

# Accidental Water Pollution In Georgia

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CENN's mission is to foster modern and sustainable development values and practices through the bridging of society and environment.

We strive to build strong and responsible civil society, good governance and accountable business to safeguard our environment and improve people's lives.



**Civil society development and institutional strengthening**



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**Sustainable development and communication**

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## Country Background

- Georgia covers a territory of **69,700 km<sup>2</sup>**
- The current estimated population is **4.6 million**.
- Approximately 53 % of the Georgian population live in urban areas.

Georgia is one of the world's richest countries in terms of water resources:

- There are more than 26,000 rivers with a total length of about 60,000 km
- 869 lakes and reservoirs make up a total surface area of about 175 km<sup>2</sup>
- Renewable groundwater resources are estimated at 573 m<sup>3</sup>/s, of which 285 m<sup>3</sup>/s are usable

Water resources in Georgia belong to **two major river basin groups**:

- The Black Sea basin in the west, with the main rivers Enguri, Rioni and Tchorokhi;
- The Caspian Sea basin in the east, with the main rivers Alazani, Iori and Kura.

**Two major transboundary river basins** fall within the territory of Georgia:

- Kura-Araks, occupying the greater part of the South Caucasus, with total area of 188,000 km<sup>2</sup>; and
  - Krami-Debed with the area of 8,340 km<sup>2</sup>.
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- The Black Sea costal line of Georgia has boundaries with:
    - Russian federation (from north, 723 km)
    - Turkey (from south-west, 252 km)
    - Armenia (from South, 163 km)
    - Azerbaijan (from south-east, 322 km)

However, taking in to account geographical location of Georgia and location of industrial facilities, the most important regions, from the point of view of the transboundary accidents , are the regions adjacent with Armenia and Azerbaijan.

The shares of industrial sectors in GDP of Georgia is distributed in the following way:  
(data from 2009)

Processing Industry	7.3%
Construction	5.3%
Generation-Distribution of energy, gas, water	2.6%
Mining Industry	06.%

- Water sewage systems are characterized by high indices of water pollution in Georgia.
- the quality of surface waters is affected mainly by mineral and oil processing industries, as well as the food industry.
- transboundary Kura-Aras and Khrami-Debed river basins are mainly polluted by municipal sewage, industrial discharges and agricultural runoff.
- One of the major pollution sources of rivers is accumulated wastes (Soviet legacy):  
accumulated mining tails, obsolete pesticides, abandoned factories
  - ✓ 100,000 tons of waste containing arsenic (4%-9% arsenic content) was found in 2 regions of Georgia that causes pollution of rivers Lukhumi and Tskhenistskali.

# Statistics on chemical accidents



- The Department of Emergency Situations records **1-3 chemical industrial accidents a year** in Georgia (mainly, by oil and oil products spills or liquidated ammonia leakage).
- According to the Environmental Inspectorate, in 2007-08 9 instances of accidental chemical pollution happened in Georgia. 4 of these 9 accidents polluted water resources.



## The laws regulating environmental protection and pollution management in Georgia include:

- Law “On Environment Protection“
- Law “On Water”
- Law “On Public Health”
- Law “On Regulation and Engineering Protection of the Sea Shores, Reservoir and River Banks”
- Law “On transit and import of wastes on the territory of Georgia”
- Law “On health protection”
- Law “On import-export control of ammunition, military techniques and dual purpose materials”
- Law “On pesticides and agrochemicals”
- Law “On conservation of soil and rehabilitating-improving its productivity”

## **Law “On licenses and permits”**

Regulates the field of licenses and permits, specifies the types of licenses and permits, establishes the rules of issuance, change and cancelation of licenses and permits.

## **Law “On environmental impact”**

Establishes the list of activities subject to ecological expertise, as well as legal basis for permitting environmental impact, carrying out ecological expertise when issuing permits and ensuring public information and participation.

According to this law applicants have to present, to the MoE, information on the impact of activities in the environment and an action plan in case of an emergency situation.

