



UNITED NATIONS ENVIRONMENT PROGRAMME

Programme des Nations Unies pour l'environnement Programa de las Naciones Unidas para el Medio Ambiente

Программа Организации Объединенных Наций по окружающей среде برنامج الأمم المتحدة للبيئة

联合国环境规划署



PROJECT DOCUMENT

SECTION 1: PROJECT IDENTIFICATION

1.1 Project title:	Reducing global and local environmental risks from primary mercury mining in Khaidarkan, the Kyrgyz Republic
1.2 Project number:	GFL: PMS:
1.3 Project type:	Medium Size Project (MSP)
1.4 Strategic objectives:	
GEF strategic long-term objective:	CHEMs-OBJ3: Pilot sound chemicals management and mercury reduction
Strategic programme for GEF IV:	CHEMs-OBJ3: Pilot sound chemicals management and mercury reduction
1.5 UNEP priority:	Harmful Substances and Hazardous Waste
1.6 Geographical scope:	National
1.7 Mode of execution:	External
1.8 Project executing organization:	State Agency for Environmental Protection and Forestry
1.9 Duration of project:	36 months
	Commencing: 1 October 2012
	Completion: 30 September 2015

Validity of legal instrument:	36 months		
1.10 Cost of project		US\$	%
Cost to the GEF Trust Fund		944,000	23.9
Co-financing			
<i>Cash:</i>			
Swiss Federal Office for the Environment (FOEN)*		645,000	16.3
Ministry of Foreign Affairs of Norway		800,000	20.2
U.S. Environmental Protection Agency		175,000	4.4
UNEP		200,000	5.1
UNDP		30,000	0.8
Sub-total (cash)		1,405,000	46.8
<i>In-kind and other inputs:</i>			
State Agency for Environmental Protection and Forestry		100,000	2.5
Kyrgyz Mining Association		50,000	1.3
Osh Aarhus Environmental Information Centre		30,000	0.8
Zoi Environment Network		120,000	3.0
Almaty University of Power Engineering and Telecommunications (AUPET)		50,000	1.3
University of Castilla La-Mancha (Spain)		100,000	2.5
UNITAR		40,000	1.0
UNEP		439,000	11.1
UNDP		228,000	5.8
Sub-total (in kind)		862,000	29.3
Total		3,951,000	100.0

1.11 Project Summary

The world's governments agreed at the twenty-fifth session of the United Nations Environment Programme (UNEP) Governing Council in 2009 to prepare a global legally binding instrument on mercury to protect human health and the environment from mercury-related risks. After the closure of major mercury mines in Almaden (Spain), Idrija (Slovenia) and Algeria, the Khaidarkan mine in southern Kyrgyzstan is the last remaining supplier of primary mined mercury to the international marketplace.

After more than 70 years of mercury mining and smelting at Khaidarkan, a number of mercury-contaminated hot-spots exist while atmospheric emissions of mercury from the smelter continue. These are sources of mercury release to the global and local environment. In addition to mercury releases from the mining and smelting operations, including its waste management, the mine continues to supply primary mercury to the global market. The mine could produce and supply more than 1,500 tonnes of mercury in the coming decade that could eventually enter the global ecosystem. The ultimate objectives of the actions of which this project forms part are to:

- protect human health and the environment by stopping mercury releases; and
- cut the mercury supply.

The UNEP Global Mercury Partnership is one existing vehicle for the coordination of efforts between the Kyrgyz Government and the international community to move forward in phasing out primary mercury mining. An additional important linkage is UNDP's work to support the implementation of the Country Development Strategy, particularly because Khaidarkan as a community is economically dependent on the mercury mine and it is located in an impoverished region of the country. So far, the Governments of Switzerland, Norway and the United States have provided financial contributions to the project while UNEP, UNDP and UNITAR have played an active role in assisting Kyrgyzstan.

The Khaidarkan plant remains important to the local community, in particular as it is the primary income generator in the area. Up until now, there has been little presentation of economic alternatives to mercury mining to facilitate transition and gain a firm commitment from all key stakeholders. As long as local economy and mining community remain threatened by mine closure and the arrangements for alternative development are not well known and practically demonstrated, the key governmental players and local community are unlikely to be confident and supportive of the phasing out of mercury production. Moreover, the lack of up-to-date sufficient and reliable local environmental and health data along with non-existing monitoring, reduces the weight of environmental arguments for mercury mining cessation. In addition, exposure of local residents to environmental and health risks from mercury and emissions into the environment continue due to lack of preventive and remedial measures.

The proposed GEF project will (i) identify and promote economic alternatives to mercury mining (such as mining and processing of gold and non-metallic minerals as well as other non-mining small-scale business development) and (ii) prepare for remedial and preventive measures at areas identified as high-risk priorities to address in and around the Khaidarkan mercury mine and smelter. In addition the project will enable a comprehensive assessment and monitoring of environmental and health risks and impacts of the mercury mining and improve knowledge and awareness of policy makers and local residents about environment and health risks. These project components will collectively contribute towards the effort of securing an agreement by the central authorities of Kyrgyzstan and the local community for primary mercury mining phase out in a socially and environmentally responsible manner.

The GEF project aims to support activities in different thematic areas at different scales that will lead to the ultimate overall project goal "*reduction of global and local environmental risks from primary mercury mining in Khaidarkan*". Overall expected project outcomes include:

- | | |
|-----------------|--|
| <i>Global</i> | <ul style="list-style-type: none"> • Reduce to minimum (eventually to zero) Kyrgyzstan's primary mercury production • Reduce emissions from Kyrgyzstan's mercury smelting into the global atmosphere |
| <i>Regional</i> | <ul style="list-style-type: none"> • Benefit to the downstream Ferghana Valley shared by Uzbekistan, Tajikistan and Kyrgyzstan, through reduction of mercury mining and associated pollution |

- National* • Replace primary mercury mining with alternative sources of income through investment promotion that will strengthen the national economy, improve the overall environmental image of Kyrgyzstan and fulfil any requirements under the international mercury process
- Local* • Diversify local economy that will improve economic resilience, including employment
- Reduce passive environment and health risk reduction measures and prepare steps for the future remediation, including adequate monitoring measures, will reduce known and potential threats to the environment (pollution) and the local population (health and agricultural activities)

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ACRONYMS AND ABBREVIATIONS

AUPET	Almaty University of Power Engineering and Telecommunications
ESC	Ecological Security Conception,
GEF	Global Environment Facility
GHS	Global Harmonised System
IBC	International Business Council
IETI	International Extractive Industry Transparency Initiative
INC	Intergovernmental Negotiating Committee
Kadamjai SES	Kadamjai Sanitary-Epidemiological Station
KMP	Khaidarkan Mercury Plant
NEAP	National Environmental Action Plan
NEHAP	National Environmental Health Action Plan
NGO	Non Governmental Organisation
PEI	Poverty-Environment Initiative
PRA	Participatory Rural Appraisal
QSP	Quick Start Programme
SAEFP	State Agency for Environmental Protection and Forestry
SAICM	Strategic Approach to International Chemicals Management
SGP	Small Grants Programme
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNITAR	United Nations Institute for Training and Research

SECTION 2: BACKGROUND AND SITUATION ANALYSIS

2.1. Background and context

1. Mercury is a highly toxic heavy metal that is transported long distances by atmospheric processes. It accumulates in ecosystems and has long been known for its significant negative effects on human health and the environment. Growing global and local concerns about the impacts of mercury led UNEP's Governing Council to agree on the preparation of a global legally binding instrument on mercury to be completed in 2013. This instrument will include provisions to limit mercury supply as well as reduce the demand for mercury and its international trade.
2. The international community considers primary mining (process of extracting raw materials from the ground) as the least preferred source of the supply of mercury¹. The Khaidarkan mine in southern Kyrgyzstan is considered to be the last primary mercury mine in the world exporting to global markets, providing about 10% of global mercury supply.
3. Khaidarkan is located in the Alai-Turkestan mountains at an elevation of about 2,000 meters above sea level. It lies to the south of and drains into the Ferghana Valley, the most densely populated region of Central Asia. Average annual temperature is +6°C. Winter temperatures reach -20°C, summer +25°C; annual precipitation is 415 mm.
4. Archeological evidence suggests that mercury extraction by artisanal methods started in the region more than 10 centuries ago. Industrial production at the Khaidarkan Mercury Plant (KMP) was formally established in 1941. In the past, the KMP was the main mercury production facility for the Soviet Union, providing a strategically important supply of mercury for military and other purposes. Mercury production reached 800 tones per year in the 1980s, and at of the Soviet era, the plant employed over 3,000 people, operating several mines spread across southern Kyrgyzstan.



5. After the national independence in 1991, major changes in the economy and market systems, including the loss of subsidies from the Soviet Union, falling mercury prices and growing energy and technical costs the mercury plant was declared bankrupt and was re-organized into the Khaidarkan Mercury Joint Stock Company with 99.9% of the shares being state-owned. Other mercury deposits and mines at Chauvay and Chonkoy that previously provided ore to Khaidarkan were abandoned. Nowadays, mining is restricted to the deepest levels of the Khaidarkan deposit, 350-400 meters below surface. As a result of difficult mining conditions, the plant is reliant on governmental subsidies for energy and geological exploration. While there are significant technical and economic challenges, the recent increase in the market price for mercury has allowed the KMP to remain operational and perhaps increase production. The main products are metallic mercury and fluorite concentrate although antimony was also

¹ Source: Report of the second meeting on the intergovernmental negotiating committee for mercury. Annex II – Report on the outcomes of the consultations on primary mercury mining. Available at : http://www.unep.org/hazardoussubstances/Portals/9/Mercury/Documents/INC2/INC2_20_report_e.doc

produced in the past. Until recently, Khaidarkan's mercury has been exported to China, Russia, U.S. and E.U. firms². A small fraction of mercury produced at Khaidarkan remains in the country and is used by artisanal gold miners; estimates suggest this amount is in the range of 150-300 kg annually.

6. The total output of primary (ore-based) mercury and secondary mercury (received from waste material) at KMP is 100 to 150 tonnes per year though in the past, it was 450-600 tonnes per year.³ In 2009, the failure of water pumps resulted in flooding the lower levels of the mine and reduced output. In the coming decade (2011-2020) the Khaidarkan mine plans to produce more than 1 500 tonnes of primary mercury that will eventually enter the global market. Mercury reserves available at Khaidarkan provide for at least several decades of future operations.
7. The smelter at KMP has only limited and inefficient pollution control systems and is considered as a potentially important source of global atmospheric mercury emissions as monitoring systems are not in place and no recent inventory has been developed. However, at full production capacity 20 years ago, Khaidarkan's atmospheric emissions of mercury were estimated at 20 tonnes per year. The problem of mercury pollution from Khaidarkan has therefore both a local and a global context.
8. Considerable mercury releases to the environment, especially atmospheric emissions, are caused by the limited and inefficient pollution prevention, lack of remedial planning and measures, and inadequate monitoring. Mercury levels in agricultural soils and river sediments in the area of ongoing and past mercury mining sites often exceed national environmental limits. Additionally, deficiencies in "passive" prevention measures such as fencing of polluted sites, regulations of land use and awareness among farmers, increase public exposure to health and environmental risks to the public, livestock and wildlife.
9. The Batken Province, where the Khaidarkan mercury mine is located, belongs to one of the poorest and most remote mountainous regions of Kyrgyzstan. Agriculture is a driver of the local economy in the Batken Province as it provides for 50% of the gross regional product. Mercury mining and processing at KMP is the single most important industry, and it forms the backbone of the company town of Khaidarkan. Currently, Khaidarkan mercury plant employs around 800 people and the local community of about 10–11 thousand people depends directly and indirectly on the KMP for income, services, electricity etc.
10. The remote location, harsh conditions and historical mining specialization⁴, mitigate against readily available economic alternatives to mercury production exist at the moment. The technical assessment report on Khaidarkan⁵ indicated that by increasing local production and promoting related businesses, the valley could become more self-sustaining and less vulnerable to economic changes.
11. Furthermore, the technical assessment report on Khaidarkan indicates that agriculture is the main economic sector in the rest of southern Kyrgyzstan and agriculture in the valley could be improved by optimizing land use, strengthening local food processing and improving the marketing of agricultural products. Land appropriate for agriculture use needs to be further assessed, given the legacy of contamination in the area of the mine itself. Batken province is famous for apricots (production potential 12,000 tonnes a year) and other fruits and vegetables (cherry, apples, pears, grapes, pomegranates) in total 35,000 tonnes. The Batken province also provides excellent conditions for manufacturing of dry foodstuff. The Ministry of Industry has also indicated that the production of local foodstuff specialties such as dried apricots represent a promising development option for this rural area. Brick production and food processing were also mentioned as alternative economic activities to mercury mining.

² In its working life the Khaidarkan mine is estimated to have produced more than 36 000 tonnes of mercury.

³ Source: Towards a Mercury-Free Future: Feasibility Study - Development of gold and other mineral deposits near Khaidarkan Feasibility. A study of alternative minerals mining for Khaidarkan (2012). Available at: www.unep.org/hazardoussubstances/Portals/9/Mercury/Documents/ASGM/Kyrgyzstan/prefeasibility-eng.pdf

⁴ Whilst other economic alternatives including agriculture and tourism are possible, the main labor force of the Khaidarkan community is specialized in mining

⁵ Environmental issues related to environmental primary mercury mining in Kyrgyzstan: Technical Assessment (2009) developed by Zoi Environment Network

12. In 2008, the Kyrgyz Ministry of Finance listed a number of investment possibilities for Batken province. Tourism attractions include peak Piramida, peak Asan-Uson, Dugoba base-camp (juniper forests and hiking/horse paths are frequented by local and international visitors). Development of community-based tourism has good prospects, but infrastructure and accessibility are to be improved.
13. On the other hand, gold mining is booming all across Kyrgyzstan, including around the Khaidarkan, and it is considered by the authorities and experts as one the industrial alternative options to substitute mercury mining⁶. Other possible industrial alternatives identified in the Kyrgyz Republic Action Plan on Primary Mercury Mining (2009) include the production of aluminium and non-metallic minerals.
14. Curbing mercury mining, although desirable from a health and environmental point of view, could compromise local livelihoods and the fragile economy of an impoverished region. As a result, the cessation of mercury mining is a delicate issue requiring a balanced socially responsible approach to the interests of all stakeholders.
15. GEF's support will develop appropriate frameworks and mechanisms to implement the most suitable alternatives to mercury mining in Khaidarkan and promote public-private partnerships. The examples of large (now closed) town-forming mercury mines in Europe (Idria, Almaden) and Terek-Say state-owned mine in Kyrgyzstan (recent transition from antimony to gold extraction) shows that alternative local development options are available, though a transition process is complicated and requires joint efforts of the central government, local community, private sector and the international partners. Gold and non-metal mining companies active in southern Kyrgyzstan are interested in manpower and infrastructure available at Khaidarkan. In this context, Khaidarkan has a number of advantages such as:
 - existing infrastructure,
 - professionally trained staff and local mining traditions,
 - lower capital costs and environmental impacts comparing to the new mining activities,
 - smaller number of permissions and shorter time required.

But the details and approaches for transfer from mercury mining to alternatives need to be elaborated, discussed, promoted and implemented.
16. Historical development of the KMP is closely associated with its company town Aiderken (formerly Khaidarkan). Most of its urban infrastructure (heating, water supply, streets and buildings maintenance, lighting etc), social services (schools, kindergartens, etc) and local economy (markets, shops, etc) used to be fully dependent on the mercury plant. After independence many of these services were restructured, but even today some of these dependencies still in place.
17. UNDP has been working in Khaidarkan since 2009 (in partnership with UNEP) to support the implementation of the Country Development Strategy and specifically aims to improve livelihoods and promote sustainable development through an integrated local development approach. The UNDP programme on creating alternative job opportunities in Khaidarkhan supports economic growth of Khaidarkan by opening, enlarging and extending the range of business opportunities and create alternative employment opportunities for local residents through, primarily, training and small grants. The latest phase of the work is wrapping up in 2012. The community will benefit from continued, additional poverty reduction efforts in the region.
18. Since the world's Governments agreed at the UNEP Governing Council in 2009 to prepare a global legally binding instrument on mercury to protect human health and the environment from mercury-related risks and with treaty negotiations underway, there is a timely high profile opportunity for the Kyrgyz Republic to act – as they are the last remaining major supplier of primary mined mercury to the international marketplace. The GEF and other international project partners are well positioned to fulfil the role of the innovative driver to this transformation process, which will ultimately support the national decisions for phasing out of primary mercury mining in Kyrgyzstan for the benefit of the global environment and to reduce local environmental and health risks. The progress as well as

⁶ Source: Towards a Mercury-Free Future: Feasibility Study - Development of gold and other mineral deposits near Khaidarkan Feasibility. A study of alternative minerals mining for Khaidarkan (2012). Available at: www.unep.org/hazardoussubstances/Portals/9/Mercury/Documents/ASGM/Kyrgyzstan/prefeasibility-eng.pdf

challenges towards the Khaidarkan mine transition could periodically be reported by the Kyrgyz delegation through the Intergovernmental Negotiating Committee (INC) process, Global Mercury Partnership meetings and other venues, as appropriate, to exchange experience, ensure transparency and keep the project on track.

2.2. Global significance

19. Mercury is a global pollutant which can be transported over long distances and across borders in the form of gaseous emissions or via waste streams and waterways. Airborne pollution is one of the main contamination pathways. Not only can exposure to mercury severely affect the health of people living and working around a mercury source, the danger of mercury pollution can also spread far and wide. It cannot be excluded that Khaidarkan mercury could reach the Arctic or tropical ecosystems. For example, mercury is widely used by artisanal gold miners around the world, including the sensitive river ecosystems, causing great damage to biodiversity and affecting health of thousands of people.
20. With the global mercury treaty negotiations underway, much profile is being placed on primary mercury mining as the least preferred source of mercury in the international marketplace. The proposed GEF project intervention in Kyrgyzstan will enable conditions for gradual phasing out of its primary mercury mining and supply to the global marketplace. Kyrgyzstan's 10% share in the total global mercury supply is significant, and therefore the GEF project intervention will have high global effect in the long term. This project will also support the efforts made by the INC to develop a legally binding instrument on mercury, including limitations for primary mercury mining and supply and mercury management at the national and global level.
21. Moreover, curbing of Khaidarkan's atmospheric mercury emissions and reducing mobilization of locally deposited mercury into the local, regional and global environment clearly marks another global significance of the project. At the same time, passive prevention measures could limit public exposure to health risks. The targeted approach and efficiency of these measures could be further supported by the adequate monitoring, which will benefit the global knowledge of mercury hazard mitigation.
22. The upstream location of the Khaidarkan mine in the cross-border Sokh river basin shared between Kyrgyzstan and Uzbekistan that drains into the Fergana Valley creates an opportunity to reduce the potential pollution risk for the international waters, which is another the GEF priority focal area.

2.3. Threats, root causes and barrier analysis

a) Threats

23. Scientific evidence of mercury accumulation in the environment, its impact on health and ecosystems and its long-range transport potential is well documented in UNEP's Global Mercury Assessment. Initial scoping studies characterize the area around Khaidarkan mercury mine and smelter (comprising town and adjacent agricultural land as well as natural waterways) by elevated mercury concentrations resulting from many years of mercury mining⁷. The mercury levels in agricultural soils, river sediments, shaft water sediments and ambient air exceed the national environmental standards of Kyrgyzstan, although due to technical limitations, chemical forms of mercury could not be specified.
24. Some studies suggest that in the past there were impacts on human health resulting from mercury production in the area. Children are particularly vulnerable to mercury exposure when playing with contaminated soils and performing their regular activities (e.g. going to school) in the area. Also, some categories of workers are exposed to elevated occupational health risks.
25. Some families in Khaidarkan depend on agricultural activities and women are particularly involved in planting and harvesting. Due to the presence of mercury in the soil, women become particularly exposed to mercury. Biological factors – notably size, physiological, hormonal and enzyme difference between women and men - influence susceptibility to health damage from exposure to toxic chemicals⁸. Women are also particularly exposed by remaining at home doing domestic tasks and/or

⁷ Environmental Issues Related to Primary Mercury Mining in Kyrgyzstan, Technical Assessment 2009 - available at: http://www.chem.unep.ch/mercury/Sector-Specific-Information/TA_eng.pdf

⁸ UNDP, 2011, Gender Mainstreaming – Chemicals and gender

working in the same area. In Khaidarkan, many households' are sustained by the income brought by men who, in some cases, go to work abroad; therefore women may be chronically exposed by remaining in the contaminated areas. The level of contamination in different media remains unknown but is believed to be high. High poverty levels make it likely that children assist their mother's in agricultural chores and thus are also at high risk of exposure to mercury. Furthermore, mercury passes the placental barrier and may accumulate in the unborn foetus. A new study, conducted in part by the Harvard School of Public Health⁹, suggests that in addition to the hazards facing a pregnant mother, mercury consumption more seriously affects her unborn baby, and can cause irreversible brain damage in children.

26. This project will reduce the negative impacts of hazardous chemicals to these vulnerable groups by seeking and promoting environmentally sound alternatives to mercury mining and by remediating some of the most contaminated areas that give rise to particular exposure risks to the community.
27. The main threat to the global ecosystem comes from the continuous primary mercury mining and supply of Khaidarkan's mercury to the global market and its eventual deposition in the natural environment and/or transformation into more hazardous forms (such as methylmercury).
28. Threats at the local and regional level, also relevant at the global context, include ongoing and historical pollution from the mercury production process. Khaidarkan mercury smelter is perhaps the most important point source of atmospheric mercury emissions (especially poorly isolated rotary kilns and stack) and effluents containing water from the mercury condensation. Re-volatilization of mercury deposited in the environment contributes to elevated mercury levels in air and river sediments.
29. Other pollution sources include sludge pond and slag heaps. The sludge pond is considered one of the most problematic areas, where samples taken indicate highly elevated mercury concentrations. The site is located next to the main road and is frequented by herders whose livestock drink and feed around the site. Vegetables are cultivated nearby. There are no fences or covers that prevent access, erosion and drainage. Slags are smelting residues left over after the ore roasting process. Commonly these dry and rather coarse materials are backfilled into the mine shafts after exploitation to increase shaft stability, reduce area taken up with such materials and limit environmental impact. In Khaidarkan, no backfilling operations were conducted which resulted in 13 million tonnes of slag stored on 40 ha surface above ground next to the town. The sheer quantity of slag stored in addition to environmental risks is causing a general problem to landscape and limits options for land use. While it is a challenge to design and implement full scale remedial actions for the slag heaps, sludge and other potential sources of pollution a demonstration of cost-efficient ways could be arranged under the GEF project, including through co-financing partners (e.g. Norwegian grant).
30. Local and global risks and threats related to the Khaidarkan industrial waste landfill include:
 - high slope angle, which can result in sliding;
 - lack of warning signs and fencing;
 - close proximity to the town, resulting in dust contamination of the residential area;
 - possibility of mercury leaching into surface and ground waters;
 - possibility of generating mercury emissions
31. According to the National Environment and Health Action Plan (NEHAP) jointly produced by the Kyrgyz Ministry of Health and the Ministry of Environment Protection in 1998, the stored wastes violate nature-protection rules and present a direct threat to the environment and the population. Kyrgyzstan's "State Programme on Waste Originating from Production and Consumption", puts the Batken province of Kyrgyzstan on the top list of the hazardous industrial waste locations (mainly due to the Khaidarkan mercury plant).
32. While the environmental situation at Khaidarkan is complex and pollution sources are difficult to isolate, it is important to identify robust and feasible solutions that meet local demands in a time and cost efficient manner. Solutions should consider local socio-economic aspects and foreign remediation

⁹ The Nutrition Source, Fish: friend or foe? Published by Harvard School of Public Health (2007)

experience applied to the context of the remote location and limited technical and financial capacity in the area.

b) Root causes

33. The root causes of a continued primary mercury mining and supply of Khaidarkan's mercury to the global market as well as pollution associated with mercury production process are:
- the considerable mercury reserves that can be exploited (>20,000 tonnes according to official estimates) and presently high world mercury prices (up to US\$ 2500 per flask) do not encourage Kyrgyzstan to stop mercury mining without alternatives;
 - a significant and historical dependence of the local community on the town-forming Khaidarkan mercury mining enterprise and limited identified potential for diversification and local business development;
 - lack of financial resources, and limited options (mechanisms and agreements do not exist) for private sector involvement to facilitate transition to non-mercury mining alternatives;
 - very limited environmental control and protection measures resulting in potentially high mercury emissions and releases;
 - in addition to the above, lack of capacity and knowledge for preventive and remedial measures perpetuates unmitigated exposure to risks
 - limited awareness of the local impacts with inadequate baseline information and lack of reliable and independent monitoring capacities makes it impossible to realistically appreciate the extent and severity of mercury contamination, pollution pathways conducive to the local and global environmental and health impacts and to check progress.

c) Barrier analysis

34. The experience with the Kyrgyz Republic Mercury Mining Phase Out project allows identification of the following clusters of barriers:

Lack of confidence in, and limited knowledge of, non-mercury alternatives

35. An economic and a political barrier that prevents a shift towards non-mercury alternatives is a limited confidence in, and non-existing practical arrangements conducive to, the economic transition in politically agreeable, financially viable, environmentally acceptable and socially responsible manner. The preliminary technical and economic estimates (including environmental impacts screening) show the good prospects for non-mercury future of Khaidarkan, mainly in the gold mining sector and non-metallic minerals (bentonite, serpentinite, gypsum). At the same time, the “*creating alternative job opportunities in Khaidarkhan*” programme implemented by the UNDP country office jointly with UNEP and funded by the U.S. State Department and the Government of Norway support diversification of the local economy (small scale private businesses) and reduce community reliance on the mercury enterprise (infrastructural improvements). It is necessary to build further economic and political confidence, convince the local community, the Khaidarkan mercury plant management and decision makers at the central authorities (Ministry of State Property, State Agency for Geology and Mineral Resources and the Government) of non-mercury mining prospects and other local employment opportunities. Further intense work and political dialogue at all levels is required to make known the technical and economic pre-feasibility calculations, arrange business presentations for mining companies about Khaidarkan's technical capacities and human resources, and create favourable conditions and frameworks for private investors interested in alternative non-mercury mining. The fact that there are still mercury reserves and that world mercury prices are high create less of an incentive for the Kyrgyz Government to stop mercury mining without confidence in and knowledge of alternatives.
36. One more related barrier is that the Khaidarkan mercury mine is state-owned and if it becomes privatized (it is currently on the official list of the governmental property for privatization), the government will likely have little say in phasing out or regulation of mercury production.

