etc. Increasing tourism around the lake provides an opportunity for the creation of a sport fishery on some of the ponds, where species attractive to anglers can be stocked. This will provide even higher levels of employment and a higher return on investment. In addition, consideration will be given to improving the sport fishery on the lake itself.

Output 1.4. Awareness and support of biodiversity-friendly fishery management

63. Although the people of the Kyrgyz Republic are very proud of Lake Issyk-Kul, they are generally unaware of the existence of their native fish species (and the fact that they are found nowhere else on earth), and the threats to which these fish species are currently exposed. Furthermore, such lack of awareness

extends into government technical and administrative (and even policy-making) bodies whose advice and decisions can create or increase potential or real threats to the existence of these same species within the lake ecosystem. The activities under this output are of critical importance in fostering cross-sectoral and multi-stakeholder support for regaining control over illegal fisheries.

64. Under this output, educational packages will be developed and distributed to all schools in towns and villages around the lake; lectures will be given to villages with a high level of fishing dependence, concentrating on such issues as the problem of overfishing, how to fight malpractices by fishery officials, and the damage caused by lost or discarded nets which continue to kill fish for a long period (so called "ghost nets"). Senior government and community representatives will be targeted with presentations highlighting such aspects as the global significance of the lake and the rights and responsibilities of institutions, fishers, the judiciary and the public. A television production company will be contracted to produce a short programme for widespread broadcast which will highlight not only the beauty and uniqueness of the lake but the threats which face it. The information regarding the problems facing Issyk-Kul endemic fish stocks will be disseminated on the Internet via CARNet, a digital network on Environment and Sustainable Development in Central Asia and Russia which is funded by UNDP and has offices in Bishkek, Almaty, Tashkent, Dushanbe, Ashgabat and Altai.

65. Once effective awareness is introduced at all levels, including accurate information on the threats to the lake and its ecosystem, the job of sustainable management of the fisheries should become much easier. The major part of this output would be most effectively carried out by NGOs in the Kyrgyz Republic which will be selected by competitive tender. Indicative activities will include:

1.4.1. Effective development and disbursement of knowledge products and educational materials through an NGO partner;
1.4.2. Appropriate education and awareness materials for targeting schools, communities, government agencies and civil service groups, high-level policy and decision-making personnel in the public and private sector;
1.4.3. Formal distribution agreements with appropriate media (newspapers, radio, television, e-networks).

Outcome 2. Sustainable fisheries demonstrated which contribute to the conservation of endemic fish species and to improve livelihoods

Output 2.1. Alternative supplies to meet market demands and propagation for re-stocking of lakes with endemics

66. There are approximately 40 ponds and lakes, some natural and some artificial, around the shores of Lake Issyk-Kul, with a total area of around 500 ha. In the Soviet era many were attached to collective farms and were highly productive. Most now are in private hands and are poorly managed and maintained. It was reported that a 50 ha lake will provide employment for as many as 50 to 60 people and produce as much as 75 mt of fish. If all the ponds were brought into effective production there could be widespread employment and a considerable increase in the amount of fish on the market; both factors will work to reduce fishing pressure on the endemic species in the lake. Additionally, these reservoirs could act as biodiversity reservoirs for some of the threatened endemic species that are suitable for pond culture.

67. Fish yields in the lake have for a long time depended on the re-stocking of its waters with juvenile fish produced in the various fish plants around the lake. At least three of these are still in existence, though operating at a low level of production. Two are in private ownership and one is state owned. The Project will support breeding and growth studies at fish plants and associated ponds to enable them to supply scientifically calculated quantities of juveniles of threatened endemic fish for restocking the lake. Based on the results of these studies, the Project will develop a set of guidelines for enhancing capacity for long-term

sustainability of these fish plants to re-stock the lake with endemics, while recognizing and encouraging the potential for creating alternative employment and reducing fishing pressure on the lake itself. All re-stocking activities will be done on the basis of maximum protection and enhancement of the endemic fish species. The project will provide assistance to the pond culture sector by supporting ten pilot ponds around the lake.

68. The state owned Ton Fish Plant will receive funding from the state as part of the state's contribution to the project. This will enable it to upgrade equipment and infrastructure and to produce large quantities of juveniles of the threatened endemic species. The Fishery Department has a five-year plan for funding of state owned hatcheries which will provide co-funding to the relevant project outcome and outputs in the order of nearly 30 million som (equivalent to approximately $744,000). 10% of this will be used for State plants outside of the project system boundary. 50% of the remainder figure will be used for the conservation and reproduction of threatened endemic fish species. The Project would also provide two mobile fish breeding units in order to take advantage of spawning aggregations of fish in parts of the lake distant to the plants. These would be owned by the project and leased to the private sector.

69. In the context of pond culture, either for meeting commercial market needs (food and recreation) or for re-stocking of endemics, access to credit (this will be provided by the UNDP co-financing) would help to provide essential equipment, allow restoration and rehabilitation work to be carried out, and for stocking and feeding to take place in selected ponds that would then supply either fish for market or for re-stocking. Some mechanism would be required to ensure that relevant private firms associated with breeding and re-stocking programmes release their fish into the lake. This might take the form of a sub-contract from the project to supply juvenile fish or for the project to hire facilities and skills from these enterprises to produce fish for release. Alternatively fish could be bought and released with project funds.

Output 2.2. A strategy to active control and reduction/eradication of introduced alien species for Issyk Kul is developed.

70. It is reported that the population of the Zander, while probably impossible to eliminate completely, could be relatively easily controlled by remedial actions at its known spawning sites. The local communities will be encouraged to catch exclusively the alien fish species. The project will hire specialized expertise to design the most cost-effective strategy for the control of the alien fish species. The costs of the actual eradication will be supported by the Government of Kyrgyzstan.

Output 2.3. Alternative Livelihood program which supports the transition of individuals and businesses away from activities that threaten endemics toward activities in support of sustainable fisheries management

71. One of the primary reasons that so much illegal and unregulated fishing pressure is exerted on the lake is that there is a high level of poverty in the surrounding areas and little or no alternative employment and no incentives for local communities to switch to an alternative. Consequently the problem of poaching has become widespread and entrenched. Most of the present-day illegal fishing is carried out by people with no history in the fishing sector. As a consequence they have little of the understanding of the fragility and complexity of the lake ecosystem that can be found amongst hereditary fishers. When questioned, many of these newcomers to the sector stated that they would gladly give up fishing if other forms of livelihood were available. In addition, to the potential employment for local communities in the pond culture work presented in output 2.1. The project would support a technical contract to identify additional alternative livelihood opportunities and to develop guidelines for the setting-up and implementation of activities that will provide economic benefits for the local communities and will not impact on the lake's biodiversity. The potential activities and guidelines will be discussed at a stakeholder workshop with a view to developing criteria for promotion of alternative livelihoods. UNDP committed to support piloting some of the identified

livelihood options by providing access to financial assistance through their credit program while the project will assist the local communities in preparing the application forms.

Output 2.4. Direct assistance to support conservation of the endemic fish species of Issyk Kul

72. The project would fund an expert based in the Issyk-Kul Biological Station who will be on hand to visit ponds and assist the local stakeholders in finding solutions. One of the priority functions of this post would be to develop guidelines for long-term re-stocking of the lake by Fish Plants, as well as an alien species control strategy. The funding for this post would be expected to roll over to become national co-funding during the lifetime of the project. Assistance to the development and implementation of alternative livelihood activities, as well as support of the breeding and re-stocking programmes would be through: (i) training and capacity building; and (ii) access to specific funding to aid in establishment of new activities and programmes. This funding would be in the form of micro-credits and loans for business start-up or realignment (away from any impacts to endemic fish species). UNDP would provide the experience and the financial support in this area through co-funding which would be targeted for poverty alleviation and improved livelihood activities. Training and capacity building would be provided through workshops in which modern techniques of commercial pond culture can be disseminated. Ideally as many of the experts as possible at the workshop should be Russian speaking to avoid translation problems. Training needs for fish plant staff (commercial and re-stocking) would be assessed and a study tour for managers of the plants would be arranged to visit appropriate countries such as China, Poland or Israel where fish culture is at a more sophisticated level.

73. Output 2.5. An Information and Knowledge Product Management System to capture lessons and best practices and to ensure transfer and dissemination of lessons and best practices as appropriate. It is particularly important to capture the lessons and best practices from this Project in relation to the development and on-the-ground implementation of the biodiversity friendly fisheries management regime, the stock enhancement of endemic and removal of alien fish species, and the changes in livelihood as a threat/impact mitigation process. An information capture and management mechanisms will be developed, most appropriately within the Biosphere Reserve Administration, which can store the relevant knowledge products. The mechanism is going to be established in a participatory process involving key stakeholders involved in fishery management in Kyrgyzstan and a particular attention will be paid on how this system could be used for replication to the other lakes in Kyrgyzstan. A further vehicle for dissemination and replication then needs to be adopted both nationally by the relevant national agency and by UNDP and GEF for transfer to other project sites both regionally and globally.

B.3 Benefits

74. The environmental benefits that are expected from this Project include:

- Stabilization and long-term conservation of identified endemics within a productive landscape.
- Demonstration of effective management of an altered ecosystem incorporating breeding and re-stocking of endemics, as well as the transfer of livelihoods away from exploitation and impact of endemics toward continuing market supply under a sustainable management regime.
- Replicable lessons and best practices for fisheries management reform within a discrete, over-exploited fishery which is threatening the survival of endemic species. The lessons and best practices could be extended to other fisheries within the Kyrgyz Republic. Furthermore, they would be transferable to similar situations particularly in other countries in transition which are attempting to embrace good governance practices and more effective management of their natural resources.
- Raised awareness of an important area of biodiversity and specific threatened endemic species within the local population as well as within those agencies responsible for the welfare and survival of those species.

75. All of these benefits have both national and global advantages in relation to biodiversity conservation within a production landscape.

B.4 Risks and mitigation measures

Risk		**Mitigation strategy**
Political will is insufficient to adopt Fishery Management Regime (FMR) in an effective framework	L	Relevant national and local authorities responsible for FMR adoption will be actively involved in project implementation through participation in the Steering Committee and awareness raising campaigns.
Alien species are not easily removable or controllable.	M	Sound scientific basis is used for the design of measures aimed at alien species removal and control within the project. Robust ecological monitoring will enable timely response to adjustment of species control activities. Highly qualified project staff and experts (local and international) will be carefully selected.
Impossibility to target non-endemics without endemic by-catch	L	Promotion of selective breeding of endemic and non-endemic species through pond culture.
Level of cooperation with various entities (media, schools, communities, etc) is not sustained	L	The project specifically addresses maintenance of regular close links with the appropriate institutions and media and delivery of targeted awareness-raising campaigns.

B.5 Sustainability

76. **Ecological sustainability**: The primary objective of the Project is to halt and reverse the decline in endemic fish species within this unique alpine lake environment. It is intended that an effective Fisheries Management Regime can be adopted and implemented during the Project lifetime, and that this will be linked to policies that control fishing effort and catch quotas. Furthermore, a programme of re-stocking of endemics and eradication of alien, introduced species will aim to restore and maintain the balance in favour of endemic species. Increased awareness and the provision of alternatives to intensive fishing will also help to ensure the ecological sustainability of this Project.

77. **Social Sustainability**: The Project will aim to remove stress and pressure on lake fisheries by creating and supporting alternative livelihood options. UNDP will be at the forefront in this Outcome through the provision of funding for activities which aims to assist those individuals or groups that wish to break their dependence on purely extractive fisheries and explore new income and livelihood alternatives associated with the lake. This Outcome will also seek other sources of supply (such as pond culture) to meet market demands for fish so as to create a more sustainable ecosystem within the lake. This, in turn, will provide further employment and livelihood opportunities.

78. **Institutional sustainability:** Overarching this entire process will be the suite of reforms, capacity building and institutional strengthening, strongly supported again by UNDP through its value-added experience in these fields, and through its commitment to enabling and sustaining good governance and sustainable environment and development partnerships. These reforms and particularly their manifestation as actual on-the-ground improvements (e.g. stronger compliance to fisheries regulations coupled with public awareness and ownership, and the eradication of corruption within officialdom) are the real essence of sustainability within this Project and, as such, the Project will inevitably be very dependent on the continued and sustained support from both the national government, and the UNDP

Country Office. Although this could be seen as a risk, it should more accurately be viewed as a positive sign toward the success of the Project in view of the excellent track-record that UNDP has within the region, and the current efforts that the UNDP CO is taking to assist the country in moving towards good governance.

79. **Financial sustainability**: The Project focuses primarily on developing a new management regime for the lake supported by an improved infrastructure. Although the initial funding for this is mostly GEF, there is support from UNDP and there is a specific set of activities focused on ensuring long-term financial sustainability for the reforms and institutional, human capacity improvements. Addressing long-term sustainable funding mechanisms for the new Fisheries Management Regime will be one of the critical Indicators for the Project.