## **Law “On protection of population and territories against natural and technogenic emergencies”**

Aims to protect population and territories against natural and technogenic emergencies, Prevent emergency situation and mitigate consequences.

## **Law “Control of Technical Hazards”**

Regulates how chemical accidents are dealt within Georgia, it covers:

- The control of placement, design and construction of dangerous enterprises
- The management systems, safety declarations and inspections of chemical facilities
- The emergency response plans and registration of chemical facilities

## **Law “On compensation of damage caused by chemical substances”**

Outlines the obligation of a polluter to compensate environmental damage to the state; it is the responsibility of the Ministry of Environmental Protection.

## **The Code of Administrative Violations**

Highlights administrative penalties in case of implementation of activities that are implemented without relevant permits or are violations of the conditions of environmental impact permit.

## **National response plan to natural and technogenic emergencies**

Gives a general scheme of state response to emergencies

- Defines 17 functions of inter-support of state institutions, tasks to be fulfilled in the framework of these functions and responsible and auxiliary agencies for each function
- The National Response Plan must be a unification of the plans of state institutions involved in the “unified system”. This implies that those institutions have to develop those plans.
- Defines the forecast of emergencies and provisions for preparedness as tasks of the “unified system”.

***The Ministry of Environment Protection has not developed the plan yet.***

# Legal Framework - Limitations



- Low capacity of governmental agencies to implement the legal requirements
- Out-of-date facility and chemical databases
- Guidelines for chemical facilities that are outdated or not applicable
- Insufficient safety requirements and weak preparedness for accidents
- Non existence of a National Response Plan in all institutions (i.e. Ministry of Environment Protection)

## **The Code of Administrative Violations of Georgia**

Considers administrative penalties in case of the implementation of activities subject to permitting without a relevant permit.

It also considers penalties if activities are implemented that violate the conditions of the environmental impact permit. In particular:

- Implementation of an activity subject to environmental impact permitting without a relevant permit is an action punishable by a penalty of 7,000-10,000 GEL;
  - Implementation of an activity that violates the conditions of an environmental impact permit incurs a penalty of 5,000 GEL.
  - Activities which are not subject to ecological expertise shall observe environmental technical regulations. An administrative penalty will be imposed for infringement of these regulations.
- In 2007-08 there were 9 instances of accidental chemical pollution in Georgia that caused a total of 3,694,050.44 GEL (~1,653,000 EUR) worth of damage, and resulted in fines totaling 1,090 GEL (~490 EUR).

However, the majority of these cases were referred to criminal courts, and as such, were not punishable by fines.

## According to the **Law on Licenses and Permits**

- Non-fulfillment of license/permit conditions by a license/permit holder incurs a penalty in accordance with the rules established by legislation. The rate of the penalty is defined by Law. Repeated non-fulfillment of license/permit conditions by a license/permit holder incurs tripled penalty costs.

## According to the **Law on Control of Technical Hazards**

- Non compliance to the construction permit conditions or non-fulfillment of construction safety measures are subject to corresponding fines. Above this, permit holders are obliged to cover any costs imposed by a failure.

## ***Ministry of Environment Protection***

Responsible for the implementation of all environmental protection laws and treaties. It is also responsible for providing the Georgian public with access to environmental information. Relevant departments within the Ministry include:

- *The Department of Integrated Environment Management*
  - *The Division of Water Resource Management*
  - *The Division of Waste and Chemicals*
  - *The Division of Air Protection*
- *Department of Ecological Expertise and Inspection*

## ***The Ministry of Labor, Health and Social Affairs***

Responsible for ensuring safe environment for public health.

The Ministry develops environmental quality norms, including for water.

## ***The Ministry of Economy and Sustainable Development , sub agency – Technical and Construction Inspection***

Supervises operation of dangerous enterprises in respect of meeting enterprise safety requirements. Violation of safety rules is subject to fine sanctions.

## ***The Ministry of Energy and Natural Resources of Georgia***

Issues licenses for natural resource consumption (among them licenses for underground waters).