Institutional and governance barriers

37. National priorities stated in Kyrgyzstan's Country Development Strategy for 2010-2011 consider energy and mining sectors as key sources of economic growth and industrial development. These priorities are also reflected in sectoral development strategies. In the case of Khaidarkan, mercury mining priorities are handled differently: environmental and health action plans and decisions stress the importance of risk reduction, remediation and discontinuation of hazardous activities, while general economic and mining sector plans indicate stable levels of mercury production. This highlights the need for a more consistent cross-sectoral approach towards mercury mining and risk reduction.
38. Considering the high local economic and social importance of mercury mining, the Kyrgyz Government has found it difficult to balance between safeguarding the global and local environment and the current economic and social stability and development. While some national authorities - such as the State Agency on Environment and Forestry and the Ministry of Natural Resources (now State Agency for Geology) have demonstrated continuous support for socially responsible phasing out of mercury mining, others such as the Khaidarkan mercury plant management, the Ministry of Economy, and the Ministry of State Property highlighted the top priority of employment maintenance, and are less concerned or convinced by the global and local environmental arguments.

No capacity for environmental remediation, monitoring and risk reduction measures

39. High mercury concentrations were identified by preliminary scoping studies¹⁰ in 2009 in Khaidarkan smelter's sludge and other industrial waste stored in the proximity to residential area and agricultural lands without appropriate containment measures. Mercury rich waste is subject to wind and water erosion and no remediation and risk reduction measures have been planned for ongoing or abandoned mercury mining areas. The preliminary identified environmental hotspots require a set of passive risk reduction measures such as fencing to prevent access for humans and livestock, and other remedial solutions to reduce seepage of mercury into ground and surface waters and emissions into the atmosphere. Additionally, funding available for risk reduction and remediation is very limited and currently inadequate to meet the needs.
40. Air quality samples measured on an irregular basis at Khaidarkan by the Kadamjai Sanitary Station show excessive mercury concentrations. In general, the lack of proper monitoring, suitable measuring equipment and local capacity in conducting sampling campaigns makes emission control, identification of pollution hotspots and evolution of environmental situation difficult. Environmental authorities have no means to verify data provided by the industry which may result in improper reporting. This is further aggravated by the absence of an environmental management plan, target values and up-to-date inventory of emissions which is required by legislation but often not applied. No independent and comprehensive analysis of environmental and health impacts has been prepared in the last two decades. The absence of strict emission control limits and the lack of monitoring hamper incentives for limiting mercury emissions and tackling environment and health problems.
41. Lack of reliable data limits the existing knowledge and understanding of global effects of the Khaidarkan mercury mining. Health and environmental assessment reports are not available to the public and therefore risks are unknown. Moreover, existing environmental and industrial/trade statistics do not show mercury emissions from mining activities and mercury production/export numbers, thereby making inaccessible vital information to the public.
42. If mercury mining discontinues, the enterprise management should take responsibility for clean-up, if not, then the Ministry of Emergencies, local administration and ultimately local residents will be responsible for tackling the environmental and health problems. Khaidarkan does not set aside any funds for environmental rehabilitation and hence the financing for proper mine closure is uncertain. Therefore, if no actions are taken to develop local capacities and mechanisms for remediation, the

¹⁰ Source: Environmental Issues Related to Primary Mercury Mining in Kyrgyzstan, Technical Assessment 2009 - available at: http://www.chem.unep.ch/mercury/Sector-Specific-Information/TA_eng.pdf

Khaidarkan community could face the full burden of environmental pollution as in the case of the two other abandoned mercury mining sites in the region, which stopped operations in the early 1990s.

Inadequate knowledge dissemination and advocacy

43. In spite of previous information dissemination efforts and a series of country missions and round tables, it has been noted that amongst governmental decision makers (which change often) and the local community there seems to be inadequate knowledge and lack of information on environmental and health impacts that mercury causes and about the international environmental image of Kyrgyzstan in the context of global mercury supply. This essentially creates an information barrier and results in reduced capacity to convince key stakeholders to change their perceptions and maintain open dialogue on environmental and health concerns and future non-mercury development of Khaidarkan. The Khaidarkan mercury mine management, until recently, does not recognize the need for action and shows only moderate interest in improving its environmental performance.

2.4. Institutional, Sectoral and Policy context

a) Institutional

44. The management and regulation of the state-owned Khaidarkan mercury plant and decision making responsibilities are complex. Ministries' and agencies' views on the issue of mercury production vary depending on their role and awareness of mercury issue and this lead to difficulties in having a consolidated position. The following national players are relevant to the project context:
45. **Khaidarkan mercury plant** is a state-owned enterprise (99.9%) but it has a significant degree of autonomy in management, contracting, and production planning. Two ministries supervise the Khaidarkan mercury plant: the State Agency on Geology and Mineral Resources (operational manager) and the Ministry of State Property (assets manager). The Ministry of Economic Regulation and Antimonopoly and the Ministry of Finance decide and provide state subsidies and loans to the plant.
46. **The State Agency on Environment and Forestry** is a specially designated governmental institution dealing with inspections, issue of permits and limits for emission release, review of environmental plans, and various environmental monitoring activities. The Agency was the lead actor in coordinating preparation of an Action Plan on Primary Mercury Mining. The Agency's Director is the operational GEF focal point. Agency's representative is a SAICM focal point. The Agency's Centre on ecological safety is supervising international environmental projects implementation. The Agency's departments and a laboratory in southern Kyrgyzstan are responsible for inspections and enforcement of environmental performance and investigating local residents' complaints. It should be noted that State Agencies in Kyrgyzstan are not a part of the Cabinet of Ministers, therefore their status in the Kyrgyz governmental structure is somehow below the one of ministries'. The ongoing reforms in Kyrgyzstan governing structures may eventually transform certain functions of the State Agency on Environment and increase the importance of the State Inspection on Environmental and Industrial Safety under the Government of Kyrgyzstan in the context of the GEF project.
47. **The State Agency on Geology and Mineral Resources (formerly Ministry of Natural Resources)** fulfils technical coordination and information gathering functions related to Khaidarkan. In view of ongoing restructuring of the Kyrgyz Government, the functions of this agency and its role in the GEF project will need to be better identified.
48. **The State Property Management Fund (formerly Ministry of State Property)** has 99.9 percent of governmental share holdings of Khaidarkan and is responsible for the privatisation process.
49. **The Ministry of Emergencies** is dealing with the safety of the abandoned and active tailings ponds (though abandoned and active mercury mining sites are not part of the current responsibility). The Hydrometeorological service under the Ministry of Emergencies carries out a nationwide environmental monitoring programme, focusing on urban air quality as well as water quality in the main rivers, but it does not conduct any environmental monitoring in or around Khaidarkan.
50. **The National Statistics Committee** of the Kyrgyz Republic collects information about pollution levels (air emissions, wastewater discharge, water use, waste accumulation) directly from the relevant

industrial activities, including Khaidarkan, and publishes summarized information in its state of the environment reports (statistical format) every three to four years. Data on imports and exports of industrial products is also available from the statistical office. They are responsible to make publically available industrial production data.

51. **Other actors** include: the Kyrgyz Mining Association, the Osh Aarhus Environmental Information Centre, the NGO "Public Ecological Expertise", the Ken-Too Mining Project Design Centre, and the Kadamjai Sanitary Station and laboratories. These are all relevant to the GEF project context. The Aarhus Centre's and Kyrgyz Mining Association's roles as interfaces between mining sector and other sector interests, especially the environment, is essential for political dialogue, investment promotion, pre-feasibility and socio-environmental studies. Lobbying on chemical safety and mercury risk reduction is undertaken by the NGO "Public Ecological Expertise".
52. **The laboratories** specializing in environmental analysis are the Alex Stuart Environmental Laboratory (independent private laboratory) and the Chui Ecological Laboratory in Kara-Balta (70 km from Bishkek). The Institute of Chemistry of the Kyrgyz Academy of Sciences also has laboratory capacities but they are mainly used for scientific projects. The Khaidarkan mercury plant has laboratory dealing with pollutants, although its equipment and methodology is considered out-of-date and mainly serve industrial production needs rather than environmental monitoring.
53. **Sanitary-Epidemiological Station (SES) in Kadamjai** (50 km away from Khaidarkan) is tasked with monitoring of environmental health conditions at Khaidarkan and has experience in mercury monitoring, but it lacks reliable and modern equipment.
54. **The Osh-Batken territorial department for environmental protection** reports to the State Agency on Environment and Forestry and is involved in supervising local environmental issues. The territorial department carries out inspections and surveys of the Khaidarkan mining plant once a year (or more often in case of local residents complaints) in cooperation with Kadamjai Sanitary Station. Although the department has a laboratory, its old equipment, lack of certification, challenges of regular supply of lab consumables, and limited staff prevent continuous and reliable environmental measurements.
55. At the international level, Governments, the United Nations Programmes, and NGOs all contribute to the Kyrgyz mercury project partnership. The following players are relevant to the GEF project context:
56. **UNEP** with support from the United States and Norway has facilitated the key steps and dialogue with Kyrgyzstan on the issue of primary mercury mining and initiated scientific and technical assessment and awareness raising to support the project development. Norway has recently provided the grant funding to UNEP to support work on environment and health risk reduction and awareness.
57. **UNITAR** with funding from Switzerland assisted Kyrgyzstan in preparation of an Action Plan on Primary Mercury Mining, but due to the political changes at the country level, this plan was not endorsed by the Kyrgyz government in 2011. UNITAR is currently engaged (in 2012-2013) in two other projects, one on the Global Harmonised System (GHS) funded by the SAICM Quick Start Programme Trust Fund (QSPTF) and one on integrated chemicals and waste management to support SAICM implementation (funded by Switzerland).
58. **UNDP** with funding from the U.S. State Department and UNEP has been engaged in a programme called "*creating alternative job opportunities in Khaidarkhan*". The programme has been successful in identifying alternative sources of income and to train locals on alternative activities to mining. This programme will continue as part of the Aid for Trade Project. Financed by Finland.
59. **Zoi Environment Network**, a Swiss NGO and a member of UNEP's Global Mercury Partnership, has been engaged on various issues related to chemicals management and access to environmental information. Zoi Environment Network jointly with Kyrgyz counterparts (Kyrgyz Mining Association, Osh Aarhus Environmental Information Centre, Alex Stewart Lab) has played central role in the initial stages of the Kyrgyz mercury project development, supporting UNEP and UNITAR with technical expertise, ground work and coordinating local activities on environment and health risks identification and mitigation, mine transition options, information support.

60. **The University Castilla La-Mancha (Spain) and the Almaty Institute of Power Engineering and Telecommunications (AUPET, Kazakhstan)** have practical international and regional experience in mercury pollution monitoring, design and remediation. They contributed to the initial assessment of environmental monitoring and remediation options for Khaidarkan, shared their experience with local experts during the round tables and field work and expressed interest in continuing participation and contribution to the relevant initiatives, including the GEF project (see attached letters, Annex 12).
61. **The U.S. Environmental Protection Agency** has provided financial support and expertise for the initial technical and economic studies related to alternative development and risk reduction. The U.S. EPA experts could be involved in further activities on environment and health risks minimisation.

b) Sectoral

62. Currently, mining related policies within Kyrgyzstan are commodity focused and the government is keen to expand mining activities to boost economic growth. The government strives to create a good business climate for the mining sector, although political instability and local protests tempered this trend. The new Mining Code is being drafted in Kyrgyzstan (as of February 2012).
63. The ongoing sectoral governance reforms seek to improve transparency and efficiency of the mining sector, raise its environmental performance and industrial safety, allocate decision-making powers and control mechanisms to the local authorities and communities. Kyrgyzstan has recently become the first country in Central Asia compliant with and given membership in the International Extractive Industry Transparency Initiative (EITI). Mentioned reforms in the mining and environment sectors demonstrate the Government's willingness to develop country's mining sector attractive for international investors, make it transparent and socially and environmentally responsible. In this context, the Kyrgyz Parliament has decided recently that mining operators should allocate 2% of profits for local communities.
64. Mercury mining has never been a major or nationally significant income generating industry in Kyrgyzstan. Mercury mining was highly subsidized in the Soviet era, and is still enjoying preferential treatment. However, for Kyrgyzstan, it represents an iconic industry. Additionally, at the local level, it is a key source of income and occupation for the entire Khaidarkan community.

c) Policy

65. The National Environmental Action Plan (NEAP 1995) critically assessed the conditions at the abandoned and active mercury mines and required response measures. However, due to lack of funding, many measures and recommendations have not been implemented. The National Environmental Health Action Plan (NEHAP 1999) supplements NEAP with activities on the protection of human health from environmental risks and threats.
66. The Country Development Strategy (2009-2011) of the Kyrgyz Republic focuses on the several types of extractive industries (gold mining, construction materials, energy resources (coal, oil, gas)), it also mentions mercury stabilisation as priority and the continuation of mercury production. The development of this document predates the mercury INC negotiations (started in 2010). During the INC negotiations, the Government of Kyrgyzstan has expressed its commitment to discontinue the operations of the mercury mine as long as sound alternative employment opportunities are identified and implemented in Khaidarkan.
67. The *Ecological Security Conception (2007-2020)*, approved by the President in 2007, is currently the country's main strategic document of environmental policy. It lays down the basic principles of environmental policy and identifies global, national and local environmental challenges. It also outlines national priorities for environmental protection, as well as instruments for ensuring environmental safety and the expected outcomes of ESC implementation. The ESC defines several main directions of action in line with the specific measures of the *Country Development Strategy*:
- to balance environmental, economic and social aspects of development;
 - to strengthen the legislative and regulatory systems;
 - to improve environmental enforcement;
 - to promote economic incentives of environmental protection;

- to reform and renew the system of environmental monitoring; and
 - to implement obligations under the ratified multilateral environmental conventions.
68. The approach of the ESC is based on a clear intention to interconnect the issues of environmental safety and sustainable development and to ensure coherence in the management activities of the national environmental authority on policymaking. Implementation of the ESC is scheduled in three phases: a) 2007–2010 – ensuring social and economic development within the carrying capacity of ecosystems; b) 2010–2015 – reducing the level of environmental pollution and rehabilitating the natural environment; c) 2015–2020 – improving the quality of environment and achieving sustainable nature use..
69. This project will be executed during phase II of the ESC approach and as such it will contribute to achieve the goals and objectives of the Ecological Security Conception for Kyrgyzstan.
70. The United Nations Development Assistance Framework (UNDAF) report for Kyrgyzstan (2012-2016) focuses on three main pillars: 1) Peace and Cohesion, Effective Democratic Governance and Human Rights, including justice for all; 2) Social Inclusion and Equity, encompassing social protection, food security, education and health; and 3) Inclusive and Sustainable Job-Rich Growth for Poverty Reduction, with particular attention to women and youth as well as vulnerable groups¹¹. This project is directly linked to pillar 2 and 3 and indirectly to pillar 1. This project is particularly relevant to Millennium Development Goal (MDG) 1: Eradicate extreme poverty and hunger; MDG 5: Improve maternal health; MDG 7: Ensure environmental sustainability; and MDG 8: Develop a global partnership for development.
71. Under UNDAF's pillar 1 (Peace and Cohesion, Effective Democratic Governance and Human Rights) it will be imperative to ensure that real and sustainable capacity development of people in the Kyrgyz Republic takes place. This project will ensure that a transparent decision making process is in place and that key stakeholders are properly represented. Minority and vulnerable groups will be empowered to participate in the project's decisions and will obtain sound information on the current situation and future plans. One of the national priorities under pillar 2 (social inclusion and equity) is to ensure social obligations and to develop the social sector. This project will work with vulnerable groups and will promote equal participation in decision making processes and activities. Under pillar 3 (inclusive and sustainable growth for poverty reduction) the project will contribute to outcome 1, which is inclusive growth leading to decent and productive employment and improved access to productive natural resources, markets, services and food security. By diversifying the availability of jobs and by promoting the creation of new employment opportunities, the project will contribute to the inclusion of the poor and the youth. Achieving this will be possible through partnerships with key players. Under the same pillar 3, this project will also make a useful contribution towards the achievement of outcome 2: sustainable management of energy, environment and natural resources practices is operationalised. This project will ensure that alternatives proposed to mercury mining activities will be sustainable and will respect the natural environment and promote sound environmental management.
72. At the global level, the international community has indicated that primary mercury production is the least desirable source of mercury¹². At the country level, current national policies, plans and ministerial priorities remain mixed, which is not conducive to the unified consistent approach for addressing the primary mercury mining in Kyrgyzstan. The proposed GEF project could help to better analyse and tackle this complex policy issue.
73. A number of legal acts and policies on the environment and industrial safety are available in Kyrgyzstan, of which the following are most relevant in the context of toxic chemicals: the Law on environmental protection; the Laws on air protection, on land and water; the Law on environmental assessment; the Law on industrial safety of hazardous production facilities; the Law on tailings and mining waste; the Law on rates of payment for environmental pollution; the Law on sanitary-epidemiological welfare of

¹¹ Source: United Nations Development Assistance Framework (UNDAF) for the Kyrgyz Republic 2012-2016 (March 2011)

¹² Source: Report of the second meeting on the intergovernmental negotiating committee for mercury. Annex II – Report on the outcomes of the consultations on primary mercury mining. Available at: www.unep.org/hazardoussubstances/Portals/9/Mercury/Documents/INC2/INC2_20_report_e.doc

the population and on the protection of public health and others (*List of laws and statutory acts of KR*¹³).

74. *Phase I (initial)* of the Kyrgyz mercury mining phase out framework project partnership, led by UNEP, started in 2007 with initial discussions with the Government of Kyrgyzstan on mercury production at the Khaidarkan mine. At that time, a UNITAR-facilitated chemicals assessment in Kyrgyzstan, funded by the SAICM Quick Start programme, identified mercury as one of the priorities for action. The recognition of the dangerous nature of mercury and its negative impacts on the environment and health in Kyrgyzstan and in the world allowed UNEP to promote the initial dialogue through technical and social-economic assessments of primary mercury mining and initial screening of alternatives and remediation options. The assessments and dialogue process resulted in a formulation of the *Action Plan on Primary Mercury Mining and its Impact on the Environment in the Kyrgyz Republic*. The Action Plan was endorsed by the Government of Kyrgyzstan in October 2009 and presented by the Kyrgyz delegation consisting of the Ministry of Industry, Ministry of Natural Resources, State Agency on Environment and Forestry and NGOs at the Ad-Hoc Open-Ended Working Group meeting in Bangkok, Thailand, October 2009.
75. By endorsing and presenting the Kyrgyz Republic's Action Plan to the international community in 2010, the country representatives signalled country's willingness to consider the gradual closure/phase out of the world's last remaining exporting mercury mine if a number of outstanding issues, especially investment promotion into alternatives, could be addressed. After the April 2010 revolution and major political changes in Kyrgyzstan, this process slowed down considerably. In spite of this step back, the continuity of the Kyrgyz position towards reduction of global and local environmental risks from the primary mercury mining was reaffirmed by the country delegations at several meetings of the Intergovernmental Negotiating Committee (INC) in 2010 (Stockholm, Sweden) and 2011 (Chiba, Japan and Nairobi, Kenya). In addition, the joint UNEP-UNITAR high-level mercury mission to Bishkek, Kyrgyzstan held in June 2011 was welcomed by the Kyrgyz State Agency on Environment and Forestry and helped to advance the global and local mercury risk reduction agenda in Kyrgyzstan.
76. The international community, in particular the Governments of Switzerland, Norway and the U.S, indicated a willingness to support the Kyrgyz Republic to move from planning to action, known as *Phase II*, recognizing the economic circumstances of the Kyrgyz Republic. In response to this, UNEP was requested to design a partnership framework that would assist in meeting the conditions of the Government of the Kyrgyz Republic for gradual socially responsible mercury mine closure/transition.
77. The overall purpose of *Phase II* framework partnership with involvement of the GEF (Global Environmental Facility) would be to catalyse action to encourage economic transition of the mercury mine and eventual mercury supply phase out. More specifically it will address the institutional, political, economic and social aspects of transition to alternative mining as well as reduce global and local environment and health risks. These would allow sound decisions on the best alternatives to mercury and result in minimisation of mercury-related environment and health risks.

2.5. Stakeholder Mapping and Analysis

78. The current situation regarding the stakeholders involved directly or indirectly with the Khaidarkan mine is as follows:

a) State governance players

79. The State Agency on Environment and Forestry is a main counterpart for the international community and UNEP on the issues of primary mercury mining and therefore plays a key role in convening the global environmental demands and priorities and their reflection in the national policies. It will be responsible for environment-related GEF project components. The Khaidarkan mercury plant is formally owned by the State Property Management Fund (formerly Ministry for State Property) and its mining activities are controlled by and reported to the State Agency on Geology (formerly Ministry of

¹³ Source: Social and Economic Investigation of Primary Mercury Production at the Khaidarkan Mercury Plant. Available at: http://www.chem.unep.ch/mercury/Sector-Specific-Information/SEA_eng.pdf

Natural Resources). Therefore, the Agency will be a key player in transition-related component of the GEF project. The Ministry of Economy has an important decision-making role in the Kyrgyz Government regarding the mine's future (including decisions on state subsidies for geological survey and energy) and will be invited to participate in the project steering committee as well as in investment promotion.

b) Private and state mining sector

80. Whilst the Khaidarkan mercury mine is currently a state-owned industry, its privatisation cannot be excluded. From an environmental perspective, it could be an *undesirable* development if the government decides to continue or increase mercury mining under the new private or the current state ownership. The potential privatisation outlines the *urgency* to engage with the Kyrgyz Government to promote investment by the private sector or by the state (for example through Kyrgyz Altyn state-owned gold producing company) into non-mercury alternatives.
81. Several private mining companies operating around Khaidarkan are potentially interested in collaboration on non-mercury mining (gold and non-metal minerals). Further dialogue with private sector, presentation of pre-feasibility study results and elaboration of the institutional, legal frameworks and implementation mechanisms for public-private partnership may catalyze further interest and advance concrete steps towards alternative mining profile of Khaidarkan. The International Business Council (IBC) active in Kyrgyzstan could be used as one of the promotion channels.

c) Civil society, including environmental NGOs and professional associations

82. At the local level there are several different stakeholders related to mercury mining and environment:
83. **Professional Mining Associations:** Kyrgyz Mining Association promotes mining sector development and is aware of the detrimental environmental and health impacts of mercury production. The Kyrgyz Mining Association works with private mining business to encourage a shift away from the continuation of mercury mining and encourage the development of economic alternatives, such as gold. Kyrgyz Mining Association is well positioned to support the GEF project in promotion of industrial transition linking state (Ministries, Government) and private (companies, investors) players.
84. **Science:** AUPET located in Kazakhstan, the closest neighbour of Kyrgyzstan, has extensive experience in planning and implementation of demercurization programmes for chlor-alkali production sites. The university staff is willing to share its expertise and experience with Kyrgyz counterparts. In addition, scientists from Spain, Russia and Slovenia, who have practical experience in environment and health monitoring are available to support Kyrgyz colleagues in specific project activities. The Institute of Chemistry, the Institute of Geology and Osh Technical University in Kyrgyzstan could be involved as local scientific project counterparts.
85. Further scientific cooperation opportunities could be explored with NATO's Science for Peace project on monitoring of transboundary water pollution in Central Asia.
86. **Environmental NGOs** are working on local public awareness, advocacy, independent studies of technical and economic aspects of mercury mining and transition to alternatives. The Osh Aarhus Environmental Information Centre has been active in raising awareness and conducting public hearings on mercury pollution and passive measures for health and environment risk reduction. NGO "Public Ecological Expertise" works on the issues linked to sound chemical management which also includes mercury. Zoi Environment Network will provide and coordinate international expertise for the project.
87. **Local Community:** mixed feelings still persist in the local community about mercury mining and the possible switch to economic alternatives (see section 2.1). The major concern is more the security of the local economic situation and jobs whilst less concern is about the environment and health issues that mercury production presents. However local farmers for example, are against polluting industry as their crops and water supplies are affected by contaminants which are a result of mercury mining and dust formation from tailings.

2.6. Baseline Analysis

88. The Khaidarkan mine is a major source of mercury emissions and releases and mercury supply which present both local and global hazards for the public health and ecosystems. Under a *business as usual scenario* without the GEF project the Khaidarkan mine will continue production of the primary mercury and its supply to the global marketplace in line with the existing plans and arrangements. Moreover, mercury emissions will continue unabated, and environment and health risks will persist or worsen.
89. An *intervention by the GEF* will enable conditions conducive to the promotion of non-mercury development alternatives and phasing out of mercury production, improved capacities for remedial planning, preventive measures and pollution monitoring and raise awareness at local and central level regarding mercury mining.
90. The Kyrgyz mercury mining phase out framework project partnership started in 2007, led by UNEP, started with initial discussions with the Government of Kyrgyzstan on mercury production at the Khaidarkan mine. At that time, UNITAR-facilitated chemicals assessment in Kyrgyzstan identified mercury as one of the priorities. The recognition of the dangerous nature of mercury and its negative impacts on the environment and health in Kyrgyzstan and in the world allowed UNEP to promote the initial dialogue through technical and social-economic assessments of primary mercury mining and initial screening of alternatives and remediation options. The assessments and dialogue process resulted in a formulation of the *Action Plan on Primary Mercury Mining and its Impact on the Environment in the Kyrgyz Republic*. The Action Plan was endorsed by the Government of Kyrgyzstan in October 2009 and presented by the Kyrgyz delegation consisting of the Ministry of Industry, Ministry of Natural Resources, State Agency on Environment and Forestry and NGOs at the Ad-Hoc Open-Ended Working Group meeting in Bangkok, Thailand, October 2009.
91. The GEF project is an essential part of an international effort lead by UNEP to assist Kyrgyzstan in creating enabling conditions for phasing out the primary mercury production at Khaidarkan. Several governments, including Switzerland, Norway and the United States, have already provided funds to support the effort. The first phase (*Phase I, see previous paragraph*) of the effort in 2007-2009 lead to initial technical, socio-economic and environmental assessment of the current situation and the adoption of an *Action Plan*. The second phase (*Phase II*) focuses of three strategic areas for socially and economically responsible phase-out of mercury production. These strategies are:
- 1) the assessment of the suitability of industrial investment based on known resources in the region of the mine,
 - 2) action at the local level to broaden the economic base and diversify the income opportunities for the community, and
 - 3) preparations towards the future remedial action at the mine to reduce the environmental and health risks it poses in the area.
- The proposed GEF project's main focus will be on the promotion of alternative investments (1) and priority environmental actions (3) that have direct local and global environmental significance. Area (2) above is covered by UNDP-administrated "*creating alternative job opportunities in Khaidarkhan*", programme complimentary to the GEF intervention.
92. Outputs obtained from *Phase I*, such as the initial socio-economic and environmental assessment, preliminary identification of alternatives to mercury mining and adoption of the action plan, will be used as a basis for action during *Phase II*. Regarding the alternatives identified, gold mining and industrial minerals mining (magnesite, serpentinite, gypsum and bentonite) along with agriculture and small scale development, appear to be the preliminary alternatives identified. Regarding agriculture and small-scale development as an *alternative* to mercury mining, optimizing agriculture practices – optimizing land use, strengthening local food processing and improving the agricultural products are considered as part of the economic diversification strategy. Small grants, micro credits and training for developing small business such as handicraft, repair services, construction, transport, foodstuff, eco-tourism, etc will be also further assessed during the *Phase II*.
93. The UNDP creating alternative job opportunities in Khaidarkhan programme will be further enhanced and complemented with a local initiative to broaden the economic base and diversification of job opportunities in the community. The GEF project will provide support to further develop the

identification and analysis of suitable alternatives to mercury mining and diversification of job opportunities. During the period from 1st September 2009 to 30 September 2010 the Programme carried out the following activities: a) Participatory Rural Appraisal (PRA) was conducted to identify basic needs and problems impacting on local development as well as to seek potential solutions; b) Small Capital Grant Facility was established and institutionalized through the development of a Grant Manual that promotes transparency and accountability in approval and implementation of grant projects. The outcomes of this *programme* are: 14 small grant project proposals were identified and funded through Small Capital Grants Facility by the local government and local community, including five small-scaled business projects which resulted in additional employment opportunities for 30 residents of Khaidarkan and nine infrastructure rehabilitation projects; Over 130 people in the community benefited from training events aimed at improvement of skills and knowledge in the farm management and technologies of agriculture, business planning, various types of non-farm business activities.