80. Sustainability will ultimately be very dependent on **government will** to reduce and eliminate all forms of corruption from the fisheries management and compliance process, and on further **Government Ownership** by way of sustainable long-term funding. The levels of co-funding committed by government and by UNDP (in support of better governance) provides a strong indication of overall ownership and commitment which bodes well for cost-effective sustainability.

B.6 Replicability

81. Undoubtedly there are many facets of this Project which will lend themselves to the demonstration of 'Best Practices' and which will provide valuable lessons within the country, the region, and the GEF experience in general. There are two valuable areas of focus that can be seen to be highly replicable and transferable in relation to this project. The first relates to biodiversity management specifically and stems from this unique opportunity to demonstrate an effective management approach to a relatively small-scale aquatic production landscape within the constraints of strong market and cultural forces. This in itself will provide GEF with valuable lessons for other, similar fisheries situations. The second focus is on the evolution of good governance practices within a transition country and uses the fisheries issue as an example of how cross-sectoral, integrated management (in the presence of effective public-private sector partnerships along with transparent, hands-on community input) can be negotiated, endorsed and implemented within a dynamic and evolving political and bureaucratic environment. Any lessons and 'Best Practices' captured during this process must be considered to be of immense value to other transitional economies within the Euro-Asian political and economic arena.

82. Kyrgyzstan has over 900 mountain lakes and in most of them the native fish species are seriously threatened by alien species and over fishing. The lessons learned in this project will be replicated initially to the large lakes as Son-Kul, Chatyr-Kul, Sary Chelek, which cover 500 km^2 and have a great economic value for fisheries. A Replication Plan is included below in Table 3. This shows an overall allocation of $22,500 for the development of knowledge products and for dissemination at workshops and meetings in the country, as well as distribution beyond the region.

Table 3. Replication Plan

Strategy	**Replication Strategy/ Interventions**	**Frequency**	**Focus for Replication**	**Cost US $ X 1000**

Outcome 1: Strengthened enabling environment for biodiversity friendly fisheries for Lake Issyk Kul	Biodiversity – friendly Fisheries Management Regime The project will provide a valuable example of fisheries management within a productive landscape where endemic species are at threat and where a new strategy is required which reforms the existing legislative and policy 'landscape' by mainstreaming the biodiversity concerns into the fisheries management sector. The issues of multiple responsibility and mandate is not uncommon within the transition politics of eastern Europe and the development of this 'model' BDFMR will help to demonstrate and capture lessons and practices for removing barriers to more effective management responsibility and accountability. It is envisaged that the Outputs of this Outcome will be transferable both to other fisheries within the country, as well as to a number of similar circumstances within Eastern Europe.	Lessons and Practices available by year 3	National and Regional Workshops to demonstrate BDFMR in other regions of Kyrgyz Republic Meetings to capture concepts within overall Biosphere Reserve Knowledge Products	$1,000 $1,000 $2,000
	On-the-Ground Delivery of BDFMR Much of the difficulty with fisheries management lies in effective monitoring, control and surveillance. The Project will aim to demonstrate the adoption of pragmatic, transparent and reliable (including corruption-free) mechanisms applicable to this lake fishery. The model for these mechanisms will be highly transferable to other similar fisheries both in Kyrgyzstan, and throughout the region	Lessons and Practices available after 2 -3 years and finalised at end of project through Evaluation Process	National and Regional with some global implications Knowledge products and Reports Workshop	$2,000 $1,000
	Financial Mechanisms One of the consistently difficult deliveries for any GEF project is financial sustainability. This Project will aim to capture a workable funding mechanism to support fisheries management and the sustainable conservation of endemics within the lake. Various mechanisms will be explored (licensing costs, market measures, user and beneficiary fees, as well as government support). The development of such a mechanism would be of value to future GEF projects both in relation to fisheries and to biodiversity sustainability in general	Realistically this would be proven as an acceptable and sustainable mechanism by the end of the project (Terminal Evaluation	National. Regional and Global Knowledge Products	$2,000

	Awareness and Educational Materials These materials will cover school, community, civil service and private sector scenarios and audiences. They will also be developed in close collaboration with the Media (TV, Radio, Newspapers, etc). The end–products and the mechanisms used to develop them will provide lessons and best practices for future awareness and media campaigns associated with the Biosphere Reserve and Biodiversity Conservation *per se* within the country. They will also be replicable on a temporal basis as well as on a geographical basis in that they would stand repetition in order to get the message across.	Highly variable depending on media and targets	National, some global Knowledge products	$1,500
Outcome 2: Sustainable fisheries demonstrated which contribute to the conservation of endemic fish species and to improve livelihoods	Pond Culture and Captive Breeding There are many valuable lessons and practices that would be captured during this exercise. The experiences in pond culture for marketing would be transferable directly within the Issyk-Kul region as the project would initially only support up to 10 ponds and there are over 40. Almost certainly the approaches could be applied elsewhere in the country both for marketing purposes and to re-stock threatened endemic fish species. Technical reports on the captive breeding and re-stocking process would be useful for transfer and replication to many similar situations outside of the country.	Technical reports probably available within 24 months of inception.	Lakeside, Nationally and regionally National Reports and Workshop	$2,000
	Control/Eradication of Alien Species This will be an important experiment for removing this type of introduced threat to aquatic endemics and a number of challenges will need to be addressed, including potential secondary effects of changes in species balance and habitat alteration. Again, the project will need to provide technical reports that capture the mechanisms and results and provide conclusions and recommendations. These will be of tremendous value to GEF as the presence of introduced and undesirable introductions of species is not uncommon. The mechanisms that are proven to be successful can be replicated and expanded around the lake and in other areas as necessary	Technical reports probably available within 24 months of inception.	Lakeside, Nationally and regionally Technical Reports	$2,000

	Alternative Livelihoods The identification and promotion of alternative livelihoods raises a number of questions related to cultural and economic constraints. Such activities have been tried to varying degrees of success in other GEF and non-GEF projects (and, in this context, the current project should seek to benefit from lessons and practices used previously. Alternative livelihoods for fishers is an area of some sensitivity and no small difficulty and has caused problems in other similar circumstances. Any lessons and practices that are transferable would be of considerable value throughout the global fisheries situation where the need for alternative livelihoods is a very real issue.	Project Technical Reporting (approximately 2nd-3rd year of project) with follow-up and re-publication in final year.	National, regional and global Knowledge Products	$1,000
	Project Administration This captures the experience from the project manager, the Project Board and the Technical Advisory Group as an overall concept in lessons and best practices for GEF projects. The transfer and replication of knowledge products will be, in itself, an opportunity for capturing and replicating lessons and best practices.	Project Administrative lessons captured in the Mid and Terminal Evaluations	Overall stakeholder workshop to review and capture lessons and best practices	$3,750

B.7 Stakeholder involvement

83. Stakeholder participation is an essential element of this project as can be seen from Annex 7. Every Output and associated Outcome from this Project has direct stakeholder involvement built into its framework. It is imperative that the Project receives support and buy-in (at a cross-sectoral level) from all the fisheries and lake stakeholders including Government, NGOs, communities and the private sector as represented by industry and individual fishers. It is these same stakeholders who have, in fact been mobilising the effort to develop and submit this MSP. Table 4 presents a list of the key stakeholders involved in project preparation and implementation and their roles and responsibilities.

Table 4. Key stakeholders involved in the project

Key Stakeholder	Mandate and current role in BD conservation	Interest in Project
Biosphere Reserve Administration	▪ Contribute to the conservation of landscapes, ecosystems, species & genetic variation in the Biosphere Reserve ▪ to foster economic and human development which is socio-culturally and ecologically sustainable; ▪ to provide support for research, monitoring, education and information exchange related to local, national and global issues of conservation and development ▪ Under State Forestry Office ▪ Administers entrance fee to Reserve ▪ 43 fisheries inspectors	Coordinating the overall aims and objective (sustainable management of fisheries and conservation of endemics) into Biosphere Reserve objectives
Alliance of Local Initiatives and Facilities	▪ Represents nearly 50 ecological NGOs in Kyrgyz Republic ▪ Renders technical, legal, advisory and information services to its	Developing a partnership for awareness and

Key Stakeholder	Mandate and current role in BD conservation	Interest in Project
for Sustainable Development of Communities and Livelihoods - NGO	members ▪ Coordinates activities of its members' programs; ▪ Initiates and develops projects for benefit of environment and local communities ▪ Runs web-site: www.alifsd.in.kg ▪ Publishes its Bulletin ▪ Develops capacity building training programmes for local NGO and CBO on biodiversity conservation, reduction of CO2 emission, international waters, desertification, sustainable land and resources use, community based sustainable development;	sensitisation of Project Objective
Regional Environmental Centre for Central Asia (CAREC)	▪ Regional scope of work with 5 national centers in each country of Central Asia ▪ Information data base on biodiversity conservation ▪ Regional projects on biodiversity conservation ▪ Regional ideas on biodiversity conservation are mainstreamed into EU Central Asian Initiative ▪ Initiated sustainable usage of Central Asian ecosytems	▪ Pilot Integration of Water Focused Economic Tools of Environment Management in Issyk-Kul Basin and its further replication in Central Asia ▪ Legal Capacities Building for the Issyk-Kul Biosphere Reserve ▪ Piloting of Public-Private Partnership Based Sustainable Livelihood Model in the Issyk-Kul Biosphere Reserve
State Agency on Environment and Forestry	▪ Policing fishery, selling fishing permits, environmental protection and monitoring; ▪ 4 fisheries inspectors; ▪ Contracts private companies to carry out enforcement of fisheries rules	Lead agency affected by licensing, regulation and enforcement reforms Primary gov't agency for capacity building and institutional strengthening Agency that will have main responsibility for the BDFMR
Ministry of Agriculture, Water Resources and Processing Industry (MAWRPI) – Fisheries Department	▪ Fisheries supervision body & fisheries development ▪ Artificial propagation of juvenile fish ▪ Catch control and sectoral control ▪ Economic aspects of fishery ▪ Fisher identity cards	
Ministry of Emergencies	▪ Monitoring of water quality	Involved in reviewing other potential impacts on lake ecosystem and welfare of endemics
Issyk-Kul Biological Station	▪ Under jurisdiction of National Academy of Science ▪ Provides advice to Scientific Commercial Council on setting of fish quotas ▪ Monitoring of fish stocks & provision of scientific advice	Monitoring & Conservation of lake species Host for new post of Technical Advisor
Ton River State Fish Plant	▪ Under jurisdiction of MAWRPI ▪ Responsible for propagation and re-stocking ▪ Most recent re-stocking has been of Sevan (Issyk-Kul) Trout which is a major predator on endemics ▪ Under-funded at present	Revitalisation of stocking programme for endemics Possible involvement in production of endemics for marketing
Private Fish Factories (Grigorievka and Karakol)	▪ Also involved in catching of fish (main source of income) ▪ Fall in fishery led to fall in funding for re-stocking	Stocking programme for endemics Production of endemics for marketing
Lakeside Communities	▪ Dependent on fishing and fish for subsistence and income	Need support for effective long-term control of fishing and re-stocking

Key Stakeholder	Mandate and current role in BD conservation	Interest in Project
Fishing Industry	▪ Dependent on fishing and fish for subsistence and income	Need support for effective long-term control of fishing and re-stocking
Fish Marketing Industry	▪ Dependent on supplies for income. Also interested in re-stocking to improve numbers	Advice on market demands and supply (size and weight) of fish
Tourism Industry	▪ Interested in potential for recreational fishing in ponds and in lake.	Alternative livelihoods as well as other potential impacts to lake

84. Annex 7 presents a Stakeholder Involvement Plan which defines the primary stakeholders involved in the project's development and implementation, and discusses their roles and interests and how they would be incorporated into the Project activities.

PART C: Management Arrangements

C.1 Implementation and Execution Arrangements

85. The national executing agency for the Project is the State Agency on Environment and Forestry. At the local level, the EA will be represented by its Directorate General of the Issyk-Kul Biosphere Reserve (DGBR), and the DGBR will be the key partner in administering the Fisheries Regime. The Fisheries Department (under the Ministry of Agriculture) will also be a key partner in the administration of the Fisheries Regime. The State Agency will provide accommodation and facilities to support the project and time and availability of Project Director (PD) for overall project coordination. This arrangement takes advantage of the fact that the Directorate General of the Biosphere Reserve a) has the mandate to control much of the activity within the Reserve (including the Lake), b) already has the necessary legislative provisions to collect fees (which will make sustainable funding measure easier to adopt), and c) has direct linkages to the government Agency which is primarily responsible for activities in and around the lake.

