

CONCEPT PAPER for a FULL SIZED GEF PROJECT

- 1 Project title:** Regional Partnership for Prevention of Transboundary Degradation of the Kura-Aras river
- 2 GEF Implementing Agency:** United Nations Development Programme
- 3 Country or countries in which the project is being implemented:** Armenia, Azerbaijan, Georgia, Islamic Republic of Iran and Turkey
- 4 GEF Focal Area(s):** International Waters
- 5 Operational Program/Short-term measure:** Waterbody-based Operational Programme (OP8)
- 6 Country Drivenness (Project linkage to national priorities, action plans and programs):**

The Kura-Aras¹ river system is critical to sustainable development of the South Caucasus countries - Armenia, Azerbaijan and Georgia. It is the principal source of water for industry, agriculture, residential uses and energy. Accordingly, the management and protection of the river system is reflected in the national development and environment policies and plans of the three countries. The rivers are also important to sustainable development for sizeable populations in the two upstream countries - Iran and Turkey. The rivers run into and impact the Caspian Sea, therefore affecting all communities using the Sea, in particular those of Iran and Azerbaijan.

Regional cooperation is a key long-term aim of all five countries, and cooperation on shared water resources is an intrinsic component of such cooperation. The Kura and Aras rivers are important to regional cooperation as they cross many borders and constitute lengthy parts of the borders.

National Policies

Armenia lies fully within the Kura and Aras river basins and sustainable development of the country depends fully on these waters. The 1998 Armenian National Environment Action Plan (ArNEAP) gives high priority to the water sector. This is demonstrated by the fact that the Integrated Water Resource Management Plan is the only component of the ArNEAP on which significant progress has been made. Armenia has also prepared the *Lake Sevan Environmental Action Plan* (Lake Sevan is a major water resource within Armenia) targeting the sustainable and integrated management of the lake's resources.

Azerbaijan. Sustainable use of the Kura and Aras rivers is particularly important to Azerbaijan. Azerbaijan relies on surface waters for 90% of its water supply, and most of the surface water comes from the Kura/Aras. According to the Azerbaijan National Environment Action Plan "pollution of the main rivers and the Caspian Sea is a very serious problem". Azerbaijan is also very committed to international cooperation on water issues. It has ratified the Helsinki convention on Trans-boundary watercourses and has approved the Hague Declaration on Water security in 21st century.

Georgia's National Environmental Action Plan (GeNEAP) gives priority to water resource management and lists the Kura river as one of the most polluted watercourses in Georgia. The GeNEAP indicates that protecting the Kura requires immediate and concerted action both at national and regional levels. Georgia is committed to regional cooperation in the management of Trans-boundary surface waters. In 1999, the Government of Georgia signed the protocol to the Helsinki convention on Trans-boundary watercourses at the Ministerial Conference on Health and Environment. At the meeting of the parties to the Convention in March 2000 at the Hague, Georgia signed the Ministerial Declaration on the principles of integrated water resource management, including the Trans-boundary context

¹ *Kura* is the name of the river in Russian, the language commonly used and understood by all countries of the South Caucasus. The river is called *Kur* in Armenian and Azeri, *Mtkvari* in Georgian. The *Aras* river is known as the *Araks* river in Armenia.

Turkey Water resources management and water quality protection is identified as a priority in Turkey's National Environmental Action Plan (NEAP, 1998). The main water resource and quality issues identified in the NEAP are: (1) deforestation and poor farming practices leading to erosion, (2) uncontrolled agricultural runoff and discharge of fertilizers and chemical pesticides, (3) large water management projects which if improperly managed can cause population displacement, climatic changes, loss of biodiversity and salinization, (4) diffused responsibility and authority for managing water bodies involving many organizations operating under a variety of laws which reduce effectiveness of water resources management. The Aras river is identified as one of the 26 major water basins in Turkey with a precipitation area of 27,548 km².

Iran The Iranian National Strategy for Sustainable Development identifies the following relevant actions among its list of priority actions and investments:

- Implementing projects to protect biodiversity...and international water pollution mitigation.
- Implementing a priority investment programme for “win-win” projects...investments that have both environmental and economic benefits...(such as) projects for watershed and forestry management.
- Addressing water pollution problems from urban households and industrial sectors through modification of water pricing, institutional framework, and efficient investments...Along with investment preparatory work, water sector studies should be launched and the comprehensive water plan updated.

The National Biodiversity Report of the I. R. Iran recognises that managing the rivers that flow into the Caspian is vital to protecting the Caspian Sea ecosystem.

The Islamic Republic of Iran has ratified several global and regional conventions including: Convention on Biological Diversity (CBD), Convention on Transboundary Movement of Hazardous Waste (Basel), and is cooperating in regional international waters initiatives in the Caspian Sea and Persian Gulf at present.