94. UNDP has recently embarked, with funds from Finland, on the implementation of a project entitled “Aid for Trade”. The project aims at building business capacities of poor communities and expanding their trade opportunities through improved production, processing and marketing. Additionally, UNDP has a longstanding experience since 2000 aiming at creating favourable conditions for improving socio-economic situation in the oblast. All of these alternatives are complementary to the GEF intervention and identification of alternative employment opportunities in Khaidarkan. The GEF funded will further complement the identification of alternative sources of income and the Aid for trade Programme.

2.7. Linkages with other GEF and non-GEF interventions

95. The focus on the promotion of economic alternatives to encourage a shift away from a mercury industry which is impacting upon the local and global environment is relatively new area for the GEF and so there are no immediate direct links with other GEF and non-GEF interventions. Perhaps, substitution of ozone depleting substances is the closest proxy. However, strong synergies with other projects within Kyrgyzstan can be made, such as with an ongoing Kyrgyz hazard mitigation project with a component on remediation and risk reduction at the Maili-Suu former uranium mines, which is partly GEF-funded and being implemented by the World Bank. Whilst uranium mine legacies present different challenges to mercury pollution, the lessons learnt from experience of Maili-Suu can be obtained and applied to the proposed project at Khaidarkan. Furthermore, in neighbouring Kazakhstan, recent experience and knowledge from mercury remediation/cleanup efforts in the Nura river basin could be relevant for Khaidarkan.
96. This project will also make strong linkages with the UNEP/GEF Pamir Alai Sustainable Land Management project in Kyrgyzstan and Tajikistan,. This project seeks to mitigate the causes and negative impacts of land degradation on the structure and functional integrity of the ecosystems of the High Pamir and Pamir-Alai Mountains by mainstreaming sustainable land management tools and practices from household, community, local government, national and regional levels¹⁴. Both projects will address the effects of land degradation (in the case of the Khaidarkan mine project mercury contaminate sites) and will share lessons learned and guidance on management of contaminated sites. The ways of participation of different stakeholders and the restoration of ecosystems that will allow initiating or re-starting the economic activities in former contaminated areas will also be an important topic and a considered and shared among the two projects.
97. With regard to linkages with non-GEF interventions, there are projects which are ongoing in southern Kyrgyzstan and can be linked to Khaidarkan. First and foremost, the UNDP-administrated programme creating alternative jobs for the Khaidarkan community. This programme is assisting in setting up small businesses, and is encouraging economic diversification with the goal of poverty reduction. The project seeks to promote alternative employment in the area and decrease economic dependence on the mercury mine. The World Bank has also facilitated a number of projects in the area including building capacity in governance and revenues management for mining sector (EITI) and improving agricultural services and irrigation network. Other donors such as the Asian Development Bank, the

¹⁴ Source: UNEP PALM project, available through internet: <http://www.ehs.unu.edu/palm/>

Japanese Agency for International Cooperation, and the Swiss Development Cooperation and others have been financing an array of projects in southern Kyrgyzstan, predominately with an economic focus. Some of these projects are linked to agriculture and water and so can be potentially affected by the pollution which comes from the mercury mine. The future remedial efforts and phasing out of mercury mining would therefore have a positive impact on the success of these projects downstream.

98. UNEP is currently implementing two Ozone related projects in Kyrgyzstan: Institutional Strengthening and Hydrochlorofluorocarbons (HCFCs) Phase-out Management Plan (HPMP). Both projects have a strong capacity building component and upgrading of legislation that will greatly assist this project. This project will make the necessary linkages and arrangements to participate in the upgrading of legislation and will look for synergies in the different capacity building activities to be performed. Coordination between UNEP the two initiatives will take place after project approval.
99. UNITAR will engage in 2012-2013 with two non-GEF interventions in Kyrgyzstan on the GHS (funded by the SAICM QSPTF) and on integrated chemicals management in support of SAICM implementation (funded by Switzerland). UNITAR will seek maximum synergies between these two projects and the current proposed project on mercury mining. GHS has obvious linkages with the transportation of dangerous materials, including mercury and mercury containing products. The studies and draft policy developed under the GHS project will provide sound basis to analyse the transport of mercury and the normative elements needed to improve transportation of mercury. The integrated chemicals management project will complement this project in two ways:
 - developing a sound strategy for chemicals management in the country (including mercury);
 - identifying the normative elements to be reinforced in chemicals management.
100. The Poverty-Environment Initiative (PEI) is a global joint UNDP-UNEP initiative supporting country-level efforts to mainstream environmental management into national and sub-national planning processes through financial and technical assistance and capacity development. In Kyrgyzstan the PEI initiative has been implemented from February 2011 to December 2013. This project will mainstream Poverty-Environment linkages into policy processes, focusing on integration of current processes into current strategies such as the Poverty Reduction Strategy Paper. This project will make the appropriate linkages to this initiative and will ensure that the outcomes related to poverty alleviation will be fully incorporated into relevant national strategy papers.

SECTION 3: INTERVENTION STRATEGY (ALTERNATIVE)

3.1. Project rationale, policy conformity and expected global environmental benefits

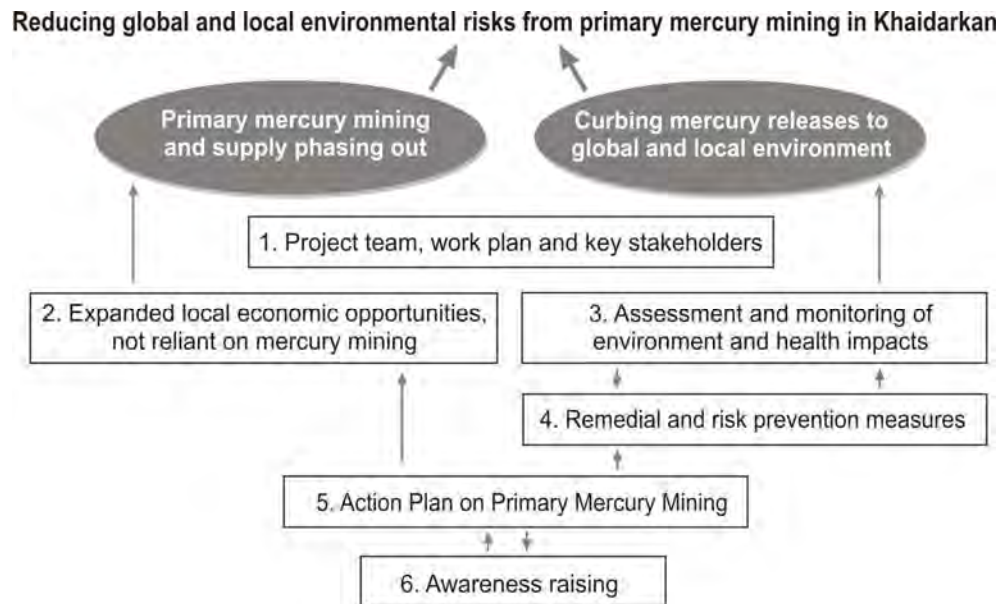
101. The rationale for the proposed project has its roots in the international attempt to take global action to reduce the release of mercury into the environment and UNEP's programme of work on harmful substances and hazardous waste. In 2003, the UNEP mercury programme was established under the auspices of the United Nations, recognising the need for the coordination of global action on the reduction of mercury pollution in the environment. In 2009, some 140 countries supported the UNEP Governing Council decisions to launch negotiations on an international mercury treaty. Negotiations for the treaty began in June 2010 and are expected to conclude in 2013. In parallel to this international process, the European Union and the United States have already agreed to banning future mercury exports, the E.U. starting in 2011 and the U.S. in 2013, and are in the process of developing and implementing strategy to tackle mercury issues.
102. As primary mining introduces new mercury from geologic formations into the global mercury supply and ultimately into the environment, it is recognized as the least desirable source of mercury for use in products and processes. After the closure of mercury mines in Slovenia and Spain, the Khaidarkan mine became the only facility in the world to mine mercury for export (China also engages in primary mercury mining but use the mercury domestically). The Kyrgyz Republic is uniquely positioned, as the world's only exporter of primary mined mercury, to contribute to global efforts to protect human health and the environment from the harmful effects of mercury. At the October 2009 meeting of the Ad-Hoc Open-Ended Working Group on Mercury, held in Bangkok, Thailand, the representatives of the Kyrgyz Government announced country's willingness to consider the closure of the world's last remaining exporting mercury mine, at Khaidarkan, if a number of the social, environmental, and economic consequences of the phasing out of its national mercury industry could be addressed.
103. In response, the international partners have supported the Kyrgyz Republic, through the Global Mercury Partnership, to design the second phase of framework for actions to assist Kyrgyzstan in addressing social, environmental and economic impacts of mercury mining phase out. Specifically the areas of focus are:
 - 1) the assessment of the viability of industrial investment based on known resources in the region of the mine;
 - 2) preparation for remedial actions that would be required at the mine to reduce the environmental and health risks; and
 - 3) action at the local level to diversify the job opportunities and to broaden the economic base of the community.
104. The GEF project would therefore:
 - 1) promote the alternative industrial options among the key ministries, the Kyrgyz government and private sector and assist with implementation mechanisms as well as encourage political endorsement and support by the local community and mercury mine management
 - 2) design and demonstrate measures for environment and health mercury risk monitoring and reduction, especially in the identified high-risk areas
 - 3) promote local economic development through training, awareness raising and small grants, consistent with activities implemented to date through UNDP aimed to diversify employment opportunities in the region, thereby also increasing support by the local community for the initiative.
105. Collectively, the GEF project and other international efforts towards mercury mine transition (to reduce primary mercury mining and supply to the global market), and curbing of emissions and releases (to reduce direct local and global environmental impacts) will have major global environmental benefits achieved in a socially and environmentally responsible way. The decrease in the global mercury supply means that less mercury will be available to use in products and processes, such as destructive artisanal gold mining practices in sensitive ecosystems. In addition, preparation for remediation of contaminated sites and risk reduction measures will assist with the subsequent reduction of mercury that is released from Khaidarkan into the global environment.

3.2. Project goal and objectives

106. The overarching goal of the project is *to protect human health and the environment from the toxic exposure to mercury by phasing out mercury production and supply*. The project's development objective is to *enable socially compatible economic transition of the Khaidarkan community from primary mercury mining to more environmentally and socially sound economic activities*.
107. The purpose of this project is to reduce global and local environmental and health risks from primary mercury mining in Khaidarkan, the Kyrgyz Republic, by supporting a socially compatible economic transition away from mercury mining.
108. The specific objectives that address the project purpose at the different scales involving different stakeholders are:
- Promote non-mercury mining alternatives and other local employment opportunities
 - Improve understanding and capacity for mercury monitoring of environment and health
 - Explore and prepare remedial and preventive measures for mercury-contaminated sites
 - Raise awareness at national and community levels about mercury and promote public transparency of related environment and health concerns

3.3. Project components and expected results

109. The figure below shows the main project components and links between them:



110. The following six components address the above stated objectives and underneath these fall the planned activities, expected outcomes with a summary of the expected outputs and main indicators of achievement. The Results Framework (please refer to Appendix 4) details the contents for each individual outcome and output, supported by indicators of achievement.

3.3.1. Component 1: Identification and implementation of local economic opportunities, not reliant on mercury mining

111. The expansion of economic opportunities will be built on the results of pre-feasibility calculations for non-mercury mining options in the region (led by national government) and the local alternative development options (coordinated by UNDP). At the same time, institutional and regulatory adjustments need to be introduced to create a balanced and attractive mechanism for public-private partnership and investment. As preliminary studies indicate, alternative mining options are considering mining activities (e.g. gold production and non-metallic minerals production such as serpentinite, bentonite, gypsum, facing stones). In parallel, non-mining investment opportunities will be identified as well as the ongoing alternative employment opportunities programme administrated by UNDP will complement local alternative development efforts by supporting small-scale income generating activities, creating new jobs and reducing dependency on the state-owned mercury plant and providing a range of non-mining alternatives to the local population. It is expected that all of these studies and assessments will be an integral part of the national plans and strategies for development.

Planned activities

- Develop socio-economic analysis, environmental impact assessment and roadmap for the implementation of other mining alternatives to mercury mining
- Identify priority alternatives for non-mercury mining economic activities in the Khaidarkan area
- Continue supporting the UNDP programme fostering alternative job opportunities in Khaidarkan not reliant on mining, based on lessons learned from previous phases of the project identified in the project evaluation (evaluation is currently underway).
- Update national plans and strategies for alternative employment which will include socio-economic analysis for mining and non-mining alternatives to mercury

Expected Outcome

- Community reliance on mercury mining reduced through identification of alternative diversified employment opportunities

Expected Outputs

- Report on socio-economic analysis, environmental impact assessment and roadmap for the implementation of mining alternatives to mercury mining elaborated and endorsed.
- Report on identified priority alternatives for non mining economic activities.
- UNDP Report on progress in facilitating the diversification of Khaidarkan economy, including the promotion of alternatives to mining developed.
- National development plans and national strategies for development includes the outcomes of the analysis and programmes on alternatives to mercury mining (as indicated in the previous bullets)

3.3.2. Component 2: Assessment and monitoring of environment and health impacts from primary mercury mining and pollution

112. Monitoring of environmental and health impacts is needed in order to check the current and historical impacts of mercury production in the area and convince the Kyrgyz government as well as local authorities that mercury production and associated emissions and releases are not only of global concern, but also has direct local implications. Moreover, without detailed environmental and health assessment, it is impossible to effectively target the future environmental remediation and risk reduction measures and check the progress against the baseline situation. The monitoring programme (especially for atmospheric air, drinking water, local crops and food supply and local population's health) is crucial for understanding of the true scales, key sources, trends over time and pathways of mercury pollution, including impacts on the global environment and health of local residents. Finally, the non-stationary system for air monitoring and emergency response will greatly reduce the risk to

take samples from the mine to the laboratories and will allow authorities to have reliable information on site within a reasonable time.

Planned activities

- Identify and reinforce existing capacities (including training and exchange of experiences) of laboratories in Kyrgyzstan able to analyze human and environmental samples.
- Conduct a comprehensive study of environmental and health impacts (including GIS and maps) in the area, involving local and international scientists, local health authorities and experts and independent (verification) sampling.
- Install a mobile, low cost and easy-to-use monitoring system for mercury related accidents and emissions within the existing competent organizations (Kadamjai Sanitary Station or other institution) and train local specialists in its use.

Expected outcome

- Impacts of mercury mining evaluated through enhanced human health and environment monitoring

Expected outputs

- Training reports from 10 experts and 4 local laboratories and results from intercalibration studies available.
- Report containing including qualitative and quantitative assessment of environmental and health risks and impacts in the primary mercury mining area available.
- Low cost and easy-to use monitoring system installed and capacity to collect and disseminate environment and health risk information available.

3.3.3. Component 3: Explore and prepare remedial and risk prevention measures for mercury-contaminated sites

113. By preparation for remedial measures of high-risk areas the GEF project will create the necessary conditions for planning and implementation of the actual remedial measures in the future. High-risk areas identified in a comprehensive assessment will be reviewed and potential remediation technologies for them proposed and tested. Rapid response and risk prevention measures will be designed and implemented to possible extent for immediate positive effects on the local and global environment and health safety. These include fencing and/or sealing of the selected contaminated areas, changes in land use, crops and other cost-efficient measures which reduce exposure to risks. Strategy and guidelines for the development and implementation of remediation measures will be developed and best practices from Central Asia (Kazakhstan) and Western Europe (Spain, Slovenia) deployed. Preparation towards future remedial measures and implementation of rapid response and risk reduction measures will help to build cooperative spirit amongst the local communities and increase local capacity for remediation. Additionally, the updated Action Plan on Primary Mercury Mining and its Impact on the Environment with specification of remedial options and responsibilities will reinforce the proposed measures.

Planned activities

- Select, prepare and agree the remediation targets and priorities for rapid response and preventive measures.
- Ensure substantial training and international experience exchange on mercury pollution remediation and rapid response approaches for risk reduction (including international partnerships for technology and experience transfer).
- Develop and implement a strategy and guidelines to conduct remediation on priority sites (including the design of a strategy and guidelines for remediation; draft a proposal for financing and implementation of the remedial measures with demonstration of selected approaches and the publication and distribution of information materials related to remedial and preventive measures).

Expected Outcome

- Reduced risk exposure from mercury contaminated sites through remedial and risk prevention measures

Expected Outputs

- Report on remediation targets and priorities available at UNEP's website
- Workshops and training reports on training on mercury remediation available.
- Strategy and guidelines for remediation of highly mercury contaminated areas prepared and highlights reduction of mercury emissions into the local and global environment and also reflected in decontamination report.

3.3.4. Component 4: Awareness rising at national and community level and public transparency

114. Awareness raising is essential in the present situation when the ministries have different priorities (continuation of mercury mining vs. environmental concerns and phasing out of mercury mining) and when at the national level links between the Khaidarkan mercury and the global environmental concerns and negotiations are not well known or understood. In addition, there is little awareness and inadequate evidence of mercury impacts and pollution in Khaidarkan. When the comprehensive study and monitoring programme would be completed and launched, the awareness raising would be used to help guide decision making with the intention of reducing the exposure to pollution in Khaidarkan and across Kyrgyzstan, including the use of mercury in artisanal gold mining. Whilst this may be a social method, its final outcome is to help to achieve the overall project goal. Raising awareness on the international mercury instrument and its inevitable impact on the mine's future is required to reduce the policy-makers and local people's indifference on this issue. Previous project activities show that transparency, inclusiveness and sharing of information are the key for cooperation between all stakeholders. Therefore this project component would ensure these important conditions are met. In this context, the project will cooperate closely with the Extractive Industry Transparency Initiative (EITI) in Kyrgyzstan, not least for improved public transparency of Khaidarkan's activities. The awareness raising and campaign to promote alternatives to mercury mining will also target the high political class. This will allow them to take an informed decision on the fate of the mercury mine.
115. At the community level, awareness raising would involve public lectures and trainings regarding mercury and its environmental and health impacts, and individual measures to reduce exposure to risks. In addition, social assessment of transition to alternatives will help in decision making process. Community level awareness work will target schoolchildren, teachers, farmers, residents as well as local medical personnel and mine workers and management. The Osh Aarhus Environmental Information Centre will be actively engaged in the design and dissemination of information materials.

Planned activities:

- Media coverage (TV and e-news/newspapers) on the selected aspects of local, national and global mercury issues and briefings on project milestones/achievements.
- Conduct social impact studies to understand better the local perception and acceptance of the transition options.
- Design and implement a targeted mercury awareness raising campaign and a strategy to promote employment opportunities to mercury mining for: a) government decision makers; b) research institutions; c) private sector; d) local residents (farmers, workers, housewives, etc); and e) journalists)
- Design and produce, including translation to local languages, mercury information kits.

Expected Outcome

- Enhanced governance through awareness raising and stakeholders' participation on the transition to mercury mine alternatives

Expected Outputs

- Media material produced and disseminated
- Report on social impacts of alternatives to mercury mining available

- Reports of awareness raising workshops and events available
- Communication materials in local language available

3.4. Intervention logic and key assumptions

116. The intervention logic on which the project is founded has two aspects:
- First, given the importance of reducing the supply of primary mined mercury in the overall international effort to reduce its release into the environment, and given that Khaidarkan is the only mine to sell primary mercury to the global market, the phasing out of the Kyrgyz mercury mining and supply would have significant environmental effect.
 - Second, the project will target a significant source of mercury exposure to the local community and the environment, and a potentially large source of mercury release into the global environment. The proposed GEF project enables the Kyrgyz government to take steps towards phase out mercury mining in an environmentally and socially responsible manner, reducing mercury releases into the local and global environment.
117. Based on these two components, the following key assumptions are made:
- the Kyrgyz government will follow its stated intent, articulated at the Open-Ended Working Group to prepare for the negotiation of a global legally binding instrument in Bangkok in 2009, and reiterated at INC-1,2,3 in 2010-2011 (Stockholm, Chiba, Nairobi) and during the high-level UNEP/UNITAR mission to Kyrgyzstan in June 2011, that it will phase out mercury mining if the international community provides assistance so that it can be carried out in an environmentally and socially responsible manner. This assumption also requires the Kyrgyz government to agree that the international assistance and commitment will be sufficient to allow for a responsible phase out.
 - the data and information on the environmental situation in and around Khaidarkan which will be collected during the project is reliable and accurate, environmental samples are taken by the experts and analyzed in professional (and verified in independent) labs, so there is little doubt as to their validity.
 - donors collectively contribute to the efforts and needs. Resources are available and are provided in a timely manner;
 - willingness of key development players to engage is demonstrated, such as regional development banks and agencies, the World Bank, the private investors;
 - local ownership and willingness to participate and share information as well as submit proposals;
 - alternative activities/income sources are environmentally and socially sustainable/sound.
118. Other key assumptions include:
- Measures are taken to ensure no new primary mercury mines are opened globally;
 - Limited global market for mercury in the future.

3.5. Risk analysis and risk management measures

119. **Disregard for the environmental and health impacts of the mercury mine:** Since the Khaidarkan mine is closely related to local people's livelihood and infrastructure, the phasing out of mercury industry cannot be done easily. Local people regard the mercury mine positively, as a source of income for the community and as a traditional activity, environmental and human health impacts from the mining of mercury are discounted. This project may be seen as a threat to the community and may be perceived as an attempt to stop their sustained source of income. The focus of the project is thus on alternative economic activity and with some environmental remediation. A measure to take may be to continue the inclusive transparent dialogue,. On top of all, difficult economic and social situation in the Kyrgyz Republic, especially in the Batken Province where the Khaidarkan plant is located, may delay some of the project activities (**Medium Risk**).

120. **Political instability and shifting priorities:** The uncertainties in Kyrgyzstan's political situation in 2010-2011 and continuous reforms in the Kyrgyz government have led to an uncertainty in the level of the commitment towards mercury mining phase out which may be perceived as a lack of political commitment. A possible risk management measure for this political instability and shifting of priorities will be to highlight the economic and social costs of mercury mining and the viability of suitable alternatives in order to secure widespread and long-term commitment of the Kyrgyz Government to the aims of the project **(Medium Risk)**.
121. **State investments or privatization of the mercury mine:** If the state-owned Khaidarkan facilities become privatized during project execution (and if world mercury prices continue to grow), the activities carried out may need to be adapted and re-focused, with the uncertainty that the initial commitment of key stakeholders would not be secured and that the awareness raising campaign would need to be re-started to convince the new mine owners. A risk management measure in this case will be for the international community to convince the Kyrgyz government not to continue to pursue privatization and to dissuade potential investors in mercury production by highlighting the lack of a sustainable business model as a result of strict limitations on mercury use as a result of the international treaty **(Medium Risk)**.
122. **Lack of local capacity:** Local involvement is necessary for sustainability of the project. However, the low level of awareness and management abilities may hinder the project process. Capacity building activities will help the local residents and officials to understand the environmental and health risks of mercury. Proposed GEF intervention could align with as well as complement ongoing activities within UNDP identification for alternative employment opportunities programme, and enable the broader engagement of community members **(Medium Risk)**.
123. **Political instability and shifting priorities:** The uncertainties in Kyrgyzstan's political situation in 2010-2011 and continuous reforms in the Kyrgyz government has lead to an uncertainty in the level of the commitment towards mercury mining phase out which may be perceived as a lack of political commitment A possible risk management measure for this political instability and shifting of priorities would be to ensure that the Kyrgyz Government signs an agreement which will have power for successive governments/decision-makers and that will ensure that the project will not be affected when there is a change in decision-making structure that will pursue the identification and implementation of alternative employment opportunities **(Medium Risk)**.
124. **State investments or privatization of the mercury mine:** If the state-owned Khaidarkan facilities become privatized during the project execution (and if world mercury prices continue to grow), the activities carried out may need to be adapted and re-started, with the uncertainty that the initial commitment of key stakeholders would not be secured and that the awareness raising campaign would need to be re-started to convince the new mine owners. A risk management measure in this case would be for the international community to convince the Kyrgyz government to not continue with the production of primary mercury in the conditions of private ownership and that any potential investor is aware of the project's activities and assessments **(Medium Risk)**.
125. **Lack of local capacity:** Local involvement is necessary for sustainability of the project. However, the low level of awareness and management abilities may hinder the project process. Capacity building activities will help the local residents and officials to understand the environmental and health risks of mercury. Proposed GEF intervention could align with as well as complement ongoing activities within UNDP identification of alternative employment opportunities programme, and enable the broader engagement of community members **(Medium Risk)**.

Table 1: Summary of risk analysis and mitigation measures

Risk	Mitigation Measures
Disregard for the environmental and health impacts of the mercury mine Medium risk	A transparent dialogue will continue with local people and the government as well as key stakeholders. The development of local economic alternatives which will provide a reasonable income to the population and that is more environmentally friendly, to be identified through the project will provide good ground to understand the local situation and to compare which option (mercury vs non-mercury) is more sustainable. Another factor to consider is the fact that global efforts on mercury reduction are taking place and it is likely that demand for mercury will decrease over the years, therefore adopting a sustainable alternative to mercury mining seems a suitable option while the international community is attentive to the progress made in Khaidarkan and are ready to assist.
Political instability and shifting priorities Medium Risk	The project will encourage the institutionalization of the National Coordinating Committee, so the process to be initiated with key stakeholders would not be stopped even if there is a change of government.
State investments or privatization of the mercury mine Medium Risk	The Kyrgyz government would have to offset the benefits/drawbacks of privatisation and those of the economic alternatives presented in the project. Another factor to take into account is the pressure from the international community to stop mercury mining.
Lack of local capacity Medium risk	Proposed GEF intervention will complement national efforts with training and capacity built at the local level. The diversification of job opportunities presented during the project and the training and support to implement economically viable alternative jobs will reduce the risk of project failure.

