

**ENVSEC Program
UNECE-OSCE Project**

**IDENTIFICATION OF THE LEGAL AND INSTITUTIONAL NEEDS FOR ACCESSION
AND IMPELEMNTATION OF THE UNECE
WATER CONVENTION BY GEORGIA**

COST ANALYSIS

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Introduction

This report has been prepared by Malkhaz Adeishvili as a consultant to UNECE-OSCE for the ENVSEC project Implementation of the UNECE Water Convention¹ and Development of an Agreement on the Management of Transboundary Watercourses Shared by Georgia and Azerbaijan. The objective of this project is to give background information for Georgia in its consideration of ratifying and implementing the UNECE Water Convention and to strengthen its transboundary water cooperation with Azerbaijan. The project has been designed in response to the request of Georgia for the preparation of ratification and implementation of the UNECE Water Convention².

The project envisages the following components:

- Assessment of national water legislation, policies and institutional arrangements, including those relating to transboundary water resources management, and bilateral and multilateral water agreements of which Georgia is a party.
- Development of an action plan with defined objectives and timelines, including assessment of costs, for Georgia to ratify and comply with the obligations of the UNECE Water Convention.

This report has been prepared in the frame of second component listed above and it provides analysis of costs Georgia may incur to meet the requirements of the convention.

The costs analysis report builds upon a gap analysis undertaken as a first step under the project³. The objective of this exercise was to identify gaps between the requirements of the UNECE Water Convention and legal and institutional frameworks, policies and practices applied in water resources management in Georgia, with particular emphasis on cooperation with the Republic of Azerbaijan. The specific aim was to assess legal and institutional needs for meeting requirements of the UNECE Water Convention by Georgia. As a result of this analysis major gaps were identified and the following actions were proposed to fill those gaps:

1. Reintroduction of licensing of waste-water discharges
2. Establishing limits for waste-water discharges based on BAT
3. Ensuring at least biological treatment of wastewater
4. Developing bilateral cooperation, including a bilateral agreement and establishment of a joint body with the riparian countries
5. Establishing a sustainable system of joint monitoring and assessment
6. Exchanging information between riparian parties
7. Establishing sustainable warning and alarm systems
8. Establishing procedures for mutual assistance

¹ UNECE Convention on the Protection and Use of Transboundary Watercourses and International Lakes. Helsinki. 1992.

² Azerbaijan is a party to the UNECE Water Convention while Georgia is preparing itself to become a party.

³ See the project report Assessment of the Legal and Institutional Needs for Implementation of the UNECE Water Convention by Georgia. 2009.

This report provides background information on the state of implementation of the above measures, respective policies and trends in Georgia. It also provides judgments and assessments, where feasible, of costs associated with the implementation of these actions.

Some of the measures listed above (measures 1-3) need to be taken to meet not only requirements of the UNECE Water Convention, but to meet primary requirements of Georgia's national environmental legislation and policies, as well as EU accession policies pursued by the country. Therefore, costs associated with the implementation of these measures cannot be considered as costs of implementation of the Convention. Some measures (measures 4-8), especially those related to cooperation with riparian countries, to some extent go beyond requirements of national legislation and environmental policies and the need of their implementation will be a direct consequence of joining the UNECE Water Convention. Implementation costs of such measures may be considered as incremental to Georgia as the country would not undertake those actions if it pursues national policies and interest only⁴. Therefore these two categories of measures are grouped separately in the following chapters of this document.

It was found that in many cases it is impossible or would not be rational to assess exact cost of implementation of specific actions as these measures will need to be implemented over a long period of time and the cost would be largely determined by appropriateness, willingness to pay and availability of resources for specific actions in a given period rather than by predetermined schedules or plans for payments. Nevertheless, implementation of actions and associated cost are categorized into short, medium and long term/cost groups. A Table in an annex of the report attempts to summarize the actions with respective implementation period, associated costs and potential source of financing.

⁴ By definition of the Global Environmental Facility (GEF), the incremental cost of protecting the global environment, including international waters, is a measure of the economic burden that would be placed on a country for undertaking its development in a way that does so. It is recognised that development undertaken with *global* environmental protection in mind sometimes costs more than the same development pursued with only the national interest in mind.

