Ministry of Environment and Natural Resources
Protection of Georgia

Policies, data collection, strengths and challenges related to water quality in Georgia

13th JTF on Environment Statistics and Indicators
29 June, 2017 Geneva

Maia Javakhishvili

Main Goals

Sustainable Development

Prevention of Environmental Degradation

Means for Achieving Key Goals

Good Environmental Governance
Public Awareness
Greening the Economy
EU Integration
EU Integration

- European Neighbourhood Policy (ENP)
- Association Agreement and DCFTA
- AA/DCFTA Roadmap
- Updated Roadmap and 1-year Report

Roadmap for EU approximation;
AA/DCFTA Annual National Plans;
New Units responsible for EU integration:
- Sustainable Development and EU Integration Policy Division
- EU Legislation Harmonisation Division

THE GLOBAL GOALS
For Sustainable Development

Government Administration
SDG Nationalisation
Ministry of Environment and Natural Resources Protection of Georgia
environmentally related goals and targets
### Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable

<table>
<thead>
<tr>
<th>TARGET</th>
<th>GEORGIA ADJUSTED</th>
<th>BASE LINE INDICATOR</th>
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<tr>
<td>11.6   By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management</td>
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<td>11.6.1. Annually generated municipal waste - 900 thousand tons. Annually collected and disposed municipal waste - 700 thousand tons. 11.6.2. Municipal waste placed on landfills - 100%; Recycled 0 %; 11.6.3 Air pollution annually measured - in 5 big cities of Georgia (Tbilisi, Batumi, Kutaisi, Zestaponi and Rustavi); 2015 average air pollution in Tbilisi (in mg/m³); PM 0.77; Sulfur dioxide 0.14; carbon monoxide 3.1; nitrogen dioxide 0.084; lead 0.0052; ozone 0.0469. Out of above listed six components, five exceed the maximum allowable concentration (MAC), except lead.</td>
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### Goal 12. Ensure sustainable consumption and production patterns

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<td>12.8   By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature</td>
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<td>12.8.1. Because of the absence of Strategy on Environmental Education for Sustainable Development, integration of environmental education into high or continuous education system is limited. Basic framework document of the standard - “Environmental Education for Sustainable Development” is already prepared, but not yet approved.</td>
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### Goal 13. Take Urgent action to combat climate change and its impacts

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<td>13.2   Integrate climate change measures into national policies, strategies and planning</td>
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### Goal 15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

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<td>15.2   By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and increase afforestation and reforestation by [x] per cent globally</td>
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<td>15.2.1. Forests occupy about 40 per cent of the territory, a total of 2,822,500 ha. From this, about 106,000 ha (3.5 %) can be considered to be sustainably managed. 15.2.2. No full-scale state inventory has been conducted during last 15 years and current data is mostly inaccurate. Between 2003 and 2015 690.4 ha were reforested within the state forest fund. According to 2013 estimates, 34,000 ha require afforestation and reforestation.</td>
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### Goal 15.5

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<th>GEORGIA ADJUSTED</th>
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<tr>
<td>15.5   Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species</td>
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<td>15.5.1 In 2014, total area of Protected Areas comprised 8.62% of the country’s territory. In recent years it has been doubled (101.59 ha) compared to the 2004 coverage (35.85 ha). 15.5.2 According to the available data, species that are in the “Red List” can be considered as the threatened species in Georgia there are 15672 listed species with various conservation status included in the Red List.</td>
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#### 15.5.2
- According to the available data, species that are in the “Red List” can be considered as the threatened species in Georgia there are 15672 listed species with various conservation status included in the Red List.
Legal Framework

**Law of Georgia on Water (16 October, 1997)**

- Sets up the legal basis for water resource protection and management

Main Sub-legal acts under the Law on Water:

- Regulation on the protection of Georgian surface waters from the pollution
- Regulation on water protection zones
- Methodology on the calculation on Maximal Admissible Discharges of pollutants in the wastewater discharged to the surface water
- Instruction of State Accounting of Water Use

Justification for the New Water Legislation

- Nominal and questionable legal validity of the most of the provisions of existing Law on Water
- Inconsistency of the latest water linked legislation to basic principles and provisions of the existing Law
- Outdated water resources management system (administrative approach)
- Obligations according the EU-Georgia Association Agreement:
  - Directive 2000/60/EC establishing a framework for Community action in the field of water policy
  - Directive 2007/60/EC on the assessment and management of flood risks
  - Directive 91/271/EEC on urban waste water treatment
  - Directive 91/676/EC concerning the protection of waters against pollution caused by nitrates from agricultural sources
Process of the preparation of the new Legislation

- Started in 2011 under the National Policy Dialogue in IWRM in Georgia
- 2012 – the Concept of the new Law approved by the NPD Steering Committee
- 2013 - first draft of the “Law in Water Resources Management” (support of the international experts from Finland)
- 2014 – 2015 – consultations with stakeholders, revision by international experts (UNECE), public hearings
- 2015 – comments from the Governmental Administration
- 2017 - Regulation Impact Assessment (ongoing), submission to the Parliament of Georgia

Institutional Setting
**Key Principles of the new Law**

**Institutional Setup for Integrated Water Resources Management**
- Intersectional Committee for Protection and Use of Water Resources
- Water Resources Management Service of the Ministry of Environment and Natural Resources Protection
- Water Basin Services
- Water Basin Councils