Sub-regional Policies and Cooperation

Following the break-up of the Soviet Union, mechanisms for cooperation, joint water management, and information sharing ceased to function. In 1997, the Ministry of Environment in Georgia took the initiative to promote regional cooperation, notably with the support of the EU TACIS programme. Bilateral co-operation agreements were developed between Armenia and Georgia and between Azerbaijan and Georgia and were signed in 1998². Articles 6,7, and 8 of these agreements state an urgent need for the protection of transboundary ecosystems and migratory species. In a related initiative, in 1997 the Hydrometeorological Departments of Armenia, Azerbaijan and Georgia signed a co-operation agreement governing the exchange of information

At project, technical and bilateral levels, there is a growing number of inter-country initiatives in the environmental field, including:

- the establishment of the Regional Environmental Centre (REC³);
- the GEF MSP *Arid and Semi-Arid Ecosystem Conservation in the Caucasus* (see later in this document for further details) by Armenia, Azerbaijan and Georgia;
- informal cooperation on the USAID funded project *South Caucasus sustainable water management project*. Turkey has also officially observed some of the activities in this project.

See Annex 2 for more information on related inter-country projects ⁴.

² The “*Agreement on Environmental Protection between Georgia and Azerbaijan*” and the “*Agreement on Environmental Protection between Georgia and Republic of Armenia*”.

³ The REC was established under the Environmental Action Programme for Central and Eastern Europe (EAP) in 1999. Its mission is to assist in solving environmental problems in the Caucasus region by encouraging co-operation among non-governmental organisations, governments, businesses, and other environmental stakeholders, by supporting the free exchange of information and by promoting public participation in environmental decision-making. The founders are the authorised representatives of the European Commission (DGXI) and Armenia, Azerbaijan and Georgia (their ministries of environment).

⁴ The information in Annex 2 was provided by *Development Alternatives Incorporated* who are responsible for implementing the previously mentioned USAID project.

Despite the above-mentioned agreements and the many projects listed in Annex 2, recent political tensions (between Armenia and Azerbaijan, and between Armenia and Turkey) have limited cooperation in the sub-region. The concerned countries are working to address these political issues, and progress has been made recently.

7 *Context*

Regional Importance of the Waters

The Kura-Aras river system is an internationally significant river system, which is seriously degraded and continues to be threatened. Integrated and trans-boundary responses are necessary to address the threats to the river system, and to address their underlying causes.

The Kura River originates in the Kizil-Giadik mountain range in Ardahan province in Northeast Turkey, winding its way through mountainous regions in Turkey, Georgia and Azerbaijan into the Caspian Sea. Tributaries from Armenia flow north into the Kura in Georgia and Azerbaijan. The Aras River originates in Erzurum province in eastern Turkey. It flows along the Turkey-Armenia border, along the Iran-Armenia border, along the Iran-Azerbaijan border, before flowing into Azerbaijan where it joins the Kura near the Caspian. Tributaries from Armenia flow south into the Aras. The Aras divides just before meeting the Kura, and one branch flows directly into the Caspian. The total length of the Kura river is 1515km and the total area of the Kura-Aras basin 188 000km², occupying the greater part of the South Caucasus. This area is distributed amongst the five countries as follows: Iran – 40 000 km²; Turkey – 28.900 km²; Azerbaijan 52.900 km²; Armenia – 29.800 km²; and Georgia – 36.400 km². The population in this largely mountainous area is approximately 7 million (see Maps in Annex 1).

The rivers and their tributaries cover almost all of Armenia and Azerbaijan, and a sizeable part of the populated and urbanized parts of Georgia. The waters in the rivers are therefore essential to sustainable development of these three countries. Whereas they are less crucial, at a national level, to Iran and Turkey, they are nevertheless important to the economy and communities living in the catchment areas. The South Caucasus have been identified by Conservation International (CI) as one of the world's 25 biodiversity hotspot, and the area identified by CI corresponds closely to the catchment area of the two rivers. This demonstrates the ecological importance and fragility of this area. The Aras is home to one of the last natural sturgeon breeding grounds, there are important and unique dry-land riparian forests along the Kura, and the delta where the Aras and Kura rivers flow into Caspian contains many important wetland sites. The Caucasus region is also well known for its diversity of natural landscapes, climate, unique and ancient cultural heritage, archaeology and ethnography.

General Status of the Waters

Man's activities in the second half of the twentieth century had a drastic effect on the quality and quantity of the water in the rivers. A range of factors, including industrial pollution, domestic waste, agricultural pesticides, large-scale irrigation/flood control/hydropower schemes and watershed degradation have affected the waters. All countries have contributed to this situation. However, as many countries in the region experienced a significant economic decline in the last decade, the stress on water quality in some parts of the river has decreased temporarily. In the future, as the economies in the region grow, and as some industrial activities are restored, the most likely scenario is that the threats to the water quality will also again grow. Water quantity problems have generally not decreased in the past decades, with increasing droughts and floods. A good example of how mismanagement can cause irreversible damage to the ecosystem is the disappearance of the Tugai forest in Azerbaijan. Inefficient irrigation used the water needed by the forests, and the forests were unable to survive.