1. MEASURES FOR MEETING NATIONAL ENVIRONMENTAL POLICY OBJECTIVES AND LEGISLATIVE REQUIREMENTS

1.1 Licensing of waste-water discharges

Convention requirement

Article 3 (b) of the Water Convention requires that: “Transboundary waters are protected against pollution from point sources through the prior licensing of waste-water discharges by the competent national authorities, and that the authorized discharges are monitored and controlled.”

Current state of implementation of the requirement, policies and trends

Licensing of waste-water discharges was introduced by the Georgian Law on Water (1997) which established procedures and rules for issuing water abstraction and wastewater discharge licenses. The Water Law is still in force. However its provisions related to licensing of water abstraction and wastewater discharges has been overridden by the Law of Permits and Licenses (2005) which provided a framework and established a list of all types of licenses and permits, including environmental, which could be applied in Georgia. In the originally adopted text of this law permits were required for waste-water discharges. However, later in 2007 permits for waste-water discharges were abolished. Instead, so called integrated environmental permits were introduced by the Law on Environmental Impact Permits which is force since 1 January 2008.

Environmental impact permit is required for a number of economic activities that may have “significant adverse effect on the environment”. Environmental impact assessment (EIA) needs to be undertaken by project proponents and state ecological examination of the EIA needs to be conducted by environmental authorities before issuing an environmental permit.

For activities not requiring environmental impact permits so called “technical restraints” or emission limit values have been established (order of the Minister of Environment and Natural Resources N 745, 13 November 2008, on Environmental Technical Relements). Emission limits values are determined. There is single list of emission limit values for different substances with no distinction between types of polluting industries, their size or technologies used.

One of the major weaknesses of the system of environmental permits in Georgia is that it does not cover all activities that may indeed cause a significant pollution of water resources, including transboundary waters. E.g. food processing industry is not included in the list. Unlike internationally accepted practices, there is no scoping procedure to identify whether EIA is required; neither there is screening procedure to determine what information should be covered by an EIA in a specific project. Also, the law on

environmental impact permits does not put specific requirements for application of BAT or for any wastewater treatment technologies. Rather the law stipulates that a permit should be given only if environmental norms, as established by Georgian legislation, are met. It is implied that sanitary-hygienic norms and rules of surface water protection have to be observed⁵. These are basically soviet type standards based on no violence of PDK.

The Environmental Service that was established under the Ministry of Environmental protection and Natural Resources in 2008 on the basis of State Ecological Inspectorate is responsible for monitoring and control of waste-water discharges. Polluters themselves must undertake monitoring and accounting of water uses, including waste-water discharges, and submit the information to the Ministry annually.

Proposed actions and associated costs

In summary, currently there is no separate license or permit issued by environmental authorities for waste-water discharges. Georgian government will need to reintroduce wastewater discharge licensing or strengthen existing system of environmental impact permits broadening the scope of activities covered and elaborating requirements and procedures related to the control of wastewater discharges and their monitoring. This action will be a step forward for improving water resources management in the Country. It also will be in line with the requirements of the UNECE Water Convention, IWRM and EU accession policies pursued by Georgia.

Implementation of this measure will, most likely, require international technical assistance and training of existing MoE's staff initially. Requirement of 2 or 3 qualified extra staff may also be needed by the Ministry of Environment and Natural Resources. Alternatively, if the ministry's internal capacities will not be adequate, the ministry may wish to call on external expertise to assist as and when required. Operation of the system could be potentially fully financed by license or permit fees to be paid by water users.

⁵ Order of the Minister of Environment of Georgia on "Methodology for Calculation of Maximum Admissible Discharge Limits of Pollutants with wastewater into Surface Water Bodies" (#105, 2 August 1996); Order of the Minister of Environment of Georgia on "Rulses of Surface Water Protection" (# 130, 17 september 1996). Order of the Minister of Health on the Norms of the Qualitative State of the Environment (2001 and 2008).

1.2 Establishing limits for waste-water discharges based on BAT

Convention requirement

Article 3 (c) of the Water Convention requires that: “limits for waste-water discharges stated in permits are based on the best available technology for discharges of hazardous substances”.