**Water Management unit**
- River basin/ river basin district

**Water classification according to EU approach**
- Water quality status
- Water use

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**Key Principles of the new Law**

**Water monitoring according to EU standards**
- Hydromorphological
- Biomonitoring

**Introduction of water use permits**
- Special permits for water abstraction and water discharge

**Polluter pays principle**

**Participatory decision-making**
Secondary Bylaws

6 by-laws has been drafted with support of UNECE and EU project “Environmental Protection of the International River Basins” (EPIRB):

- On identification and delineation of river basins
- On rules for identification and delineation of water bodies
- On the rules on composition and functioning of River Basin Councils
- On the approval of the procedure of the development, consideration and endorsement of river basin management plans
- On the rules for planning and implementation of water resources monitoring
- On Calculation of Maximum Admissible Discharge (MAD) Norms of Pollutants Discharged With Wastewater Into Surface Water Bodies

Delineation of the River Basins
Monitoring Points

Points Water Monitoring Points

158 Points
85 – in West Georgia
73 – in East Georgia
QA/QC

Sampling
Analytical Methods

Microbiological Laboratory
Water Monitoring

National Environmental Agency
Environment Pollution Monitoring Database

Quality Control Manager (Tbilisi Lab)

Pollution Monitoring Department

Environmental Information Service

MoENRP

Water Monitoring Data

Monthly Informative Bulletin “State of Environment of Georgia”

Brief interpretation
### UNSD/UNEP PILOT QUESTIONNAIRE 2017 ON WATER QUALITY (Rivers)

**Table WQ1: Water Quality of a selected river**

<table>
<thead>
<tr>
<th>Date</th>
<th>Company</th>
<th>mg/l</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>River1</td>
<td>9.15</td>
</tr>
<tr>
<td>2016</td>
<td>River2</td>
<td>9.02</td>
</tr>
<tr>
<td>2017</td>
<td>River3</td>
<td>8.95</td>
</tr>
</tbody>
</table>

### Notes
- **MPN/mL**: Most Probable Number per mL
- If the required data are not available, please leave the cell blank. If the reported value is not stated, the phenomenon in the column is not present or the value is less than half the unit of measurement, the cell should be filled with “-”.
- Please provide the performance Better But betters on site and data collection methodology to the water provider, such as a methods trial, and the type of the original data sources used (e.g., sensor or administrative source).
- Data can also be provided for the years 1999 and 2000. Select column E in column C, right-click, and select “Unhide”.
## UNSD/UNEP Pilot Questionnaire 2017 on Water Quality (Rivers)

### Table IVQ1: Water Quality of a selected river's selected monitoring location

<table>
<thead>
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</thead>
<tbody>
<tr>
<td>TSS (Total Suspended Solids)</td>
<td>mg/L</td>
<td>-</td>
<td>0.78</td>
<td>1.59</td>
<td>1.16</td>
<td>1.21</td>
<td>0.86</td>
<td>0.86</td>
<td>0.76</td>
<td>0.68</td>
<td>0.81</td>
<td>0.85</td>
<td>0.89</td>
<td>0.90</td>
<td>0.90</td>
<td>0.92</td>
</tr>
<tr>
<td>Electrical Conductivity (EC)</td>
<td>uS/cm</td>
<td>200</td>
<td>205</td>
<td>202</td>
<td>204</td>
<td>203</td>
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<td>201</td>
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<td>200</td>
<td>200</td>
<td>200</td>
</tr>
<tr>
<td>Faecal Coliforms (FC)</td>
<td>MPN/100mL</td>
<td>-</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
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<tr>
<td>pH</td>
<td>-</td>
<td>7.0</td>
<td>7.1</td>
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<tr>
<td>Other (specify)</td>
<td>-</td>
<td>-</td>
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- Please provide the Footnotes Section below information on the source and data collector methodology in the values provided, such as: a bacteriological method (a.u.), and the type of the sampling device used (e.g., grab, sieve, or administrative sample).

### Footnotes

## UNSD/UNEP Pilot Questionnaire 2017 on Water Quality (Groundwater)

### Table IVQ2: Water Quality of a selected groundwater body's selected monitoring location

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Electrical Conductivity (EC)</td>
<td>uS/cm</td>
<td>150</td>
<td>152</td>
<td>154</td>
<td>156</td>
<td>158</td>
<td>160</td>
<td>162</td>
<td>164</td>
<td>166</td>
<td>168</td>
<td>170</td>
<td>172</td>
<td>174</td>
<td>176</td>
<td>178</td>
</tr>
<tr>
<td>pH</td>
<td>-</td>
<td>7.0</td>
<td>7.1</td>
<td>7.1</td>
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<td>7.1</td>
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<tr>
<td>Other (specify)</td>
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### Footnotes

13
Averaging of all Georgian rivers qualitative data is not recommended because the dynamics of the natural resources and geographical environment interdependence is different, accordingly river chemical and biological quality indicators is different as well.
Challenges and possible solutions

✓ Water quality monitoring points and measured parameters are not sufficient
✓ Absence of web-based environmental data management and reporting systems
  - Outdated databases
✓ Insufficient quality control system
✓ Data reliability
✓ Lack of relevant trained staff
✓ Sharing of experience and good practice
✓ Monitoring data systematization and analysis using modern technologies

www.moe.gov.ge

Thank you

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