Georgia and EU Water Framework Directives: Challenges and Opportunities

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- Water Monitoring history in Georgia
- Transboundary Water Monitoring
- EU- WFD

Three Countries of the South Caucasus

Rivers of Georgia

- 26 000 rivers (98% less than 25 km)

-12 transboundary rivers

- 800 lakes
- 786 glaciers (occupying about 559,9 square km)
- Western Georgia (75%)
- Eastern Georgia (25%)

Brief overview of surface water monitoring in Georgia

History:

- Sporadic hydrological (quantity) observations started in 19-th century about 160 years ago
- Regular hydrological observations started in 1930-ies
- In 1960-ies hydrological observation stations covered practically all major and medium size rivers of Georgia.
- Regular observation of surface water quality started in 1950-ies
- In 1980-ies coverage of observation sites and number of water quality monitoring parameters reached its maximum – about 170 posts were established and 56 parameters, including hydrological, physical, chemical and hydro-biological parameters, were monitored on about 72 rivers.
- This system was an integral part of larger Soviet system of water monitoring

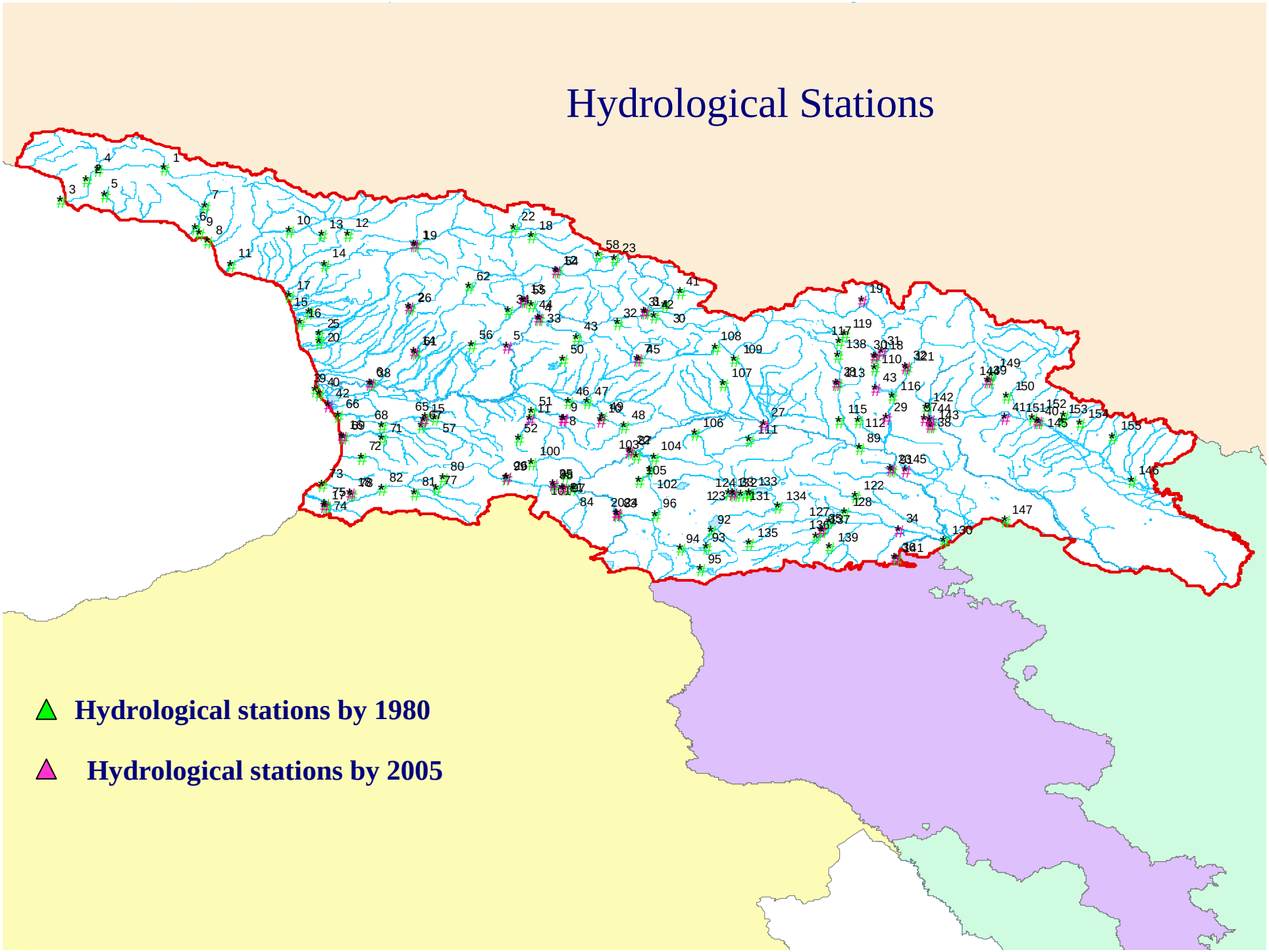
Brief overview of surface water monitoring in Georgia

Recent developments:

- The monitoring system started to deteriorate in 1990-ies with the collapse of the USSR and economic downturn in Georgia

- The monitoring network shrank drastically, monitoring stations closed down and capacities to undertake water quality analysis was reduced significantly

Hydrological Stations



Recent developments:

- Revival of the system started from 2000, mostly with international assistance (NATO, OSCE, USAID, UNDP, GEF, German Government, Finnish Government etc)
- From 2007 State budget increased in the field of Environmental monitoring