86. UNDP will act as the GEF Implementing Agency for this Project. The project builds on strong UNDP experience in Kyrgyzstan and in the region on environmental finance, mainstreaming environment, supporting democratic governance and poverty reduction initiatives. UNDP's National Governance Programme for the Kyrgyz Republic aims at supporting the country to establish an effective and transparent system of national government. UNDP has helped the Kyrgyz parliament to open its processes to the public, and advised on reforming of its procedures and structure. UNDP works closely with the parliament to ensure that the beneficial changes in process are retained, and to help the parliament to plan appropriate internal structure and procedures, and introduce mechanisms to implement effectively its oversight function, especially over state budget. The project conforms with UNDP's agreed strategies to support good governance including: (i) Policy advice and technical support; (ii) Capacity development of institutions and individuals; (iii) Advocacy, communications, and public information; (iii) Promoting and brokering dialogue; and (iv) Knowledge networking and sharing of good practices. UNDP is also committed to assisting countries in the integration of biodiversity, ecosystem services, protected areas (and other commitments under the Convention on Biological Diversity) into national policies and programmes, including in such key sectors as fisheries. As Implementing Agency, UNDP brings to the table a wealth of experience working with governments in the arena of reform, and is well–positioned to assist in both capacity building and institutional strengthening. As always, the UNDP Country Office will be answerable as the agency responsible for transparent practices, appropriate conduct and professional auditing. Staff and Consultants will be contracted according to the established Rules and Regulations of

the United Nations and all financial transactions and agreements will similar follow the same Rules and Regulations.

87. The project manager will be hired for the duration of the project. Project office will be provided (co-funded in kind) by the Executing Agency (SAEF) at the offices of the Directorate General of the Biosphere Reserve. The project manager will be responsible for the day-to-day management and administration of all project activities, staff, consultants, disbursements, etc and for ensuring that M&E requirements are met in a timely fashion. Project staff will be selected (based on pre-agreed ToRs and selection processes) by a selection committee which will include the IA, EA and the Lead Government Agency. Selection will be by unanimous agreement.

C.2 Consultations, Coordination and Collaboration between and among Implementing Agencies and the GEF Secretariat, if appropriate

88. Extensive consultations were held with GTZ, CAREC and other GEF funded projects in the region to learn for their experience and avoid duplication. Over the past ten years significant amount of effort was made by the Government with the financial and technical support for GTZ to establish and strengthen the Issyk Kul Biosphere Reserve. Lessons learnt will be used in preparation and implementation. In addition, the project team initiated discussions with the World Bank office in Bishkek in order to maximize synergies and learn from the Bank's experience in implementation of GEF – funded projects in the region.

PART D: Monitoring and Evaluation

89. Monitoring and Evaluation (M&E) of the project will follow the UNDP Program Manual and GEF M&E procedures and will be conducted by the project team and the UNDP Country Office (UNDP-CO) with support from UNDP/GEF Regional Coordination Unit in Bratislava. The Logical Framework Matrix provides impact and outcome indicators for project implementation along with their corresponding means of verification. These will form the basis for the project M&E System. The Tracking Tool for BD 2 projects is going to be used as one of the main instruments to monitor progress. The M&E plan includes: inception report, project implementation reviews, quarterly operational reports, a mid-term and final evaluation. The project's Monitoring and Evaluation Plan will be presented and finalized at the Project's Inception Meeting following a collective fine-tuning of indicators, means of verification, and the full definition of project staff M&E responsibilities.

Project Inception Phase

90. A Project Inception Workshop will be conducted with the full project team, relevant government counterparts, co-financing partners, the UNDP-CO and representation from the UNDP-GEF Regional Coordinating Unit. A fundamental objective of this Inception Workshop will be to assist the project team to understand and take ownership of the project's goal, objective and outcomes, as well as finalize preparation of the project's first annual work plan on the basis of the project's logframe matrix. This will include reviewing the logframe (indicators, means of verification, assumptions), imparting additional detail as needed, and on the basis of this exercise finalize the Annual Work Plan (AWP) with precise and measurable performance indicators, and in a manner consistent with the expected outcomes for the project. Additionally the purpose and objective of the Inception Workshop (IW) will be to: (i) introduce project staff with the UNDP-GEF expanded team which will support the project during its implementation, namely the CO and responsible Regional Coordinating Unit staff; (ii) detail the roles, support services and complementary responsibilities of UNDP-CO and RCU staff vis à vis the project team; (iii) provide a detailed overview of UNDP-GEF reporting and monitoring and evaluation (M&E)

requirements, with particular emphasis on the harmonized Annual Project Implementation Reviews (PIRs)/Annual Project Report (APR), Project Board Meetings, as well as mid-term and final evaluations. Equally, the IW will provide an opportunity to inform the project team on UNDP project related budgetary planning, budget reviews, and mandatory budget rephasings. The IW will also provide an opportunity for all parties to understand their roles, functions, and responsibilities within the project's decision-making structures, including reporting and communication lines, and conflict resolution mechanisms. The Terms of Reference for project staff and decision-making structures will be discussed again, as needed, in order to clarify for all, each party's responsibilities during the project's implementation phase.

Monitoring responsibilities and events

91. The day-to-day monitoring of implementation progress will be the responsibility of the project manager, whose work will be based on the project's annual work plan and its indicators. Annual monitoring will be carried out by the Project Board (including Government, UNDP, and key beneficiaries of the project), which is the highest policy-level meeting of the parties directly involved in the implementation of a project. The first such meeting will be held within the first twelve months following the inception workshop. A detailed schedule of Project Board's meetings to review project progress will be developed by the project management, in consultation with project national executing agency and stakeholder representatives and incorporated in the Project Inception Report. Such a schedule will include: (i) tentative time frames for Project Board's meetings and (ii) project related Monitoring and Evaluation activities. For each Project Board meeting the project manager will prepare annual project report and submit it to the PB members at least two weeks prior to the meeting for review and comments. In addition, ad-hoc meetings can be scheduled between the Government, project manager, the Implementing Agency and other pertinent stakeholders as deemed appropriate and relevant to allow parties to take stock and to troubleshoot any problems pertaining to the project in a timely fashion to ensure smooth implementation of project activities. An additional monitoring tool for Outcome 1, which is dealing with policy development, will be the Fisheries Advisory Committee (FAC): this will be selected and adopted once a formal Fisheries Management Regime has been adopted by the government. This FAC may, if appropriate and if the all project stakeholders concur, effectively take on the functions of an expanded Project Board.

92. Day to day monitoring of implementation progress will be the responsibility of the Project Coordinator, assisted by experts as deemed necessary based on the project's Annual Work Plan and its indicators. The project team will inform the UNDP-CO of any delays or difficulties faced during implementation so that the appropriate support or corrective measures can be adopted in a timely and remedial fashion. Periodic monitoring of implementation progress will be undertaken by the UNDP-CO through quarterly meetings with the National Executing Agency, or more frequently as deemed necessary. This will allow parties to take stock and to troubleshoot any problems pertaining to the project in a timely fashion to ensure smooth implementation of project activities.

Project Reporting

93. The project manager in conjunction with the UNDP-GEF extended team will be responsible for the preparation and submission of the following reports that form part of the monitoring process:

94. A Project Inception Report will be prepared immediately following the Inception Workshop. It will include a detailed First Year/Annual Work Plan divided in quarterly time-frames detailing the activities and progress indicators that will guide implementation during the first year of the project. This Work Plan would include the dates of specific field visits, support missions from the UNDP-CO or the Regional Coordinating Unit (RCU) or consultants, as well as time-frames for meetings of the project's decision

making structures. The Report will also include the detailed project budget for the first full year of implementation, prepared on the basis of the Annual Work Plan, and including any monitoring and evaluation requirements to effectively measure project performance during the targeted 12 months time-frame. The Inception Report will include a more detailed narrative on the institutional roles, responsibilities, coordinating actions and feedback mechanisms of project related partners. In addition, a section will be included on progress to date on project establishment and start-up activities and an update of any changed external conditions that may effect project implementation. When finalized the report will be circulated to project counterparts who will be given a period of one calendar month in which to respond with comments or queries. Prior to this circulation of the IR, the UNDP Country Office will review the document. As part of the Inception Report, the project team will prepare a draft Reports List, detailing the technical reports that are expected to be prepared on key areas of activity during the course of the Project, and tentative due dates. Where necessary this Reports List will be revised and updated, and included in subsequent APRs. These technical reports will represent the project's substantive contribution to specific areas, and will be used in efforts to disseminate relevant information and best practices at local, national and international levels.

95. The UNDP/GEF PIR/APR will be prepared on an annual basis prior to the PB meeting to reflect progress achieved in meeting the project's Annual Work Plan and assess performance of the project in contributing to intended outcomes through outputs and partnership work. The PIR/APR will include the following: (i) An analysis of project performance over the reporting period, including outputs produced and, where possible, information on the status of the outcome; (ii) The constraints experienced in the progress towards results and the reasons for these; (iii) The three (at most) major constraints to achievement of results; (iv) AWP and other expenditure reports (ERP generated); (v) lessons learned; and (vi) Clear recommendations for future orientation in addressing key problems in lack of progress.

96. Short reports outlining main updates in project progress will be provided quarterly to the local UNDP Country Office and the UNDP-GEF regional office by the project team.

97. During the last three months of the project the project team will prepare the Project Terminal Report. This comprehensive report will summarize all activities, achievements and outputs of the Project, lessons learnt, objectives met, or not achieved, structures and systems implemented, etc. and will be the definitive statement of the project's activities during its lifetime. It will also lay out recommendations for any further steps that may need to be taken to ensure sustainability and replicability of the project's activities.

Independent evaluations

98. The project will be subject to two independent external evaluations as follows. An independent Mid-Term Evaluation will be undertaken at the mid point of project implementation. The Mid-Term Evaluation will determine progress being made towards the achievement of outcomes and will identify course correction if needed. It will focus on the effectiveness, efficiency and timeliness of project implementation; will highlight issues requiring decisions and actions; and will present initial lessons learned about project design, implementation and management. Findings of this review will be incorporated as recommendations for enhanced implementation during the final half of the project's term. The organization, terms of reference and timing of the mid-term evaluation will be decided after consultation between the parties to the project document. The Terms of Reference for this Mid-term evaluation will be prepared by the UNDP CO based on guidance from the Regional Coordinating Unit and UNDP-GEF. An independent Final Evaluation will take place three months prior to the terminal tripartite review meeting and will be undertaken in accordance with UNDP and GEF guidance. The final evaluation will focus on the delivery of the project's results as initially planned (and as corrected after the mid-term evaluation, if any such correction took place). The final evaluation will look at impact and sustainability of results, including the contribution to capacity development and the achievement of global

environmental goals. The final evaluation should also provide recommendations for follow-up activities, and the report will feature management response to the issues raised. The Terms of Reference for this evaluation will be prepared by the UNDP CO based on guidance from the Regional Coordinating Unit and UNDP-GEF.

Audit clause

99. The Government of Kyrgyzstan will provide the Resident Representative of UNDP Kyrgyzstan with certified periodic financial statements, and with an annual audit of the financial statements relating to the status of UNDP (including GEF) funds according to the established procedures set out in the Programming and Finance manuals. The Audit will be conducted by the legally recognized auditor of the Government, or by a commercial auditor engaged by the Government.

Learning and knowledge sharing

100. Results from the project will be disseminated within and beyond the project intervention zone through a number of existing information sharing networks and forums. In addition, the project will participate, as relevant and appropriate, in UNDP/GEF sponsored networks, organized for senior personnel working on projects that share common characteristics. The project will identify and participate, as relevant and appropriate, in scientific, policy-based and/or any other networks, which may be of benefit to project implementation though lessons learned. The project will identify, analyze, and share lessons learned that might be beneficial in the design and implementation of similar future projects. Identification and analyzing lessons learned is an on- going process, and the need to communicate such lessons as one of the project's central contributions is a requirement to be delivered not less frequently than once every 12 months. UNDP/GEF shall provide a format and assist the project team in categorizing, documenting and reporting on lessons learned.

PART E: Legal Context

101. This Project Document shall be the instrument referred to as such in Article I of the Standard Basic Assistance Agreement between the Government of the Kyrgyz Republic and the United Nations Development Programme, signed by the parties on February 13, 1992. The host country implementing agency shall, for the purpose of the Standard Basic Assistance Agreement, refer to the government co-operating agency described in that Agreement.

102. The UNDP Resident Representative in the Kyrgyz Republic is authorized to effect in writing the following types of revision to this Project Document, provided that he/she has verified the agreement thereto by the UNDP-GEF Unit and is assured that the other signatories to the Project Document have no objection to the proposed changes:

a) Revision of, or addition to, any of the annexes to the Project Document;
b) Revisions which do not involve significant changes in the immediate objectives, outputs or activities of the project, but are caused by the rearrangement of the inputs already agreed to or by cost increases due to inflation;
c) Mandatory annual revisions which re-phase the delivery of agreed project inputs or increased expert or other costs due to inflation or take into account agency expenditure flexibility; and
d) Inclusion of additional annexes and attachments only as set out here in this Project Document.