The further downstream, the greater the deterioration in water quality and the increases in water quantity challenges. This downstream progression is due to the increasing levels and aggregation of pollution emissions, the increasing demands for water, and the fact that the downstream areas are naturally drier. The Kura-Aras rivers also have a major impact on the Caspian Sea. At present, the river is the second largest flowing into the Caspian, providing approximately 10% of the total inflow. It is possible that it provides an even greater share of the Caspian's

pollutants⁵. In order to sustainably manage the Caspian Sea, it will be necessary to manage the quality and quantity of the inflow from the Kura Aras.⁶

Generally speaking, capacity to manage natural resources in the region is limited. Each country has limited institutions and tools to manage water, and lacks funds due to poor economic performance in recent years. Monitoring and information systems are weak in each country. Each of the countries has a growing but incomplete legislative system to manage water resources, including laws, decrees, guidance, fees and charges. Enforcement levels are mixed. Each country also has a small but growing NGO community, particularly Georgia and Armenia. Previously, the three downstream countries were part of the Soviet Union and since the break-up of the Soviet Union there are almost no mechanisms for regional cooperation.

National Cos

Armenia lies upstream on the Kura and Aras Rivers. Armenia has considerable water reserves, both underground, surface and in over 50 man-made reservoirs. Irrigation accounts for an estimated two-thirds of water usage, and water resources are also used for industry, hydropower, recreation, domestic use, and waste disposal. Hydropower accounts for 35% of total energy production. Existing data suggests that Armenia is a source of trans-border pollution on the rivers, notably to Azerbaijan. Armenia experiences regular spring floods due to snow-melts and flash floods which can cause much damage. These floods can flush out sediments in the reservoirs, including deposits of pollutants. Finally, lake Sevan, which plays an important role in the national economy, and feeds into the Aras river, has been shrinking in recent years.

Management of water and environment is distributed over several agencies, including the Ministry of Nature Protection, the National Environmental Authority, the Hydrometeorological department and others. Coordination amongst agencies is weak and there is institutional confusion, however there is a strong vertical management structure in place.

At present, Armenia has weak relations with two of its neighbours (Turkey and Azerbaijan) and this is a barrier to cooperation. However, cooperation on natural resource management does exist, and it is hoped that cooperation on such technical issues as water resources will become increasingly possible. Armenia continues to have good relations with Iran.

Azerbaijan is an arid country, totally reliant on water from the Kura-Aras for agriculture, industry and residential use. The rivers also feed many ecosystems in Azerbaijan, including the sturgeon breeding grounds. The present status of the rivers is a real threat to national sustainable development and to these ecosystems.

As described by the AzNEAP, “The Kura River (from Georgia) and its tributary (Aras River from Armenia) are already heavily polluted before they cross the border to Azerbaijan. Most flora and fauna cannot survive under these conditions. Municipal and industrial contamination sources and agricultural pesticides from inside Azerbaijan add to the problem. Water from Kura River does not meet Azerbaijan’s drinking water standards, even after conventional treatment.”

On leaving Georgia, the river Kura enters Azerbaijan and is immediately stored in the Minchechou reservoir. Vast areas of Azerbaijan are irrigated by this reservoir. Pollutants from Georgia also collect in this reservoir, and these pollutants are subject to being flushed out by floods.

Due to recent conflicts with Armenia, Azerbaijan is home to a large number of internally displaced persons (IDP). The IDPs create a large pressure on the country’s natural resource base, particularly on riparian forests along the Kura in the north of the country.

⁵ Until recently, the Volga was by far the largest pollution source. However, economic decline along the Volga has led to major drops in the pollution load.

⁶ The Caspian Sea covers 422,000 km² and provides a livelihood for 12 million people in five countries. GEF is providing support to the protection of the Caspian through the Caspian Environment Programme (CEP) with the involvement of the five riparian countries and UNDP, World Bank, UNEP and EU-TACIS.

At the national level, responsibilities for environment and water resources are shared by the newly formed Ministry of Environment and Natural Resources (formed from the previous State Committees for Environment, Geology, Hydrometeorology and the Forestry Agency) and the State Water Committee.