**Inspectorate of Environment Protection** under the Ministry of Energy and Natural Resources carries out planned and random surveillance of permit and license conditions; prevents and discloses administrative infringements and cases of illegal use of natural resources and environmental pollution.

## ***The Ministry of Internal Affairs***

Responsible for the enforcement of the legislation governing water quality and the management of disaster situations (including pollution), under the ***Management of Emergency Situations Department***.



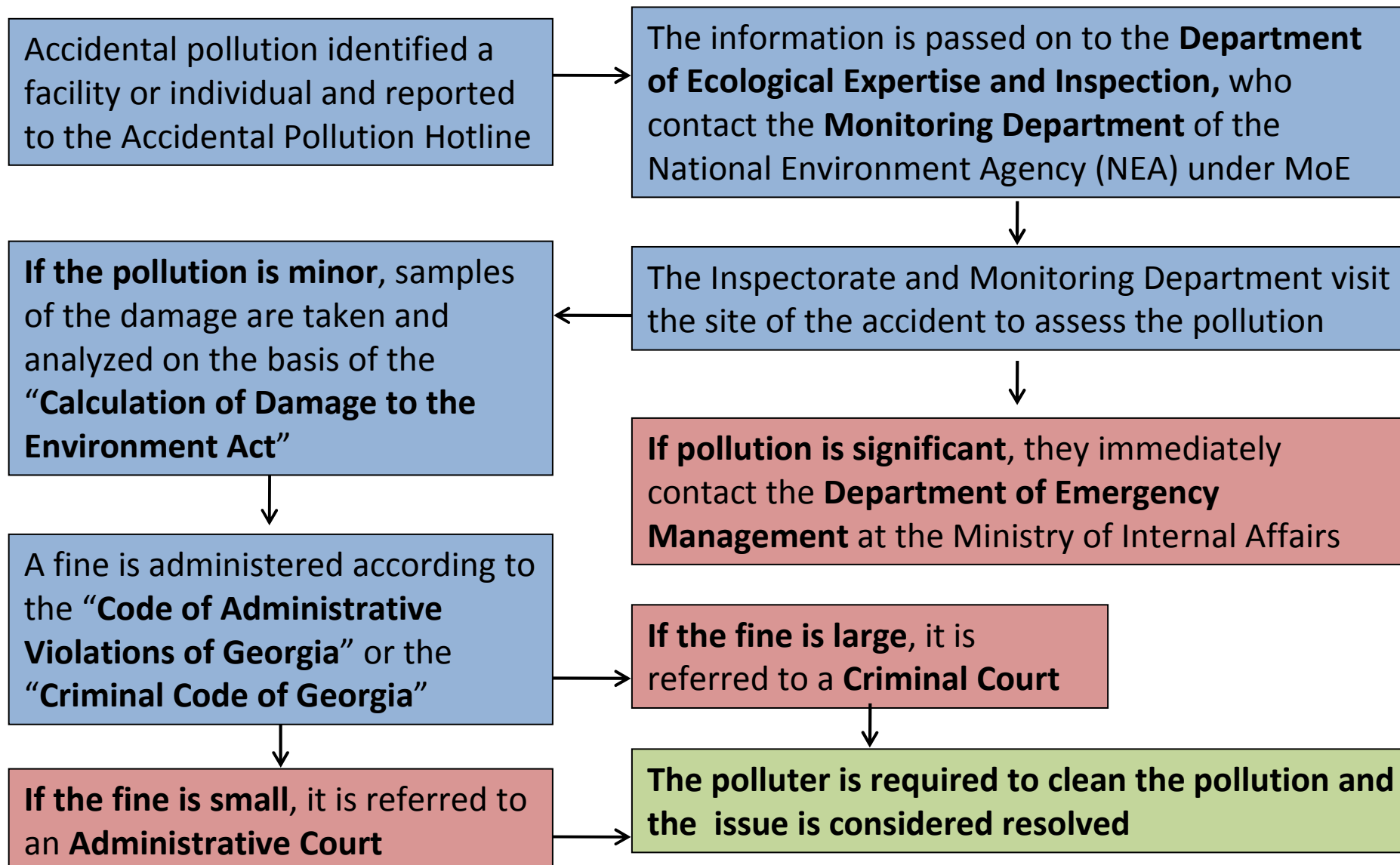
# Institutional setting - Limitations

Capacity within the governmental Institutions to deal with accidental water pollution is low and suffers from the following issues:

- **Lack of international, norms or standards** (with regards to accidental water pollution) in the responsible Ministries.
- **Weak coordination** between ministries.
- **Funding limitations** within the Ministries (particularly the Ministry of Environment Protection).
- **Absence of expertise** among employees.
- **No international treaties or agreements ratified** regarding accidental water pollution, and low levels of international communication between neighboring states on this issue.



# Reporting and response process in the case of accidental water pollution



## Reporting and response process in the case of accidental water pollution - Problems



The outlined process has a number of problems and limitations:

- There currently exist two Departments responsible for inspection - Department of Ecological Expertise and Inspection at the Ministry of Environment Protection, and the Inspectorate of Environment Protection within the Ministry of Energy and Natural Resources. There is no clear division of tasks between these two departments.
- Department of Ecological Expertise and Inspection does not have their own equipment necessary for the evaluation of the environmental pollution.
- The Accidental Pollution Hotline is not suitably attended by Ministry employees.
- Knowledge of the Accidental Pollution Hotline is low amongst industry employees and concerned citizens, resulting in low instances of reporting.
- The fines for polluters do not currently take into account the size of the polluters, consequently they are not always equitable.

# Interantional Warning and Alert Plan for the kura River Basin



In 2003-2006 the Umweltbundesamt, German Ministry of Environment and the governments of Georgia, Armenia and Azerbaijan, launched the International Warning and Alert Plan for the Kura River Basin.

The three objectives of the project were:

- Determination of the technical and administrative feasibility for consultancy services.
- Preparation of a warning and alarm system in Armenia, Azerbaijan and Georgia.
- Registration of all activities relevant for industrial activities in the Kura river basin (Pilot project).

# International Warning and Alert Plan for the Kura River Basin



The achievement of these project goals was initiated by implementation of the following tasks:

- Development of an international warning and alarm plan in the Kura river basin watershed.
- Implementation of international main warning centers for cross-national communications.
- Creation of a data collection on potential watercourse endangerment, with evaluation algorithm.
- Selection and investigation of relevant plants with high potential hazards to water.
- Recommendations for implementing international experience, directives, and laws.
- Participation and orientation of international presentations.

# International Warning and Alert Plan for the Kura River Basin

Although these tasks were successfully completed within the timeframe of the project, since completion of the Project, in 2006, there has been no continuation of the activities or maintenance of the Project's achievements.

To date:

- There has been no continuation of the progress made under the initiative.
- Contact points are no longer active.
- The employees whose capacity was built by the initiative are no longer working on any warning or alert plans.



The Kura River in Georgia

# Conclusions and Recommendations

- Although Georgia has the legislative and institutional facilities required to implement a successful Accidental water pollution response plan, it is lacking in institutional capacity and funding.
- Reporting process to deal with incidents of accidental water pollution exists, however it suffers from a range of problems which limit its effectiveness and scope.

## Recommendations:

- **Policy:** International (to join and ratify), regional and bilateral (start negotiations, develop regional and/or bilateral agreements and EWSs), national (improvements to reflect international and bilateral obligations, guidelines, action plans)
- **Institutional:** relevant institutional set up to deliver taken obligations (preparedness, informing, warning, reporting, enforcing, monitoring, responding) at the international, regional, national and local levels
- **Capacity building:** state (central and local authorities), facility operators, specialists, NGOs
- **Resilience enhancement, education and awareness raising** of effected communities, institutions, children, etc.
- **Pilot projects (regional, bilateral, national):** testing policies, techniques, methodologies, capacity building and educational programs, EWSs, etc.

## CENN Contact Information:



# Thank you for listening

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