SECTION II: STRATEGIC RESULTS FRAMEWORK

PROJECT STRATEGY	OBJECTIVELY VERIFIABLE INDICATORS				
Goal	The goal of the project is to conserve the globally significant biodiversity of Kyrgyz lakes				
	Indicator	**Baseline**	**Target**	**Sources of verification**	**Risks and Assumptions**
Objective of the project : To strengthen the policy and regulatory framework to integrate requirements for endemic fish conservation into the fishery management regime	Productivity / population size of endemic fish species(*Leuciscus schmid,i Leuciscus bergi, Schizothorax issyk-kuli, Diptychus dybovskii)* showing continuing trend of significant increase by end of project.	Low numbers of 4 endemics - unable to quantify	At Issyk Kul: Nake Osman 40 tons per year per lake, Chebak 150 tons per year per lake, Marinka 40 tonos per year per lake.	Monitoring records and data analyses of fish populations and species distributions.	No other factors impacting sustainability of endemics (i.e. water quality, disease, etc). Monitoring is accurate.
	Ratio of endemic to non-endemic species: significantly reduced number of alien species by end of project, particularly those in direct competition or predating on endemics.	Over 60 percent non-endemic species in the lake	60/40 endemic to non-endemic population size ration by project end, 90/10 ration 5 years after project completion	Catch statistics. Reports from Biological Station	Alien species are removable or controllable. Alien species may now be an important component of an altered ecosystem.
	Newly established set aside area (fishing moratorium)	0 ha	56,000 ha	Lake Issyk Kul management plan	The decision for setting area aside might face opposition from fishermen, especially involved in poaching. The strategy of wider stakeholder consultations will be applied to mitigate the risk.
	Reduced fishing effort directly attributable to changes in livelihoods within fishers	1,500 persons fishing in lake.	1000 (reduced by 1/3)	Fisheries Management statistics. Reports to SteerCom	Fishers willing to stop fishing. May be difficult to evaluate.
Outcome 1 Strengthened systemic and institutional capacity for biodiversity friendly fisheries	Effectiveness of policies and mechanisms for biodiversity friendly fishing	Absence of fisheries management plans	BDFMR adopted by the Gov. and providing for sustainable management targeting endemics	A formally endorsed and gov't-adopted BDFMR document.	Political will to adopt BDFMR in a form that does not compromise its effectiveness Other agencies willing to relinquish responsibility (and associated budgeting)

PROJECT STRATEGY	OBJECTIVELY VERIFIABLE INDICATORS				
Goal	The goal of the project is to conserve the globally significant biodiversity of Kyrgyz lakes				
	Indicator	**Baseline**	**Target**	**Sources of verification**	**Risks and Assumptions**
management regime	Effectiveness of a management bodies (esp. Fisheries Advisory Committee) to deliver the biodiversity friendly regime in the long-term perspective.	Institutional fragmentation	FAC established and implementing effective policy	Minutes of FAC meetings. Project represented on FAC	Appropriate members selected. Assumes need for separate Committee. Role might be filled by SteerCom
	Percent of fisheries under control and monitoring	90% fishing illegal. Catches uncontrolled and unmonitored	90% of fishing legally licensed. Illegal fishing routinely prosecuted.	Database of licences. Records of prosecutions. Reports from Fisheries Officers. Independent assessment.	Government prepared to act to eradicate corruption in ranks. Transparent enforcement procedures adopted and applied. Support from legislative arm and Courts
	Percent endemic lake fish species harvested	Endemics targeted as preferred catches	Reduced % of endemics in catches. Reduced overall fisheries catch from lake.	Catch statistics published by Management Body. Fisheries database established and accessible. Survey of markets.	Possible to target non-endemics without endemic by-catch. Can change market demand or provide alternate supply of popular endemic food fish (through pond culture)
Outcome 2 Sustainable fisheries demonstrated which contribute to the conservation of endemic fish	The degree of the effectiveness of the breeding and restocking programs in sustain the viable endemic fish population	Limited restocking	Re-stocking rates: Marinka *Schizothorax issyk-kuli* – 500,000 per year Naked Osman *Diptychus dybovskii* – 240,000 per year	Project records. Reports from Biological Stations. Records of breeding plants	Possible to successful breed and release all spp. of endemics. Knowledge of number of individuals required.

PROJECT STRATEGY	OBJECTIVELY VERIFIABLE INDICATORS				
Goal	The goal of the project is to conserve the globally significant biodiversity of Kyrgyz lakes				
	Indicator	**Baseline**	**Target**	**Sources of verification**	**Risks and Assumptions**
species and to improve livelihoods	Average license period for fishing rights for a particular plot, assigned to one user/fishermen	Non-existing	At least 10 years	BDFMR document	Local fishermen may oppose establishment of long tenure. There is a need for a transparent bidding process behind the distribution of long-term fishing rights, and the process should incorporate assessment of the fishing experience and qualifications. These are the risk mitigation measures the project will incorporate
	Volumes of commercial fish supply produced from artificial ponds (higher volumes will contribute to reduction in required fishing effort).	Little to no pond culture	10 ponds producing commercial spp. for market (>500 mt)	Project records. Site visits by Evaluators. Pond operator's records.	Suitable ponds available. Pond cultured fish are acceptable to market. Cost-effective alternative to wild- caught fish
	The trend of changes in the levels of introduced alien fish species showing significant results.	No control or attempts to reduce alien species	Active control. Alien species number and sizes reduced	Field monitoring. Reports from Biological Station. Catch records.	Accurate information available on existing numbers and life-cycle/habitats. Control is feasible.
	The trend of employment of local people in livelihood fishing (a dropping trend will signify a relaxation of the catch loads)	Heavy concentration on fishing for livelihood. Ltd opportunities for other employment	Increase in other forms of employment. Decrease in fishing effort.	Fishing licences. Independent survey. Local record of businesses and employment.	Other livelihoods are available and attractive alternative. Fishers willing to work in other trades

SECTION III: TOTAL BUDGET AND WORKPLAN

Award ID:	00048448
Award Title:	PIMS 3192 BD MSP Kyrgyzstan Fisheries
Business Unit:	KGZ10
Project Title:	PIMS 3192 Strengthening Policy and regulatory framework for mainstreaming biodiversity into the fishery sector in Kyrgyzstan
Implementing Partner	State Agency on Environment and Forestry under the Government of Kyrgyz Republic

GEF Outcome/Atlas Activity	Responsible Party	Fund ID	Donor Name	Atlas Budgetary Code	ATLAS Budget Description	Amount Year 1 (USD)	Amount Year 2 (USD)	Amount Year 3 (USD)	Amount Year 4 (USD)	Total (USD)	See Budget Note:
Outcome 1 Strengthened systemic and institutional capacity for biodiversity friendly fisheries management regime	**UNDP**	**62000**	**GEF**	71300	Local Consultants	64,500	12,500			77,000	1.
				72100	Contractual services	21,000				21,000	2.
				72145	Training and Education Services	5,200		1,600		6,800	3.
				71610	Travel	1,000	1,000	1,000	1,000	4,000	
				74500	Misc.	7,200	2,000	2,000	2,000	13,200	4.
				72200	Equipment	70,000	80,000	100,000		250,000	5.
				72600	Micro-capital grants	30,000	70,000	70,000	68,000	238,000	
				74200	Audio, video and print production costs	30,000	15,000	15,000	10,000	70,000	
					Subtotal GEF	**228,900**	**180,500**	**189,600**	**81,000**	**680,000**	
		00012	**UNDP**	71300	Local Consultants		7,000			7,000	
				72100	Contractual services		10,000			10,000	
				72605	Grants to Institute and other Beneficiaries		30,000			30,000	
				74500	Misc.		2,000	1,000	1,000	4,000	
					Subtotal UNDP	**0**	**49,000**	**1,000**	**1,000**	**51,000**	
					Total Outcome 1	**228,900**	**229,500**	**190,600**	**82,000**	**731,000**	
Outcome 2 Sustainable fisheries demonstrated which contribute to the conservation of endemic fish species and to improve livelihoods	**UNDP**	**62000**	**GEF**	71200	International Consultants	67,000	30,000		30,000	127,000	6.
				71300	Local Consultants		6,600		1,000	7,600	7.
				72100	Contractual services	6,000	3,000			9,000	8.
				71610	Travel	500	500	500	500	2,000	
				72205	Office equipment	10,000	9,400			19,400	9.
				74500	Misc.	3,000	3,000	2,000	2,000	10,000	10.
				74200	Audio, video and print production costs	3,000	2,000	1,000	1,000	7,000	
					Subtotal GEF	**89,500**	**54,500**	**3,500**	**34,500**	**182,000**	
		00012	**UNDP**	71200	International Consultants	16,000				16,000	
				72200	Equipment		59,580	90,000	38,580	188,160	
				72600	Micro-capital grants			30,000	40,000	70,000	

GEF Outcome/Atlas Activity	Responsible Party	Fund ID	Donor Name	Atlas Budgetary Code	ATLAS Budget Description	Amount Year 1 (USD)	Amount Year 2 (USD)	Amount Year 3 (USD)	Amount Year 4 (USD)	Total (USD)	See Budget Note:
				72100	Contractual services		22,000	10,000	10,000	42,000	
				72145	Training and Education Services		8,000	7,580		15,580	
					Subtotal UNDP	**16,000**	**89,580**	**137,580**	**88,580**	**331,740**	
					Total Outcome 2	**105,500**	**144,080**	**141,080**	**123,080**	**513,740**	
PROJECT MANAGEMENT	**UNDP**	**62000**	**GEF**	71300	Local Consultants	19,500	19,500	19,500	19,500	78,000	11.
				71610	Travel	1,000	1,000	1,000	1,000	4,000	
				72205	Equipment	1,200				1,200	12.
				73105	Rent	1,200	1,200	1,200	1,200	4,800	
					Subtotal GEF	**22,900**	**21,700**	**21,700**	**21,700**	**88,000**	
		00012	**UNDP**	71300	Local Consultant	3,900	3,900	3,900	3,900	15,600	
				71610	Travel	2,100	7,520	7,520	6,520	23,660	
				72215	Transportation Equipment	8,000				8,000	
					Subtotal UNDP	**14,000**	**11,420**	**11,420**	**10,420**	**47,260**	
					Total Management	**36,900**	**33,120**	**33,120**	**32,120**	**135,260**	
					PROJECT TOTAL	**371,300**	**406,700**	**364,800**	**237,200**	**1,380,000**	

Budget notes

1. *The expert group will consist of 7 different specialists for 350 person-weeks, and the main functions of the group will be to oversee the elaboration of all modules of the BDFRM (USD 77,000)*
2. *Cost of group of experts/NGOs (70 person-weeks) on awareness and support of BDFRM (USD 21,000)*
3. *Expert group (4 person) on development of the sustainable fishing training modules (16 person-weeks) – USD 2,800*
4. *Contingency expenditure related to BDFMR development: stationary consular services in case of visa applications, unexpected changes in communication costs*
5. *Laboratory, surveillance and monitoring equipment and software for the lake Issyk Kul specialists to ensure the implementation of the BDFMR.*
6. *Includes:*
   a. *24 person- weeks of fishery policy adviser – USD 48,000*
   b. *8 person -weeks of advisor on the knowledge management platform under output 2.5 – USD 19,000*
   c. *10 person- weeks of international consultants for mid-term evaluation – USD 30,000*
   d. 10 person -weeks of international consultants for final evaluation - USD 30,000
7. *Includes:*
   a. *10 person- week of national project evaluation consultants – USD 2,000*
   b. *32 person- weeks of technical expert on endemic species breeding – USD 5,600*
8. *Cost of a local company (USD 9,000) for the implementation the Information and Knowledge Product Management System*
9. *Office equipment (computer, copier and printer) for stakeholders involved in the implementation of the Information Capture and Management Mechanism.*
10. *Contingency costs: translation of documents, purchase and subscription for peer-reviewed publications in support of the proposal, visa costs, unexpected change in the communication costs.*
11. *Includes:*
    a. *208 person -weeks of project manager (USD 52,000)*
    b. *208 person -weeks of project administrative assistant (USD 26,000)*
12. *One laptop for project manager*

Summary of Funds:

	Amount Year 1 (USD)	Amount Year 2 (USD)	Amount Year 3 (USD)	Amount Year 4 (USD)	Total
GEF	341,300	256,700	214,800	137,200	950,000
UNDP	30,000	150,000	150,000	100,000	430,000
Government	150,000	450,000	300,000	100,000	1,000,000
NGOs	690,000	350,000	350,000	300,000	1,690,000
TOTAL	**1,211,300**	**1,206,700**	**1,014,800**	**637,200**	**4,070,000**

SECTION IV: ADDITIONAL INFORMATION

103. This project document is submitted to the GEF Secretariat for endorsement at the same time as the CEO approval template. Once the CEO approval template is endorsed by the GEF Secretariat, the UNDP project document will be finalized accordingly [including the cover-page], and presented for approval by UNDP and Government of Kyrgyzstan.