Georgia is rich in water resources. It has two primary drainage basins, separated by the Likhi range of mountains. The eastern basin drains into the Caspian Sea, the western into the Black Sea. The Kura is the largest river in the eastern basin. Georgia is also rich in biological diversity due to its highly varied climatic, geologic, topographic, and hydrologic conditions. These conditions allow Georgia to support a biota that includes up to 4,500 species of vascular plants and 10,000 cryptograms together with other organisms. Much of this diversity is found in the Kura watershed, and in the Kura and its tributaries

Georgia both contributes to and suffers from degradation of the Kura river. Industrial and domestic untreated waste, coming largely from the Tiblisi region⁷, severely degrades the water. This is further exacerbated by inefficient agricultural practices (large irrigation schemes and pesticide use). By the time the water leaves Georgia for Azerbaijan it is seriously degraded. At the same time, a healthy Kura River is essential for an healthy Georgian economy. Georgia depends on the Kura river for industry, agriculture, fishing, energy production and recreation. For example, large areas of eastern Georgia depend on agriculture irrigated by the Kura. Also, some of Georgia's hydropower (which supplies approximately 70% of Georgia's electricity) comes from schemes on the Kura.

Of the three lower riparian countries, Georgia probably has the strongest institutional and legislative framework. It also has a stronger technical capacity and a developing network of NGOs.

Iran A large area of Northern Iran feeds into the Aras river. The Aras accounts for over 350 km of Iran's northern border, and therefore the area is important for Iran's relations with its neighbours. Iran has relatively good relations with its neighbours. The areas of Iran and Azerbaijan near the border share a common culture, which has facilitated relations between the two countries.

The Government of Iran has a policy to develop hydropower. Details of the plans are still being prepared, but it is considered likely that a large number (up to forty) of small and medium hydropower plants may be built on the Aras river. At present, little is known of the use of this water in Iran, and the status of the water as it runs into the Azerbaijan

Iran is a riparian country of the Caspian Sea and large parts of its population are dependant on the Caspian for industry, agriculture and recreational uses. However, as noted in The National Biodiversity Report of I. R. Iran "polluted rivers threaten the coastal ecosystems... Man-made barriers and obstacles close the migration routes of fishes, and no fish-ways are anticipated along their migration routes, therefore many spawning grounds are destroyed." Iran is therefore a strong supporter of efforts to improve the quality of the Caspian through the improved quality management of inflowing rivers (notably the Kura-Aras).

Turkey The Turkish provinces of Erzurum, Ardahan, Kars and Igdirdir lie upstream in the Kura-Aras basin. The rivers also make up a small part of Turkey's border with Armenia. While the environmental situation in these eastern provinces is comparatively good; watershed degradation, erosion and agricultural pollution are issues of concern. Existing data suggests Turkey contributes to pollution levels. Long-term efforts to manage the Kura-Aras would require the involvement of Turkey, and Turkey is keen to cooperate in the region in the long-term.

8 *Project Rationale and Objectives:*

Objectives

The overall objective is to ensure that the quality and quantity of the water throughout the Kura-Aras river system meets the short and long-term needs of the ecosystem and of the communities using the ecosystem. Related to this, a second objective is to reduce pollution in the Caspian Sea.

⁷ The Rustavili industrial district, just downstream from Tiblisi, is a major source of industrial pollution

The immediate objectives of the project are: to foster regional cooperation; to increase national and regional capacity to address water quality and quantity problems; and to promote changes in the economic sectors causing pollution, water shortages and habitat degradation. The focus will be on transboundary issues.

Threats

The water quality in the Kura and Aras rivers is low, gets worse progressively downstream, and is likely to get worse in the future. In terms of quantity, despite many efforts to manage the water flow, areas in the region continue to experience both floods and shortages. These constraints are also likely to grow along with the demand for water in the coming decades. Finally, the Kura contributes greatly to the degradation of the Caspian Sea. All of the major quality and quantity challenges on the rivers have trans-border aspects.

Urban and residential threats

The 7 million or so people in the river system discharge water and other waste material directly into the river system, with almost no treatment. This problem is widespread across the basin, and tends to accumulate downstream. It is notably important downstream of large urban areas such as Tbilisi, spreading into Azerbaijan.

Industrial threats

Industry is common throughout the region and is generally old, highly polluting technology. All kinds of industry are found, providing all forms of pollution. All countries also have abandoned contaminated industrial lands, which are likely to release pollution over large time-scales. Although industrial pollution crosses all the borders, the Rustavili industrialised region just downstream from Tbilisi is a major source of pollution for Azerbaijan. Industry is also a major user of water, therefore affecting water quantity.

Energy-related threats

Upstream countries use dams to generate hydropower. These already affect the temporal flow of water. There are plans to increase hydropower significantly in coming years, notably in Iran, and possibly Turkey and Armenia. These plans will clearly affect water in all downstream countries.

Agricultural threats

Armenia, Georgia and Azerbaijan have large, inefficient and polluting agricultural systems, based on dams and irrigation. Irrigation schemes lead to water loss and lead to salinisation, and agricultural systems add pesticides and fertilisers to the water. These problems accumulate downstream, leading to severe water quality and quantity problems as the rivers enter the Caspian.

Water-shed management

Deforestation and land degradation in upstream areas, notably in Turkey, Iran and Armenia, are affecting the quality and quantity of water entering the river. Deforestation is a major contributor to changes in the temporal flow of water, and to the sedimentation flow in the river. Deforestation along the river in Armenia and Azerbaijan is also a major challenge.