Atom-Absorption Spectrometer (PERKINELMER AAnalist 800)

Semiconductor gamma-spectrometer Canberra

Chromato-mass-spectrometer TRACE DSQ

TRANSBOUNDARY RIVERS OF GEORGIA

BLACK SEA

Psou

Chorokhi/Coruh

Machakhelisckali

CASPIAN SEA

- Kura
- Iori
- Alazani
- Debet
- Agstev
- Potskhovi
- Ktsia-Khrami
- Andis Koisu
- Terek

Transboundary Functions and Issues

The three South Caucasus countries have, related with water, a lot of common. All are using water more or less for:

- Irrigation,
- Drinking water supply
- Hydropower
- Recreation

The Main Problems

All three countries are facing similar problems. The major ones are:

- Organic pollution
- Pollution with hazardous substances
- Scarcity
- Health
- Erosion

South Caucasus River Monitoring

- Monitoring analyses are being performed in 2 stages: in dynamic and static conditions. First in the field (on rivers) with the newest hand-operated devices and after probe preparation sampling with high accuracy measurements in the laboratories on Atomic Absorption Spectrometer type operation.
- a) monthly measurements of the basic parameters of water quality: Discharge; Specific conductivity; Dissolved solids; PH; Temperature; Dissolved oxygen; Redox potential

  b) laboratory analysis:

  Heavy metals: Cu, Mo, Pb, Zn, Hg, Ag, Co, Cr, Ni, Mn, Cd, As

  c) Ions: SO_4^{--}, HCO_3^{-}, CO_3^{--}, Na^{+}, K^{+}, Mg^{--}, Ca^{++}, Total P and N.

  d) Radionuclides ^{238}U, ^{232}Th, ^{235}U families and others radionuclides - ^{40}K, ^{137}Cs at all

  e) Persistent organic pollutants (POPs): pesticides: (9 pesticides); industrial chemicals: PCBs (Polychlorinated Biphenyls); unpremeditated waste products: Dioxins, Furans

Specific objectives

Increase technical capabilities (analytical chemistry and its application in water system, sampling and monitoring, database management and communications) among the partner countries.

Cooperatively establish standardized common sampling, analysis and data management techniques for all partner countries (SOP). Implement standards for good laboratory practice (GLP), quality assurance (QA) and quality control (QC).

Establish database management, GIS and model sharing system accessible to all partners via the WWW.

Establish social framework (i.e., annual international meetings) for whole-watershed management.

International Cooperation
(Bilateral Agreements)

- Agreement on Environmental Cooperation between the Government of Georgia and the Government of the Republic of Armenia (1997)

- Agreement on Environmental Cooperation between the Government of Georgia and the Government of the Republic of Azerbaijan (1997):

International Cooperation (International Legal Aspects)

Country	Helsinki Convention	London Protocol	Industrial Accidents Convention	Aarhus Convention	Espoo Convention
Armenia	-	1999 -S	1997 -R	2001 -R	1997-R
Azerbaijan	2000 -R	2000 –R	2004 -R	1999 –R	1999 –R
Georgia	-	1999 –S	-	2000-R	-

S – signature, R –ratification

European Neighborhood Policy

- ENP - Action Plan (signed in 2006) is a political document laying out the strategic objectives of the cooperation between Georgia and the EU
- Implementation of the Action Plan will significantly advance the approximation of Georgian legislation, norms and standards to those of the European Union.

EU WFD – Georgian Challenge

“Water is not a commercial product like any other but, rather, a heritage which must be protected, defended and treated as such”

Problems and Challenges

- Legal changes (abolishing of the “polluter pays principles”, “simplifying” of the permitting system – abolishment of the permissions for the water abstraction and wastewater discharge)
- Institutional changes (abolishing of the State Department for Geology, State Sanitary Surveillance Service)

Problems and Challenges

- Management problem (fragmented, under funded and poorly governed
- Water monitoring system in Georgia has been operating without a clear strategy and effective policy and legal framework
- The system is based mostly on Soviet time approaches, methodology and practices and it operates “by inertia”
- No detailed proposals or drafts of legal acts is enacted for water monitoring and assessment.
- No precise proposals on the number of monitoring stations, sampling frequencies, on monitoring parameters, etc.

IWRM – Georgian Choice

- River basin is managed holistically
- All stakeholders are participated

National Plan for IWRM

- Define steps and actions that are needed at a National level to support effective and integrated water resources management at the river basin level
- Estimate costs
- Establish Inter-Ministerial Working Group

IWRM – Problems and challenges

- Excluding underground water from IWRM

- Unclear status of the water basin management agencies

EU WFD – Georgian Draft Water Law

- Establishment of programmes for the monitoring of

- Surface waters

- The Programme will cover:

- Ecological and chemical status and ecological potential;

EU WFD – Georgian Draft Water Law

- Ensure standardized methods for analysis and monitoring (National Core set of Indicators based on UNECE Recommendations)
- Standards for sampling and monitoring of water quality elements
- a) surveillance monitoring, b) operational monitoring and c) investigative monitoring

EU WFD – Georgian Draft Water Law

- *Annex V of the directive lays down requirements to and provides guidance for arranging monitoring systems*

- Five classes of ecological and chemical status established for water bodies: a) high, b) good, c) moderate, d) poor and e) bad ecological status

- Harmonization of Georgian legislation with the European standards are still far to achieve but we understand that implementation of these conditions can be the only possibility for ensuring the good environmental governance

Thank you !