3.6. Consistency with national priorities or plans

126. The project is consistent with several national priorities and actions plans:

- **National Environmental Action Plan (NEAP):** Kyrgyzstan's 1995 and 1998 NEAPs mention the Khaidarkan mine as a hotspot that needs to be addressed.
- **Kyrgyzstan Action Plan on Primary Mercury Mining (2009):** This plan has temporarily been suspended by the interim government decision in December 2010¹⁵ and could be revised depending on how the political situation plays out. The State Agency on Environment and Forestry intends to revise and re-submit an Action Plan for approval in 2012.
- **National Environmental Health Action Plan (NEHAP 1999):** This plan mentions the fact that mercury contamination is an issue in Kyrgyzstan and it needs to be addressed urgently.
- **Strategic Approach to International Chemicals Management (SAICM):** currently works to update the national chemicals management profile of Kyrgyzstan and integrate sound management of chemicals considerations into national development plans and processes
- **Country Development Strategy:** This strategy favours development of infrastructure, hydropower and mining projects (the strategy is being revised by the government).

¹⁵ After a major political change in April 2010, many decisions of the President Bakiev's government cabinet, including an Action Plan on Primary Mercury Mining (endorsed in October 2009) were suspended or reversed.

3.7. Incremental cost reasoning

127. Without the GEF support, the Kyrgyz government along with the international partners would not be able to make the necessary steps forward to phase out the supply of primary mercury from the Khaidarkan mine to the global market and to reduce mercury pollution meaning that the environmental (local, national and global) and health impacts caused by mercury will continue unabated. Without the necessary GEF funding, it will difficult to promote alternative development, design the public-private partnership framework and engage effectively with private partners for investment to alternatives. Moreover, without the GEF support, the work on preparation for remedial measures and risk reduction would be constrained and the scope of awareness raising of mercury issues limited.
128. Economically speaking, if comprehensive actions are not taken to phase out primary mercury mining, the subsequent costs of the impacts of the continued mercury mining in Khaidarkan would be far greater. If the mine continues business as usual or decides to increase its production to levels seen some years ago, an estimated US\$ 6 million would need to be invested for maintenance and development. High costs would be incurred as a result of the unabated mercury pollution (growing health and remediation costs, losses in agriculture due to mercury contamination) as well as global costs (costs related to mercury pollution of sensitive ecosystems, downstream pollution). Whilst the investment that is needed to maintain or increase mercury production could be sourced either from the state or private channels, the costs associated with the mercury pollution would most likely have to be covered by the community and the Kyrgyz government (especially in the case of emergency). Furthermore, even though mercury prices have risen recently (linked to gold prices), in the longer term, mercury production and use is likely to decline with the onset of the global mercury instrument.. On the other hand, if there was a mercury phase out and a parallel launch of economic alternatives with help of GEF and other donors and investors, could not only increase economic performance of the region but also reduce environmental pressures from booming mining activities and mercury pollution.
129. The proposed GEF project's main focus will be on the promotion of alternative investments (1) and priority environmental actions (3) that have direct local and global environmental significance. Area (2) above is covered by UNDP-administrated programme on creating alternative job opportunities in Khaidarkhan, and is complimentary to the GEF intervention. UNDP has been involved in the identification of alternatives to mercury mining and the final report on the activities from 2007-2011 will be ready in the next weeks. However the work performed by UNDP has been mainly focused on the identification of local alternatives such as small business and small scale development opportunities in Khaidarkan. The level of investment required to implement the identified alternatives has not been assessed yet and it is expected that. Among other things, the GEF funding will assist to further support the UNDP programme and to further assess the identified local alternatives and the level of investment required. Aside from the UNDP local alternatives and small scale development, the project will further assess and identify bigger alternative investment opportunities to mercury mining, which will have the potential to create a bigger number of employment opportunities (e.g. mining activities, tourism. etc).
130. *Phase I* of the Kyrgyz mercury project partnership led by UNEP and sponsored by Switzerland, Norway and the U.S. Governments included a range of activities that contributed to the establishment of a preliminary baseline (technical conditions, socio-economic and environmental situation) and prepared the ground for further actions (small grants programme, action plan, local partners) for a GEF intervention and other projects during the subsequent phase. Via its intervention, the GEF will contribute to the reinforcement of this baseline information and the improvement of the situation within the Khaidarkan area economically, environmentally and socially. The main improvements that the GEF grant would bring would be:
- 1) consolidation of the preliminary baseline by upgrading the analysis of the socio-economic and environmentally sound alternatives to mercury mining and the strengthening of the monitoring of health and environmental impacts of mercury mining and pollution
 - 2) increased economic resiliency and diversity via a comprehensive assessment of mining alternatives to mercury mining with the potential of new investment into selected proposed options between US\$ 2-3 million (minimum) and US\$ 30-60 million (max) within 3-8 year

timeframe, although this would depend on the economic and political climate in the country and the success of public-private partnership¹⁶

- 3) increased engagement of local community in alternative employment activities through a diversification of job opportunities and suitable alternatives
 - 4) improved capacity for remedial measures, rapid response measures for environment and health risk reduction, and mercury monitoring programme. Moreover, a comprehensive study supported by the GEF would gather precise figures needed for targeted remediation and support decision making.
131. In relation to co-financing, several donors have expressed interest in providing support. Norway and other donors and project partners have confirmed co-financing for the GEF grant in excess of US\$1.5 million, while private investors / mining operators can potentially inject even more resources into the current project or follow-up activities. Indeed, the GEF through promoting investment into alternatives could create appropriate conditions for investors to participate in the endeavour. Also GEF involvement as a highly renowned institution would provide additional stimulus for investors to get in. It is important to highlight that the co-finance funds will be mostly used to provide international expertise and services to assist with the execution of project activities (e.g. hiring international consultants, conduct mercury analysis in expert laboratories, etc.) GEF funding will be mainly used to execute activities at the national level.

3.8. Sustainability

132. Since 2007/2008, the Kyrgyz government has cooperated with UNEP, UNITAR, and other partners to address the complex economic and environmental challenges of primary mercury mining at Khaidarkan. Future sustainability of the joint efforts could be achieved in several ways:
- **Employment in alternative economic activities:** Currently, the mercury mine employs more than 500 people out of the 11,000 population, and is by far the most important employer of the community. The ongoing local economic diversification programmes and proposed alternative development options (mining of non-metallic minerals and gold mining and processing) allow for further job creation, resilient local economy and better performance.
 - **Preparation for remediation:** transition to the proposed gold mining and processing will be accompanied by the necessary improvements in existing environmental infrastructure, which will eventually contribute to remediation and risk reduction goals. Moreover, additional funds could be provided by the government and donors for remediation when the primary mercury mining stops.
 - **Declaration from the Kyrgyz Government to phase out primary mercury mining and supply:** This will demonstrate the Kyrgyz Government's commitment towards mercury mining phase out and would encourage donors to continue support for economic transition and mercury risk reduction. This commitment should also make provisions for ensuring that workers that have been employed at the mercury plant are provided with decent jobs and that environmental and health risks for local residents and workers are addressed.

3.9. Replication

133. The proposed GEF activities/interventions for this project can be replicated in other situations where mercury production is being continued or recently abandoned and has environmental and social impacts locally or internationally. In particular, the proposed remedial and risk reduction measures, monitoring and awareness raising programmes can be applied in situations where closure is imminent or at abandoned sites, including two abandoned mercury production sites in Kyrgyzstan.

3.10. Public awareness, communications and mainstreaming strategy

134. For this aspect of a GEF intervention the project envisages the following activities:

¹⁶ Source: UNEP (2009): Kahidarkan Mercury : Addressing primary mercury mining in Kyrgyzstan. Refers to the estimated cost of developing gold mining in the region.

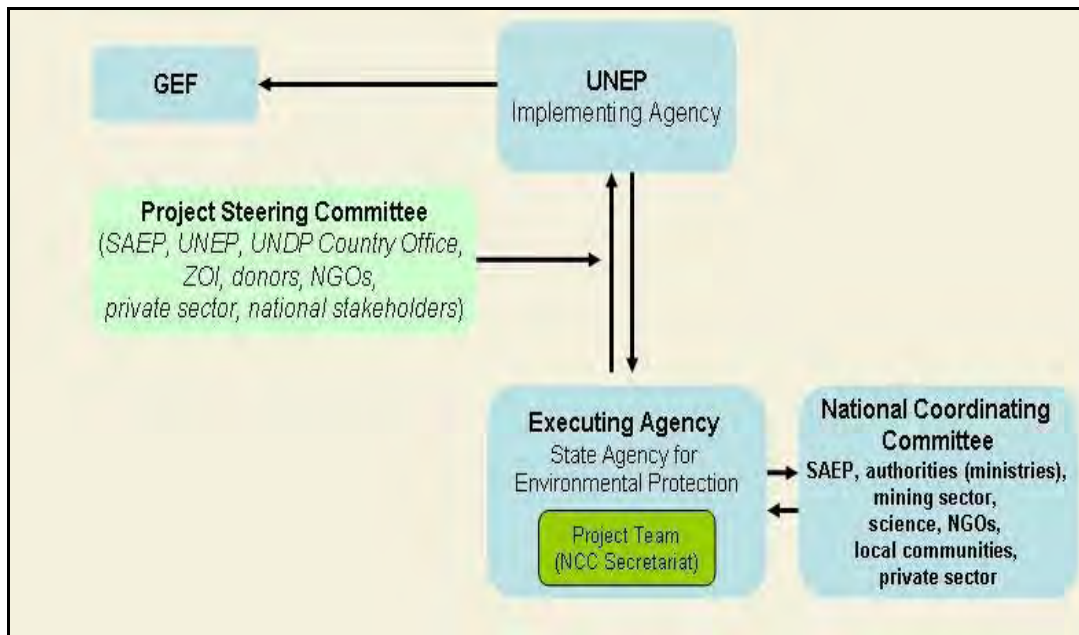
- Mainstreaming of the replacement of primary mercury mining by alternative options in sectoral and country development programmes as appropriate;
- Cooperation with Extractive Industry Transparency Initiative in Kyrgyzstan and professional mining associations and NGOs on the issues related to mercury mining;
- Engagement of mass media and local journalists into public informing and awareness raising activities and reporting on the GEF project milestones;
- Cooperation with NGOs (Osh Aarhus Centre, other local and international) and IGOs (UNDP, UNITAR) in dissemination of the project information, results and UNEP-published mercury materials
- Towards the end of the project, the results and achievements will be publicized

3.11. Environmental and social safeguards

135. Under the *environmental safeguards*, the project will follow internationally agreed standards in sampling and analysis of contaminated soil and will prepare a sound plan to prevent accidents that may put at risk communities nearby. The project will also measure the levels of mercury in waters and land and will identify areas where mercury contamination is high and where decontamination actions need to be considered.
136. Concerning the *social safeguards*, vulnerable groups will be encouraged to participate in the project and special attention will be given to poor communities being at risk from mercury mining or living in proximity of the mercury mine smelter. Another the key activity will be to identify employment opportunities for the community(ies) with the ultimate goal to stop the dependency on the mine operations, with the inherent risk that it represents. Closing the mine may represent the loss of 800 employments. This project will ensure that at least an equal number of employment opportunities will be identified and that the plans and strategy to be adopted by the government will ensure an income to the people potentially affected. Additionally, media coverage will ensure that the population know about the risk posed by mercury, the environmental and social consequences of continuing operating the mercury mine and/or closing the mine. Dissemination of the information is particularly important to alert the population on the simple measures to avoid mercury contamination and to understand the importance of taking a sound decision that will preserve the income of the population and preserve the environment.
137. Concerning the project activities, the project team and partners will use electronic means of communications as much as possible and will pay much attention to activities that may considerable increase the release of (e.g. travelling by plane).
138. The following activities that will need to be carried out during the project cycle in relation to environmental and social safeguards would be:
- Implement management approaches, such as results-based management, which embeds sustainability considerations;
 - Implement a policy for conducting regular assessments of environmental and social aspects of project activities where needed;
 - Establish a framework that allows project information access, review and transparency;
 - Develop sustainable practices of the intended project activities;
 - Pursue steps that avoid unnecessary trade-offs or harm to people and the environment;
 - Strengthen control of mercury emissions ;
 - Establish a monitoring system on environmental impacts to identify practical measures for reducing harmful effects on the health of people living in surrounding areas;
 - Consider gender issues in decision-making and project implementation;
 - Ensure that all aspects of the project consider climate neutrality and impact on the environment.

SECTION 4: INSTITUTIONAL FRAMEWORK AND IMPLEMENTATION ARRANGEMENTS

139. The figure below shows the institutional framework and project implementation arrangements:



140. UNEP will be the *GEF implementing agency* in this project. It is mandated by its Governing Council to work to protect human health and the environment from exposure to mercury by:
- convening an intergovernmental negotiating committee to prepare a global legally binding instrument on mercury; and
 - continuing and enhancing international action, including through the Global Mercury Partnership.

Since 2007, UNEP has convened an advisory group comprising of the Kyrgyz Republic, donor governments, international partners (UNITAR, UNDP, Zoi Environment Network), and experts to work towards the phasing out of primary mercury mining. As the implementing agency, UNEP will manage the project by providing substantive input and financial coordination within the larger Kyrgyz mercury project partnership. UNEP will collaborate closely with its partners (see below) to convene stakeholders, coordinate with international players and supervise the project activities.

141. The State Agency for Environmental Protection and Forestry will be the *GEF executing agency* in this project and will facilitate national coordination and project implementation. It will organize independent audits in order to guarantee the proper use of GEF funds allocated at the national level. Financial transactions, audits and reports will be carried out in accordance with national regulations and UNEP procedures. It will also provide regular progress and financial reports to UNEP. According to its core competence, the State Agency for Environmental Protection (in cooperation with other competent institutions, such as the State Inspection on environmental and technical safety) will supervise remedial measures planning and environment and health risk reduction measures and information dissemination to ensure that national requirements are met.
142. The Centre on Ecological Safety within the Agency will be a *supporting executing partner* for remedial planning and risk reduction measures.
143. The Osh Aarhus Environmental Centre located close to Khaidarkan will be a *supporting executing partner* for environmental and health studies and awareness raising.
144. Considering the complex nature of the GEF project components and the mandates/competencies of relevant national ministries and agencies in the Kyrgyz Republic, the Ministry of Natural Resources and the Ministry of State Property (or their successors in the case of future governmental changes) will

supervise activities related to the economic transition of Khaidarkan. For enabling direct links to the private sector, the Kyrgyz Mining Association will be a *supporting executing partner* for this task.

145. At the international level, **A Project Steering Committee (PSC)** will be created and it will meet at the beginning, mid-term and at the end of the project. This committee will be formed by donors, executing and implementation organisms (UNEP, State Agency of Environmental Protection, State Agency of Geology, Ministry of Economy, donors, Zoi Environment Network) and other GEF implementation organisms. This committee will evaluate the progress of the project and will take the necessary measures to guarantee the fulfilment of the goals and objectives. It will meet twice during the project execution, at the beginning and at the end of the project.
146. At the National level, a **Project Team (PT)** will be established within the *executing agency*; this team will be in charge of the execution and management of the project and it will report to UNEP and to the Project Steering Committee; also, it will be composed by the Project Coordinator, Technical Assistant and Management Assistant. The State Agency of Environmental Protection, the *executing agency*, will be supported by the Osh Aarhus Environmental Information Centre. The Management Assistant will be located in Osh, a second largest city of Kyrgyzstan, in proximity to Khaidarkan. The Osh Aarhus Environmental Information Centre agrees to host the position. The location of the Management Assistant will allow discussing any pressing issues that may arise during project execution.
147. The activities under the project will be facilitated by internal project communication with national and local counterparts regarding the implementation of activities both at the national and local levels. The Ministry of Natural Resources will cooperate closely with the State Agency of Environmental Protection ensuring coordination at the national level. UNEP will actively communicate with project partners on the progress of the project.
148. The **National Coordinating Committee (NCC)** will be in charge of decision making throughout the project. The ministries, the representatives of mining industries and professional associations, science and the corresponding NGOs will be part of this committee. NCC will decide on the frequency of the meetings and their operating procedures. Regular meetings will be carried out throughout the implementation, and additional meetings may be set if necessary. NSC will supervise the tasks of the Coordinator of the Project and of the implementation team. Likewise, this committee will review, comment on and approve the work plan. Every decision made by the Committee, such as the corresponding liabilities, schedules and budget, will be duly reported to whom it may concern. Members of the NCC will facilitate the implementation of project activities within their corresponding organizations, they will guarantee that cooperation activities are timely executed and they will promote integration
149. Throughout the project, Zoi Environment Network will be engaging with the Kyrgyz Mining Association, a professional organization that represents the mining sector of Kyrgyzstan. This association is self-governing, independent and is not linked to any political party. Their mission is to provide broad technical and legal expertise to develop and promote the mining sector in the Kyrgyz Republic. The Kyrgyz Mining Association was actively engaged in *Phase I* and it has also since officially joined UNEP's Mercury Partnership. Together with the other project partners, the Kyrgyz Mining Association, during *Phase II*, will participate in the project ensuring direct links with the private mining sector and maximize conditions for investment into alternative economic development of Khaidarkan.
150. UNITAR in the previous *Phase I* has facilitated socio-economic assessment, an action plan to address primary mercury mining in the Kyrgyz Republic and trainings. Currently UNITAR implements SAICM project in Kyrgyzstan and will establish necessary synergies.

SECTION 5: STAKEHOLDER PARTICIPATION

151. There is a broad potential for project stakeholders to contribute in the two thematic work areas:
- promotion of economic alternatives, and
 - reduction of most immediate threats posed by the mine to the environment and the local community.

In both thematic areas, sharing of expertise, experience and provision of co-financing for project objectives and activities will improve the project impact and strengthen its sustainability. Within the private sector, a number of mining and geo-exploration companies have preliminarily expressed their interest in the Khaidarkan facilities and workforce.

152. In terms of the reduction of most immediate threats posed by the mine to the environment and the local community, there is opportunity to draw on the experiences and lessons learned from other mercury sites closure and remediation projects, particularly in Spain and Kazakhstan as well as experience in Kyrgyzstan at the Mayлуу-Suu uranium tailings. To assist with this, the engagement of the University of Castilla La-Mancha and AUPET that work closely on these themes, would facilitate a transfer of experiences highly useful for the project.
153. At national level, important stakeholders are the Ministry of Natural Resources, the Ministry of State Property, the Ministry of Economic Development and other recipients of project information and results and would be involved with the promotion of economic alternatives.
154. The GEF project activities will be aligned with the ongoing UNDP-administrated “creating alternative job opportunities in Khaidarkhan” programme in Khaidarkan which has a strong position for small business promotion at the local level. Although non GEF funded, this programme is consistent and supportive of the project activities. UNDP is leading thematic area on the promotion of local alternative employment and engages with local authorities to address the infrastructural challenges.
155. The donor governments (Norway, Switzerland and the U.S.) have played a key role in initial project steps through their funding contributions and involvement of experts. Their interest as development partners is to assist and support the Kyrgyz Republic to phase out the mercury supply and replace the mercury mining activities with sustainable economic alternatives in the area. These governments have indicated a continued interest in providing development assistance as the project moves forward and milestones of mercury mine transition are met.
156. The local communities in and around the Khaidarkan area would be direct beneficiaries of the project as they will benefit from not only increased employment resulting from the promotion of economic alternatives but also reduced exposure to environmental and health risks. Both of these elements will indeed improve the quality of their every day lives. Local NGOs working in the area would be able to further engage the communities into this project process.

SECTION 6: MONITORING AND EVALUATION PLAN (M&E)

157. The project will follow UNEP standard monitoring, reporting and evaluation processes and procedures. Substantive and financial project reporting requirements are summarized in Appendix 8. Reporting requirements and templates are an integral part of the UNEP legal instrument to be signed by the executing agency and UNEP.
158. The project M&E plan is consistent with the GEF Monitoring and Evaluation policy. The Project Results Framework presented in Appendix 4 includes SMART indicators for each expected outcome as well as mid-term and end-of-project targets. These indicators along with the key deliverables and benchmarks included in Appendix 6 will be the main tools for assessing project implementation progress and whether project results are being achieved. The means of verification and the costs associated with obtaining the information to track the indicators are summarized in Appendix 15. Other M&E related costs are also presented in the Costed M&E Plan and are fully integrated in the overall project budget.
159. The M&E plan will be reviewed and revised as necessary during the project inception workshop to ensure project stakeholders understand their roles and responsibilities vis-à-vis project monitoring and evaluation. Indicators and their means of verification may also be fine-tuned at the inception workshop. Day-to-day project monitoring is the responsibility of the project management team but other project partners will have responsibilities to collect specific information to track the indicators. It is the responsibility of the Project Manager to inform UNEP of any delays or difficulties faced during implementation so that the appropriate support or corrective measures can be adopted in a timely fashion.
160. The project Steering Committee will receive periodic reports on progress and will make recommendations to UNEP concerning the need to revise any aspects of the Results Framework or the M&E plan. Project oversight to ensure that the project meets UNEP and GEF policies and procedures is the responsibility to the Task Manager in UNEP-GEF. The Task Manager will also review the quality of draft project outputs, provide feedback to the project partners, and establish peer review procedures to ensure adequate quality of scientific and technical outputs and publications.
161. At the time of project approval 50% percent of baseline data is available. Baseline data gaps will be addressed during the first year of project implementation. A plan for collecting the necessary baseline data is presented in Appendix 4 and 5. The main aspects for which additional information are needed are:
- identification and in depth socio-economic assessment of sound alternatives to mercury mining;
 - upgrading and reinforcement of monitoring mercury in health and environment;
 - upgrading and reinforcement of environmental and health impacts of mercury mining;
162. Project supervision will take an adaptive management approach. The Task Manager will develop a project supervision plan at the inception of the project which will be communicated to the project partners during the inception workshop. The emphasis of the Task Manager supervision will be on outcome monitoring but without neglecting project financial management and implementation monitoring. Progress vis-à-vis delivering the agreed project global environmental benefits will be assessed with the Steering Committee at agreed intervals. Project risks and assumptions will be regularly monitored both by project partners and UNEP. Risk assessment and rating is an integral part of the Project Implementation Review (PIR). The quality of project monitoring and evaluation will also be reviewed and rated as part of the PIR. Key financial parameters will be monitored quarterly to ensure cost-effective use of financial resources.
163. A mid-term management review or evaluation will take place after 12 months of project execution as indicated in the project milestones. The review will include all parameters recommended by the GEF Evaluation Office for terminal evaluations and will verify information gathered through the GEF tracking tools, as relevant. The review will be carried out using a participatory approach whereby parties that may benefit or be affected by the project will be consulted. Such parties were identified during the stakeholder analysis (see section 2.5 of the project document). The project Steering Committee will participate in the mid-term review and develop a management response to the

evaluation recommendations along with an implementation plan. It is the responsibility of the UNEP Task Manager to monitor whether the agreed recommendations are being implemented.

164. An independent terminal evaluation will take place at the end of project implementation. The Evaluation and Oversight Unit (EOU) of UNEP will manage the terminal evaluation process. A review of the quality of the evaluation report will be done by EOU and submitted along with the report to the GEF Evaluation Office not later than 6 months after the completion of the evaluation. The standard terms of reference for the terminal evaluation are included in Appendix 9. These will be adjusted to the special needs of the project.
165. The GEF tracking tools are attached as Appendix 15. These will be updated at mid-term and at the end of the project and will be made available to the GEF Secretariat along with the project PIR report. As mentioned above the mid-term and terminal evaluation will verify the information of the tracking tool.

SECTION 7: PROJECT FINANCING AND BUDGET

7.1. Overall project budget

166. The following table shows the overall budget (GEF and co-finance) by activity. Reconciliation between GEF activities budget and UNEP budget by expenditure code, total GEF and co-finance and GEF finance only, please see Appendix 1 and Appendix 2.

Table 1: Project budget by project component

Project Components	GEF	Co-finance	TOTAL
1. Identification and implementation of local economic opportunities, not reliant on mercury mining	250,000	1,123,000	1,373,000
1.1 Develop socio-economic analysis, environmental impact assessment and roadmap for the implementation of other mining alternatives to mercury mining.	45,000	215,000	260,000
1.2 Identify priority alternatives for non-mercury mining economic activities in the Khaidarkan area.	45,000	120,000	165,000
1.3 Continue supporting the UNDP programme fostering alternative job opportunities in Khaidarkan not reliant on mining, base on lesson learned from previous phases of the project identified in the project evaluation.	120,000	578,000	698,000
1.4 Update national plans and strategies for alternative employment which will include socio economic analysis for mining and non-mining alternatives	50,000	210,000	250,000
2. Assessment and monitoring of environment and health impacts from primary mining and pollution	155,000	495,500	650,500
2.1 Identify and reinforce existing capacities (including training and exchange of experiences) of laboratories in Kyrgyzstan able to analyze human and environmental samples.	65,000	190,000	255,000
2.2 Conduct a comprehensive study of environmental and health impacts of mercury mining in the area, involving local and international scientists, local health authorities and experts and independent (verification) sampling.	50,000	262,500	312,500
2.3 Install a mobile, low cost and easy-to-use monitoring system for mercury related accidents and emissions within the existing competent organizations and train local specialists in its use.	40,000	43,000	83,000
3. Explore and prepare remedial and risk prevention measures for mercury contaminated sites	258,000	640,500	898,500
3.1 Select, prepare and agree on the remediation targets and priorities for rapid response and preventive measures.	20,000	86,500	106,500
3.2 Ensure substantial training and international experience exchange on mercury pollution remediation and rapid response approaches for risk reduction (including international partnerships for technology and experience transfer).	74,000	213,500	283,500

3.3 Develop and implement a strategy and guidelines to conduct remediation on priority sites (including the design of a strategy and guidelines for remediation; draft a proposal for financing and implementation of the remedial measures with demonstration of selected approaches and the publication and distribution of information materials related to remedial and preventive measures).	164,000	340,500	504,500
4. Awareness rising at national and community level and public transparency	120,000	475,000	595,000
4.1 Media coverage (TV and e-news/newspapers) on the selected aspects of local, national and global mercury issues and briefings on project milestones /achievements.	15,000	10,000	25,000
4.2 Conduct social impact studies to understand better the local perception and acceptance of the transition options.	20,000	65,000	85,000
4.3 Design and implement a targeted mercury awareness raising campaign and a strategy to promote employment opportunities to mercury mining for: a) government; b) research institutions; c) private sector; d) local residents (farmers, workers, housewives, etc); and e) journalists)	55,000	257,500	312,500
4.4 Design and produce, including translation to local languages, mercury information kits.	30,000	142,500	175,500
Project Management and Supervision	80,000	189,000	269,000
Monitoring and Evaluation	81,000	84,000	165,000
TOTAL	944,000	3,007,000	3,951,000

7.2. Project co-financing

167. The co-financing committed for the project includes signed pledges from national partners as well as from global partners. A summary of the secured co-financing for the project, please see Appendix 10. The co-financing commitment letters from project partner see Appendix 11. UNDP supports the project and has provided a co-financing letter for approximately 258,000 USD. A support letter is attached. The Swiss Federal Office for the Environment has provided a co-finance of 600,000 CHF through UNITAR to the project. UNEP has assigned resources to support this project for a total of 344,000 USD, as indicated in Appendix 2.