Underlying Causes

The above threats to water quality and quantity have many underlying causes, including:

At a regional level:

- Agencies responsible for water management have little incentive to work closely with counterpart agencies in other countries;
- There is little incentive to ensure sustainability of water quality and quantity that leaves the country;
- Government actions and action plans in each country are not coordinated with related actions in other countries;
- Similarly, efforts by the non-governmental community (the scientific community and NGOs) are not coordinated with efforts in other countries;
- Private sector activities in one country are not in line with plans and legislation across the border;
- Standards, legislation vary from country to country;
- Data and information on the water quality/quantity is limited, especially at cross-border points.

At the National levels:

- Government agencies do not have capacity to manage water;

- Inter-sectoral cooperation mechanisms are inadequate;
- Lack of tools to improve water management within each sector, eg to manage pesticide use in the agricultural sector;
- In Azerbaijan, internal migration leads to unsustainable utilization of river and riverside resources;
- Polluters face few incentives to clean up;
- Underdeveloped legislation;
- Fragmented and very incomplete system of water monitoring and unavailability of reliable data on pollution;
- Finance and financial mechanisms to clean water or reduce pollution emissions are inadequate;
- Government and non-governmental actors (NGOs and private sector) do not pool resources.

Baseline Scenario

The concerned countries recognize the problems and are making efforts to improve water quality. The efforts tend to be fragmented and un-coordinated, and tend to focus on the threats rather than on addressing the root causes. This fragmentation is both within the countries, and across the countries. Given the above underlying causes, it is unlikely that ongoing national efforts would lead to water improvements in the near future; it is more likely that things would get significantly worse before getting better.

The international community is supporting efforts to improve the water quality, particularly in the three downstream countries. The international community is also fostering regional cooperation amongst these three countries. Two important planned/ongoing projects include the EU/TACIS Interstate Environment Programme (ISEP) and the USAID Regional Sustainable Water Management project. ISEP is supporting capacity building for monitoring and assessment. This includes the necessary institutional strengthening to improve monitoring⁸. The USAID project is working with the three countries on information collection and management (including GIS), on regional political cooperation and on initiating pilot projects. This project initially takes a series of bilateral approaches to strengthening water management capacity.

Both of these projects start off with a rapid needs assessment.

The absence of Turkey and Iran from other initiatives means that a comprehensive, integrated approach cannot be taken. Even in the three downstream countries, there are no strong tools to foster coordination and cooperation. Even if tools were developed, the capacity in the countries to manage water and to cooperate regional are insufficient. Notably, information shortages make it impossible to set priorities. Existing initiatives are limited in technical scope, focusing on some aspects but not all aspects of the degradation, and existing initiatives do not take an integrated approach – they focus too much on the threats, not on the underlying causes.

Alternative Scenario

The present and planned efforts may slow down the deterioration of the Kura-Aras system. They are not likely to lead to an improvement in the water quality. Without additional support, no effective national or regional management system will be established. Lack of coordination, lack of incentives, will mean that degradation and pollution continue.

The GEF project will set solid foundations for a long-term, regional, fully integrated and comprehensive approach to management of the Kura-Aras rivers. It will allow for: full involvement of all countries; a thorough analysis of the situation (technical, institutional, financial, social and economic) in terms of threats and underlying causes; the development of thorough and integrated approach to planning and priority setting; the identification of sustainable financial mechanisms, and; the full involvement of all partners. The GEF project will build on the findings, information, capacity development and institutional setting of other internationally supported projects in the region, notably the above-mentioned EU/TACIS and USAID projects, and the Caspian Environment Programme⁹.

⁸ This €4 million programme covers four rivers, and starts up in 2001.

⁹ The Caspian Environment Programme (CEP), supported by several international agencies including GEF, has its headquarters in Azerbaijan. CEP is a cooperative effort amongst all states on the Caspian to revert environmental

Why should GEF get involved at all?

The Kura Aras river system is an internationally important waterbody seriously threatened by transboundary threats. Protecting this waterbody is therefore beyond the scope of one country, and will have global benefits. The catchment area is also important in terms of biodiversity, ethnic diversity and political cooperation. Finally, improving the quality and flow of the Kura Aras is essential to protecting the Caspian sea.

Governments in the region are committed to cooperate. However, existing mechanisms to operationalise this commitment are limited, and hindered by the tense political situation. GEF support can ensure this commitment leads to action.