Current state of implementation of the requirement, policies and trends

In line with this requirement of the Convention, Georgian Environmental Law (1996) Article 24 on License for Adverse Environmental Impact states: “The Ministry [of the Environment] issues license for adverse environmental impacts with due consideration of existing technologic levels, possibilities of implementing the best available technologies, practices and cleaner production methods, and hazardous substances emission limit values as defined by the environmental regulations”.

Despite the legal requirements, application of BAT is very poor in the country and emission limit values for wastewater discharges are based on soviet time water quality standards which are rather strict and practically very difficult if not impossible to be observed by industries.

The need of application of BAT and introduction of new approaches for setting emission limit values has been recognized widely in EECCA countries, including Georgia. Moreover at the request of the Ministry of Environment of Georgia the ongoing EU TACIS project Water Governance in the Western EECCA Countries is providing technical assistance for introducing EU practices and approaches for setting wastewater emission limit values.

Proposed actions and associated costs

Even though it is required by Georgia’s national legislation to set wastewater discharge limits based on BAT for discharges of hazardous substances, this requirement is poorly implemented in practice. The level of knowledge concerning BAT is insufficient and institutional capacities for this approach to be applied in Georgia are poor at present.

Georgia will need to use opportunities under the ongoing projects and apply for new international assistance programmes to strengthen its capacities for implementing BATs and adopting a new system of emission limit values using EU practices and approaches.

Implementation of this measure will require a significant international technical assistance, training of selected staff of the Ministry of Environmental Protection and Natural Resources (MEPRN) and requirement of qualified extra staff. However, it should be understood that it will take a relatively long period of time for Georgia to practically apply BAT based emission limit values. It is difficult to assess the cost for building

individual and institutional capacities for introducing BAT in environmental management in Georgia. However, once the system is in place, its operation could be potentially fully financed by license or permit fees to be paid by polluters. It should be also understood that this measure would be closely linked with strengthening license/permits system for wastewater discharges discussed in the previous section.

1.3 Ensuring biological treatment

Convention requirement

Article 3 (e) of the Water Convention requires that “at least biological treatment or equivalent processes are applied to municipal waste water, where necessary in a step-by-step approach”.

Current state of implementation of the requirement, policies and trends

A number of urban wastewater treatment plant (WWTPs) were built in Georgia in 1970-1980-ies, but most of the WWTPs have fallen into disrepair and are now out of use. An OECD funded study completed by COWI in 2005 developed a financing strategy for water supply and sanitation sector in Georgia⁶. This study determined that, according to some scenarios, total cost of wastewater collection and treatment, including costs of operation, maintenance, repair, rehabilitation, reconstruction and construction would be about 0.75 bln Georgian Lari (1GEL = 0.6 as of July 2009) for selected 20 urban settlements over the period of 2003-2023 in order to achieve the millennium development goals (MDG) in this sector⁷.

The largest WWTP located in the Kura basin, shared basin with Azerbaijan, is the one at Gardabani, which receives sewage and trade effluent from Tbilisi and the cities of Rustavi and Gardabani. Currently, this is the only operational urban wastewater treatment plant (WWTP) in Georgia. Gardabani WWTP is designed to provide primary (mechanical) and secondary (biological) treatment but the secondary treatment facility is out of operation due to structural and equipment deficiencies and financial difficulties. The private company that operates the plant is required under its contract to rehabilitate and operate the secondary treatment facility by the year 2017.

Currently there is no firm plan to extend the provision of urban sewerage and wastewater treatment in Georgia but there is a general commitment and intention that all urban areas

⁶ Support to Georgian Government in Developing and Implementing Financial Strategy for Urban Water Supply and Sanitation in Georgia and Carrying Out the Feasibility Analysis. Volume 1: Financing Strategy for W&WW Sector in Georgia. OECD. June 2005.

⁷ One target of the MDGs is to half, by 2015, the proportion of population that do not have sustainable access to safe drinking water and basic sanitation.

of significant size in Georgia should be provided with at least biological wastewater treatment in future.