Annex 1. Endorsement letter

STATE AGENCY OF ENVIRONMENTAL PROTECTION AND FORESTRY OF THE KYRGYZ REPUBLIC

ГОСУДАРСТВЕННОЕ АГЕНТСТВО ПО ОХРАНЕ ОКРУЖАЮЩЕЙ СРЕДЫ И ЛЕСНОМУ ХОЗЯЙСТВУ КЫРГЫЗСКОЙ РЕСПУБЛИКИ

[illegible] Toktogul str. [illegible]
Kyrgyz Republic
[illegible]

[illegible] Бишкек, [illegible]
[illegible]

N 01-21/2240
04.10.07

To: Yannick Glemarec
UNDP/GEF Executive Coordinator
304 East 45th Street, 9th Floor, New York
NY 10017

Subject: Endorsement for "Strengthening policy and regulatory framework for mainstreaming biodiversity into fishery sector"

In my capacity as GEF Operational Focal Point for Kyrgyzstan. I confirm that the above project proposal: (a) is in accordance with the government's national priorities and the commitments made by Kyrgyzstan under the relevant global environmental conventions; and (b) has been discussed with relevant stakeholders, including the global environmental convention focal points, in accordance with GEF's policy on public involvement.

Accordingly, I am pleased to endorse the preparation of the above project proposal with the support of UNDP. If approved, the proposal will be prepared and implemented by State Agency on Environment and Forestry. Further, I request UNDP to provide a copy of the project document for information of this office before it is submitted to the GEF Secretariat for CEO endorsement.

I understand that the total GEF financing being requested for this project is $1,072,500 which includes US$ 25,000 against a pre-RAF PDF A, US$ 950,000 for project implementation and $97,500 (10% of the project) of fees to UNDP for project cycle management services associated with this project.

I consent to the utilization of the following indicative allocations available to Kyrgyzstan in GEF-4 under the GEF Resource Allocation Framework to cover the GEF project preparation and implementation as well as the associated Agency fees for this project.

Biodiversity: $1,072,500

Sincerely,

Arstanbek Davletkeldiev,
Director,
GEF Operational Focal Point

Copy to: UN CBD Focal Point

Annex 2. Co-financing letters

The Regional Environmental Centre for Central Asia
40, Orbita-1, 050043, Almaty, Republic of Kazakhstan
Tel: +7(327) 2785110, 2785022, 2296646, 2292619
Fax: +7(327) 2705337
e-mail: carec@carec.kz
www.carec.kz

carec

С/07.Д-1 '5 "30" 07 2007 г.

To: Mr. Neal Walker
Resident Representative,
UNDP in the Kyrgyz Republic

Dear Mr. Neal Walker,

Hereby the Regional Environmental Centre for Central Asia (CAREC) conveys its complements to UNDP in the Kyrgyz Republic and has the honour to inform that CAREC in its project portfolio has three pipeline projects are to be implemented in Issyk-Kul Province of the Kyrgyz Republic. Taking into consideration expected outcomes, all three projects are appropriate to be considered as co-financing for UNDP/GEF project "Sustainable Management of Endemic Fish Population of the Issyk-Kul Lake Basin". These CAREC projects are:

1. Pilot Integration of Water Focused Economic Tools of Environment Management in Issyk-Kul Basin and its further replication in Central Asia. Period of implementation - 2008-2010, project cost - 500,000.00 EUR;
2. Follow up Legal Capacities Building for the Issyk-Kul Biosphere Reserve. Period of implementation - 2008-2009, project cost - 80,000.00 EUR;
3. Follow up Piloting of Public-Private Partnership Based Sustainable Livelihood Model in the Issyk-Kul Biosphere Reserve. Period of implementation - 2008-2011, project cost - 650,000.00 EUR.

As it is seen, these projects will be implemented right within scheduled period of the above UNDP/GEF project and its total amount is 1,230,000.00. CAREC is keen to implement its above presented projects in consultations with UNDP for avoidance of overlapping and for contribution of multiplied and well coordinated joint efforts for achieving outcomes of all these projects as efficiently as possible.

Looking forward for fruitful further cooperation,

With best regards,

Talaibek Makeev,
Executive Director

United Nations Development Programme
Программа Развития Организации Объединенных Наций

Kyrgyzstan
Кыргызстан

November 20, 2007
Ref. No 1647

Dear Mr. Glemarec,

Hereby UNDP in the Kyrgyz Republic as an implementing agency for the GEF Medium Size Project "Strengthening policy and regulatory framework for mainstreaming biodiversity into fishery sector" confirms its commitment to implement above mentioned project in partnership with local stakeholders and as it's contribution to the project is ready to fund USD 30,000 (thirty thousand) in 2008, USD 150,000 (one hundred fifty thousand) in 2009, USD 150,000 (one hundred fifty thousand) in 2010 and USD 100,000 (one hundred thousand) in 2011.

The total contribution from UNDP Kyrgyzstan for the whole project period of four years is USD 430,000 in addition to USD 950,000 from GEF. Above amount is to be paid for promotion of extended livelihood base of local populations as a key condition for sustainable fishery in Issyk-Kul lake.

Other than that UNDP co-funded USD 15,250 at PDF A stage.

Sincerely,

Neal Walker
Resident Representative

Mr. Yannick Glemarec
UNDP/GEF Executive Coordinator
304 East 45th Street, 9th Floor, New York
NY 10017

UN House 160, Chui av., 720040, Bishkek, Kyrgyzstan Tel.: +996 (312) 611 213 Fax: +996 (312) 611 217 www.undp.kg
Дом ООН 720040, Кыргызстан, г. Бишкек, пр. Чуй, 160 Тел.: +996 (312) 611 213 Факс: +996 (312) 611 217 www.undp.kg

КЫРГЫЗ
РЕСПУБЛИКАСЫНЫН
АЙЫЛ, СУУ ЧАРБА ЖАНА
КАЙРА ИШТЕТҮҮ ӨНӨР ЖАЙ
МИНИСТРЛИГИ

МИНИСТЕРСТВО СЕЛЬСКОГО,
ВОДНОГО ХОЗЯЙСТВА И
ПЕРЕРАБАТЫВАЮЩЕЙ
ПРОМЫШЛЕННОСТИ
КЫРГЫЗСКОЙ РЕСПУБЛИКИ

720040, Бишкек ш., Киев көчөсү, 96 «А»
Телефон: +(996 312) 62-36-16,
факс: +(996 312) 62-36-32

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факс: +(996 312) 62-36-32

«29» июня 2007 г. №01-4/1505

На № _____

г-ну Нилу Волкеру
Постоянному Представителю
ПРООН в Кыргызской Республике

Уважаемый г-н Нил Волкер!

Министерство сельского, водного хозяйства и перерабатывающей промышленности (МСВХиПП) Кыргызской Республики подтверждает участие в реализации средне размерного проекта ГЭФ «Усиление политических и регуляторных рамок для внедрения биоразнообразия в рыбный сектор в Кыргызской Республике», исполнительным агентством, которым будет ПРООН в Кыргызстане.

В качестве своего вклада в проект, МСВХиПП готов профинансировать деятельность по репродукции эндемичных видов рыб, а также акклиматизированных видов рыб, имеющих фоновое промысловое значение для снижения промысловой нагрузки на эндемичные виды.

Общая сумма финансирования вышеуказанной деятельности согласно разработанной программе развития рыбной отрасли на период 2006-2010 гг. будет эквивалентна 335000 (триста тридцать пять тысяч) долларам США. Более того, МСВХиПП подтверждает материальный вклад в проект объектами, оборудованием, трудовыми ресурсами Тонского рыбзавода и трудовыми ресурсами сотрудников МСВХиПП эквивалентными 665000 (шестьсот шестьдесят пять тысяч) долларов США.

Министр С.Жеенбеков

Unofficial translation

To: Mr. Neal Walker
Resident Representative of UNDP in the Kyrgyz Republic

Dear Mr. Walker,

Hereby, Ministry of agriculture, water resources and processing industry (MAWR&PI) of Kyrgyz Republic is confirmed participation in realization of the GEF middle-size project "Strengthening policy and regulatory framework for mainstreaming biodiversity into fishery sector". The UNDP in Kyrgyzstan is the project executive agency.

MAWR&PI as an contribution to the project investment willing to finance activities on reproduction endemic fish species as well as conditioned fish species that having background data implication for lowering commercial load on endemic species.

Total financing of mentioned above activities according to programme of fishery branch development on period 2006-2010 will equivalent to 335000 (three hundred thirty five thousand) USD dollars. Moreover, MAWR&PI is confirmed material investment in project by objects, facilities, labor resources of Ton Fishery plant and labor resources of MAWR&PI that is equivalent to 665000 (six hundred sixty five thousand) USD dollars.

Sincerely,

Minister

S. Jeenbekov

Annex 3. Fish species in Lake Issyk-Kul

Salmon family

Scientific name	Author	Common name	Origin
Salmo ischchan issykogegarkuni	Lushin	Issyk-Kul trout	introduced
Parasalmo (Salmo) mykiss gairdneri	Richard	Rainbow trout	introduced
Coregonus lavaretus ludoga	Poljakov	Whitefish or Syg	introduced

Carp family

Scientific name	Author	Common name	Origin
Leuciscus schmidti	Herz	Issyk-Kul chebak	endemic
Leuciscus bergi	Kaschkarov	Issyk-Kul chebachok	endemic
Phoxinus issyk-kulensis	Berg	Issyk-Kul minnow	endemic
Gobio gobio latus	Anikin	Issyk-Kul gudgeon	endemic
Schizothorax issyk-kuli	Berg	Issyk-Kul marinka or Snow Trout	endemic
Diptychus dybovskii	Kessler	Naked osman (river form)	endemic
Diptychus dybovskii lansdelli		Naked osman (lake form)	endemic
Diptychus gymnogaster microcephalus	Imanov	Issyk-Kul scaled osman	endemic
Cyprinus carpio	Linnaeus	Issyk-Kul carp or Sazan	indigenous
Carasius auratus gibelio	Linnaeus	Goldfish	introduced

Loach family (CAE = Central Asian Endemic)

Scientific name	Author	Common name	Origin
Noemacheilus stoliczkai	Steindach.	Tibetan loach,	CAE
Noemacheilus elegans	Kessler	Tyanshan loach	CAE
Noemacheilus strauch	Kessler	Thicklip loach	CAE
Noemacheilus strauchi ulacholicus	Anikin	Issyk-Kul gubach	endemic
Noemacheilus strauchi ulacholicus var. *pedaschenko*	Berg	Spotted thicklip loach	endemic
Noemacheilus strauchi dorsaloides	Turdakov	Lake gubach	endemic
Noemacheilus dorsalis	Kessler	Grey loach	CAE
Noemacheilus labiatus		Loach	introduced

Other species

Scientific name	Author	Common name	Origin
Tinca tinca	Linnaeus	Tench	introduced
Abramis brama orientalis	Berg	Oriental bream	introduced
Stizostedion lucioperca	Linnaeus	Pikeperch	introduced
Pseudorasbora parva	Schl.	Amur dace	introduced
Hypseleotris cinctus	Darby	Eleotris	introduced

Annex 4. Terms of reference for consultants

Positions marked with * are supported only from co-financing

Position Titles	*$/ person week*	*Estimated person weeks over 4 years*	*Tasks to be performed*
For Project Management		**780**	
Local		780	
Project Manager (PM)	250	208	• Supervise overall implementation of the project for its total duration to ensure project performance in accordance with the approved project document; • Is responsible for the day-to-day management and administration of all project activities, staff, consultants, disbursements, etc and for ensuring that M&E requirements are met in a timely fashion; • Manage the administrative assistant and the logistics clerk/driver. • PM will be answerable to the UN Country Office but will be expected to work in close collaboration and cooperation with the Project Director on behalf of Executing Agency. • PM will coordinate his work with UNDP CO Environment Programme Officer. • Organize the project inception workshop; Organize the project tri-partite meetings; • Assist in the preparation of feasibility studies for problems solution and its presentation for stakeholders; • Analyze results attained by the project, and take into account the successful projects and experience of previous projects; improve key stakeholders' awareness about project activities; • Facilitate the activities of the Fisheries Advisory Group; • Ensure coordination of the project activities with other relevant activities and initiatives of the Government; • Contract and closely work with the team composed of a national and international specialists with expertise in financial mechanisms for fisheries; • Support breeding and growth studies at fish plants and associated ponds; • Provide assistance to the pond culture sector by supporting ten pilot ponds around the lake; • Support a technical contract to identify additional alternative livelihood opportunities. • Hire of specialized expertise to design the most cost-effective strategy for the control of the alien fish species • Provide expert advisory services in the field of fishery legislation to draft Fisheries Management Regime for further dissemination to other 900 lakes, rivers and water reservoirs of Kyrgyzstan. • Regularly provide information on project progress on the portal www.caresd.net for the benefit of all stakeholders.
Project administrative assistant	125	208	• Assist the project officers in maintaining close contacts with the Government, Executing Agencies, donors and other counterparts through direct contacts, collection and summarizing of information, proposals, incoming and outgoing documents, drafting letters, organizing meetings under supervision of PM. • Provide operational support to project activities implementation as well as to project management;