9 Expected outcomes and activities of Full Project:

The project will develop a framework for cooperation, a detailed plan to achieve that cooperation, and the tools needed to implement the plan. Specifically, it will have the following outcomes (to be verified during a PDF stage):
Regional:

1. A transboundary diagnostic analysis of pollution sources and hot spots, habitat loss and water quantity issues in the Kura-Aras basin. This will serve as an update and comprehensive background document for planning, priority setting and decision-making;
2. A regional Strategic Action Programme (SAP). This will clarify the overall goals and objectives. It will set out priorities, timelines and responsibilities for improving the regional management of basin resources. The SAP will determine financial sources of funding. It will identify needs in terms of capacity, legislation, institutional strengthening, as well as key infrastructure requirements. The SAP will identify measures to address all underlying causes;
3. Inter-governmental capacity for transboundary water management. An appropriate regional approach to management will be developed, this may be an inter-governmental committee, or river-basin authority, etc. The possibility of an inter-country water management agreement will be explored;
4. Increased harmonization of legislation, standards and monitoring;
5. Enhanced non-governmental regional capacity: this will cover the technical and scientific community, the private sector, the industrial and agricultural community, and NGOs. The project may facilitate the setting up of networks, information centers, and clearing houses;

National (the following outcomes, although observed at the national level, are essential to achieving the regional objectives)

6. National strategic action plans for each country in the basin. Based on the SAP, these will provide detailed guidance and implementation plans for each country. The national SAP will cover technical, legislative, financial, economic and scientific measures, and a clear allocation of responsibilities;
7. National capacity for integrated water resource management of the basin. This will include high-level political commitment. Each country should develop appropriate mechanism for in-country management, which feed into and from the regional mechanism. This will include appropriate inter-departmental mechanisms, and mechanisms for NGO and private sector participation in water resources management;
8. Raised awareness, at all levels, including high-level political levels, and strengthened NGO networks;
9. Possibly, GEF will cover the incremental costs of measures to address urgent, important transboundary water issues;
10. Study of Minchechou lake quality (Azerbaijan only).

Within the framework of the regional SAP, some bilateral activities may also take place:

11. Development of a water sharing agreement between Georgia and Azerbaijan;

Activities to achieve these outcomes are likely to include:

degradation in the Caspian. The CEP houses much information on environmental management in the region, and through its network will contribute to the successful implementation of this Kura-Aras project.

1. Establishment of an international, intergovernmental project Steering Committee. All GEF Implementing Agencies and other key donors will be invited to be members of this Committee, along with concerned development banks;
2. Establishment of regional expert group to support the Steering Committee;
3. Establishment of inter-department decision-making bodies in each country, with support from non-government sector;
4. Establishment of expert teams covering key sectors;
5. Undertaking a national diagnostic analysis of water quality, water quantity, water management, water related legislation and standards, sources of pollution, and efforts to improve water quality. This will also cover institutional and financial issues;
6. Incorporating the national analyses into a transboundary diagnostic analysis (TDA);
7. Development of draft national action plans to respond to key issues arising in TDA;
8. Incorporation of the national action plans into a region wide strategic action programme (SAP), including financing plan;
9. Revision of national action plans in line with the regional SAP;
10. Implementation of initial elements in the SAP, including monitoring, strengthening monitoring and assessment, training, establishing resource centers, awareness raising, strengthening NGO and NGO networks.
11. Conducting regional workshops to bring all the stakeholders together and to facilitate concerted action;
12. Establish communication and information technology systems;
13. Possibly, a small grants programme (SGP) will be developed to implement immediate priorities, and to support NGO involvement in water quality improvement schemes in the region;
14. Strengthening of existing networks of NGOs, scientists, industrialists and agriculturalists.

Items 1,2,3 and 10 will build to a small extent on the work undertaken by USAID and EU/TACIS. Items 4 and 5 will build more heavily on the work undertaken by USAID and EU/TACIS. Items 6, 7, 8, 9 and 11 will be fully funded by GEF. Item 10, 12, 13 and 14 will be incrementally financed by GEF.

Additional sources of co-finances will be explored during the PDF stage and during full project implementation.

All activities will be undertaken in an iterative and participatory manner. This will ensure that feedback is continually incorporated into outputs, that stakeholders in each country can influence, where appropriate, the regional outputs, and will generate 'buy-in' and commitment to the project.

10 Sustainability (financial, social, environmental) and replicability of the full project

The proposed project prepares a SAP and takes only limited direct action to improve water quality. Hence, the project can only be considered sustainable if the SAP is successfully implemented and achieves its goals.

Regional government cooperation mechanisms will be established and agreements drawn up to ensure long-term government commitment to the SAP. Project support to non-governmental networks (across the region and in each country) will mean these networks can support implementation of the SAP. The SAP will be a comprehensive tool, covering market and command/control instruments to change the behaviour of polluters and water-users in each country. The SAP will focus on the underlying causes, not the direct threats. Financial constraints to implementing the SAP will be assessed from the outset and ways to overcome them identified, including a financial strategy, with possible financing sources identified and approached during preparation.

Partnerships and participation are key to successfully implementing the SAP. Key partners include all government agencies, NGOS, scientific community, financial community (private and donor), other donors, GEF and all GEF IAs.