7.3. Project cost-effectiveness

168. The guidelines for mercury remediation and air mercury concentration monitoring developed by the project, experience from demonstration of risk reduction measures, and other tangible results will be shared with interested national stakeholders and countries to the extent possible. Moreover, future investments into alternative development of Khaidarkan will multiply GEF funding and co-financing.
169. This project will be cost effective by:
- Enhancing an effective communication through the establishment of the steering committee, professional project team and using the existing capacities (including labs, local experts, etc);
 - Encouraging innovation in public-private partnership (e.g. Gold and other minerals mining) and investment promotion;
 - Considering experience and lessons learnt from similar projects in Spain and Kazakhstan;
 - Demonstration of low-cost and locally specific mercury risk reduction and remedial measures;

- Developing strategies/approaches for remediation of mercury-contaminated areas that can be used in abandoned mercury mines of Kyrgyzstan or other countries.
170. This project will coordinate closely with other project interventions on mercury coordinated by UNEP and make the appropriate linkages with SAICM activities on sound chemicals management.
 171. All GEF proposed interventions in GEF V, whether POPs, mercury, sound chemicals management or Ozone, are complementary to UNEP's Subprogramme 5 (Harmful Substances and Hazardous Waste). Expected Accomplishment 3 of the sub-programme seeks to put in place appropriate policy and control systems for harmful substances of global concern; mercury is a target substance in this regard. Programme of Work Output 531 is to develop an international framework for action to minimize the availability, accessibility and use of mercury. UNEP delivers this output through its Global Mercury Programme (Project 53-P1) that (i) supports the international negotiations on a global, legally-binding instrument on mercury; and (ii) promotes the take up of immediate actions through the Global Mercury Partnership. These activities have been specifically mandated by Governing Council decision. The project proposed here is complementary to and extends work under the Supply and Storage partnership area of the Global Mercury Partnership that, as a result, represents important cofinancing to this initiative. The Khaidarkan mercury mine is the last commercial mine producing primary mercury for export to world markets; therefore addressing mercury supply from this source is considered as having the potential to deliver significant global impact.
 172. UNEP has Chemicals and POPs related staff capacity in the Regional Office for Asia Pacific (ROAP), based in Bangkok, Thailand. ROAP will assist UNEP DTIE to identify further opportunities for cooperation with ongoing and planned activities in the region. Experts from the UNEP DTIE and ROAP offices will provide substantial input throughout the duration of this project.

APPENDICES

- Appendix 1: GEF Budget by project components and UNEP budget lines
- Appendix 2: Co-financing by source and UNEP budget lines
- Appendix 3: Incremental cost analysis
- Appendix 4: Results Framework
- Appendix 5: Workplan and timetable
- Appendix 6: Key deliverables and benchmarks
- Appendix 7: Costed M&E plan
- Appendix 8: Summary of reporting requirements and responsibilities
- Appendix 9: Standard Terminal Evaluation TOR
- Appendix 10: Decision-making flowchart and organizational chart
- Appendix 11: Terms of Reference
- Appendix 12: Co-financing commitment letters from project partners
- Appendix 13: Endorsement letter of GEF National Focal Point
- Appendix 14: Draft procurement plan
- Appendix 15: Tracking Tools

APPENDIX 1: Budget by project components and UNEP budget lines

RECONCILIATION BETWEEN GEF ACTIVITY BASED BUDGET AND UNEP BUDGET BY EXPENDITURE CODE (GEF FINANCE ONLY)

Project No:
Project Name: Reducing global and local environmental risks from primary mercury mining in Khaidarkan, the Kyrgyz Republic
Executing Agency: State Agency for Environmental Protection and Forestry (SAEFP)
 Source of funding (noting whether cash or in-kind): GEF Trust Fund Cash

UNEP BUDGET LINE/OBJECT OF EXPENDITURE	BUDGET ALLOCATION BY PROJECT COMPONENT/ACTIVITY*							ALLOCATION BY CALENDAR YEAR**			
	Component 1	Component 2	Component 3	Component 4	PM	M&E	Total	Year 1	Year 2	Year 3	Total
	US\$	US\$	US\$	US\$	US\$	US\$	US\$	US\$	US\$	US\$	US\$
10 PROJECT PERSONNEL COMPONENT											
1100 Project Personnel											
1101 Project coordinator (KYR)					50'000		50'000	16'667	16'667	16'667	50'000
1199 Sub-Total	0	0	0	0	50'000	0	50'000	16'667	16'667	16'667	50'000
1200 Consultants w/m											
1201 National Consultants	95'000	40'000		45'000			180'000	31'667	94'167	54'167	180'000
1202 International Consultants	20'000	5'000		10'000			35'000	15'000	10'000	10'000	35'000
1299 Sub-Total	115'000	45'000	0	55'000	0	0	215'000	46'667	104'167	64'167	215'000
1600 Travel on official business (above staff)											
1601 Travel Project coordinator/project staff (KYR)			20'000	10'000	5'000		35'000	18'333	13'333	3'333	35'000
1699 Sub-Total	0	0	20'000	10'000	5'000	0	35'000	18'333	13'333	3'333	35'000
1999 Component Total	115'000	45'000	20'000	65'000	55'000	0	300'000	81'667	134'167	84'167	300'000
20 SUB-CONTRACT COMPONENT											
2100 Sub-contracts (UN organizations)											
2101 UNDP programme fostering alternative jobs (act. 2.3)	120'000						120'000	40'000	40'000	40'000	120'000
2102 Reinforce analytical capacities		65'000					65'000		65'000		65'000
2103 Remediation activities -- mercury contaminated sites (Act. 4.1-4.3)			210'000				210'000		105'000	105'000	210'000
2199 Sub-Total	120'000	65'000	210'000	0	0	0	395'000	40'000	210'000	145'000	395'000
2999 Component Total	120'000	65'000	210'000	0	0	0	395'000	40'000	210'000	145'000	395'000

30 TRAINING COMPONENT												
3200	Group training (field trips, WS,											
3201	Training on mercury issues (6.3)				45'000			45'000	15'000	15'000	15'000	45'000
3299	Sub-Total	0	0	0	45'000	0	0	45'000	15'000	15'000	15'000	45'000
3300	Meetings/conferences											
3301	National Coordination meetings							0				0
3302	Steering group mtgs (3)						0	0				0
3399	Sub-Total	0	0	0	0	0	0	0	0	0		0
3999	Component Total	0	0	0	45'000	0	0	45'000	15'000	15'000	15'000	45'000
40 EQUIPMENT COMPONENT												
4100	Expendable equipment											
4101	Operating costs	5'000		14'000		10'000		29'000	13'000	8'000	8'000	29'000
4199	Sub-Total	5'000	0	14'000	0	10'000	0	29'000	13'000	8'000	8'000	29'000
4200	Non-expendable equipment											
4201	Computer, fax, photocopier,					10'000		10'000	3'333	3'333	3'333	10'000
4202	Equipment for mercury accidents		40'000					40'000		20'000	20'000	40'000
4299	Sub-Total	0	40'000	0	0	10'000	0	50'000	3'333	23'333	23'333	50'000
5999	Component Total	5'000	40'000	14'000	0	20'000	0	79'000	16'333	31'333	31'333	79'000
50 MISCELLANEOUS COMPONENT												
5200	Reporting costs (publications, maps, NL)											
5201	Translation and interpretation	10'000	5'000	14'000	10'000	5'000		44'000	11'333	13'833	13'833	44'000
5299	Sub-Total	10'000	5'000	14'000	10'000	5'000	0	44'000	11'333	13'833	18'833	44'000
5500	Evaluation											
5501	Mid-term and final evaluation					60'000		60'000			60'000	60'000
5502	Financial audit (3)					21'000		21'000			21'000	21'000
5599	Sub-Total	0	0	0	0	0	81'000	81'000	0	0	81'000	81'000
5999	Component Total	10'000	5'000	14'000	10'000	5'000	81'000	125'000	11'333	13'833	99'833	125'000
TOTAL		250'000	155'000	258'000	120'000	80'000	81'000	944'000	164'333	404'333	375'333	944'000
control sum from left		250'000	155'000	258'000	120'000	80'000	81'000	944'000	164'333	404'333	375'333	944'000

Output 1: to add 1101 and 1601 = 55,000 \$
 To project management is added: Steering group mtgs

APPENDIX 2: CO-FINANCING BY SOURCE AND UNEP BUDGET LINES

Project Components and Activities	GEF Funding	Co-financing (in-kind)	Co-financing	Co-financing (in-kind)	Co-financing (in-kind)	Co-financing (in-kind)	Co-financing (in-kind)	Co-financing (in-kind)	Co-financing (cash)	Co-financing (cash)	Co-financing (cash)	Co-financing (in-kind)	Co-financing (in-kind)	TOTAL
		State Agency for Environmental Protection Executing Agency	UNEP Implementing Agency	Kyrgyz mining association	Kyrgyz Osh Aarhus Environmental Information Centre	Zoi Environment Network Switzerland	University Castilla La-Mancha Spain	Almaty University of Power Engineering Kazakhstan	U.S. EPA	Swiss FOEN	Norway MFA	UNITAR	UNDP	
Component 1: Identification and implementation of local economic opportunities, not reliant on mercury mining														
<i>Activities</i>														
1.1 Develop socio-economic analysis, environmental impact assessment and roadmap for the implementation of other mining alternatives to mercury mining	45'000		110'000	30'000			5'000			50'000	5'000	15'000		260'000
1.2 Identify priority alternatives for non-mercury mining economic activities in the Khaidarkan area.	45'000		15'000				10'000			50'000	10'000	30'000	5'000	165'000
1.3 Continue supporting the UNDP programme fostering alternative job opportunities in Khaidarkan not reliant on mining, base on lesson learned from previous phases of the project identified in the project evaluation.	120'000		35'000				5'000			50'000		230'000		698'000
1.4 Update national plans and strategies for alternative employment which will include socio-economic analysis for mining and non-mining alternatives	40'000	5'000	5'000					5'000			150'000	35'000	10'000	250'000
SUBTOTAL	250'000	5'000	65'000	30'000			20'000	5'000		150'000	165'000	310'000	15'000	1'373'000
Component 2: Assessment and monitoring of environment and health impacts from primary mercury mining and pollution														
<i>Activities</i>														
2.1 Identify and reinforce existing capacities (including training and exchange of experiences) of laboratories in Kyrgyzstan able to analyze human and environmental samples.	65'000	10'000	25'000				10'000	15'000	5'000		100'000	25'000		255'000
2.2 Conduct a comprehensive study of environmental and health impacts of mercury mining in the area, involving local and international scientists, local health authorities and experts and independent (verification) sampling.	50'000	10'000	30'000		2'500		10'000	20'000	10'000		170'000	10'000		312'500

2.3 Install a mobile, low cost and easy-to-use monitoring system for mercury related accidents and emissions within the existing competent organizations and train local specialists in its use.	40'000	10'000				6'000	5'000	7'000			15'000			83'000
SUBTOTAL	155'000	30'000	55'000			2'500	26'000	40'000	22'000	-	270'000	50'000		650'500
Component 3: Explore and prepare remedial and risk prevention measures for mercury-contaminated sites														
<i>Activities</i>														
3.1 Select, prepare and agree on the remediation targets and priorities for rapid response and preventive measures.	20'000	10'000				9'000	10'000	7'500			30'000	20'000		106'500
3.2 Ensure substantial training and international experience exchange on mercury pollution remediation and rapid response approaches for risk reduction (including international partnerships for technology and experience transfer).	74'000	5'000			3'500	15'000	20'000	5'000			75'000	80'000	10'000	287'500
3.3 Develop and implement a strategy and guidelines to conduct remediation on priority sites (including the design of a strategy and guidelines for remediation; draft a proposal for financing and implementation of the remedial measures with demonstration of selected approaches and the publication and distribution of information materials related to remedial and preventive measures).	164'000	20'000				10'000	10'000	15'500				285'000		504'500
SUBTOTAL	258'000	35'000				3'500	34'000	40'000	28'000		105'000	385'000	10'000	898'500
Component 4: Awareness rising at national and community level and transparency														
<i>Activities:</i>														
4.1 Media coverage (TV and e-news/newspapers) on the selected aspects of local, national and global mercury issues and briefings on project milestones /achievements.	15'000					5'000	5'000							25'000
4.2 Conduct social impact studies to understand better the local perception and acceptance of the transition options	20'000		20'000			5'000	5'000				35'000			85'000
4.3 Design and implement a targeted mercury awareness raising campaign and strategy to promote employment opportunities to mercury mining for: a) government; b) research institutions; c) private sector; d) local residents (farmers, workers, housewives, etc); and e) journalists)	55'000	2'500	50'000	10'000		5'000	15'000	5'000		85'000	35'000	50'000		312'500

4.4 Design and produce, including translation to local languages, mercury information kits.	30'000	2'500	10'000	5'000	5'000	5'000	10'000		25'000	35'000	35'000	10'000		172'500
SUBTOTAL	120'000	5'000	80'000	15'000	20'000	30'000	15'000	-	110'000	105'000	85'000	10'000		595'000
Project Management and Supervision														
<i>Activities:</i>														
<i>Establish a project management, supervision and coordination</i>	80'000	25'000	90'000	5'000	4'000	10'000					50'000	5'000		269'000
SUBTOTAL	80'000	25'000	90'000	5'000	4'000	10'000					50'000	5'000		269'000
Monitoring and Evaluation														
<i>Monitoring and Evaluation</i>	81'000		54'000								30'000			165'000
SUBTOTAL	81'000		54'000								30'000			165'000
TOTAL	944'000	100'000	444'000	50'000	30'000	120'000	100'000	50'000	260'000	645'000	910'000	40'000	258'000	3'951'000

APPENDIX 3: INCREMENTAL COST ANALYSIS

1. Without the GEF support, the Kyrgyz government along with the international partners would not be able to make the necessary steps forward to phase out the supply of primary mercury from the Khaidarkan mine to the global market and to reduce mercury pollution meaning that the environmental (local, national and global) and health impacts caused by mercury will continue unabated. Without the necessary GEF funding, it will be difficult to promote alternative development, design the public-private partnership framework and engage effectively with private partners for investment to alternatives. Moreover, without the GEF support, the work on preparation for remedial measures and risk reduction would be constrained and the scope of awareness raising of mercury issues limited. However with GEF support, all of these actions above would be possible and the essential steps would be made towards the phase out of the mercury supply from this particular state-owned plant and its eventual closing.
2. Economically speaking, if comprehensive actions are not taken to phase out primary mercury mining, the subsequent costs of the impacts of the continued mercury mining in Khaidarkan would be far greater. If the mine continues business as usual or decides to increase its production to the previous decade level, an estimated US\$ 6 million would need to be invested for maintenance and development. High costs would be incurred as a result of the unabated mercury pollution (growing health and remediation costs, losses in agriculture due to mercury contamination) as well as global costs (costs related to mercury pollution of ecosystems, downstream pollution). Whilst the investment that is needed to maintain or increase mercury production could be sourced either from the state or private channels, the costs associated with the mercury pollution would most likely have to be covered by the community and the Kyrgyz government (especially in the case of emergency). Furthermore, even though mercury prices have risen recently, in the longer term, mercury production and use is likely to decline with the onset of the global mercury convention. On the other hand, if there was a mercury phase out and a parallel launch of economic alternatives with help of the GEF and other donors and inputs from investors, could not only increase economic performance of the region but also reduce environmental pressures from booming mining activities and mercury pollution.
3. The costs of doing this project represent incremental costs. The Kyrgyz government in the current time and foreseeable future cannot afford to fund alternative development and measures to reduce environment and health risks from mercury contamination in the area. This project will assist the Kyrgyz government to address both issues and support the global efforts towards reduction in the long term of primary mercury mining and of mercury emissions.
4. Donors participating in this project will contribute with funds and human resources for provision of international expertise and to improve baseline studies by using international experts. GEF funding will be mainly required to hire national experts and to coordinate local and national activities related to the project. In that way, this project will be a perfect complement to the ongoing efforts.
5. The project's results can potentially be replicated for other abandoned mercury mining sites in Kyrgyzstan and also used as a model for greening of the national mining sector through reduction of mercury supply and emissions in socially responsible manner.

APPENDIX 4: RESULTS FRAMEWORK

Strategy Narrative	Indicator	Units	Baseline	Mid-Term Target	End of Project Target	Sources of verification	Risks and Assumptions
Project Goal: To protect human health and the environment from the toxic exposure of mercury by phasing out mercury production and supply in Kyrgyz Republic							
Project Objective: to enable socially compatible economic transition of the Khaidarkan community from primary mercury mining to more environmentally and socially sound economic activities							
The expansion of economic opportunities will be built on the results of pre-feasibility calculations for non-mercury mining options in the region (led by national government) and the local alter-native development options (coordinated by UNDP). At the same time, institutional and regulatory adjustments need to be introduced to create a balanced and attractive mechanism for public-private partnership and investment. As preliminary studies indicate, alternative mining options are considering mining activities (e.g. gold production and non-metallic minerals production such as serpentinite, bentonite, gypsum, facing stones). In parallel, non-mining invest-ment opportunities will be identified as well as the the ongoing alternative employment opportunities programme administrated by UNDP will complement local alternative development efforts by supporting small-scale in-come generating activities, creating new jobs and reducing dependency on the state-owned mercury plant and providing a range of non-mining alternatives to the local population. It is expected that all of these studies and assess-ments will be an integral part of the national plans and strategies for development.	Analysis of non mercury mining alternatives and employment opportunities.	NA	<ul style="list-style-type: none"> • Preliminary socio-economic analysis of primary mercury production at Khaidarkan. • Report of the phase II of UNDP project "<i>creating job opportunities in Khaidarkan</i>", including the independent evaluation. • Action plan for mercury management developed but needs update. • Country Development Plan for 2009-2011 	<ul style="list-style-type: none"> • Alternatives to mercury mining identified (mining and non-mining alternatives). • Socio-economic aspects of alternatives to mercury mining assessed. • Job opportunities study developed. • Baseline information to national plans and strategies for alternative employment opportunities gathered 	<ul style="list-style-type: none"> • Key National stakeholders to support alternatives to mercury mining and developed a roadmap for their implementation • National plans and strategies updated and including mercury decrease considered for adoption 	<ul style="list-style-type: none"> • Socio-economic analysis available • Report on suitable alternatives to mercury mining and job opportunities in Khaidarkan available • National plans and strategies on mercury management through the SAEP website 	<ul style="list-style-type: none"> • Kyrgyz government and private investors interested to participate. • Alternatives to mercury mining supported by key stakeholders. • Adoption of action plan and other strategic national plans out of this project's control • Partners participation from the inception workshop essential
Without detailed environmental and health assessment, it is impossible to effectively target the future environmental remediation and risk reduction measures and check the progress against the baseline situation. The monitoring programme (especially for atmospheric air, drinking water, local crops and food supply and local population's health) is crucial for under-standing of the true scales, key sources, trends over time and pathways of mercury pollution, including impacts on the global environment and health of local residents. Finally, the non-statio-nary system for air monitoring and emergency response will greatly reduce the risk to take samples from the mine to the laboratories and will allow authorities to have reliable information on site within a reasonable time.	Status of the development of a monitoring and health impact system.	NA	<ul style="list-style-type: none"> • Analytical capacity for mercury monitoring in humans and environment not known in Kyrgyzstan. • Preliminary report on environmental issues related to primary mining in Khaidarkan available • Mercury monitoring system for rapid response not available 	<ul style="list-style-type: none"> • Analytical capacity built (laboratories inter-calibration studies, laboratories database) for mercury monitoring. • Detailed Environmental and health analysis of mercury mining concluded. • Mercury monitoring system and emergency response sys-tem developed and implemented 	<ul style="list-style-type: none"> • Capacity built in mercury monitoring generates reliable information to support a sound decision on the fate of the mine. • Environmental and health impact analysis support government decision 	<ul style="list-style-type: none"> • Mercury monitor-ring data generated within the project. • Environmental and health impact analysis report available 	<ul style="list-style-type: none"> • Laboratories willing to participate. • Government to support mercury monitoring efforts.

Strategy Narrative	Indicator	Units	Baseline	Mid-Term Target	End of Project Target	Sources of verification	Risks and Assumptions
High-risk areas identified in a comprehensive assessment will be reviewed and potential remediation technologies for them proposed and tested. Rapid response and risk prevention measures will be designed and implemented to possible extent for immediate positive effects on the local and global environment and health safety. These include fencing and/or sealing of the selected contaminated areas, changes in land use, crops and other cost-efficient measures which reduce exposure to risks. Strategy and guidelines for the development and implementation of remediation measures will be developed and best practices from Central Asia (Kazakhstan) and Western Europe (Spain, Slovenia) deployed.	Total area fenced off, structures reinforced and sludge treated	# hectares, number of structure and cubic meters	0ha / 0structures / 0 m3	4ha / 2 structures / 100m3	47ha / 5 structures / 200m3	Remediation report and certificates.	<ul style="list-style-type: none"> • Selection of sites may generate conflict. • All stakeholders will participate, thus minimizing the risk of conflict.
Awareness raising is essential in the present situation when the ministries have different priorities (continuation of mercury mining vs. environmental concerns and phasing out of mercury mining) and when at the national level links between the Khaidarkan mercury and the global environmental concerns and negotiations are not well known or understood. In addition, there is little awareness and inadequate evidence of mercury impacts and pollution in Khaidarkan. When the comprehensive study and monitoring programme would be completed and launched, the awareness raising would be used to help guide decision making with the intention of reducing the exposure to pollution in Khaidarkan and across Kyrgyzstan, including the use of mercury in artisanal gold mining. Whilst this may be a social method, its final outcome is to help to achieve the overall project goal. Raising awareness on the international mercury instrument and its inevitable impact on the mine's future is required to reduce the policy-makers and local people's indifference on this issue. Previous project activities show that transparency, inclusiveness and sharing of information are the key for cooperation between all stakeholders. Therefore this project component would ensure these important conditions are met. In this context, the project will cooperate closely with the Extractive Industry Transparency Initiative (EITI) in Kyrgyzstan, not least for improved public transparency of Khaidarkan's activities. The awareness raising and campaign to promote alternatives to mercury mining will also target the high political class. This will allow them to take an informed decision on the fate of the mercury mine.	Number of targeted events /activities organized by the project coordination to reach target audiences (government, industry, research institutes, local residents, and journalists).	# of events	<ul style="list-style-type: none"> • Awareness of alternatives to mercury mining through UNDP project phase II • Awareness raising materials • developed by UNITAR /UNEP /ZOI 	10 (2 for each target audience)	At least 15 (3 for each target audience)	Events' reports	<ul style="list-style-type: none"> • Participation of interested partners

Strategy Narrative	Indicator	Units	Baseline	Mid-Term Target	End of Project Target	Sources of verification	Risks and Assumptions
Outcome 1: Community reliance on mercury mining reduced through identification of alternative diversified employment opportunities							
	1.1 Number of alternatives undergoing requiring socio economic analysis, environmental impact assessment and roadmap developed for the implementation of identified mining alternatives.	# of mining alternatives	Preliminary socio-economic analysis of primary mercury production at Khaidarkan Preliminary report on Environmental issues related to primary mining in Khaidarkan	3 mining alternatives analysed Socio economic analysis of mercury mining	10 mining alternatives analysed	Socio economic analysis and environmental impact report of mining alternatives available in UNEP's website	Key stakeholder institutions able to cooperate
	1.2 Number of priority alternative non-mining economic activities identified; socio-economic analysis, environmental impact assessment undertaken	# of non-mining alternatives identified	Preliminary socio-economic analysis of primary mercury production at Khaidarkan.	5 non-mining alternatives identified and analysed	10 non-mining alternatives identified and analysed	Socio economic analysis and environmental impact report of non-mining alternatives available on UNEP's website	Key stakeholder institutions able to cooperate
	1.3 Number of alternative job opportunities (small business projects) created in Khaidarkan under the UNDP programme	# of trainings; # of small business projects # of employment opportunities	0 trainings 0 small business projects 0 employment opportunities identified in the project	4 trainings; 4 small business development projects 200 employment opportunities identified in the project	At least 6 trainings and roundtables, At least 10 small business development projects At least 800 employment opportunities for miners, poor farmers and unemployed (women not less than 30%) identified in the project	UNDP report on Job opportunity programme available on UNEP's website Project's identification of employment opportunities report available	Khaidarkan community willing to explore alternative job opportunities
	1.4 Number of national plans and strategies	# of national plans and strategies for development and chemicals management	<ul style="list-style-type: none"> Action plan for mercury management developed but needs update. Country Development Plan for 2009-2011 	2 national development plans include mercury reduction	4 national development plans and strategies include mercury reduction	National development plans and national strategies for development and/or chemicals management	<ul style="list-style-type: none"> Adoption of action plan and other strategic national plans out of this project's control Partners participation from the inception workshop essential
Outcome 2: Impacts of mercury mining evaluated through enhanced human health and environment monitoring							
	2.1 Number of laboratories able to perform mercury analysis in humans and environment in Kyrgyzstan	# of national laboratories # of local specialists trained # of laboratories participating in an inter-calibration study	Limited national capacities capable of performing mercury monitoring in humans and/or the environment 0 local specialist trained 0 intercalibration studies	2 national laboratories 4 local specialists trained in field sampling, 2 laboratories participating in an intercalibration studies	4 national laboratories 10 local specialists trained to field sampling 4 laboratories participating in an intercalibration studies	Data reports from laboratories Reports from specialists' training sessions Results from inter-calibration study	National laboratories and experts willing to participate in the training and inter-calibration studies
	2.2 Number of people and villages monitored on health and environmental impacts of mercury mining in Khaidarkan area	# of people monitored # of villages monitored	Preliminary report on environmental issues related to primary mining in Khaidarkan available	2,000 people monitored 1 community villages	At least 5,000 people monitored At least 3 villages monitored	Report on environmental and health impacts of mercury mining available	Health practitioners and environmental experts willing to undertake this study