Position Titles	*$/ person week*	*Estimated person weeks over 4 years*	*Tasks to be performed*
			• Collect data and other information on project development and subject-matter activities (e.g. maintain, log, file and update records in prescribed format for subsequent use); • Contribute to the preparation of status and progress reports by collecting information, preparing tables and drafting selected sections of it. Prepare background material to be used in discussions and briefing sessions; • Arrange for the recording and processing of government requests for assistance; • Assist in identification and formulation of development co-operation projects and in preparation of draft project documents; • Assist in monitoring project/project activities by reviewing a variety of records, including correspondence, reports, activities, project inputs, budgets and financial expenditures in accordance with UNDP requirements. Prepare and file correspondence and materials relevant to the above; • Assist in translation and organization of preparation of Terms of Reference for national and international experts; • Assist in the organization and logistical preparation for workshops, seminars, visiting missions, field trips and etc; • Assist on financial and administrative maters; • Prepare unofficial translations and may act as interpreter if necessary.
Project logistics clerk and driver*	75	208	• Driving the Project Manager and other project staff on a daily basis; • Maintaining vehicle in a good shape and order on a daily basis; • Delivering official correspondence as requested; • Assisting the Finance/Administrative Assistant in day-to-day running of the office; • Doing simple cash withdrawal and handling as authorized by Project Manager; • Maintaining office equipment as authorized by the Project Manager.
Co-financing national expert on cross-project coordination, monitoring and evaluation*	215	156	• Hold monitoring and assessment of sister/co-financing projects and programmes, • Develop sample forms of monitoring and assessment, efficient indicators of assessing activities as well as introducing modern tools of monitoring the project results, • Analyze information on monitoring and assessment results and hand in for placement on web-site www.caresd.net and for mass media. Provide entering and renewal of information based on this and sister projects. • Provide technical consultative support to project staff on the issues of monitoring and evaluation, and/or develop ToRs for technical assistance as well as develop ToRs for trainings on capacity building and strengthening aiming to fill the gaps of knowledge and skills of personnel. • To carry out assessment of the GEF projects and other donors to ensure sustainability of results and needs of their involvement and reflect them in the draft strategy on external resources mobilization. • Introduce best international and sub-regional practice through UNDP, GEF and other donor projects; • Promote imbedding of the project results in other projects and programmes that are under development within UNDP, or by other agencies/donors.
For Technical Assistance		**620**	
Local		558	

Position Titles	***$/ person week***	***Estimated person weeks over 4 years***	***Tasks to be performed***
FAG: Expert group (7 national specialists) for the elaboration and validation of the biodiversity-friendly fisheries management regime	220	350	This expert group will consist of 7-9 different specialists, and the main functions of the group will be to oversee the elaboration of all modules of the BDFRM, as described in paragraph 11. In addition to that, the FAG will ensure: - Review of the current existing fisheries policy, legislation, monitoring, control and surveillance procedures. - Arranging for the stakeholder consultations on the draft policies/laws, - Analysis of the leading international experience in BDFMR with assistance from the international experts, - Development of the up-to-date guidelines and processes that would ensure that BDFRM volumes, boundaries and techniques are environmentally safe, - implementation of biological monitoring of fish stocks and catches during the life of the project. - Facilitating the stakeholder consultations/workshops, chairing meetings to lobby for the adoption and endorsement of BDFRM by Parliament
Expert group on development of the sustainable fishing training modules	175	16	The functions of this 4 experts' group will be: • Working out the training development and implementation schedule, to be approved by PM and facilitate/manage its implementation; • Develop a specific module for a 3 days training "For responsible agencies in Monitoring, Control and Surveillance"; • Develop a specific module for a 3 days training "Fish population and catch data monitoring and presentation" • Develop a specific module for a 3 days training "For Fisheries Management personnel and related government officials" • Develop a specific module for a 3 days training "For fishers and communities to share Monitoring, Control and Surveillance requirements" • Develop and conduct training of trainers (TOT) on the selected topics; • Probate developed module on TOT and update it accordance with the comments and additions obtained during the first set of trainings; • Further develop the capacities of trainers to conduct training on developed modules
Training facilitators (trainers) for seminars and workshops	100	40	The 4 trainers will be responsible for: • Participating in the training of trainers, before and after the trainings; • 3 days training "For responsible agencies in Monitoring, Control and Surveillance"; • 3 days training "Fish population and catch data monitoring and presentation" • 3 days training "For Fisheries Management personnel and related government officials" • 3 days training "For fishers and communities to share Monitoring, Control and Surveillance requirements"
Expert group on awareness raising	300	70	The group of experts/NGOs on awareness and support of BDFRM will: • Develop initial guidelines on target groups and types of awareness-raising materials, • Facilitate consultations/workshops with government and NGOs, to review the target group and products; present them at the tri-partite committee, • Finalize and produce the materials, • Implementation of distribution and awareness raising campaigns, media presentations and publications • Reaching agreements with media representatives (TV, Radio and Newspapers) on the promotion of sustainable fishery policies.
Technical	175	32	• Develop and support the implementation of the specifications on the

Position Titles	*$/ person week*	*Estimated person weeks over 4 years*	*Tasks to be performed*
expert on endemic species breeding			conservation of the endemic fish species of Issyk Kul, elaboration of guidance and standards for native species breeding, reintroduction, protection from introduced species, • Support the expert group on elaboration of trainings in matters related to the scientific knowledge on native species breeding and reintroduction; co-facilitate the workshops, • Assistance in development and analysis of documentation for the procurement and installation of the support equipment for pond culture and breeding programmes, • Assistance in development and analysis of documentation for the procurement and deployment of mobile breeding stations.
National project evaluation consultants	200	10	The role of the national project evaluation consultant will be to participate, alongside with the international consultants, in the mid-term and final evaluation of the project, in order to assess the project progress, achievement of results and impacts. The project evaluation specialists will develop draft evaluation report, discuss it with the project team, government and UNDP, and as necessary participate in discussions to realign the project time-table/logical framework at the mid-term stage. The standard UNDP/GEF project evaluation TOR will be used.
Experts on the financial mechanism to support the sustainable fisheries policy*	175	40	Two national experts on identification of financial mechanism for the implementation of the BDFRM will: • Review of potential funding mechanisms to support various needs and activities of the BDFRM; develop a corresponding proposal and sensitize government toward adoption of a selected financing mechanism, • Facilitate stakeholder meeting to discuss funding mechanisms, • Lobby for / facilitating the adoption of the funding mechanisms into FRM operations, including taking care of the necessary formalities that might be required under the national legislation for the adoption of such mechanism.
International		62	
International consultants for mid-term evaluation	3,000	10	The main objective of the mid-term international evaluation team will be to determine progress being made towards the achievement of outcomes and will identify course correction to strengthen the chances for the delivery of the expected results. The team will test and confirm the key hypotheses underlying the project, reassess risks and assumptions, focus on the effectiveness, efficiency and timeliness of project implementation; will highlight issues requiring decisions and actions; and will present initial lessons learned about project design, implementation and management. Findings of this review will be incorporated as recommendations for enhanced implementation during the final half of the project's term. The organization, terms of reference and timing of the mid-term evaluation will be decided after consultation between the parties to the project document.
International consultants for final evaluations	3,000	10	The main task of the final evaluation team will be - in accordance with UNDP and GEF guidance - to focus on the delivery of the project's results as initially planned (and as corrected after the mid-term evaluation, if any such correction took place). The final evaluation will look at impact and sustainability of results, including the contribution to capacity development and the achievement of global environmental goals. The final evaluation should also provide recommendations for follow-up activities, and the report will feature management response to the issues raised.
Fishery policy advisor	2,000	24	• Technical guidance of the national team on sustainable fishery policies, through the whole period of elaboration of the BDFRM; ensuring that this

Position Titles	*$/ person week*	*Estimated person weeks over 4 years*	*Tasks to be performed*
			policy is developed using a participatory approach; • Provide monitoring of, and mentoring to hired trainers rolling-out capacity-buildings training to rural communities, local government and decision-makers. Co-facilitating the trainings. • Arrange and conduct the field survey and production of guidelines for pond culture and captive breeding, • Facilitating the stakeholder workshop for discussion and review of guidelines for pond culture and captive breeding; supporting the initial start-up process for the launching of the pond culture and captive breeding, • Arrange and conduct the field survey and production of guidelines for the alien species management, • Facilitating the stakeholder workshop for the discussion and review of guidelines for alien species management, • Supervise the initiation of the alien species management programme in Kyrgyzstan.
Advisor on the knowledge management platform	2,375	8	• Present the international experience to develop an information capture and knowledge management mechanism on Kyrgyz sustainable fisheries, • Work with the local experts on the feasibility study for creating a Kyrgyz knowledge management platform on sustainable fisheries; draft terms-of-reference, staffing rules, standards and other guidance for the expected knowledge portal, present and discuss it at the stakeholder workshop, • Provide guidance to the project staff in following items for further knowledge platform implementation: - Stakeholder meetings to discuss and capture lessons and best practices, - Transfer of lessons and best practices to UNDP and GEF.
Alternative livelihoods consultant*	2,000	10	• Present the international experience on sustainable livelihood opportunities, which supports the transition of individuals and businesses away from activities that threaten endemics toward activities in support of sustainable fisheries management • Work with the local experts and international consultants within the outcome 1 and output 2.1-2.2 to study and discuss with them the alternative income and employment opportunities as well as creation of incentives for alternative income and employment generation, • Conducting a cost-analysis (SWOT) of alternative livelihoods opportunities, • Presentation of draft Alternative Livelihoods Programme to Stakeholders and to the tri-partite committee.

Note: positions marked with * are funded from co-financing.

Annex 5. Tracking tool

I. Project General Information

1. Project name: Strengthening policy and regulatory framework for mainstreaming biodiversity into fishery sector
2. Project type: MSP
3. Project ID (GEF): 3192
4. Project ID (IA): 3217
5. Implementing Agency: UNDP
6. Country (ies): Kyrgyzstan

Name of reviewers completing tracking tool and completion dates:

	Name	**Title**	**Agency**
Work Program Inclusion	Zharas Takenov	Environmental Focal Point	UNDP CO - Kyrgyzstan
Project Mid-term			
Final Evaluation/project completion			

7. Project duration: ***Planned*** 4_years ***Actual*** _____ years

8. Lead Project Executing Agency (ies): State Agency of Environment and Forestry – the General Directorate of Lake Issyk Kul Biosphere Reserve

9. GEF Operational Program:

X coastal, marine, freshwater (OP 2)

10. Production sectors and/or ecosystem services directly targeted by project:

10.a. Please identify the main production sectors involved in the project. Please put "**P**" for sectors that are primarily and directly targeted by the project, and "**S**" for those that are secondary or incidentally affected by the project.

Agriculture_____
Fisheries_____P_____
Forestry_____
Tourism_____S_____
Mining_____
Oil_____
Transportation_____
Other (please specify)_____

10.b. For projects that are targeting the conservation or sustainable use of ecosystems goods and services, please specify the goods or services that are being targeted, for example, water, genetic resources, recreational, etc
1. Food resources
2. Genetic resources
3. Recreation facilities

II. Project Landscape/Seascape Coverage

11.a. What is the extent (in hectares) of the landscape or seascape where the project will directly or indirectly contribute to biodiversity conservation or sustainable use of its components?

Targets and Timeframe Project Coverage	Foreseen at project start	Achievement at Mid-term Evaluation of Project	Achievement at Final Evaluation of Project
Landscape/seascape area directly covered by the project (ha)*	623,600 ha (lake area)		
Landscape/seascape area indirectly covered by the project (ha) **	4,311,588 ha (area of biosphere reserve surrounding the largest Kyrgyz lake Issyk-Kul)		

Clarification of the biological impact:

* The biodiversity-friendly fisheries regime (BDFMR) is expected to envisage establishment of new set-aside areas where fishing will be prohibited. Specifically, in Issyk-Kul the BDFMR, subject to additional scientific research and stakeholder consultations, will envisage a five-year fishing moratorium for:
- area in the western bank shallow area (current fishing plots ## 1-10) in the vicinity of the Balytchy town,
- area in the eastern bank shallow area (current fishing plots ## 31,33,35,37,40) in the vicinity of the Tup village.
The total area is 56,000 ha.

** The entire Issyk-Kul lake area is 623,600 ha. While directly, the project sets aside only a small area of the lake, the BDFMR will bring about positive legal, institutional, and capacity changes relevant to the whole lake and its buffer zone, and even broader – for the rest of the key Kyrgyz lakes.

11.b. Are there Protected Areas within the landscape/seascape covered by the project? If so, names these PAs, their IUCN or national PA category, and their extent in hectares.

	Name of Protected Areas	IUCN and/or national category of PA	Extent in hectares of PA
1.	Issyk-Kul Biosphere Reserve	MAB and State Nature Reserve	4,311,588 ha
2.	Issyk-Kul Ramsar Site	Ramsar Site RDB Code 2KG001	633,600 ha

III. Management Practices Applied

12.a. Within the scope and objectives of the project, please identify in the table below the management practices employed by project beneficiaries that integrate biodiversity considerations and the area of coverage of these management practices? Note: this could range from farmers applying organic agricultural practices, forest management agencies managing forests per Forest Stewardship Council (FSC) guidelines or other forest certification schemes, artisanal fisherfolk practicing sustainable fisheries management, or industries satisfying other similar agreed international standards, etc.