Proposed actions and associated costs

Improving management of wastewaters and provision of at least biological treatment of municipal wastewaters must be a central objective of Georgia's long-term national environmental policies, including the policy of EU accession. Even though the country finds it difficult to mobilize financial resources for rehabilitating WWTPs, the need to make steps forward in this direction has been recognized and there are some projects for improvements in the Kura river basin. It is not easy to assess the full cost of providing biological treatment in entire Georgia or in the Kura river basin. However, preliminary analysis suggests that full rehabilitation and operation of WWTPs will cost **tens** of millions of USD. However, it must be taken into consideration that no immediate actions are needed but step-by-step approach, as required by the UNECE Water Convention, could be applied. Also, it should be understood that ultimately water users and polluters, including the population, will have to pay for the cost of treatment through water supply and sanitation charges/tariffs, as it is internationally accepted principle⁸, and as it is also required by the Georgian environmental legislation⁹.

⁸ The Polluter Pays Principle (PPP) is an environmental policy principle which requires that the costs of pollution be borne by those who cause it. In its original emergence the Polluter Pays Principle aims at determining how the costs of pollution prevention and control must be allocated: the polluter must pay.

⁹ Georgian Environmental Law (1996), Article 5. Basic Principles of Environmental Protection:
“During planning and implementation activities, the governmental bodies and physical or legal entities (irrespective of property and legal status) must followpolluter pays principle, by virtue of which polluter shall compensate for environmental damage”.

2. INCREMENTAL MEASURES

2.1. Bilateral and multilateral cooperation

Convention requirement

Article 9 of the Water Convention requires that “the Riparian Parties shall on the basis of equality and reciprocity enter into bilateral or multilateral agreements or other arrangements, where these do not yet exist, or adapt existing ones, where necessary to eliminate the contradictions with the basic principles of this Convention, in order to define their mutual relations and conduct regarding the prevention, control and reduction of transboundary impact”.

Current state of implementation of the requirement, policies and trends

There is no specific transboundary water agreement between Georgia and Azerbaijan. One of the objectives of the ENVSEC project is to help these countries to draft an agreement on the management of transboundary watercourses. The cost of drafting the agreement will be fully covered by the project. However, governments of Georgia and Azerbaijan will need to finance the functioning of a joint body to be established for the purpose of this agreement.

According to UNECE Water Convention tasks of the joint body shall be, inter alia, the following:

- To collect, compile and evaluate data in order to identify pollution sources likely to cause transboundary impact;
- To elaborate joint monitoring programmes concerning water quality and quantity;
- To draw up inventories and exchange information on the pollution sources;
- To elaborate emission limits for waste water and evaluate the effectiveness of control programmes;
- To develop concerted action programmes for the reduction of pollution loads from both point sources (e.g. municipal and industrial sources) and diffuse sources;
- To establish warning and alarm procedures; etc.

Proposed actions and associated costs

It is expected that initially functioning of the joint body will be supported by donor organizations. However, in a longer term, governments of Georgia and Azerbaijan will need to finance the joint body themselves.

Functioning of the joint body may include the following costs:

- Staff work: 3-4 people part time, plus one fulltime secretary;
- Travel cost for about 5 people with 2 meetings per year;

Real cost will be largely determined by how much countries will be willing to pay for the cooperation.

2.2. Joint monitoring and assessment

Convention requirement

Article 11 of the convention requires that the “Riparian Parties shall establish and implement joint programmes for monitoring the conditions of transboundary waters including floods and ice drifts, as well as transboundary impact.

Current state of implementation of the requirement, policies and trends

A number of donor funded projects have been implemented or are still ongoing to support joint monitoring of transboundary rivers between Georgia and Azerbaijan. Among these are the following projects:

1. Water Management in the South Caucasus. Funded by the USAID (2000-2004).
2. Joint River Management Programme on Monitoring and Assessment of Water Quality on Transboundary Rivers. Funded by EU/TACIS (2002-2003).
4. Science for Peace Program - South Caucasus River Monitoring. NATO/ OSCE (2002-2008).
5. South Caucasus Water Program. Funded by the USAID (2005-2008).