Strategy Narrative	Indicator	Units	Baseline	Mid-Term Target	End of Project Target	Sources of verification	Risks and Assumptions
	2.3 Status of development of guidelines and establishment of a monitoring system for air emissions and emergency response	NA	No mercury monitoring in air and emergency response systems in place in Kyrgyzstan	Equipment for emergency response and air monitoring of mercury (e.g. mobile unit for mercury testing and consumables) purchased.	Data on air monitoring and accident response made available through the use of the equipment purchased	Data report on air monitoring	Government to ensure sustainability and continuous use of the equipment purchased.
Outcome 3: Reduced risk exposure from mercury contaminated sites through remedial and risk prevention measures							
	3.1 Number of sites identified for remediation targets and to establish priorities	# number of remediation sites identified	No prioritization of remediation is available	2	At least 3 sites identified for remediation	Report including remediation targets and priorities	Stakeholders' agreement on list of priority sites and criteria used
	3.2 Number of technicians and experts trained on mercury remediation	#of trainees	No previous training on remediation	10	20	Training records	Availability of national technicians and experts on soil remediation
	3.3 Number and spatial extent of facilities fenced and subject to remediation measures., number of structures reinforced	# of hectares and structures	0ha / 0 structures / 0 m3	4ha / 2 structures / 100m3	47ha / 5 structures / 200m3	Remediation report	Sites selection done in a transparent manner Cooperation of local people
Outcome 4: Enhanced governance through awareness raising and stakeholders' participation on the transition to mercury mine alternatives							
	4.1 Number of media articles/ reports/videos/radio emissions produced	# media materials	No media coverage known to date	10 media materials produced and disseminated	25 media material produced and disseminated	Journalist materials: Videos, DVD, news-paper articles, etc	Media interested and willing to cooperate Coverage of the mercury mining in Khaidarkan done in a professional manner
	4.2 Number of local inhabitants participating in the study on social impacts of transition to non-mercury alternatives identified	# of local inhabitants participating in the social impacts study	No report of social impacts of transition to non-mercury alternatives	200 inhabitants participating in the study on social impacts of transition to non-mercury alternatives	600 inhabitants participating (through surveys, workshops, etc) on the social impacts study on non-mercury alternatives	Report on social impacts available in UNEP's website	Report to be endorsed by national authorities Local people available and willing to participate
	4.3 Number of events/ activities to raise awareness and disseminate information to key stakeholders: a) government; (decision making officers)b) research institutions; c) private sector; d) local residents; e) journalists	# of events	No awareness raising participatory activities known	At least 6 events (workshops, seminars, training sessions, etc) , 1 per stakeholder group	At least 12 events (workshops, seminars, training sessions, etc) , 3 per stakeholder group	Reports of the event available Record of assistance	Key stakeholders interested in participating in project events/workshops
	6.4 Number of awareness raising materials (mercury information kits) in local language developed	# of awareness raising materials developed # of awareness raising materials distributed	3 awareness raising materials developed by intergovernmental organizations	10 awareness raising materials developed 200 awareness raising materials distributed	20 awareness raising materials developed 500 awareness raising materials distributed	Materials available	Materials address key concerns from stakeholders

APPENDIX 5: WORK PLAN AND TIMETABLE

Activities	timeframe											
	1Q	2Q	3Q	4Q	5Q	6Q	7Q	8Q	9Q	10Q	11Q	12Q
Component 1: Identification and implementation of local economic opportunities, not reliant on mercury mining												
1.1 Develop socio-economic analysis, environmental impact assessment and roadmap for the implementation of other mining alternatives to mercury mining												
1.2 Identify priority alternatives for non- mining economic activities in the Khaidarkan area.												
1.3 Continue supporting the UNDP programme fostering alternative job opportunities in Khaidarkan not reliant on mining, base on lesson learned from previous phases of the project identified in the project evaluation												
1.4 Update national plans and strategies for alternative employment which will include socio economic analysis for mining and non-mining alternatives												
Component 2: Assessment and monitoring of environment and health impacts from primary mercury mining and pollution												
2.1 Identify and reinforce existing capacities (including training and exchange of experiences) of laboratories in Kyrgyzstan able to analyze human and environmental samples.												
2.2 Conduct a comprehensive study of environmental and health impacts of mercury mining in the area, involving local and international scientists, local health authorities and experts and independent (verification) sampling												
2.3 Install a mobile, low cost and easy-to-use monitoring system for mercury related accidents and emissions within the existing competent organizations and train local specialists in its use.												
Component 3: Explore and prepare remedial and risk prevention measures for mercury-contaminated sites												
3.1 Select, prepare and agree on the remediation targets and priorities for rapid response and preventive measures.												
3.2 Ensure substantial training and international experience exchange on mercury pollution remediation and rapid response approaches for risk reduction (including international partnerships for technology and experience transfer).												
3.3 Develop and implement a strategy and guidelines to conduct remediation on priority sites (including the design of a strategy and guidelines for remediation; draft a proposal for financing and implementation of the remedial measures with demonstration of selected approaches and the publication and distribution of information materials related to remedial and preventive measures).												
Component 4: Awareness rising at national and community level and public transparency												
4.1 Media coverage (TV and e-news/newspapers) on the selected aspects of local, national and global mercury issues and briefings on project milestones /achievements.												
4.2 Conduct social impact studies to understand better the local perception and acceptance of the transition options												
4.3 Design and implement a targeted mercury awareness raising campaign and a strategy to promote employment opportunities to mercury mining for: a) government; b) research institutions; c) private sector; d) local residents (farmers, workers, housewives, etc); and e) journalists)												
4.4 Design and produce, including translation to local languages, mercury information kits.												

APPENDIX 6: KEY DELIVERABLES AND BENCHMARKS

	Project components	Results	Duration
1	Component 1: Identification and implementation of local economic opportunities, not reliant on mercury mining		From month 4 to 33
	Develop socio-economic analysis, environmental impact assessment and roadmap for the implementation of other mining alternatives to mercury mining	<ol style="list-style-type: none"> 1. Socio-economic analysis report at month 12; 2. Environmental impact assessment report of mining alternatives at month 12; 3. Roadmap for implementation of alternatives at month 18; 	21 months
	Identify priority alternatives for non-mercury mining economic activities in the Khaidarkan area	<ol style="list-style-type: none"> 1. Identification of further alternatives at month 6; 2. Socio-economic analysis report at month 12; and 3. Environmental impact assessment report of non-mining alternatives at month 12; and 4. Roadmap for implementation of non-mining alternatives at month 15 	24 months
	Continue supporting the UNDP programme fostering alternative job opportunities in Khaidarkan not reliant on mining, base on lesson learned from previous phases of the project identified in the project evaluation	<ol style="list-style-type: none"> 1. Report on economic diversification in the community, including creation of job alternatives in Khaidarkan at month 16; 2. At least 6 trainings and roundtables to promote training for the local community at month 18; and 3. At least 10 small business development projects in Khaidarkan at month 18. 4. At least 800 employment opportunities identified in the project at month 18 	30 months
	Update national plans and strategies for alternative employment which will include socio economic analysis for mining and non-mining alternatives	<ol style="list-style-type: none"> 1. National Plans and strategies for mercury reduction 	9 months
2	Component 2: Assessment and monitoring of environment and health impacts from primary mercury mining and pollution		From month 13 to 33
	Identify and reinforce existing capacities (including training and exchange of experiences) of laboratories in Kyrgyzstan able to analyze human and environmental samples.	<ol style="list-style-type: none"> 1. Database of national/regional laboratories with mercury monitoring capacity at month 9; 2. Standard Operational Procedures for local laboratories to perform analysis on mercury at month 11; 3. Training module for sampling and analysis of mercury in humans and the environment at month 13; 4. Report of mercury monitoring training (sampling and analysis) for government, civil society and research institutes at month 18; 5. Information exchange report on mercury monitoring on health and environment at month 18; 6. Intercalibration study report on mercury laboratories performance at month 18. 	21 months
	Conduct a comprehensive study of environmental and health impacts of mercury mining in the area, involving local and international scientists, local health authorities and experts and independent (verification) sampling	<ol style="list-style-type: none"> 1. Study on mercury mining impacts to human health and environment at month 12; 2. At least 6,000 people monitored at month 12th 3. At least 3 villages monitored at month 12th 	12 months
	Install a mobile, low cost and easy-to-use monitoring system for mercury related accidents and emissions within the existing competent organizations and train local specialists in its use.	<ol style="list-style-type: none"> 1. National plan to develop a non-stationary monitoring system for air at month 11; 2. Purchasing required equipment at month 21; 	15 months

3	Component 3: Explore and prepare remedial and risk prevention measures for mercury contaminated sites		From month 4 to 36
	Select, prepare and agree on the remediation targets and priorities for rapid response and preventive measures.	<ol style="list-style-type: none"> 1. Assessment report on remediation targets and priorities in Khaidarkan at month 15 2. At least 3 sites identified for remediation at month 10th 	6 months
	Ensure substantial training and international experience exchange on mercury pollution remediation and rapid response approaches for risk reduction (including international partnerships for technology and experience transfer).	<ol style="list-style-type: none"> 1. Strategy to develop capacity for mercury remediation at month 7; 2. Report on capacity building activities (training, experience exchange) at month 15; 3. At least 20 technicians and experts trained on mercury remediation at month 7th 	12 months
	Develop and implement a strategy and guidelines to conduct remediation on priority sites (including the design of a strategy and guidelines for remediation; draft a proposal for financing and implementation of the remedial measures with demonstration of selected approaches and the publication and distribution of information materials related to remedial and preventive measures).	<ol style="list-style-type: none"> 1. Guidelines for remediation at month 15; 2. Strategy for remediation in Khaidarkan at month 16 3. Tender exercise for soil remediation and selection of expert company at month 18; 4. Report on remediation and preventive measure for risk reduction at month 24 	15 months
4	Component 4: Awareness rising at national and community level and public transparency		From month 1 to 36
	Media coverage (TV and e-news/newspapers) on the selected aspects of local, national and global mercury issues and briefings on project milestones /achievements.	<ol style="list-style-type: none"> 1. Strategy for involvement of local/national media at month 6; 2. Report on involvement of local /national /international media on mercury issues at month 23 3. At least 25 media material produced and disseminated throughout the project from month 4. 	33 months
	Conduct social impact studies to understand better the local perception and acceptance of the transition options	<ol style="list-style-type: none"> 1. Report on social impact on transition to non-mercury alternatives at month 21 	6 months
	Design and implement an awareness raising strategy for: a) government; b) research institutions; c) private sector; d) local residents (farmers, workers, housewives, etc); and e) journalists)	<ol style="list-style-type: none"> 1. Report on awareness raising campaigns at month 24; 	36 months
	Design and produce, including translation to local languages, mercury information kits.	<ol style="list-style-type: none"> 1. Information kits available and materials produced throughout the project until month 24 	27 months

APPENDIX 7: COSTED M&E PLAN

Day-to-day management and monitoring of the project activities will be the responsibility of the executing agency, the State Agency of Environmental Protection (SAEP). SAEP will submit half year reports to UNEP and a Project Implementation Report (PIR) in close collaboration with UNEP, once a year. SAEP will be responsible for the recruitment of local/international staff or consultants and the execution of the activities according to the work plan and expected outcomes.

The half-yearly reports will include progress in implementation of the project, financial report, a work plan and expected expenditures for the next reporting period. It will also include obstacles occurred during implementation period where necessary. The PIR will be prepared on an annual basis with the first report due one year after project implementation start according to GEF rules. It will be submitted by SAEP to the UNEP task manager.

The National Steering Committee will be kept small but efficient and include the directly concerned stakeholders at the national level. It will meet regularly and will coordinate national activities.

The Project Steering Committee will comprise UNEP, SAEP and the involved bilateral donors. The Project Steering Committee will meet back-to-back with the technical meetings, *i.e.*, inception workshop and final workshop. The Project Steering Committee will meet physically twice during the project implementation and once through teleconference. The Project Steering Committee will monitor the progress of the project and give advice as to implementation issues.

Table: Monitoring and Evaluation Budget

M&E activity	Purpose	Responsible Party	Budget (US\$)	Time-frame
Inception workshop and gaps assessment*	Awareness raising, building stakeholder engagement, detailed work planning with key groups	SAEP	0	Within two months of project start
Inception report	Provides implementation plan for progress monitoring	Project coordinator	0	Immediately following Inception Workshop
Project Review by Project Steering Committee*	Assesses progress, effectiveness of operations and technical outputs; Recommends adaptation where necessary and confirms implementation plan.	SAEP	0	Month 1 and 18
Project Implementation Review – Mid term review	Progress and effectiveness review for the GEF, provision of lessons learned. This will be organized by SAEP in close consultation with UNEP.	SAEP	25,000	Month 18
Terminal report	Reviews effectiveness against implementation plan Highlights technical outputs Identifies lessons learned and likely design approaches for future projects, assesses likelihood of achieving design outcomes	SAEP	0	At the end of project implementation
Independent Terminal evaluation	Reviews effectiveness, efficiency and timeliness of project implementation, coordination mechanisms and outputs Identifies lessons learned and likely remedial actions for future projects Highlights technical achievements and assesses against prevailing benchmarks. Organized by UNEP	UNEP, Independent external consultant	35,000	At end of project implementation
Independent Financial Audit	Reviews use of project funds against budget and assesses probity of expenditure and transactions	SAEP	21,000	At the end of each year (3)
Total indicative M&E cost*1			81,000	

* The inception workshop and steering committee meetings will be done back to back with technical meetings, therefore costs reported will be "zero"

APPENDIX 8: SUMMARY OF REPORTING REQUIREMENTS AND RESPONSIBILITIES

- Day-to-day management and monitoring of project activities will be the responsibility of the Executing Agency (State Agency of Environmental Protection - SAEP)
- During the course of the project, the Executing Agency teams will be responsible for the preparation of regular progress reports (financial and technical) and for the preparation of forward plans and budgetary estimation. The timely preparation and submission of mandatory report forms are integral part of the monitoring process. Reporting requirements are summarized below:

Table: Summary of Reporting Requirements and project monitoring

Report and Content	Format	Timing	Responsibility
Inception report			
Detailed implementation plan for progress monitoring	Agreed format allowing progress tracking	Following inception workshops	SAEP
Technical Progress reports			
Documents progress & completion of activities; Describes progress against annual work plan; Reviews implementation plans, summarizes problems and adaptive management; Provides activity plans for following period; Provides project outputs for review	UNEP Progress Reporting Formats;	Biennial, within 30 days of each reporting period	SAEP
Financial Progress Reports			
Documents project expenditure according to established project budget and allocations; Provides budgetary plans for following reporting period; Requests further cash transfers; Requests budget revision as necessary; Provides inventory of non-expendable equipment procured for project	UNEP Financial reporting formats; Inventory of non-expendable equipment	Biennial, within 30 days of each reporting period	SAEP
Financial Audit			
Audit of project accounts and records	Approved audit report format	At project completion	SAEP
Co-financing report			
Reports co-financing provided to the project; Reviews co-financing inputs against GEF approved financing plan	UNEP reporting format	Annual	SAEP UNEP
Project Implementation Review (PIR) reports			
Summary implementation review	GEF M&E format	Annual	SAEP UNEP
Terminal report			
Review of effectiveness of the project, its technical outputs, lessons learned and progress towards outcomes	UNEP reporting format	At project completion	SAEP UNEP
Mid term and terminal Evaluation			
Provides detailed independent evaluation of project management, actions, outputs and impacts	GEF M&E format	At mid-term of the project and at project completion	SAEP (Mid-term) and Independent Evaluator UNEP

3. The **Inception report** will include a detailed narrative on the institutional roles and responsibilities of the project partners, identify stakeholder engagement commitments developed during the inception workshops, set out progress on project establishment and start-up activities, provide a detailed implementation plan suitable for progress tracking purposes. The report will be submitted by the SAEP to UNEP-GEF and used as a benchmark against which regular progress reports are reviewed.
4. **Technical Progress reports** will be prepared by the project coordinator in the SAEP in English within 30 days of the end of each semester. Reports will be prepared using the standard UNEP format. These reports form the principal tools of regular project monitoring and will contain:
 - an account of actual implementation activities undertaken during the reporting period and an assessment of progress against the implementation plan;
 - an identification of barriers to project implementation and recommendations for corrective actions during the following period, including any revision to the implementation plan;
 - a detailed and costed work plan for the following reporting period, including a forward project of the status of funds held locally and, when necessary, a request for further cash transfers to the project;
 - an updated inventory of non-expendable equipment and items of attraction procured for the project;
 - copies of project meeting reports and participants lists, technical outputs submitted to the project team.
5. **Financial progress reports (Project Expenditure Accounts)**: will be prepared by the Executing Agency within 30 days of the end of each semester. Reports will be prepared in US\$ using the project budget codes and in the standard UNEP format. They will contain an account of actual expenditure in support of the activities undertaken. The reports will be approved by a duly authorized official of the Executing Agency and submitted to UNEP-GEF.
6. A **terminal financial audit, if applicable**, is required within 180 days of the completion of the project. The Executing Agency will supply UNEP with a final statement of account in the same format as for the periodic financial statements, certified by a recognized firm of public accountants. If requested, The Executing Agency shall facilitate an audit by the United Nations Board of Auditors and/or the Audit Service of the accounts of the Project. In particular, the auditors should be asked to report whether, in their opinion:
 - Proper books of account and records have been maintained;
 - All project expenditures are supported by vouchers and adequate documentation;
 - Expenditures have been incurred in accordance with the objectives outlined in the project document;
 - The Expenditure reports provide a fair view of the financial condition and performance of the project.
7. **Unspent funds**: Any portion of cash advances remaining unspent or uncommitted by the Executing Agency on completion of the project will be reimbursed to UNEP within one month of the presentation of the final statement of accounts. In the event of any delay in such reimbursement, the Executing Agency will be financially responsible for any adverse movement in the exchange rates.
8. **Co-finance report**: The Executing Agency will report annually on the co-finance received and used to advance the project activities. The report will show:
 - The amount of co-financing realized compared with the amount of co-financing committed to at the time of project approval, and
 - Co-financing reporting by source and by type¹⁷.
9. **Project Implementation Review (PIR)** will be prepared by the project coordinator in English at the end of each 12 month period of project implementation. The PIR is an annual monitoring process mandated by the GEF and for which the independent GEF M&E unit provides the scope and content. Individual PIRs are collected, reviewed and analyzed by UNEP-GEF by focal area, theme and region to extract common issues, lessons learned and good practices. Focal area PIRs are discussed at the GEF Interagency Focal Area Task Forces with consolidated reports by focal area then being transferred to the independent GEF M&E unit.

¹⁷ Sources include the agency's own co-financing, government co-financing and contributions mobilized for the project from other multilateral agencies, bilateral development cooperation agencies, NGOs, the private sector, and beneficiaries. Types of co-finance include Cash (grants, loans, credits, and equity investments) and In-Kind resources (limited to those dedicated uniquely to this project and valued as the lesser of the cost and the market value of the required inputs they provide for the project and monitored with documentation available for any evaluation or project audit.

10. The **Terminal Report** is prepared by the Executing Agency in English immediately within the 60 days following the end of project implementation. It is submitted to UNEP-GEF, to the Chief, Budget and Financial Management Service, and to the Chief, Programme Coordination and Management Unit. It provides a review of the effective operation of the project and of its achievements in reaching its designed outputs. The report will set out lessons learned during the project and assesses the likelihood of the project achieving its design outcomes. It provides a basis for the independent **Terminal Evaluation** of the project. This evaluation reviews the impact and effectiveness of the project, the sustainability of results and whether the project has achieved its immediate, development and global objectives. Indicators for the evaluation of the effective operation of the project are given in the table below:

Table: Indicators for evaluation of effective operation of the project

Indicator	Means of verification
Biennial progress and financial reports and annual PIR prepared in a timely and satisfactory manner	Arrival of reports at UNEP
Performance targets, outputs, and outcomes are achieved as specified in the implementation plan and any agreed revisions to it	Progress reports
Deviations from the implementation plans are corrected promptly and appropriately.	Work plans, minutes of SAEP meetings
Biennial financial reports are timely and accurate	Arrival of reports at UNEP
Disbursements are made on a timely basis	IMIS system of UNEP and Bank statements of national executing agency
Procurement is achieved according to procurement plan and reflected in non-expendable equipment inventory	Progress reports
Requests for deviations from approved budgets are submitted in timely manner	Timely submission of revised budget to UNEP for approval
Audit reports and other reviews showing sound financial practices	Audit reports

Appendix 9: STANDARD TERMINAL EVALUATION TOR

1. TERMS OF REFERENCE:

1. Terminal Evaluation of the UNEP GEF project
2. Project Number GF/...

2. PROJECT BACKGROUND AND OVERVIEW:

1. Project rationale from the project document
2. Relevance to GEF Programmes
3. Executing Arrangements
4. Project Activities
5. Budget

TERMS OF REFERENCE FOR THE EVALUATION

1. OBJECTIVE AND SCOPE OF THE EVALUATION

The objective of this terminal evaluation is to examine the extent and magnitude of any project impacts to date and determine the likelihood of future impacts. The evaluation will also assess project performance and the implementation of planned project activities and planned outputs against actual results.

The evaluation will focus on the following main questions: ...

2. METHODS

This terminal evaluation will be conducted as an in-depth evaluation using a participatory approach whereby the UNEP/DGEF Task Manager, key representatives of the executing agencies and other relevant staff are kept informed and regularly consulted throughout the evaluation. The consultant will liaise with the UNEP/EOU and the UNEP/DGEF Task Manager on any logistic and/or methodological issues to properly conduct the review in as independent a way as possible, given the circumstances and resources offered. The draft report will be circulated to UNEP/DGEF Task Manager, key representatives of the executing agencies and the UNEP/EOU. Any comments or responses to the draft report will be sent to UNEP / EOU for collation and the consultant will be advised of any necessary revisions.

The findings of the evaluation will be based on the following:

1. A desk review of project documents including, but not limited to:
 - (a) The project documents, outputs, monitoring reports (such as progress and financial reports to UNEP and GEF annual Project Implementation Review reports) and relevant correspondence.
 - (b) Review of specific products including the final reports from country executing agencies, workshop proceedings, etc
 - (c) Notes from the Steering Group meetings.
 - (d) Other project-related material produced by the project staff or partners.
2. Interviews with project management and technical support staff.
3. Interviews with intended users for the project outputs and other stakeholders involved with this project, including in the participating countries and international bodies. As appropriate, these interviews could be combined with an email questionnaire.
4. The Consultant shall seek additional information and opinions by e-mail, through telephone communication, or by actual meetings.
5. Interviews with the UNEP/DGEF project task manager and Fund Management Officer, and other relevant staff in UNEP dealing with POPs related activities as necessary. The Consultant shall also gain broader perspectives from discussions with relevant GEF Secretariat staff.

Key Evaluation principles. In attempting to evaluate any outcomes and impacts that the project may have achieved, evaluators should remember that the project's performance should be assessed by considering the difference between the answers to two simple questions "what happened?" and "what would have happened anyway?". These questions imply that there should be consideration of the baseline conditions and trends in relation to the intended project outcomes and impacts. In addition it implies that there should be plausible evidence to attribute such outcomes and impacts to the actions of the project.

Sometimes, adequate information on baseline conditions and trends is lacking. In such cases this should be clearly highlighted by the evaluator, along with any simplifying assumptions that were taken to enable the evaluator to make informed judgements about project performance.

3. PROJECT EVALUATION PARAMETERS

A. Attainment of objectives and planned results:

The assessment of project results seeks to determine the extent to which the project objectives were achieved, or are expected to be achieved, and assess if the project has led to any other positive or negative consequences. While assessing a project's outcomes the evaluation will seek to determine the extent of achievement and shortcomings in reaching the project's objectives as stated in the project document and also indicate if there were any changes and whether those changes were approved. As the project did not establish an elaborate baseline (initial conditions), the evaluator should seek to estimate the baseline condition so that achievements

and results can be properly established (or simplifying assumptions used). Since most GEF projects can be expected to achieve the anticipated outcomes by project closing, assessment of project outcomes should be a priority. Outcomes are the likely or achieved short-term and medium-term effects of an intervention's outputs. Examples of outcomes could include but are not restricted to stronger institutional capacities, higher public awareness (when leading to changes of behaviour), and transformed policy frameworks or markets. The evaluation should assess the extent to which the project's major relevant objectives were effectively and efficiently achieved or are expected to be achieved and their relevance.

- *Effectiveness*: Evaluate how, and to what extent, the stated project objectives have been met, taking into account the "achievement indicators" specified in the project document and logical framework¹⁸.
- *Relevance*: In *retrospect*, were the project's outcomes consistent with the focal areas/operational program strategies and country priorities? The evaluation should also assess the whether outcomes specified in the project document and or logical framework are actually outcomes and not outputs or inputs.
- *Efficiency*: Cost-effectiveness assesses the achievement of the environmental and developmental objectives as *well* as the project's outputs in relation to the inputs, costs, and implementing time. Include an assessment of outcomes in relation to inputs, costs, and implementation times based on the following questions: Was the project cost-effective? Was the project the least cost option? Was the project implementation delayed and if it was then did that affect cost-effectiveness? The evaluation should assess the contribution of cash and in-kind co-financing to project implementation and to what extent the project leveraged additional resources. Comparisons of the cost-time vs. outcomes relationship of the project with that of other similar projects should be made if feasible.

B. Assessment of Sustainability of project outcomes:

Sustainability is understood as the probability of continued long-term project-derived outcomes and impacts after the GEF project funding ends. The evaluation will identify and assess the key conditions or factors that are likely to contribute or undermine the persistence of benefits after the project ends. Some of these factors might be outcomes of the project, e.g. stronger institutional capacities or better informed decision-making. Other factors will include contextual circumstances or developments that are not outcomes of the project but that are relevant to the sustainability of outcomes. The evaluation should ascertain to what extent follow-up work has been initiated and how project outcomes will be sustained and enhanced over time. In this case, sustainability will be linked to the continued use and influence of scientific models and scientific findings, produced by the project.