Targets and Timeframe Specific management practices that integrate BD	Area of coverage foreseen at start of project	Achievement at Mid-term Evaluation of Project	Achievement at Final Evaluation of Project
1. Re-stocking of native lake fish species and limiting proliferation of introduced species*	Total Project Area (623,600 ha) but wrong species and insufficient numbers		
2. Increasing the fishing license duration for a particular plot, assigned to a particular fisherman **	Issyk-Kul fishing plots along the south-western and northern banks, total area: 70,000 ha		
3. Standardizing fishing gear types***	Total Project Area (623,600 ha)		

Clarifications:

* The following restocking plan applies for Issyk-Kul to support endemic species:
Marinka *Schizothorax issyk-kuli* – 500,000 per year
Naked Osman *Diptychus dybovskii* – 240,000 per year

** The productivity of endemic species at about 12 plots along the south-western and northern banks (other than those discussed in 11a above), has dropped substantially (area about 70,000 ha). A particular biodiversity management tool that the BDFMR will initiate for such area will be a law and by-laws to establish the license duration given out to a particular user as at least 10 years, thus creating a long-term interest of the user in conservation of the endemic species and preventing short-term poaching interests. Such license will be established for plots were productivity of the endemics drops below certain scientifically established levels. In parallel to the regulation, a transparent license distribution/assigning process will be developed, to enable smaller fishermen participate freely in the competition for the license. The final law, by-laws, and final bidding process will be developed during the project (as they require serious consultations and legal work); the law and processes will incorporate a system for assessing the bidder's fishing qualification record, including the assessment of local knowledge. The assessment system will further assess the capacity of the user to maintain the 4 endemic species' populations at the stable or increasing level through the 10 year period, through restocking, biological and ecological plot improvement works, etc. The new by-law should eliminate the current discrimination when fishing license can only be obtained by an entity which is engaged in commercial restocking: many local fishermen can maintain the population using traditional knowledge or by coupling with restocking specialists, but because such schemes do not qualify as commercial restocking, local fishermen are currently barred from participating in the official license procurement process, and poverty drives them into poaching as a result.

*** The current fishing regulation prescribes the maximum permissible mesh size for all species (including endemics), and the maximum quantity of nets to be used by one fishermen. Currently, fishing regulations do not prescribe the length of the net. Nets up to 100 long have come to be used by poachers, and while introduced species have not suffered a substantial loss (due to their higher population size), the endemics, with their difficult-to-quantify populations, have been put under real threat. The BDFMR will discuss and establish a limitation for the net length, probably 25 m per net. However, this is subject to further research and consultations. In parallel to standardizing the net length, appropriateness of the fishing gear for endemic species and the mesh size (currently 17 mm for Chebachok and 32 mm for Chebak) will be re-considered given the disappearance of these species. Increasing the net mesh size for these species will be discussed during the elaboration of the BDFMR.

12.b. Is the project promoting the conservation and sustainable use of wild species or landraces?

Yes

Species (*Genus sp*., and common name)	**Wild Species (please check if this is a wild species)**	**Landrace (please check if this is a landrace)**
Leuciscus schmidti	Wild Species	
Leuciscus bergi	Wild Species	
Schizothorax issyk-kuli	Wild Species	
Diptychus dybovskii	Wild Species	

12.c. For the species identified above, ***or other target species of the project not included in the list above (E.g., domesticated species)***, please list the species, check the boxes as appropriate regarding the application of a certification system, and identify the certification system being used in the project, if any. An example is provided in the table below.

Certification **Species**	A certification system is being used	A certification system will be used	Name of certification system if being used	A certification system will not be used
Leuciscus schmidti				X
Leuciscus bergi				X
Schizothorax issyk-kuli				X
Diptychus dybovskii				X

IV. Market Transformation and Mainstreaming Biodiversity

13. a. ***For those projects that have identified market transformation as a project objective****, please describe the project's ability to integrate biodiversity considerations into the mainstream economy by measuring the market changes to which the project contributed. The sectors and subsectors and measures of impact in the table below* ***are illustrative examples, only****. Please complete per the objectives and specifics of the project.*

Name of the market that the project seeks to affect (sector and sub-sector)	**Unit of measure of market impact**	**Market condition at the start of the project**	**Market condition at midterm evaluation of project**	**Market condition at final evaluation of the project**
Sustainable Fisheries – Conservation of endemics	Number of wild-caught endemics as a percentage of the overall catch for marketing	90		
Sustainable Fisheries- Targeting of introduced species	Number of wild-caught introduced species (as targeted by project) as percentage of overall catch for marketing	60		
Sustainable Fisheries – Overall reduction in fishing effort	Numbers of persons working in fishing industry	1500 fishermen		

13. b. Please also note which (if any) market changes were directly caused by the project.

V. Improved Livelihoods

14. For those projects that have identified improving the livelihoods of a beneficiary population based on sustainable use /harvesting as a project objective, please list the targets identified in the logframe and record progress at the mid-term and final evaluation. An example is provided in the table below

Improved Livelihood Measure	Number of targeted beneficiaries (if known)	Please identify local or indigenous communities project is working with	Improvement Foreseen at project start	Achievement at Mid-term Evaluation of Project	Achievement at Final Evaluation of Project
Alternative Employment either in sustainable fisheries-related work or other work that is not significantly impacting endemic fish species or the lake ecosystem	Total number of fishermen targeted: 1500	Fishermen	At least 500 engaged in alternative employment schemes by project end		

VI. Project Replication Strategy

15.a . Does the project specify budget, activities, and outputs for implementing the replication strategy? **Yes**

15.b. Is the replication strategy promoting incentive measures & instruments (e.g. trust funds, payments for environmental services, certification) within and beyond project boundaries? **Yes**

Assistance to Alternative Livelihood Transition through credits and loans to assist in the use of lessons and best practices for pond culture being adopted so as to provide an alternate source of endemics (cultured, not wild-caught) and to provide juveniles for re-stocking and enhancing the wild population. This Trust Fund will also be used to replicate proposed examples for alternative livelihoods arising from a Project-assisted review and assessment activity.

15.c. For all projects, please complete box below. Two examples are provided.

Replication Quantification Measure (Examples: hectares of certified products, number of resource users participating in payment for environmental services programs, businesses established, etc.)	Replication Target Foreseen at project start	Achievement at Mid-term Evaluation of Project	Achievement at Final Evaluation of Project
1. Number of endemics being raised to re-stock the wild lake population	5,000 per endemic species per annum		
2. Number of endemics being propagated as an alternative (non-wild) source of endemics for market	300 mt		
3. Number of fishermen moving out of fishing into livelihoods that are non-threatening to the endemic fish population of the lake	500		

VII. Enabling Environment

16. Please complete this table at **work program inclusion for each sector** that is a primary or a secondary focus of the project. Please answer YES or NO to each statement under the sectors that are a focus of the project.

Sector **Statement: Please answer YES or NO for each sector that is a focus of the project.**	**Agriculture**	**Fisheries**	**Forestry**	**Tourism**	**Other (please specify)**	**Other (please specify)**
Biodiversity considerations are mentioned in sector policy		Yes		Unknown		
Biodiversity considerations are mentioned in sector policy through specific legislation		Yes				
Regulations are in place to implement the legislation		No				
The regulations are under implementation		No				
The implementation of regulations is enforced		No				
Enforcement of regulations is monitored		No				

VIII. Mainstreaming biodiversity into the GEF Implementing Agencies' Programs

17. At each time juncture of the project (work program inclusion, mid-term evaluation, and final evaluation), please check the box that depicts the status of mainstreaming biodiversity through the implementation of this project with on-going GEF Implementing Agencies' development assistance, sector, lending, or other technical assistance programs.

Time Frame **Status of Mainstreaming**	**Work Program Inclusion**	**Mid-Term Evaluation**	**Final Evaluation**
The project is not linked to IA development assistance, sector, lending programs, or other technical assistance programs.			
The project is indirectly linked to IAs development assistance, sector, lending programs or other technical assistance programs.			
The project has direct links to IAs development assistance, sector, lending programs or other technical assistance programs.			
The project is demonstrating strong and sustained complementarity with on-going planned programs.	**YES**		

IX. Other Impacts

18. Please briefly summarize other impacts that the project has had on mainstreaming biodiversity that have not been recorded above.

Annex 6. Monitoring and evaluation plan and budget

Type of M&E activity	Responsible Parties	Budget US$ *Excluding project team Staff time*	Time frame
Inception Workshop (IW)	▪ Project manager ▪ UNDP CO, UNDP GEF	$3,000	Within first two months of project start up
Inception Report	▪ Project manager ▪ UNDP CO	None	Immediately following IW
Measurement of Means of Verification for Project Purpose Indicators	▪ Project manager will oversee the hiring of specific studies and institutions, and delegate responsibilities to relevant team members	To be finalized in Inception Phase and Workshop. Cost to be covered by targeted survey funds.	Start, mid and end of project
Measurement of Means of Verification for Project Progress and Performance (measured on an annual basis)	▪ Oversight by Project GEF Technical Advisor and project manager ▪ Measurements by regional field officers and local IAs	TBD as part of the Annual Work Plan's preparation. Cost to be covered by field survey budget.	Annually prior to APR/PIR and to the definition of annual work plans
APR and PIR	▪ Project manager ▪ UNDP-CO ▪ UNDP-GEF	None	Annually
TPR and TPR report	▪ Government Counterparts ▪ UNDP CO, project manager ▪ UNDP-GEF Regional Coordinating Unit (RCU)	None	Every year, upon receipt of APR
Periodic status reports	▪ Project manager	None	TBD by project manager and UNDP CO
Technical reports	▪ Project manager	3,000	TBD by project manager and UNDP-CO
Mid-term evaluation	▪ Project manager ▪ UNDP- CO ▪ UNDP-GEF RCU ▪ External Consultants (evaluation team)	40,000	At the mid-point of project implementation.
Final External Evaluation	▪ Project manager, ▪ UNDP-CO, UNDP-GEF RCU ▪ External Consultants (evaluation team)	40,000	At the end of project implementation
Terminal Report	▪ Project manager ▪ UNDP-CO ▪ External Consultant	None	At least one month before the end of the project
Lessons learned	▪ Project manager ▪ UNDP-GEF RCU (formats for documenting best practices)	4,400	Yearly
Audit	▪ UNDP-CO ▪ Project manager	4,000 (average $1000 per year*)	Yearly
TOTAL INDICATIVE COST *Excluding project staff time, UNDP staff and travel expenses.*		US$ 94,400	

Annex 7. Stakeholder participation plan

The primary stakeholders in this project at the national level are the lake fishermen and fishing industry, the fishing regulatory bodies (government agencies) and the Biosphere Reserve administration. At the global level it will be the Man and the Biosphere Programme, the Ramsar Convention, and all individuals and organisations associated with the sustainable management and conservation of global biodiversity. The stakeholder participation plan per project output is outlined below along with details of the key stakeholders, their roles and interest in this project, and any potential sources of conflict and associated mitigation measures.

Output 1.1. A Biodiversity friendly Fisheries Management Regime: Undertaking the review of fisheries policy, legislation, monitoring, control and surveillance procedures requires the participation and input of stakeholders from the various ministries responsible for regulating and overseeing fishing activities in the lake, as well as those dealing with protection and conservation of species and habitats. Six organisations have varying levels and foci of control over fisheries and closely related issues in the Lake. Fisheries and Forestry are the primary government plays and currently coordinate and generally cooperate over fisheries through a joint Committee but still maintain separate roles. Beyond the formal agency level there are also contracts with private companies to carry out enforcement. Monitoring at the scientific level is generally the responsibility of the Issyk-Kul Biological Station but resources constrain actual activities and, in any case, the results need to be integrated into an overall management process. As part of the Biosphere Reserve, the lake (and therefore its fishery) are of keen concern to the Biosphere Reserve Administration, and similarly those areas designated as Ramsar Sites will almost certainly be effected and impacted by any changes in fisheries management.

Any review will need to take into account not only the input and advice of the formal agencies and bodies (government, NGOs) but will need to consult with other stakeholders. These must include the fishers themselves (at both the individual and at the company level) and the lake communities. The stakeholders at the marketing end of the fishery who sell the product to the consumer will also be included. In order to capture effective stakeholder input the review process needs to undertake individual one-on-one (or selected group) seminars and follow these up with sharing of results before incorporation into a report with conclusions and recommendations for the next Output and stakeholder process.