Many of the projects supported joint monitoring and harmonization of rules for setting up and operation of monitoring programmes, measurement systems, devices, analytical techniques, information exchange, developing common databases, etc. Currently joint monitoring of transboundary rivers including Kura river and Alazani River is being supported by EU/TACIS project Trans Boundary River Management Phase II for the Kura River (2008-2010). Georgian environmental authorities will need to sustain the system after completion of the different projects.

Proposed actions and associated costs

Georgian environmental authorities will need to sustain and expand the system of joint monitoring built with the support of international projects. The need of joint monitoring and information exchange has been recognized and put into provisions of the governmental agreement on environmental cooperation between Georgia and Azerbaijan (1997) as well as in the memorandum of understanding between the Ministry of Environment of Ecology and Natural Resources of Azerbaijan and the Ministry of Environment protection and natural Resources of Georgia (2007)¹⁰.

Representatives of the Environmental Agency, the organization responsible for surface water monitoring in Georgia, estimate annual cost of joint monitoring to be in the range of 40-50 thousands GEL. This include monitoring in 4 points including Kura, Alazani and Iori rivers and Jandar lake, with about 30 water quality parameters analyzed every month.

¹⁰ For more information see the gap analysis document prepared under the project.

2.3 Exchange of information between riparian parties

Convention requirement

Article 13 of the convention requires that the riparian parties exchange reasonably available data, inter alia, on:

- (a) Environmental conditions of transboundary waters;
- (b) Experience gained in the application and operation of best available technology and results of research and development;
- (c) Emission and monitoring data;
- (d) Measures taken and planned to be taken to prevent, control and reduce transboundary impact;
- (e) Permits or regulations for waste-water discharges issued by the competent authority or appropriate body.

The convention stipulates that in order to harmonize emission limits, the Riparian Parties shall undertake the exchange of information on their national regulations.

Current state of implementation of the requirement, policies and trends

A first attempt to exchange information between Georgia and Azerbaijan on the state of transboundary waters was made under the USAID funded project Water Management in the South Caucasus (2000-2004). Among other things, this project included capacity building for monitoring and exchange of hydrological and water quality data in participating countries. Demonstration projects were developed in each country to begin basic data collection for a monitoring program. Hydrological and meteorological stations were rehabilitated and equipment was provided for a revitalized monitoring program. Water Resources Database Management System and web sites for exchanging water information were developed at hydro-meteorological departments in participating countries. Since then Georgian environmental authorities regularly update the website with hydrological and water quality data for Kura and Alazani rivers on two transboundary points with Azerbaijan. The data is easily accessible at the web site <http://www.hydromet.ge/en/data.htm>.

According to the Georgian Water Law, data relating to water resources (surface water, groundwater quality and quantity, water use, permits, etc.), which are collected in the course of monitoring activities should also be fed into the state water cadastre. The work for updating the cadastre started with the technical assistance provided through the USAID South Caucasus Water Programme. About 0.5 mln USD was allocated to develop cadastres for Georgia, Azerbaijan and Armenia and information exchange system. However the work was not finalized and it is being continued now with the assistance of the EU/TACIS project Trans Boundary River Management Phase II for the Kura River. When finished, the cadastre would consist of 5 databases on water use permits, wastewater discharge permits, actual water use, water quantity and quality, respectively. Development of the cadastre will facilitate information exchange between Georgia and Azerbaijan at minimal cost using modern information technologies such as the internet.

Proposed actions and associated costs

Information exchange between Georgia and Azerbaijan related to water resources management is in a rudimentary stage at the moment. However there is a recognition of the need to develop the information exchange system. Namely, article 12 of the governmental agreement on environmental cooperation between Georgia and Azerbaijan (1997) states that “the Parties will be coordinating their activities and exchange information in the field of environmental protection”. Article 2 of the agreement states, that “Parties will establish inter-linkage between national systems of monitoring of the environment and respective databases.”

Initial steps have been made under the USAID and EU/TACIS funded projects for developing common databases and information exchange systems between Georgia and its neighbors. There is a good potential for receiving further international support for developing the system. However, in a longer term, cost of operation, maintenance and further development of the system will be largely determined by how much riparian countries will be willing to invest in the information exchange and cooperation. It should be noted that availability of electronic databases and the internet significantly reduces the costs of information exchange.