Four aspects of sustainability should be addressed: financial, socio-political, institutional frameworks and governance, and ecological (if applicable). The following questions provide guidance on the assessment of these aspects:

- *Financial resources*. To what extent are the outcomes of the project dependent on continued financial support? What is the likelihood that any required financial resources will be available to sustain the project outcomes/benefits once the GEF assistance ends (resources can be from multiple sources, such as the public and private sectors, income generating activities, and market trends that support the project's objectives)? Was the project was successful in identifying and leveraging co-financing?
- *Socio-political*: To what extent are the outcomes of the project dependent on socio-political factors? What is the likelihood that the level of stakeholder ownership will allow for the project outcomes/benefits to be sustained? Is there sufficient public / stakeholder awareness in support of the long term objectives of the project?
- *Institutional framework and governance*. To what extent are the outcomes of the project dependent on issues relating to institutional frameworks and governance? What is the likelihood that institutional and technical achievements, legal frameworks, policies and governance structures and processes will allow for, the project outcomes/benefits to be sustained? While responding to these questions consider if the required systems for accountability and transparency and the required technical know-how are in place.
- *Ecological*. Are there any environmental risks that can undermine the future flow of project environmental benefits? The TE should assess whether certain activities in the project area will pose a threat to the sustainability of the project outcomes.¹⁹

¹⁸ In case in the original or modified expected outcomes are merely outputs/inputs then the evaluators should assess if there were any real outcomes of the project and if yes then whether these are commensurate with the realistic expectations from such projects.

As far as possible, also assess the potential longer-term impacts considering that the evaluation is taking place upon completion of the project and that longer term impact is expected to be seen in a few years time. Frame any recommendations to enhance future project impact in this context. Which will be the major 'channels' for longer term impact from the project at the national and international scales? The evaluation should formulate recommendations that outline possible approaches and necessary actions to facilitate an impact assessment study in a few years time.

C. Catalytic role

The terminal evaluation will also describe any catalytic or replication effect of the project. What examples are there of replication and catalytic outcomes that suggest increased likelihood of sustainability? Replication approach, in the context of GEF projects, is defined as lessons and experiences coming out of the project that are replicated or scaled up in the design and implementation of other projects. Replication can have two aspects, replication proper (lessons and experiences are replicated in different geographic area) or scaling up (lessons and experiences are replicated within the same geographic area but funded by other sources). If no effects are identified, the evaluation will describe the catalytic or replication actions that the project carried out. No ratings are requested for the catalytic role.

D. Achievement of outputs and activities:

- Delivered outputs: Assessment of the project's success in producing each of the programmed outputs, both in quantity and quality as well as usefulness and timeliness.
- Assess the soundness and effectiveness of the methods and approaches used by the project.

E. Assessment of Monitoring and Evaluation Systems:

- **M&E design.** Did the project have a sound M&E plan to monitor results and track progress towards achieving project objectives? The Terminal Evaluation will assess whether the project met the minimum requirements for project design of M&E and the application of the Project M&E plan (Minimum requirements are specified in Annex 4). The evaluation shall include an assessment of the quality, application and effectiveness of project monitoring and evaluation plans and tools, including an assessment of risk management based on the assumptions and risks identified in the project document. The M&E plan should include a baseline (including data, methodology, etc.), SMART (see Annex 4) indicators and data analysis systems, and evaluation studies at specific times to assess results. The time frame for various M&E activities and standards for outputs should have been specified.
- **M&E plan implementation.** Was an M&E system in place and did it facilitate tracking of results and progress towards projects objectives throughout the project implementation period. Were Annual project reports complete, accurate and with well justified ratings? Was the information provided by the M&E system used during the project to improve project performance and to adapt to changing needs? Did the Projects have an M&E system in place with proper training for parties responsible for M&E activities to ensure data will continue to be collected and used after project closure?
- **Budgeting and Funding for M&E activities.** Were adequate budget provisions made for M&E made and were such resources made available in a timely fashion during implementation?
- **Long-term Monitoring.** Is long-term monitoring envisaged as an outcome of the project? If so, comment specifically on the relevance of such monitoring systems to sustaining project outcomes and how the monitoring effort will be sustained.

F. Assessment of processes that affected attainment of project results.

The evaluation will consider, but need not be limited to, consideration of the following issues that may have affected project implementation and attainment of project results:

- Preparation and readiness.** Were the project's objectives and components clear, practicable and feasible within its timeframe? Were capacities of the executing institutions and counterparts properly considered when the project was designed? Were lessons from other relevant projects properly incorporated in design? Were the partnership arrangements properly identified and the roles and responsibilities negotiated prior to implementation? Was availability of counterpart resources (funding,

¹⁹ For example, construction of dam in a protected area could inundate a sizable area and thereby neutralizing the biodiversity related gains made by the project or, a newly established pulp mill might jeopardise the viability of nearby protected forest areas by increasing logging pressures.

staff, and facilities), passage of enabling legislation, and adequate project management arrangements in place at project entry?

- Ascertain to what extent the project implementation mechanisms outlined in the project document have been closely followed. In particular, assess the role of the various committees established and whether the project document was clear and realistic to enable effective and efficient implementation, whether the project was executed according to the plan and how well the management was able to adapt to changes during the life of the project to enable the implementation of the project.
 - Evaluate the effectiveness and efficiency and adaptability of project management and the supervision of project activities / project execution arrangements at all levels (1) policy decisions: Steering Group; (2) day to day project management; (3) GEF guidance: UNEP DGEF.
- ii. **Country ownership/Drivenness.** This is the relevance of the project to national development and environmental agendas, recipient country commitment, and regional and international agreements. Examples of possible evaluative questions include: Was the project design in-line with the national sectoral and development priorities and plans? Are project outcomes contributing to national development priorities and plans? Were the relevant country representatives, from government and civil society, involved in the project? Did the recipient government maintain its financial commitment to the project? Have the government approved policies or regulatory frameworks been in-line with the project's objectives?

Stakeholder involvement. Did the project involve the relevant stakeholders through information sharing, consultation and by seeking their participation in project's design, implementation, and monitoring and evaluation? For example, did the project implement appropriate outreach and public awareness campaigns? Did the project consult and make use of the skills, experience and knowledge of the appropriate government entities, NGOs, community groups, private sector, local governments and academic institutions in the design, implementation and evaluation of project activities? Were perspectives of those that would be affected by decisions, those that could affect the outcomes and those that could contribute information or other resources to the process taken into account while taking decisions? Were the relevant vulnerable groups and the powerful, the supporters and the opponents, of the processes properly involved? Specifically the evaluation will:

- Assess the mechanisms put in place by the project for identification and engagement of stakeholders in each participating country and establish, in consultation with the stakeholders, whether this mechanism was successful, and identify its strengths and weaknesses.
- Assess the degree and effectiveness of collaboration/interactions between the various project partners and institutions during the course of implementation of the project.
- Assess the degree and effectiveness of any various public awareness activities that were undertaken during the course of implementation of the project.

Financial planning. Did the project have the appropriate financial controls, including reporting and planning, that allowed management to make informed decisions regarding the budget and allowed for timely flow of funds. Specifically, the evaluation should:

- Assess the strength and utility of financial controls, including reporting, and planning to allow the project management to make informed decisions regarding the budget and allow for a proper and timely flow of funds for the payment of satisfactory project deliverables throughout the project's lifetime.
- Present the major findings from the financial audit if one has been conducted.
- Did promised co-financing materialize? Identify and verify the sources of co- financing as well as leveraged and associated financing (in co-operation with the IA and EA).
- Assess whether the project has applied appropriate standards of due diligence in the management of funds and financial audits.
- The evaluation should also include a breakdown of final actual project costs by activities compared to budget (variances), financial management (including disbursement issues), and co- financing. This information will be prepared by the relevant DGEF Fund Management Officer of the project for scrutiny by the evaluator (table attached in Annex 1 Co-financing and leveraged resources).

UNEP Supervision and backstopping. Did UNEP Agency staff identify problems in a timely fashion and accurately estimate its seriousness? Did UNEP staff provide quality support and advice to the project, approved modifications in time and restructure the project when needed? Did UNEP and Executing Agencies provide the right staffing levels, continuity, skill mix, frequency of field visits?

Co-financing and Project Outcomes & Sustainability. If there was a difference in the level of expected co-financing and actual co-financing, then what were the reasons for this? Did the extent of materialization of co-financing affect the project's outcomes and/or sustainability, and if it did affect outcomes and sustainability then in what ways and through what causal linkages?

Delays and Project Outcomes & Sustainability. If there were delays in project implementation and completion, the evaluation will summarise the reasons for them. Did delays affect the project's outcomes and/or sustainability, and if so in what ways and through what causal linkages?

The **ratings will be presented in the form of a table** with each of the categories rated separately and with **brief justifications for the rating** based on the findings of the main analysis. An overall rating for the project should also be given. The rating system to be applied is specified in Annex 1:

4. EVALUATION REPORT FORMAT AND REVIEW PROCEDURES

The report should be brief, to the point and easy to understand. It must explain; the purpose of the evaluation, exactly what was evaluated and the methods used. The report must highlight any methodological limitations, identify key concerns and present evidence-based findings, consequent conclusions, recommendations and lessons. The report should provide information on when the evaluation took place, the places visited, who was involved and be presented in a way that makes the information accessible and comprehensible. The report should include an executive summary that encapsulates the essence of the information contained in the report to facilitate dissemination and distillation of lessons.

Evidence, findings, conclusions and recommendations should be presented in a complete and balanced manner. The evaluation report shall be written in English, be of no more than 50 pages (excluding annexes), use numbered paragraphs and include:

- i) An **executive summary** (no more than 3 pages) providing a brief overview of the main conclusions and recommendations of the evaluation;
- ii) **Introduction and background** giving a brief overview of the evaluated project, for example, the objective and status of activities;
- iii) **Scope, objective and methods** presenting the evaluation's purpose, the evaluation criteria used and questions to be addressed;
- iv) **Project Performance and Impact** providing factual evidence relevant to the questions asked by the evaluator and interpretations of such evidence. This is the main substantive section of the report and should provide a commentary on all evaluation aspects (A – F above).
- v) **Conclusions and rating** of project implementation success giving the evaluator's concluding assessments and ratings of the project against given evaluation criteria and standards of performance. The conclusions should provide answers to questions about whether the project is considered good or bad, and whether the results are considered positive or negative;
- vi) **Recommendations** suggesting *actionable* proposals for stakeholders to rectify poor existing situations as well as recommendations concerning projects of similar nature.. In general, Terminal Evaluations are likely to have very few (only two or three) actionable recommendations;
- vii) **Annexes** include Terms of Reference, list of interviewees, documents reviewed, brief summary of the expertise of the evaluator / evaluation team, a summary of co-finance information etc. Dissident views or management responses to the evaluation findings may later be appended in an annex.

Examples of UNEP GEF Terminal Evaluation Reports are available at www.unep.org/eou

Review of the Draft Evaluation Report. Draft reports submitted to UNEP EOU are shared with the corresponding Programme or Project Officer and his or her supervisor for initial review and consultation. The DGEF staff and senior Executing Agency staff are allowed to comment on the draft evaluation report. They may provide feedback on any errors of fact and may highlight the significance of such errors in any conclusions. The consultation also seeks agreement on the findings and recommendations. UNEP EOU collates the review comments and provides them to the evaluators for their consideration in preparing the final version of the report.

All UNEP GEF Evaluation Reports are subject to quality assessments by UNEP EOU. These incorporate GEF Office of Evaluation quality assessment criteria and are used as a tool for providing structured feedback to the evaluator (see Annex 3).

5. SUBMISSION OF FINAL TERMINAL EVALUATION REPORTS.

The final report shall be submitted in electronic form in MS Word format and should be sent to the following persons:

...

With a copy to:

...

The final evaluation report will be printed in hard copy and published on the Evaluation and Oversight Unit's website www.unep.org/eou. Subsequently, the report will be sent to the GEF Office of Evaluation for their review, appraisal and inclusion on the GEF website.

6. RESOURCES AND SCHEDULE OF THE EVALUATION

This final evaluation will be undertaken by an international evaluator contracted by the Evaluation and Oversight Unit, UNEP. The contract for the evaluator will begin on... The evaluator will submit a draft report on ... to UNEP/EOU, the UNEP/DGEF Task Manager, and key representatives of the executing agencies. Any comments or responses to the draft report will be sent to UNEP / EOU for collation and the consultant will be advised of any necessary revisions. Comments to the final draft report will be sent to the consultant by ... after which, the consultant will submit the final report no later than ...

In accordance with UNEP/GEF policy, all GEF projects are evaluated by independent evaluators contracted as consultants by the EOU. The evaluators should have the following qualifications: The evaluator should not have been associated with the design and implementation of the project. The evaluator will work under the overall supervision of the Chief, Evaluation and Oversight Unit, UNEP. Knowledge of UNEP programmes and GEF activities is desirable. Fluency in oral and written English is a must.

Annex 1. OVERALL RATINGS TABLE

Criterion	Evaluator's Summary Comments	Evaluator's Rating
Attainment of project objectives and results (overall rating). Sub criteria (below)		
Effectiveness		
Relevance		
Efficiency		
Sustainability of Project outcomes (overall rating). Sub criteria (below)		
Financial		
Socio Political		
Institutional framework and governance		
Ecological		
Achievement of outputs and activities		
Monitoring and Evaluation (overall rating) Sub criteria (below)		

Criterion	Evaluator's Summary Comments	Evaluator's Rating
M&E Design		
M&E Plan Implementation (use for adaptive management)		
Budgeting and Funding for M&E activities		
Catalytic Role		
Preparation and readiness		
Country ownership / drivenness		
Stakeholders involvement		
Financial planning		
UNEP Supervision and backstopping		
Overall Rating		

RATING OF PROJECT OBJECTIVES AND RESULTS

Highly Satisfactory (HS): The project had no shortcomings in the achievement of its objectives, in terms of relevance, effectiveness or efficiency.

Satisfactory (S): The project had minor shortcomings in the achievement of its objectives, in terms of relevance, effectiveness or efficiency.

Moderately Satisfactory (MS): The project had moderate shortcomings in the achievement of its objectives, in terms of relevance, effectiveness or efficiency.

Moderately Unsatisfactory (MU): The project had significant shortcomings in the achievement of its objectives, in terms of relevance, effectiveness or efficiency.

Unsatisfactory (U): The project had major shortcomings in the achievement of its objectives, in terms of relevance, effectiveness or efficiency.

Highly Unsatisfactory (HU): The project had severe shortcomings in the achievement of its objectives, in terms of relevance, effectiveness or efficiency.

Please note: Relevance and effectiveness will be considered as critical criteria. The overall rating of the project for achievement of objectives and results **may not be higher** than the lowest rating on either of these two criteria. Thus, to have an overall satisfactory rating for outcomes a project must have at least satisfactory ratings on both relevance and effectiveness.

RATINGS ON SUSTAINABILITY

Sustainability will be understood as the probability of continued long-term outcomes and impacts after the GEF project funding ends. The Terminal evaluation will identify and assess the key conditions or factors that are likely to contribute or undermine the persistence of benefits after the project ends. Some of these factors might be outcomes of the project, i.e. stronger institutional capacities, legal frameworks, socio-economic incentives /or public awareness. Other factors will include contextual circumstances or developments that are not outcomes of the project but that are relevant to the sustainability of outcomes..

Rating system for sustainability sub-criteria. On each of the dimensions of sustainability of the project outcomes will be rated as follows:

- **Likely (L):** There are no risks affecting this dimension of sustainability.
- **Moderately Likely (ML):** There are moderate risks that affect this dimension of sustainability.
- **Moderately Unlikely (MU):** There are significant risks that affect this dimension of sustainability
- **Unlikely (U):** There are severe risks that affect this dimension of sustainability.

All the risk dimensions of sustainability are critical. Therefore, overall rating for sustainability will not be higher than the rating of the dimension with lowest ratings. For example, if a project has an Unlikely rating in either of the dimensions then its overall rating cannot be higher than Unlikely, regardless of whether higher ratings in other dimensions of sustainability produce a higher average.

RATINGS OF PROJECT M&E

Monitoring is a continuing function that uses systematic collection of data on specified indicators to provide management and the main stakeholders of an ongoing project with indications of the extent of progress and achievement of objectives and progress in the use of allocated funds. Evaluation is the systematic and objective assessment of an on-going or completed project, its design, implementation and results. Project evaluation may involve the definition of appropriate standards, the examination of performance against those standards, and an assessment of actual and expected results.

The Project monitoring and evaluation system will be rated on 'M&E Design', 'M&E Plan Implementation' and 'Budgeting and Funding for M&E activities' as follows:

Highly Satisfactory (HS): There were no shortcomings in the project M&E system.

Satisfactory (S): There were minor shortcomings in the project M&E system.

Moderately Satisfactory (MS): There were moderate shortcomings in the project M&E system.

Moderately Unsatisfactory (MU): There were significant shortcomings in the project M&E system.

Unsatisfactory (U): There were major shortcomings in the project M&E system.

Highly Unsatisfactory (HU): The Project had no M&E system.

"M&E plan implementation" will be considered a critical parameter for the overall assessment of the M&E system. The overall rating for the M&E systems will not be higher than the rating on "M&E plan implementation."

All other ratings will be on the GEF six point scale.

GEF Performance Description	Alternative description on the same scale
HS = Highly Satisfactory	Excellent
S = Satisfactory	Well above average
MS = Moderately Satisfactory	Average
MU = Moderately Unsatisfactory	Below Average
U = Unsatisfactory	Poor
HU = Highly Unsatisfactory	Very poor (Appalling)

Annex 2 - CO-FINANCING AND LEVERAGED RESOURCES

Co-financing (basic data to be supplied to the consultant for verification)

*Other is referred to contributions mobilized for the project from other multilateral agencies, bilateral

Co financing (Type/Source)	IA own Financing (mill US\$)		Government (mill US\$)		Other* (mill US\$)		Total (mill US\$)		Total Disbursement (mill US\$)	
	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual
- Grants										
- Loans/Concessional (compared to market rate)										
- Credits										
- Equity investments										
- In-kind support										
- Other (*)										
-										
-										
-										
-										
-										
3. Totals										

development cooperation agencies, NGOs, the private sector and beneficiaries.

Leveraged Resources. Leveraged resources are additional resources—beyond those committed to the project itself at the time of approval—that are mobilized later as a direct result of the project. Leveraged resources can be financial or in-kind and they may be from other donors, NGO's, foundations, governments, communities or the private sector. Please briefly describe the resources the project has leveraged since inception and indicate how these resources are contributing to the project's ultimate objective.

Table showing final actual project expenditure by activity to be supplied by the UNEP Fund management Officer. (insert here)

Annex 3 - REVIEW OF THE DRAFT REPORT

Review of the Draft Report. Draft reports submitted to UNEP EOU are shared with the corresponding Programme or Project Officer and his or her supervisor for initial review and consultation. The DGEF staff and senior Executing Agency staff provide comments on the draft evaluation report. They may provide feedback on any errors of fact and may highlight the significance of such errors in any conclusions. The consultation also seeks agreement on the findings and recommendations. UNEP EOU collates the review comments and provides them to the evaluators for their consideration in preparing the final version of the report. General comments on the draft report with respect to compliance with these TOR are shared with the reviewer.

Quality Assessment of the Evaluation Report. All UNEP GEF Reports are subject to quality assessments by UNEP EOU. These apply GEF Office of Evaluation quality assessment and are used as a tool for providing structured feedback to the evaluator.

The quality of the draft evaluation report is assessed and rated against the following criteria:

GEF Report Quality Criteria	UNEP EOU Assessment	Rating
A. Did the report present an assessment of relevant outcomes and achievement of project objectives in the context of the focal area program indicators if applicable?		
B. Was the report consistent and the evidence complete and convincing and were the ratings substantiated when used?		
C. Did the report present a sound assessment of sustainability of outcomes?		
D. Were the lessons and recommendations supported by the evidence presented?		
E. Did the report include the actual project costs (total and per activity) and actual co-financing used?		
F. Did the report include an assessment of the quality of the project M&E system and its use for project management?		
G. Quality of the lessons: Were lessons readily applicable in other contexts? Did they suggest prescriptive action?		
H. Quality of the recommendations: Did recommendations specify the actions necessary to correct existing conditions or improve operations ('who?' 'what?' 'where?' 'when?'). Can they be implemented? Did the recommendations specify a goal and an associated performance indicator?		
I. Was the report well written? (clear English language and grammar)		
J. Did the report structure follow EOU guidelines, were all requested Annexes included?		
K. Were all evaluation aspects specified in the TORs adequately addressed?		
L. Was the report delivered in a timely manner		

GEF Quality of the MTE report = $0.3*(A + B) + 0.1*(C+D+E+F)$

EOU assessment of MTE report = $0.3*(G + H) + 0.1*(I+J+K+L)$

Combined quality Rating = $(2* \text{'GEF EO' rating} + \text{EOU rating})/3$

The Totals are rounded and converted to the scale of HS to HU

Rating system for quality of terminal evaluation reports:

A number rating 1-6 is used for each criterion: Highly Satisfactory = 6, Satisfactory = 5, Moderately Satisfactory = 4, Moderately Unsatisfactory = 3, Unsatisfactory = 2, Highly Unsatisfactory = 1, and unable to assess = 0.

Annex 4 - GEF MINIMUM REQUIREMENTS FOR M&E

Minimum Requirement 1: Project Design of M&E²⁰

All projects must include a concrete and fully budgeted monitoring and evaluation plan by the time of Work Program entry (full-sized projects) or CEO approval (medium-sized projects). This plan must contain at a minimum:

- SMART (see below) indicators for project implementation, or, if no indicators are identified, an alternative plan for monitoring that will deliver reliable and valid information to management
- SMART indicators for results (outcomes and, if applicable, impacts), and, where appropriate, corporate-level indicators
- A project baseline, with:
 - a. a description of the problem to address
 - b. indicator data
 - c. or, if major baseline indicators are not identified, an alternative plan for addressing this within one year of implementation
- An M&E Plan with identification of reviews and evaluations which will be undertaken, such as mid-term reviews or evaluations of activities
- An organizational setup and budgets for monitoring and evaluation.

Minimum Requirement 2: Application of Project M&E

- Project monitoring and supervision will include implementation of the M&E plan, comprising:
- Use of SMART indicators for implementation (or provision of a reasonable explanation if not used)
- Use of SMART indicators for results (or provision of a reasonable explanation if not used)
- Fully established baseline for the project and data compiled to review progress
- Evaluations are undertaken as planned
- Operational organizational setup for M&E and budgets spent as planned.

SMART INDICATORS GEF projects and programs should monitor using relevant performance indicators. The monitoring system should be “SMART”:

1. **Specific:** The system captures the essence of the desired result by clearly and directly relating to achieving an objective, and only that objective.
2. **Measurable:** The monitoring system and its indicators are unambiguously specified so that all parties agree on what the system covers and there are practical ways to measure the indicators and results.
3. **Achievable and Attributable:** The system identifies what changes are anticipated as a result of the intervention and whether the result(s) are realistic. Attribution requires that changes in the targeted developmental issue can be linked to the intervention.
4. **Relevant and Realistic:** The system establishes levels of performance that are likely to be achieved in a practical manner, and that reflect the expectations of stakeholders.
5. **Time-bound, Timely, Trackable, and Targeted:** The system allows progress to be tracked in a cost-effective manner at desired frequency for a set period, with clear identification of the particular stakeholder group to be impacted by the project or program.

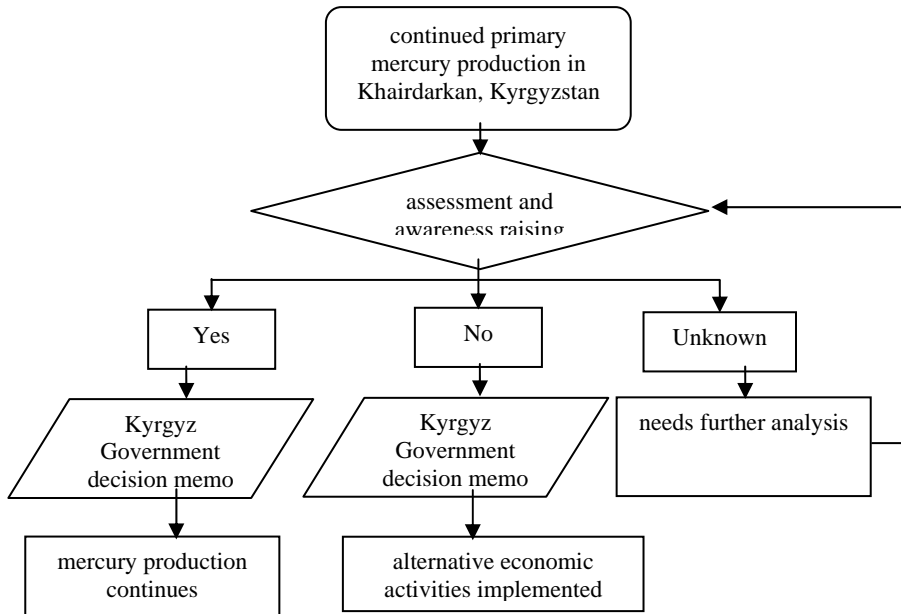
²⁰ <http://gefweb.org/MonitoringandEvaluation/MEPoliciesProcedures/MEPTools/meptstandards.html>

Annex 5 - LIST OF INTENDED ADDITIONAL RECIPIENTS FOR THE TERMINAL EVALUATION

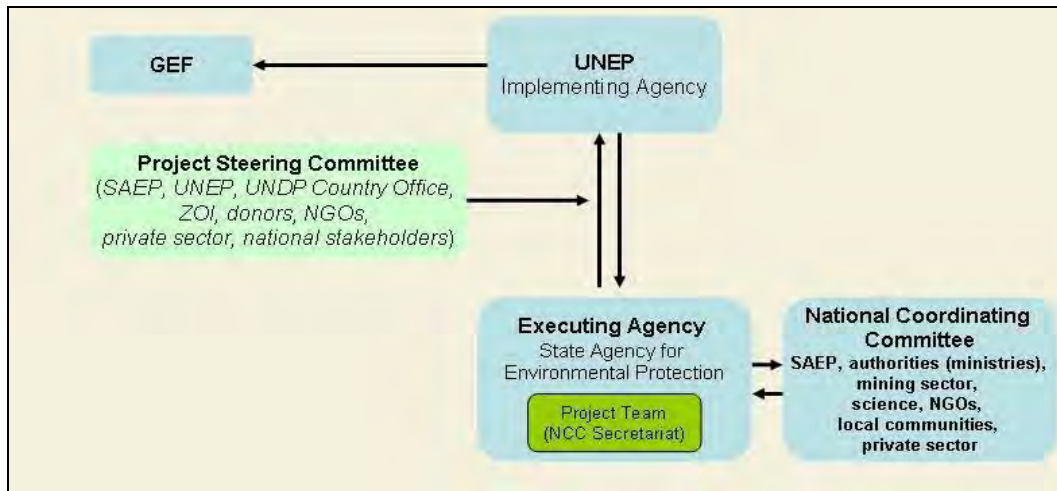
Name	Affiliation	Email
Government Officials		
GEF Focal Point(s)		
Executing Agency		

APPENDIX 10: DECISION-MAKING FLOWCHART AND ORGANIZATIONAL CHART

Graph: Decision Making flowchart



Graph: Organizational Chart



APPENDIX 11: TERMS OF REFERENCE

Project Coordinator Terms of Reference Job Description

Project: Reducing global and local environmental risks from primary mercury mining in Khaidarkan, the Kyrgyz Republic

Post title: Project Coordinator

Duration: 24 Months

Date Required: 1 July 2012

Duty station: Bishkek, Kyrgyz Republic

Counterpart: State Agency for Environmental Protection and Forestry

Duties: Working within the State Agency for Environmental Protection and Forestry premises and with recruited experts, the Project Coordinator will be responsible for the supervision, coordination and execution, of the above mentioned project. The main duties are as follows:

	Main Duty	Output	Timing
1	Elaborate a detailed work plan and budget for the MSP project.	Work Plan and budget	For consideration at the 1 st meeting of the Steering Group
2	Liaise with the parties participating and countries in the project and assist them to: <ul style="list-style-type: none"> • establish national coordinating mechanisms (NCCs) • link project activities to related sub-project institutions 	Terms of Reference for NCCs NCCs established and operational	At project start to provide national representatives for the Steering Committee
3	Prepare, in consultation with SAEP, and UNEP, draft Terms of Reference for the experts to be contracted in the context of the MSP project	Draft Terms of Reference	For consideration at the 1 st meeting of the Steering Group
4	Provide a secretariat function for the Project Steering Committee of the project including: <ul style="list-style-type: none"> • prepare necessary documents and logistics for the meetings of the Committee; • facilitate meetings, providing progress and draft technical papers for consideration • prepare formal reports of meetings 	Meeting papers and Reports	Meetings of the Steering Committee are envisaged at the inception and late stage (2 meetings) of the MSP implementation. Exact timing to be determined in the work plan.
5	Prepare, in conformity with the project document, periodic progress and financial reports of the project	Progress and financial reports in UNEP format Terminal report of the MSP project	At the end of each semester Within 60 days of the end of the MSP project
6	Coordinate, in close collaboration with the UNEP, all activities under the MSP project, as stated in appendix 5 of the project document	Regular supervision and coordination	24 months
7	Prepare in collaboration with UNEP recruited expert(s); <ol style="list-style-type: none"> a. to analyse Hg monitoring in agreed media; b. to assess the environmental and health impact of mercury mining in the region; c. to further assess the alternatives to gold mining ; d. contract with expert lab to analyse samples from contaminated sites; e. other tasks as indicated in Appendix 5 	Series of environmental and health assessments relevant for decision making officers;	During the second year of the project

Expected Outputs/ Outcomes

- Approved biennial and terminal progress and financial reports in UNEP formats as specified in the project document
- Terms of Reference for experts to be recruited for the project
- Terms of Reference for National Coordinating Committees linked to the project
- Coordination and final delivery of reports as stated in Appendix 8 of the Project document
- Terminal report to UNEP
- Final written outputs will be required in English.