The same stakeholders will be involved in the design of the biodiversity friendly fishery management regime. The project will share a draft of a proposed new BDFMR with the same people who provide the initial input at the review stage. In view of the intention to capture lessons and best practices for wide dissemination it would also be appropriate to share the draft BDFMR with a major global advisory fisheries agency such as FAO and with LakeNet which is an organisation that is working with the Ramsar Convention under a Memorandum of Cooperation with the aim of improving conservation and sustainable development of the Lake and its drainage basin.

Stakeholder input will be through initial distribution of the draft BDFMR followed by a stakeholder workshop to discuss and resolve any issues so as to finalise draft documents (which will constitute the BDFMR) for submission to high-level government policy makers. A smaller policy level think-tank would then meet (if necessary) to resolve any higher level policy issues and concerns relating to mandate, responsibility, accountability, funding, etc as may be raised at the senior government level. The Project would be represented at this meeting as the outcome would have very real implications for the success and delivery of the Project as well as the realisation of its objectives. Representatives from the fishing industry and NGOs could be invited to this think-tank as appropriate. A final version of the BDFMR would then go to Cabinet for endorsement.

Output 1.2. The capacity to deliver an implement the biodiversity friendly fishery management regime is strengthened: This is where the real activities associated with the BDFMR will happen. Monitoring, in the sense of fisheries data collection as well as 'habitat' or 'ecosystem' related monitoring will be important both to the direct aims of the project in terms of enhancing sustainability of endemics as well as indirect requirements such as adequate water quality, sufficient breeding and egg-laying habitat, etc. Effective and transparent surveillance and enforcement is critical to the successful implementation of the BDFMR and, for it to be truly effective, needs the support of local communities and fishermen through their understanding of its aims and objectives.

All of these 'on-the-ground, activities require stakeholder involvement from the formal responsible agencies but also input and feedback from the NGOs (especially Ramsar and the MAB Programme) as well as potentially valuable linkages to local communities. Much of this would be discussed through the stakeholder participation exercises planned under 1.1, but there is a need for fine-tuning and feedback (particularly in the earlier stages of implementation of the BDFMR) to ensure effective management and to resolve any unforeseen issues. The project will address this need for stakeholder fine-tuning through two vehicles. First, the project will assist in the creation of a Fisheries Advisory Committee to ensure cross-sectoral integration between the stakeholders in guiding the BDFMR, and which will therefore have appropriate stakeholder representation. Secondly, the project will support a full and comprehensive stakeholder review workshop with 12 months and again within 24 months (if still within the project lifetime) of initial implementation of the BDFMR.

The capacity-building programme will address the primary hands-on stakeholders involved in the administration and management of the fishery. Specifically this must be the responsible government body identified in the BDFMR, as well as associated government agencies which may be undertaking closely related activities such as information gathering and database management (e.g. for monitoring and dataset processing purposes). However, it will also be in the interests of the overall objective of the Project to provide some assistance to the Biosphere Reserve administration as appropriate in order to ensure that they can meets their needs and responsibilities both in hosting the Project, and in maintaining the functioning of the Reserve as it relates to the integrity of the lake ecosystem. In this respect, the project will work with the Biosphere Reserve to assist them in building capacity to identify other threats and impacts to the Lake ecosystem beyond fisheries issues, and to monitor those threats and impacts with a view to identifying appropriate actions that may be considered essential by the government and other possible funding sources. To this effect, the Project will also host a lake ecosystem workshop to address this specific area of concern and to catalyse future actions and initiatives (by government and/or by other donors) that will inevitably support the long-term objectives of the Project. In order to address these needs, the Project will, as a priority, adopt a capacity building and institutional strengthening workplan through a meeting of the appropriate stakeholders within the first month to 6 weeks following Project Inception.

Output 1.3. Funding mechanism for administration and management of fisheries: The Project will, in its early stages (and through its Project Board) create a working group of appropriate stakeholders whose sole responsibility will be to identify and gain agreement on the long-term financial sustainability of the project outputs. Such a working group will be defined by the Project Board and will include representatives from the relevant government agencies, the lakeside community, the fishing industry (both harvesting and marketing) and appropriate NGOs whose interests will be linked to said funding. The working group will deliver a draft document agreed by the stakeholders to the Project Board for onward consideration at the appropriate administrative and policy level of those agencies and entities that are identified as having responsibility for the long-term financial provisions (with a view to formal endorsement and thus sustainability of the project objectives and outputs).

Output 1.4. Awareness and support of biodiversity friendly fishery management regime

Disbursement of knowledge products and educational materials through an NGO partnership agreement: This output deals primarily with the actual agreement process and requirements. In this context the main stakeholders will be the Project and the NGO community. It will be necessary to identify a suitable NGO and fair and transparent selection process (following UNDP rules and requirements for contracting). It would be appropriate for government to be considered a stakeholder in this selection process as the NGO selected will need to work closely with government representative in order to be effective. In the same respect it would be politic if the educational and community sector's opinions and choice were taken into consideration in this election process.

Education and awareness materials for targeting the academic, public and private sectors: In essence, all recipients of these knowledge products and educational materials are stakeholders, which represents a rather large group. In the interest of comprehensive and transparent stakeholder involvement this output will require, in its earliest stages, an open workshop for all interested parties. This would almost certainly result in the formation of smaller working groups to address specific and focused target groups in the community (e.g. schools at different levels, community groups, the fishing industry, civil servants at different levels, etc). The NGO partner would be responsible for the administration of these stakeholder participatory activities and this will be a part of its Terms of Reference. A second workshop would then collectively review the individual 'target' efforts of the groups to ensure compatibility and parallel delivery of the required information. The Workshop would also agree on a realistic schedule for the dissemination of awareness materials and how the audiences for these materials would best be grouped and addressed. In the case of senior government decision and policy makers, this would require some specific negotiations at a more focused level, probably through a specific working group of civil servants hosted by the NGO with other representation as deemed appropriate by the government and the Project Board.

Distribution agreements with appropriate media: The stakeholders here would be the media itself in cooperation and discussion with the NGO partner. Obviously the Project would also be an interested party, as would the government, but these interests can be captured through the Project Board which would give specific attention to this important process. The NGO partner would discuss needs with the individual media representation but it would also be valuable for them to host a media working session to compare notes between the different requirements and to discuss scheduling so as to achieve the greatest effect and to reach out to the largest audience.

Output 2.1. Alternative supplies in place to meet market demands. The purpose of the pond culture is two-fold. First, one intention is to supplement and replace wild-caught stocks (particularly of endemic species) with pond-reared fish to meet market demand. The specific stakeholders in this exercise would be the groups involved in (or interested in) pond culture for marketing, the sellers, and the community (end-market). The second group of stakeholders would be groups or individuals (including the State) using pond culture techniques to breed and propagate endemics for release, along with those agencies who are responsible for conservation and management of the endemic species (e.g. Biological Station, Biosphere Reserve and the Fisheries Advisory Committee). It would be effective and practical to deal with these stakeholders as one interest group. It may well be that those bodies that undertake pond culture for the purpose of raising endemics for market can also divert some of their fish to re-stocking, and this may indeed prove to be a more cost-effective approach.

The project would host an early workshop of aforementioned stakeholders to discuss appropriate approaches to the two end intentions of marketing and re-stocking. Discussion points would include identification of marketing needs (numbers, sizes and seasonality), defining numbers of fish of each species needed for effective re-stocking, a discussion of the technical aspects associated with pond culture and release (water quality, stocking numbers, handling, size at release, etc.) and how guidelines will be

develop and distributed, and what funding needs would be required (credit loans, capital cost, etc.). A presentation would also be given on the mobile breeding facilities.

Based on the output from the workshop the Project would produce a set of guidelines and would then enter into one-on-one discussions with appropriate and interested stakeholders. The Project would enter into Agreements with pond culturists for the provision of endemics for re-stocking. Training and capacity building would be provided as necessary.

Output 2.2. Control and reduction/eradication of introduced alien species: This is fundamental to the sustainable conservation and management of the endemic species within the lake. Stakeholders would include the fishers (who would need to have incentive to target the introduced species that are of primary concern), the government and NGO agencies responsible for the welfare of the lake ecosystem (to design strategies to discourage breeding and growth of problem species). Careful consideration needs to be given to any changes that are proposed to lake habitats for this purpose that may have additional and unforeseen detrimental effects on other species (especially the endemics). The Project would contract an Expert to develop a control and eradication strategy based on detailed consultations with stakeholders. This would be circulated to all relevant stakeholders for their consideration and then presented and discussed in its draft form to a stakeholder meeting arranged by the Project. Feedback from this meeting would result in a final strategy and workplan for review by the Fisheries Advisory Committee and for endorsement by government, following which the proposed activities would be implemented. Results (after a period of 18-24 months) would be shared with the stakeholders, and a further stakeholder meeting to discuss long-term procedures would be arranged if appropriate and necessary.

Output 2.3. Alternative livelihoods programme: The primary stakeholders would be those individuals and groups whose activities currently threaten the sustainability of populations of endemic fish species in the lake. Therefore the fishers and the fishing communities are the priority stakeholders that need to participate in the activities under this Output. The Project would undertake an assessment of alternative livelihoods taking into account the potential for new impacts on the lake ecosystem that might arise from new livelihood promotion. This Output would need to coordinate closely with the corresponding Output which would provide necessary access to credit facilities to assist in the establishment of new and/or amended employment activities. As part of the assessment of alternative livelihoods the Project would identify the potential for funding. An initial stakeholder meeting would be arranged as an introduction to the assessment process and to capture ideas and opinions. Lines of communication would be identified for stakeholder access to the assessment process. The results of the assessment would be shared with the stakeholders at a workshop during which proposed alternatives and support would be discussed and reviewed. Stakeholders would be given advise then on next steps to altering their livelihoods, especially in relation to credits and funding assistance. The alternative livelihood process would be reviewed in a further meeting some 218-24 months later for the purposes of assessing its success and for fine-tuning.

Output 2.3 Direct assistance to support conservation of the endemic fish species. The Project would provide initial funding for a post at the Biological Station with the provision that this post would be funded in the long-term through the normal source of funding from the government. The Biological Station would be the stakeholders as would those groups who benefit from the presence and technical advice of this person. That would include primarily the fishers and the pond culturists. The Technical Advisor would be expected to develop professional working relations with these individuals and groups and to undertake training exercises (supported by the project) as necessary and appropriate.

Output 2.4. A knowledge management system: Stakeholders can be considered to be global. UNDP and GEF themselves would constitute stakeholders and will benefit as project development and support agencies from the lessons and best practices arising from this project. Other similar fisheries within Kyrgyzstan, within the region and within other parts of the world could benefit also from these lessons

and best practices. The Project will work closely with the Implementing Agency and GEF to ensure capture and dissemination as appropriate (see Replication Plan).

Annex 8. References

Konurbaev, A.O. and Timirkhanov, S.R., 2003. *Looking at fishes in Kyrgyzia, Central Asia.* Bishkek 2003. ISBN 9967-11-185-2

Rakhimdinova, A. In Tyup and Bishkek (RCA No. 338, 6th January 2005. *Poverty and corruption behind poaching that threatens Kyrgyz fish stocks.* On Institute for War and Peace Reporting at http://iwpr.gn.apc.org

Savvaitova, K.A. and Petr, T., 1999. *Fish and fisheries in Lake Issyk-Kul (Tien Shan), River Chu and Pamir lakes.* Petr, T. (ed.) Fish and fisheries at higher altitudes: Asia. FAO Fisheries Technical Paper. No. 385. Rome, FAO. 1999. 304p.

SIGNATURE PAGE

Country: Kyrgyz Republic

UNDAF Outcome(s)/Indicator(s):

Poor and vulnerable groups have increased and more equitable access to quality basic social services and benefits, in a strengthened pro-poor policy environment

Expected Outcome(s)/Indicator (s):

Sustainable development principles integrated into poverty reduction policies and programmes.

(CP outcomes linked t the SRF/MYFF goal and service line)

Number of developed national action plans to implement commitments of KR under the UN environmental conventions

Expected Output(s)/Indicator(s):

Increased institutional capacity to implement international conventions and agreements

(CP outcomes linked t the SRF/MYFF goal and service line)

Number of various pilot and practical activities applying biodiversity conservation policies

Implementing partner: *(designated institution/Executing agency)*	State Agency on Environment Protection and Forestry
Other Partners:	MAWRPI, Issykul oblast administration and others

Programme Period: 2007-2010
Programme Component: Environment for Sustainable Development
Project Title: Strengthening policy and regulatory framework for mainstreaming biodiversity into fishery sector
Project ID: 00058610
Project Duration: 2008-2013
Management Arrangement: National Execution

Total budget:	1,380,000 USD
Allocated resources:	1,380,000 USD
• Government	
• Regular	430,000 USD
• Other:	
○ GEF	950,000 USD
○ Donor	_____
• In kind contributions	: 2,690,000 USD

AGREED BY:	SIGNATURE:	DATE:
Arstanbek Davletkeldiev, Head of State Agency on Environmental Protection and Forestry, Kyrgyzstan		25.02.08
Neal Walker, Resident Representative UNDP/Kyrgyzstan		26.02.08