2.4 Warning and alarm systems

Convention requirement

Article 14 of the Convention requires that the “Riparian Parties shall without delay inform each other about any critical situation that may have transboundary impact. The Riparian Parties shall set up, where appropriate, and operate coordinated or joint communication, warning and alarm systems with the aim of obtaining and transmitting information”.

Current state of implementation of the requirement, policies and trends

An International Warning and Alert Plan for the Kura River Basin was prepared under the project Transboundary Cooperation for Hazard Prevention in the Kura-river Basin (05/2003 – 12/2006). The project was implemented by the German Federal Environmental Agency with the support of the German Federal Ministry for the Environment, Nature Protection and Nuclear Safety. The project covered Georgia, Azerbaijan and Armenia¹¹.

¹¹ More details on the project and plan could be found at the following internet site:
http://www.kura.iabg.de/hauptwarnzentralen_engl.htm

The Kura river basin was divided into three reporting zones which correspond to the countries' respective shares of the river basin. A Main International Warning Centre (MIWC) started to operate in each of the reporting zones.

The functions of the Main International Warning Centers include, in particular:

- prompt acknowledgement of the receipt of reports;
- prompt transmission of the reports using prescribed reporting model;
- transmission of the current status of the water pollution event based on continuous monitoring of its development by the national / regional competent authorities;
- reporting of identified damage or other impacts.

In the Republic of Azerbaijan, the function of Main International Warning Centre (MIWC) is fulfilled by the Caspian Complex Environmental Monitoring Administration of the Ministry of Ecology and Natural Resources of the Republic of Azerbaijan in Baku.

In Georgia, the function of Main International Warning Centre (MIWC) was fulfilled by the Centre for Monitoring and Forecasting (now the National Environmental Agency) of the Ministry of Environment Protection and Natural Resources.

Proposed actions and associated costs

Georgia and Azerbaijan will need to ensure that warning and alarming system established under the project Transboundary Cooperation for Hazard Prevention in the Kura-river Basin is maintained and develop, as appropriate. This will require provision of sustainable funding for covering operation and maintenance of existing system including 24 hours work of operators, communication, operation and maintenance of the communication equipment. Additional funding will be required for further development of the system if countries will wish to do so in the longer term.

2.5. Mutual assistance

Convention requirement

Article 15 of the Convention states that “if a critical situation should arise, the Riparian Parties shall provide mutual assistance upon request, following procedures to be established in accordance with paragraph 2 of this article.

Current state of implementation of the requirement, policies and trends

Currently no formal procedure for mutual assistance between Georgia and Azerbaijan exist, neither there are discussions or plans on this issues. However, cooperation and mutual assistance in extreme situations on ad hoc basis has happened number of times.

Proposed actions and associated costs

As required by the Convention, Georgia and Azerbaijan shall elaborate and agree upon procedures for mutual assistance addressing, inter alia, the following issues:

- The direction, control, coordination and supervision of assistance;
- Local facilities and services to be rendered by the Party requesting assistance, including, where necessary, the facilitation of border-crossing formalities;
- Methods of reimbursing assistance services.

It is suggested that the countries apply for international assistance to develop and agree the procedure for mutual assistance. It is feasible that experts’ work for developing the procedures will be supported by donors. As for the cost of assistance in particular cases it will largely be determined by respective circumstances and the scale of assistance needed. Moreover, as mentioned, methods and procedures should be in place to ensure that assisting country is fairly reimbursed for assistance services provided with a good faith.

ANNEX

Cost Analysis Table

Note:

Cost categories: Low cost < 10 000 USD per year; Medium cost >10 000 < 50 000 USD per year; High cost > 50 000 USD per year.

Implementation periods: Short term < 3 years; Medium term > 3 years, < 10 years; Long term > 10 years.