11 Country Eligibility:

All riparian countries are eligible for GEF support for International Waters. UNDP has a programme in each country.

12 Stakeholders involved in project:



Success in a project of this nature depends on the full involvement of a broad group of actors. The project will develop and adopt a fully participative approach. The process for preparing the TDA and SAP will generate this participation. Other activities will also foster and benefit from this participation, such as the workshops and studies to be undertaken. Finally, a section in the SAP will be devoted to assuring long term, broad participation.

The project will bring together representatives of the following institutions and organisations of the countries concerned: relevant ministries and State committees and Departments and their local offices, Parliamentary committees for environmental protection, Hydro-meteorological Departments, water users' associations, farmers, representatives of Industries, Regional Environmental Centre (REC), NGO resource centres and NGOs, representatives of the scientific community.

13 Information on project proposer:

The project proponents are the riparian governments of the Kura Aras Basin and all but Turkey have indicated their abiding interest in working on the project. Signatures will be provided at PDF B submission stage, as is normal in International Waters Projects.

The project will be implemented by UNDP and executed by UNOPS. OPS will assure neutrality, and financial/administrative oversight. UNDP and OPS will together ensure appropriate linkages with related GEF and other internationally supported projects, notably relations with the *Caspian Environment Programme*.

14 Financing Plan of Full project

GEF will finance most of the incremental costs of the project. All activities leading to the preparation of the SAP are eligible for GEF support. However, even some of these activities will be co-financed by EU/TACIS and USAID programmes.

- *USAID/Strengthening Regional Sustainable Water Management in the South Caucasus*. This \$4mn project aims to increase the quantity and quality of dialogue between countries in the region, notably Armenia, Azerbaijan and Georgia. The activities and outputs are closely related to the outputs and objectives of the proposed GEF project. Links between the two projects have already been established, and a draft MOU prepared. During PDF B stage, these links will be deepened and areas of cooperation developed.

- *EU/TACIS Joint River Management Programme on Monitoring and Assessment of Water Quality on Transboundary Rivers*. This €4mn project covers four rivers, including Kura. The overall objective of this Project is to support the prevention, control and reduction of adverse transboundary pollution impact caused by the quality of the four rivers selected for the Project. Although the focus is strongly on monitoring, the project will address related legislative, institutional, economic and financial issues. Information generated and capacity built under this project will be very closely related to the GEF project.

15 IA coordination and Linkages to GEF and IA programs and activities

Implementation of the SAP will require a variety of support measures and financial mechanisms. Accordingly, as with other international waters projects, implementation of the SAP will rely on good coordination and cooperation amongst the GEF IA and other donors. To ensure this, the IAs and key donors will be involved from the outset and through the process to prepare the SAP.

In addition, the project will build on the institutional and informational basis of other regional GEF projects, including:

- the *MSP Arid and Semi-Arid Ecosystem Conservation in the Caucasus*. This project involves Armenia, Azerbaijan and Georgia, and aims to develop management plans for arid zones and develop demonstration pilot projects, in the Kura catchment area. This project will generate information and data relevant for the national diagnostic analysis, as well as provide model institutional arrangements at technical and decision-making levels.

- *The Caspian Environment Programme (CEP)*. The CEP involves all countries along the Caspian and is supported by several donors. It provides a strong information, data and technical base, which can be drawn on at both the PDF and full project stages.

The proposed project will also be linked to the UNDP Georgia project “Capacity Building for the Ministry of Environment”.

In recent years, a broad body of experience and knowledge with preparing SAPs and enhancing regional cooperation on international waters has developed, much of it through GEF support. The project will build on the experience and findings of the GEF International Waters and other projects, particularly those involved in the preparation of SAPs.

16 Proposed project development strategy

A PDF B will be requested for the further development of the project. The PDF B will be implemented over 10 months, starting late 2001.

The PDF will: generate the detailed information needed to design the full project, including a preliminary TDA; clarify fully the threats, underlying causes to water degradation, and the linkages; identify and cost-out the activities in the full project; develop the institutional mechanisms to implement the full project; and prepare a stakeholder participation plan.

It is anticipated that the full project brief will be submitted to GEF Council for review in late 2002.

17 Response to Reviews

No independent, formal reviews have taken place as yet.