Reporting

The Coordinator will report to UNEP, Steering Committee, Partner countries and SSC.

Qualifications

At least 7 years experience with proven records as Project Coordinator in the field of heavy metals releases.

Expert knowledgeable on the following matters:

- Knowledge of analysis of mercury management or research;
- Knowledge of good practices to mercury and experience in setting up a coordination mechanism for mercury management;
- Familiarity with the Toolkit for Identification and Quantification of Mercury Releases and mercury Convention papers (including COP decisions);
- Familiarity with the regulation and standards of the mercury;
- Familiarity with the mercury processes and available technologies.

Language:

Excellent command of spoken and written Russian and English

Background

The duties and tasks of the Coordinator as set out above are derived from the project document approved by the GEF.

APPENDIX 12: CO-FINANCING COMMITMENT LETTERS FROM PROJECT PARTNERS

APPENDIX 13: ENDORSEMENT LETTER OF GEF NATIONAL FOCAL POINT

ҚАЗАҚСТАН РЕСПУБЛИКАСЫ
**АЛМАТЫ ЭНЕРГЕТИКА
ЖӘНЕ БАЙЛАНЫС
УНИВЕРСИТЕТІ**
КОММЕРЦИЯЛЫҚ ЕМЕС
АКЦИОНЕРЛІК ҚОҒАМЫ



РЕСПУБЛИКА КАЗАХСТАН
**АЛМАТИНСКИЙ
УНИВЕРСИТЕТ
ЭНЕРГЕТИКИ И СВЯЗИ**
НЕКОММЕРЧЕСКОЕ
АКЦИОНЕРНОЕ ОБЩЕСТВО

“20 12 2011” ж. / г.
№ 46-2162

Тел. 8(727)-2925740
Факс 8(727)-2925057

050013, Алматы қ., Байғұрсынов к-сі, 126
050013, г.Алматы, ул.Байғұрсынова, 126
E-mail: aipet@aipet.kz

20 December 2011

Ms. Maryam Niamir-Fuller
Director, UNEP GEF Coordination Office
United Nations Environment Programme
Nairobi, Kenya

Dear Ms. Maryam Niamir-Fuller

Letter of intent to collaborate on the GEF mercury project in Kyrgyzstan

Almaty University of Power Engineering and Telecommunications (AUPET) welcomes UNEP's initiative to support our neighbors in the Kyrgyz Republic in implementation of the GEF mercury project in Khaidarkan. AUPET is ready to make the in-kind (non-financial) contribution to this project up to 50 000 USD in the form of transfer of experience and expertise gained during implementation of the two similar projects on mercury pollution monitoring and cleanup at chlor-alkali and acetaldehyde industries in Pavlodar and Temirtau, Kazakhstan.

AUPET could offer the knowledge and experience of its staff, chemical lab and analytical capacities, approaches for GIS modelling and risk assessment and assist in other preparations for mercury remediation. We will be pleased to work in cooperation with both Kyrgyz and international partners.

Rector

A handwritten signature in blue ink, appearing to read 'Daukeyev', is written over a faint circular stamp.

G. Daukeyev

004464

Кыргыз Тоо Ассоциациясы

Kyrgyz Mining Association

2 Erkindik Ave., office 236
Bishkek, 720739
Kyrgyz Republic
Tel: +996 (312) 30-04-78
Fax: +996 (312) 30-04-78
E-mail: ikarybek@hotmail.com



Кыргызская Горная Ассоциация

Кыргызская Республика
720739, г. Бишкек
пр. Эркиндик, 2, к. 236
Тел: +996 (312) 30-04-78
Факс: +996 (312) 30-04-78
E-mail: ikarybek@hotmail.com

14 February 2012

Ms. Maryam Niamir-Fuller
Director, UNEP GEF Coordination Office
United Nations Environment Programme
Nairobi, Kenya

Dear Ms. Maryam Niamir-Fuller,

We have the honor to express our sincere appreciation for your support in economic transitioning of mercury production in Kyrgyzstan into sustainable alternatives of social and environmental development.

Hereby the Kyrgyz Mining Association as the member of UNEP Global Mercury Partnership is willing to support the upcoming Global Environment Facility's mercury project in the area related to Khaidarkan's mercury plant transition to alternative mining alternatives.

We are pleased to offer our in-kind (non-financial) contribution up to US\$ 50,000 in the form of facilitating round tables, business contacts, peer-review of technical and legal documents and supporting dialogue with the Government of Kyrgyz Republic.

Please accept our kind wishes of good health, well being and every success in your activities.

Sincerely,

Karybek Ibraev
Executive Director
of Kyrgyz Mining Association



**KYRGYZ REPUBLIC
STATE AGENCY ON ENVIRONMENT
PROTECTION AND FORESTRY**



**КЫРГЫЗ РЕСПУБЛИКАСЫНЫН
ОКМОТУНО КАРАШТУУ
КУРЧАП ТУРГАН ЧОЙРОНУ КОРГОО
ЖАНА ТОКОЙ ЧАРБАСЫ БОЮНЧА
МАМЛЕКЕТТИК АГЕНТТИК**

720001, Bishkek, 228 Toktogul str.
Tel: + (996-312) 54-52-82,
Fax: + (996-312) 35-31-02
E – mail: min-eco @ elcat. kg

720001, г. Бишкек, Токтогул көчөсү, 228
Тел. + (996-312) 54-52-82,
Факс: + (996-312) 35-31-02
E – mail: min-eco @ elcat. kg

№ 01-11/3287
30.12.11

**Ms. Maryam Niamir-Fuller
Director, UNEP GEF Coordination Office
United Nations Environment Programme
Nairobi, Kenya**

Dear Ms. Maryam Niamir-Fuller

The State Agency for Environmental Protection and Forestry of the Kyrgyz Republic is determined to provide co-financing for the GEF mercury project in the form of in-kind (non-financial) contribution up to US\$ 100,000 in the form of expertise, hosting of the project management unit, facilitation of project meetings, participation of the Osh-Batken department on environmental protection in the project activities and inputs to remedial and risk reduction measures at Khaidarkan.

Sincerely,

**Baianbek Kadyrov
Director
State Agency on Environment Protection
and Forestry of Kyrgyz Republic**

№ 0000107



UNITED NATIONS ENVIRONMENT PROGRAMME

Programme des Nations Unies pour l'environnement Programa de las Naciones Unidas para el Medio Ambiente
Программа Организации Объединенных Наций по окружающей среде برنامج الأمم المتحدة للبيئة
联合国环境规划署



Ref: BK/pu

Date: 30 January 2012

Subject: Additional UNEP / DTIE Chemicals Branch co-financing towards the project
'Reducing local and global environmental risks from mercury mining' in the Kyrgyz Republic

Dear Ms. Niamir-Fuller,

The Chemicals Branch of UNEP's Division of Technology, Industry and Economics (DTIE) has played an active role in supporting efforts to reduce local and global environmental risks from mercury mining in the Kyrgyz Republic and has been developing the above project for co-financing.

I write this letter in follow up to my initial support letter dated 28 September 2011. In writing this letter, I hereby confirm an additional matching contribution of 800,000 USD over the 36 month period of the project which can be reported as UNEP's contribution. This 800,000 USD contribution is a grant received by UNEP from the Government of Norway in December 2011 to support the Kyrgyz Republic to reduce the most immediate threats posed by the mine site to the environment and the local population.

We hope that this additional DTIE/Chemicals Branch contribution will help to secure support from the GEF for further actions in the Kyrgyz Republic.

Yours sincerely,

Timothy J. Kasten

Head

Chemicals Branch

Division of Technology, Industry and Economics (DTIE)

Ms. Maryam Niamir-Fuller
Director
GEF Coordination Office
EO/UNEP
Nairobi, Kenya

Cc. Mr. Jon Opem, Norwegian Ministry of Environment, Oslo, Norway

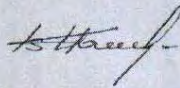
Osh, Kyrgyzstan
22 December 2011

Ms. Maryam Niamir-Fuller
Director, UNEP GEF Coordination Office
United Nations Environment Programme
Nairobi, Kenya

Dear Ms. Maryam Niamir-Fuller

The Osh Aarhus Environmental Information Center, a public non-governmental organization, has been active in assessments, public lectures, media coverage and information round tables on the topic of hazardous chemicals (mercury, heavy metals, pesticides) since 2005. The Osh Aarhus Center has also been engaged in UNEP-led Kyrgyzstan mercury project since 2008. We would like to continue our contribution for improving public access and understanding of environmental information in the frameworks of the GEF mercury project and are ready to make in-kind (non-financial) contribution up to 30 000 USD in the form of staff time, facilitation of trainings, disseminating project information and public lectures.

Sincerely,



Kanybek Isabaev
Director of the Osh Aarhus Center



Almadén, 20 December 2011

Ms. Maryam Niamir-Fuller
Director, UNEP GEF Coordination Office
United Nations Environment Programme
Nairobi, Kenya

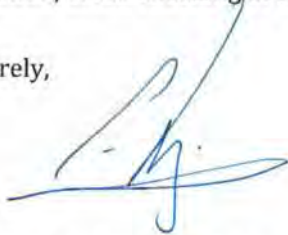
Expression of interest to collaborate on the GEF mercury project in Kyrgyzstan

Dear Ms. Maryam Niamir-Fuller,

The "*Instituto de Geología Aplicada*", belonging to University of Castilla La-Mancha in Spain has extensive experience in monitoring of mercury pollution in Spain and other parts of the world and since 2008 has assisted to Kyrgyzstan in its initial efforts towards understanding of mercury pollution and remediation approaches at Khaidarkan.

The "*Instituto de Geología Aplicada*"-University of Castilla La-Mancha is interested to continue collaboration with both Kyrgyz and international partners in the frameworks of the GEF mercury project in Kyrgyzstan and is ready to make in-kind (non-financial) contribution up to 100 000 USD in the form of staff time, experience exchange, and validation/cross-checking of selected environmental samples.

Sincerely,



Prof. Pablo L. Higuera, PhD
Director
Instituto de Geología Aplicada
Universidad de Castilla-La Mancha
P. Manuel Meca, 1
13400 Almadén (Ciudad Real)
Spain





Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Federal Department of the Environment,
Transport, Energy and Communications DETEC
Federal Office for the Environment FOEN

CH-3003 Bern, FOEN, EG

Ms. Maryam Niamir-Fuller
Director,
GEF Coordination Office
United Nations Environment Programme
Block 2, North Wing, Ground Floor
PO Box 30552 Nairobi
Kenya

Reference: K411-2009
Your reference:
Our reference: EG
Contact person: EG
Bern, 28 October 2011

Financial support for the Kyrgyz Republic to phase out its primary mercury mining

Dear Ms. Niamir-Fuller,

The Swiss Federal office for the Environment (FOEN) assists with several contributions the Government of the Kyrgyz Republic to close its primary mercury mining in Haiderkan in a sustainable manner.

We started with financial support of **CHF 200'000.--** for the UNITAR/UNEP project on the *Development of an Action Plan to Address Primary Mercury Mining in Kyrgyzstan*. As a follow up we funded another joint UNEP/UNITAR project on the *Development of a GEF Project Proposal and a Phase-Out Strategy to Address Primary Mercury Mining in Kyrgyzstan* with **CHF 150'000.--**. In addition to this we made a contribution of **CHF 250 000.--** to UNITAR to assist the Kyrgyz Republic in starting the implementing of the national action plan to enhance the environmental sound cessation of the primary mercury mine.

Switzerland is convinced that the proposed GEF project "Reducing local and global environmental risks from mercury mining in the Kyrgyz Republic" is going to further reduce the supply of mercury to the global market. The sustainable closure of the primary mercury mine in Kyrgyzstan will contribute to eliminate the use of mercury and thus help to reduce the adverse effect of mercury pollution to the environment and human health at global and national level.

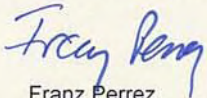
Gabi Eigenmann
FOEN, 3003 Bern
Telephone +41 31 322 93 03 ; Telefax +41 31 323 03 49
gabi.eigenmann@bafu.admin.ch
<http://www.bafu.admin.ch>

1/2

Reference: K411-2009

Kind regards

Federal Office for the Environment FOEN
The Head of the International Affairs Division



Franz Perrez
Head of the International Affairs Division

Copy to:

- Federal Department of Foreign Affairs, Political Affairs Division V, Bern
- Swiss Agency for Development and Cooperation SCD, Jean-Bernard Dubois, Bern
- Swiss Embassy in Nairobi, Siri Walt
- FOEN intern: pfr, ZD, SIK, MRB, EG, BMC



United Nations Resident Coordinator in the Kyrgyz Republic
Постоянный Координатор системы ООН в Кыргызской Республике

3 April
Date: March 29, 2012
Ref# 3948

Subject: Additional UNEP/DTIE Chemicals Branch co-financing towards the project "Reducing global and local environmental risks from primary mercury mining in Khaidarkan" in the Kyrgyz Republic

Dear Ms. Naimie-Fuller,

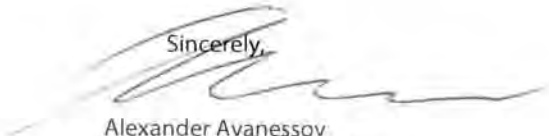
The Office of the United Nations Development Programme (UNDP) in Kyrgyzstan presents its compliments to the UNEP Division of GEF Coordination Office.

As you are aware, UNDP has been implementing a project "Creating alternative job opportunities in Khaidarken" since 2009 with an objective to assist the Government of the Kyrgyz Republic to create alternative job opportunities in the near term, hence broadening its economic vitality and reducing its reliance on income from primary mercury mining.

UNDP has a longstanding experience since 2000 and expertise in Batken implementing various projects and programmes which created favorable conditions for improving socio-economic situation in the oblast and added value to the success of the current project. Following this successful cooperation we would like to confirm that we stand ready to support the next phase of the project. Given the scarcity of UNDP internal resources, the amount of our co-financing is subject to discussions depending on the co-funding request.

We look forward for continuing the partnership between UNDP and the UNEP in promoting development in the Kyrgyz Republic.

Sincerely,



Alexander Avanesov
UNDP Resident Representative
in the Kyrgyz Republic

Ms. Maryam Niamir-Fuller
Director
UNEP Division of GEF Coordination
Nairobi, Kenya

Cc. Ms. Brenda Koekkoek
Programme Officer
United Nations Environment Programme



UNITED NATIONS ENVIRONMENT PROGRAMME

Programme des Nations Unies pour l'environnement Programa de las Naciones Unidas para el Medio Ambiente
Программа Организации Объединённых Наций по окружающей среде برنامج الأمم المتحدة للبيئة

联合国环境规划署



Date: 28 September 2011

Subject: UNEP / DTIE Chemicals Branch co-financing towards the project 'Reducing local and global environmental risks from mercury mining' in the Kyrgyz Republic

Dear Ms. Niamir-Fuller,

Chemicals Branch of UNEP's Division of Technology, Industry and Economics (DTIE) has assisted the Division of GEF Coordination in the development of the above-mentioned project and would serve as the implementing agency for this project. UNEP has played an active role in supporting related efforts since 2007.

On behalf of UNEP DTIE, I hereby confirm that our co-financing contribution to the project is up to USD 344,000 over the 36 month period of the project. This contribution comprises of the following:

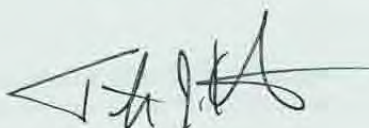
- USD 200,000 of financial support provided from the United States of America Department of State for UNEP and UNDP to work in partnership with local development partners in the Kyrgyz Republic with the aim to expand the access of the local community to business skills and knowledge, marketing information and financial capital through the Small Capital Grants Facility;
- USD 90,000 in-kind staff time for project management – coordination and scientific supervision as well as liaison with international partners;
- USD 30,000 in-kind contribution to this project for administrative support;
- USD 24,000 for infrastructure and hosting of project staff, such as office space, rental and maintenance of equipment, communications.

Ms. Maryam Niamier-Fuller
Director
UNEP Division of GEF Coordination
Nairobi, Kenya

Cc. Mr. John Thompson, United States of America Department of State
Washington, USA

We hope that DTIE/Chemicals' contribution will help to get the project approved by the GEF Secretariat.

Yours sincerely,



Timothy J. Kasten
Head
Chemicals Branch

Division of Technology, Industry and Economics (DTIE)



UNITED NATIONS ENVIRONMENT PROGRAMME

Programme des Nations Unies pour l'environnement Programa de las Naciones Unidas para el Medio Ambiente
Программа Организации Объединенных Наций по окружающей среде برنامج الأمم المتحدة للبيئة
联合国环境规划署



Ref: BK/pu

Date: 30 January 2012

Subject: Additional UNEP / DTIE Chemicals Branch co-financing towards the project
'Reducing local and global environmental risks from mercury mining' in the Kyrgyz Republic

Dear Ms. Niamir-Fuller,

The Chemicals Branch of UNEP's Division of Technology, Industry and Economics (DTIE) has played an active role in supporting efforts to reduce local and global environmental risks from mercury mining in the Kyrgyz Republic and has been developing the above project for co-financing.

I write this letter in follow up to my initial support letter dated 28 September 2011. In writing this letter, I hereby confirm an additional matching contribution of 800,000 USD over the 36 month period of the project which can be reported as UNEP's contribution. This 800,000 USD contribution is a grant received by UNEP from the Government of Norway in December 2011 to support the Kyrgyz Republic to reduce the most immediate threats posed by the mine site to the environment and the local population.

We hope that this additional DTIE/Chemicals Branch contribution will help to secure support from the GEF for further actions in the Kyrgyz Republic.

Yours sincerely,

Timothy J. Kasten

Head

Chemicals Branch

Division of Technology, Industry and Economics (DTIE)

Ms. Maryam Niamir-Fuller
Director
GEF Coordination Office
EO/UNEP
Nairobi, Kenya

Cc. Mr. Jon Opem, Norwegian Ministry of Environment, Oslo, Norway



unitar

United Nations Institute for Training and Research

JK/vd/11/719

25 January 2012

Subject: UNITAR in-kind co-financing toward the project 'Reducing local and global environmental risks from mercury mining' in the Kyrgyz Republic

Dear Ms. Niamir-Fuller,

UNITAR's Chemicals and Waste Management Programme (CWM) has assisted in the development of the above mentioned project. UNITAR has played an active role in supporting related efforts since 2007.

On behalf of UNITAR, I hereby confirm that our in-kind contribution to this project is up to USD 40,000. This contribution comprises the following:

- USD 25,000 in-kind staff time for coordination and technical supervision, as well as liaison with international partners;
- USD 10,000 in-kind contribution to this project for administrative support; and
- USD 5,000 for infrastructure and hosting of project staff such as office space, rental and maintenance of equipment, communications.

We hope that UNITAR's contribution will assist in getting the project approved by the GEF Secretariat.

Yours sincerely,

Jonathan Krueger
Acting Programme Manager
Chemicals and Waste Management Programme

Ms. Maryam Niamier-Fuller
Director
UNEP Division of GEF Coordination
Nairobi, Kenya

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

Office of
International and Tribal Affairs

September 29, 2011

Ms. Maryam Niamir-Fuller
Director
UNEP Division of GEF Coordination
Nairobi, Kenya

Dear Ms. Niamir-Fuller:

The United States Environmental Protection Agency has supported and engaged in efforts to assist the Government of the Kyrgyz Republic to phase out primary mercury mining since 2008. We have contributed 175,000 USD through our cooperative agreement with UNEP/DTIE Chemicals Branch for assessments that have formed the foundation for further action in this project. Specifically, we contributed 85,000 USD for a technical assessment of mercury mining and economic alternatives to mercury mining in the Kyrgyz Republic, and \$90,000 for a pre-feasibility study to further analyze the economic potential of the most promising alternatives.

We strongly support the proposed GEF project entitled "Reducing local and global environmental risks from mercury mining in the Kyrgyz Republic." Reducing primary mercury mining is a key objective of international efforts to reduce mercury pollution, and GEF support of this project is critical to reaching that objective.

Sincerely,

A handwritten signature in blue ink, appearing to read "Kenneth J Davis", is written over a faint, larger version of the same signature.

Kenneth J Davis
Office of Global Affairs and Policy
Office of International and Tribal Affairs
United States Environmental Protection Agency



Zoi environment network
International Environment House
Chemin de Balexert 9
CH-1219 Châtelaine, Geneva, Switzerland
<http://www.zoinet.org>

Ms. Maryam Niamir-Fuller
Director
UNEP Division of GEF Coordination
Nairobi, Kenya

Geneva, 27 January 2012

Dear Ms.Niamir-Fuller,

ZOI Environment Network has supported and engaged in efforts to assist the Government of the Kyrgyz Republic to phase out primary mercury mining since 2008. We are contributing 120,000 USD through our cooperative project with the Finnish Government in the area of mining and security, addressing mining environment and security issues in Kyrgyzstan.

We strongly support the proposed GEF project entitled "Reducing local and global environmental risks from mercury mining in the Kyrgyz Republic".

A handwritten signature in blue ink, appearing to read 'OS', is written over the printed name of Otto Simonett.

Otto Simonett, Director
Zoi environment network



tel. +41 22 917 83 42 • fax +41 22 796 44 37 • enzo@zoinet.org

KYRGYZ REPUBLIC
STATE AGENCY ON ENVIRONMENT
PROTECTION AND FORESTRY



КЫРГЫЗ РЕСПУБЛИКАСЫНЫН
ӨКМӨТҮНӨ КАРАШТУУ
КУРЧАП ТУРГАН ЧӨЙРӨНҮ КОРҒОО
ЖАНА ТОКОЙ ЧАРБАСЫ БОЮНЧА
МАМЛЕКЕТТИК АГЕНТТИК

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№ *01-31/2999 от 20.11.11*

25 November 2011, Bishkek

To: Maryam Niamir-Fuller
Director, GEF Coordination Office
United Nations Environment Programme
Block 2, North Wing, Ground Floor
PO Box 30552 Nairobi, Kenya

Subject: Endorsement for “Reducing global and local environmental risks from primary mercury mining in Khaïdarkan, the Kyrgyz Kyrgyz”
In my capacity as GEF Operational Focal Point for Kyrgyzstan, I confirm that the above project proposal (a) is in accordance with my government’s national priorities and our commitment to the relevant global environmental conventions; and (b) was discussed with relevant stakeholders, including the global environmental convention focal points.

I am pleased to endorse the preparation of the above project proposal with the support of the GEF Agency listed below. If approved, the proposal will be prepared and implemented by State Agency on the Environmental Protection and Forestry of the Kyrgyz Republic in cooperation with national and international partners. I request the GEF Agency to provide a copy of the project document before it is submitted to the GEF Secretariat for CEO endorsement.

The total financing (from GEF TF) being requested for this project is US\$1,000,000 inclusive of project preparation grant (PPG), if any, and Agency fees for project cycle management services associated with the total GEF grant. The financing requested for Kyrgyzstan is detailed in the table below.

Source of Funds	GEF Agency	Focal Area	Amount (in US\$)			
			Project preparation	Project	Fee	Total
GEF TF	UNEP	Chemicals	0	1,000,000	100,000	1,100,000
Total GEF Resources			0	1,000,000	100,000	1,100,000

Sincerely,

Baianbek Kadyrov
GEF Operational Focal Point for the Kyrgyz Republic,
Director of State Agency on Environment
Protection and Forestry of the Kyrgyz Republic

Copy to: Kyrgyz Focal Point for Stockholm Convention
Kyrgyz Ministry of Foreign Affairs
UNEP DTIE Chemicals; David Piper, Jorge Ocana

№ 0000032

APPENDIX 14: DRAFT PROCUREMENT PLAN

APPENDIX 15: TRACKING TOOLS