	Measures	Cost Analysis	Cost category	Implementation period	Potential Source of Funding
Measures for Meeting National Environmental Policy Objectives and Legislative Requirements					
1	Reintroduction of licensing of waste-water discharges	Implementation of this measure may require international technical assistance and training of the MEPNR staff. Requirement of 2 or 3 qualified extra staff may also be needed by the Ministry of Environment Protection and Natural Resources. Alternatively, if the ministry's internal capacities will not be adequate, the ministry may wish to call on external expertise to assist as and when required. Operation of the system could be potentially fully financed by license or permit fees to be paid by water users.	Medium cost	Medium term	International + governmental + operation costs of the system could be covered through license fees.
2	Establishing Limits for Waste-Water Discharges Based on the BAT	Implementation of this measure will require a significant international technical assistance, training of MoE's staff and requirement of qualified extra staff. It will take a relatively long period of time for Georgia to practically apply BAT based emission limit values. Once the system is in place, its operation could be	Medium cost	Medium term	International + governmental + operation costs of the system could be covered through license fees.

		potentially fully financed by license or permit fees to be paid by polluters. This measure would be closely linked with strengthening license/permits system for wastewater discharges.			
3	Ensuring at Least Biological Treatment	Preliminary analysis suggests that full rehabilitation and operation of WWTPs will cost tens of millions of USD. However, it must be taken into consideration that no immediate actions are needed but step-by-step approach, as required by the UNECE Water Convention, could be applied. Also, it should be understood that ultimately water users and polluters, including the population, will have to pay for the cost of treatment through water supply and sanitation charges/tariffs, as it is internationally accepted principle, and as it is also required by the Georgian environmental legislation.	High cost	Long term	Government may provide investment costs for municipal WWTPs, operation must be covered through user fees. Industries must cover all cost related to treatment of their wastewaters.
Incremental Measures					
4	Developing bilateral cooperation, including a bilateral agreement and establishment of a joint body with the riparian countries	<p>It is expected that initially functioning of the joint body will be supported by donor organizations. However, in a longer term, governments of Georgia and Azerbaijan will need to finance the joint body by themselves.</p> <p>Functioning of the joint body may include the following costs:</p> <ul style="list-style-type: none"> - Staff work: 3-4 people part time, plus one fulltime secretary; - Travel cost for about 5 people with 2 meetings per year; <p>Real cost will be largely determined by how</p>	Short to long term	Low to medium cost	International assistance in the short term. Internal governmental long-term financing.

		much countries will be willing and able to pay for the cooperation.			
5	Establishing a Sustainable System of Joint Monitoring and Assessment	Initial estimate of annual cost of joint monitoring is in the range of 40-50 thousands GEL. This include monitoring in 4 points including Kura, Alazani and Iori rivers and Jandar lake, with about 30 water quality parameters analyzed every month.	Short to long term	Medium cost	International assistance over the short term. Internal governmental long-term financing.
6	Exchanging Information Between Riparian Parties	Initial steps have been made under the USAID and EU/TACIS funded projects for developing common databases and information exchange systems between Georgia and its neighbors. In the longer term, cost of operation, maintenance and further development of the system will be largely determined by how much riparian countries will be willing to invest in the information exchange and cooperation. Availability of electronic databases and the internet significantly reduces the costs of information exchange.	Short to long term	Low cost	International assistance over the short term; Internal governmental long-term financing.
7	Establishing Sustainable Warning and Alarm Systems	Georgia and Azerbaijan will need to ensure that warning and alarming system established under the project Transboundary Cooperation for Hazard Prevention in the Kura-river Basin, funded by the German Government, is maintained and develop, as appropriate. This will require provision of a sustainable funding for covering operation and maintenance of existing system including work of 2 full-time operators (24 hours total work per day), cost of	Short to long term	Low cost	Internal governmental long-term financing.

		communication, operation and maintenance of the communication equipment. Additional funding will be required for further development of the system if countries will wish to do so in the longer term.			
8	Establishing Procedures for Mutual Assistance	Georgia and Azerbaijan could apply for international assistance to develop and agree the procedure for mutual assistance. It is feasible that experts' work for developing the procedures will be supported by donors. Cost of assistance in particular cases will largely be determined by respective circumstances and the scale of assistance needed. Methods and procedures should be in place to ensure that assisting country is fairly reimbursed for assistance services provided with a good faith.	Short to long term	Low cost	Internal governmental long-term financing.