ANNEXES



1. References
2. Maps of South Caucasus region
3. Matrix of Inter-Country projects related to water management in the South Caucasus region

Annex 1.1 Map of South Caucasus Region Showing Approximate Path of Kura and Aras Rivers



ANNEX 1.1 Map showing geographical features of the basin of Kura and Aras rivers



Annex 2 – Matrix of Regional Projects Related to Water Management

South Caucasus Regional Water Management Project—USAID	Development Alternatives, Inc., Jim Wolf, Team Leader, 946-444 (x 312)	2 years (2000-2002)	USD 4m	Design and implementation of activities falling under three categories in the Kura and Araks river basins: strengthening of legal and institutional framework for transboundary management; improvement of transboundary water monitoring capabilities; projects that will demonstrate the benefits of inter-country cooperation.
Synergy--USAID	Eurasia Foundation, George Zarubin, 923-728	began in 1998	USD 400,000	Examples of robust 3-country cooperative efforts between NGO/private sector entities. Considering water management in early 2001.
Energy Linkages Project—USAID	Hagler Bailly, Dean White/Bidzina Chkonia			Has a glacial melt rate component; Understanding of hydropower's role.
TACIS Joint River Management Programme--TACIS		Early spring 2001 (2 years)	1 mln EUR (4 m EUR for all four basins)	Overall objective is to support the prevention, control and reduction of adverse transboundary pollution impact caused by the quality of the four rivers selected for the project. The results will be used to recommend modifications to the UN/ECE Guidelines for monitoring and assessment of transboundary waters.
Regional Environment Center (EU-TACIS, USEPA)	Nato Kirvalidze, tel/fax 966-956, 877-418-171; rec@caucasus.net	Chartered 1999		Emphasis on capacity building and the development of regional environmental cooperation. Objectives include increasing information exchange between NGOs, governments, the scientific community and the private sector, developing compatible environmental policy and strategies among countries, and raising awareness about the environment. Includes a grants program.
South Caucasus Highland and Mountain Development Project—IFAD	Center for Highland Development—Mr. Koba Arabuli; 931-204; arabuli@global-ertl.net		26 mln for Azerbaijan, 23 mln for Georgia	Rural infrastructure rehabilitation, including irrigation; center to be established in Azerbaijan (see Azerbaijan project matrix)
<i>Support for South Caucasus Highland and Mountain</i>	<i>Markus Duerst 253-682; tblisi@edc.net</i>		<i>USD 500,000</i>	<i>Possible grant support to IFAD project</i>

<i>Development Project—Swiss Agency for Development and Cooperation</i>				
Arid and Semi-Arid Ecosystem Conservation in the Caucasus (CASEC) GEF/UNDP (grant)	NACRES, Zurab Gurielidze, Levan Butkhuzi Tel.: 8-99-56-80-32 Keti Chachibaia, 998-558	December 1999; 24 months	USD 750,000 (plus 128,000 in kind)	The objective of this project is the protection of biodiversity in the arid and semi-arid zone in Eastern Georgia. The project is designed to ensure local land users' participation in the design of alternative land uses, and their integration in its implementation. The project will complement and enhance proposed protection activities in the target area and coordinate these with neighboring countries (Azerbaijan and Armenia) sharing sections of the ecosystem.
Biodiversity portfolio for the Caucasus MacArthur Foundation	WWF-Georgia Nugzar Zazanashvili 33-01-54	1999-2000	80,000	Prioritization of activities in the region in biodiversity field. Completed.
TEAP—TACIS Environmental Awareness Project		completed		
Kura-Araks Coalition	NGO Little Town--Gocha Dzamukasvili (899) 572-143	1997		Coalition of NGOs from all three South Caucasus republics focusing on the Kura and Araks basins. Conduct public awareness raising and monitoring.
Caucasus Environmental NGO Network USAID	DevTech Systems/ Georgian Center for the Conservation of Wildlife	1999-2000	58,000	Promotion of the regional environmental collaboration in the Caucasus by information exchange (monthly bulletin "Caucasus Environmental News" and list-serves) and regional workshops in separate subjects.
<i>Peace Zone project—Helsinki Citizens' Assembly</i>	<i>Arzu Abdullayeva, 994-12-413676; assembly-baku@azeurotel.com</i>			<i>A project for a Peace Zone in the 'Red Bridge' area where Armenia, Azerbaijan and Georgia meet. Local groups in the area will jointly campaign for a series of steps which could help to remove tension: - partial lifting of the Azerbaijan blockade on Armenia in the local Kazakh-Ejevan area - withdrawal of military forces to ten kilometres inside each country - de-mining - independent radio and television links between two countries - joint projects on infrastructure, especially concerning water and agriculture - people-to-people contacts. http://www.hca.cz/projects/baku.html)</i>
Cooperative River Monitoring among Armenia, Azerbaijan, Georgia and the	National Academy of Sciences (Armenia),	3 year project; June 2001		Pre-proposal has been submitted to NATO. Purpose of demonstration project will establish approximately 90 monitoring stations for collection of limited data above and below major cities and farming, mining and industrial areas on the Kura and Araks Rivers and their major tributaries.

US—NATO Science for Peace Programme	Tbilisi State University (Georgia), and Azerecolab (Azerbaijan)			This system will be developed cooperatively with scientists from Armenia, Azerbaijan, Georgia and the US, and with additional funding from the US DOE.
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Italicized descriptions indicate that projects are in the conceptualization stage.