

ENVIRONMENT ASSESSMENT (SUMMARY)¹

A. Georgia's Environment and Its Changing Conditions

1. Economic growth considerations were given priority over environmental concerns during 2004–2012. However, since 2012 the government has accorded increased attention to fostering a development process that is sustainable and mindful of Georgia's many natural resource management challenges.

2. **Natural ecosystems.** Georgia's main ecosystems comprise forests (about 40% of the land area), grasslands (26%), wetlands (19%), and deserts and semideserts (6%). Management of these ecosystems has been constrained by inconsistent environmental policies; inappropriate governance systems for natural resources; the absence of a natural resource inventory and reliable data; unsustainable operations and weak law enforcement; pollution in some rivers and in the Black Sea, and unsustainable fishing, hunting, and poaching practices; low levels of public participation in decision-making processes; and limited public awareness. Georgia's protected areas play a significant role in biodiversity conservation and catalyzing socioeconomic development. The management system for protected areas is not yet effective.

3. **Land resource management.** Land in Georgia is divided into two legal categories: land designated for agriculture (40%) and land designated for non-agricultural purposes (about 60%).² Major land resource management challenges include land degradation (e.g., pasture erosion, soil salinity, decline in organic matter, and wind erosion), inefficient land resource management practices, limited access to information and technology, and weak communication among stakeholders that impedes the effectiveness of decision-making processes.

4. **Water resource management.** Georgia has an abundance of fresh water resources. They comprise more than 26,000 rivers with an annual mean total flow of 61.5 billion cubic meters (m³); 860 lakes and 43 artificial water reservoirs with a total volume of more than 400 million m³; 734 glaciers that accumulate 30 billion m³ of ice; more than 2,000 groundwater sources with a total yield of 160,000 m³ per day; and mineral water resources, estimated at 50 million m³ per day. Key issues related to water resource management include limited monitoring data on water quality and quantity; pollution by untreated municipal wastewater, landfills, and some large industrial facilities; degradation of Black Sea coastal waters; poor access to reliable, safe drinking water supply for segments of the population; and lack of protection measures for transboundary rivers and lakes. Further, sustainable integrated water resource management is not currently practiced in Georgia.

5. **Biological resources.** Georgia's biological resources consist of forests, freshwater and marine fish, and unique wildlife with a high economic value. Barriers to the effective management of Georgia's biological resources include limited data on the status of biological resources, unsustainable use of resources, inadequate licensing and control systems, forest diseases, invasion of alien species, and habitat degradation and fragmentation.

6. **Environmental impact of energy sector.** It is anticipated that there will be major investments in hydropower plants. The quality of environmental and social impact assessments for planned large and medium-sized hydropower plants and coal-fired power plants often does

¹ This summary is based on Asian Development Bank (ADB) 2013. *Country Environmental Note: Georgia*. Unpublished (available on request), and other analytical materials.

² Government of Georgia, Ministry of Environmental Protection. 2011. *National Report on the State of the Environment of Georgia 2007–2009*. Tbilisi.

not meet international standards. The lack of a comprehensive strategic environmental assessment (SEA) or an integrated river basin study for hydropower development plans could create significant negative environmental and social impacts for large areas of Georgia. The hydropower sector is also extremely climate sensitive, and ensuring sustained energy production from the sector will require building climate resilience into the design and operation of hydropower facilities.

7. **Environmental impact of transport sector.** Road transport is the main source of air pollution in urban areas of Georgia, comprising nearly 92% of the total volume of pollutants emitted by different sources. The environmental impact of road transport is exacerbated by the predominance of cars with outdated technologies and the use of low-quality fuels. The total volume of emissions tripled during 2000–2010.

8. **Environmental impact of water and other urban infrastructure and services sector.** Deficiencies in urban infrastructure, including water supply and sanitation, adversely impact water quantity and quality. Wastewater discharge into surface water bodies is the main source of pollution for water ecosystems, including the Black Sea. Old and damaged infrastructure adversely affects health.

9. **Legal framework and institutional capacity.** Frequent changes in legislation and institutions weaken the roles and functions of the agencies responsible for protecting the natural environment. Environmental legislation and enforcement needs to be improved to support the new mandate of the Ministry of Environment and Natural Resources Protection (MoENRP). Priority should be accorded to strengthening the MoENRP and executing agencies for donor-financed projects in building human resources for discharging their environmental functions.

10. **Climate change.** While greenhouse gas emissions are low at 14.27 million tons of carbon dioxide equivalent (tCO₂e) in 2011, Georgia aspires to low-carbon and climate-resilient development as stated in the National Environmental Action Plan (NEAP).³ The potential for emission reductions in Georgia is mainly in transport. Greenhouse gas emissions from transport grew significantly by 126% from 0.95 million tCO₂e in 2000 to 2.15 million tCO₂e in 2009.⁴ Georgia has limited capacity to anticipate and manage risks resulting from the expected rise in temperature, changes in precipitation, and increase in extreme weather events.

11. **Disaster risk management.** Georgia has been vulnerable to several natural hazards and disaster risks that have a statistically high probability of occurrence. These include the risks of seismic, hydrological, geological, and climatic hazards that have socioeconomic impacts and impacts on physical infrastructure. The incidence and magnitude of some of these risks (e.g., floods, debris flows, flash floods, droughts, avalanches, stone falls, land and water erosion, and landslides) are likely to increase as the result of climate change. The estimated cumulative losses from these natural hazards amounted to nearly GEL1.2 billion during 1995–2009.⁵ Several international development partners are helping to upgrade Georgia's capacity for disaster risk forecasting, preparedness, response planning, and management.

³ Georgia. 2014. *Georgia National Report on Progress towards Achieving the Millennium Development Goals*. Tbilisi.

⁴ World Resources Institute. 2013. *Climate Analysis Indicator Tool 2.0: Georgia*. <http://cait2.wri.org/wri/Country%20GHG> (accessed 10 October 2014).

⁵ Government of Georgia, National Environment Agency, Department of Management of Geological Hazards. 2011. *Overview of the National Report of the State of Environment of Georgia for the Period of 2007–2009*. Unpublished (available at http://momxmarebeli.ge/images/file_762444.pdf).

B. Environmental Policies and Institutions

12. The NEAP summarizes the government's strategic environmental priorities. The NEAP-2, covering 2012–2016, was approved in January 2012. It outlines 11 priority themes: water resources, ambient air quality protection, waste and chemicals, the Black Sea, biodiversity and protected areas, forestry, land resources, mineral resources and groundwater, disasters, nuclear and radiation safety, and climate change. The NEAP-2 also covers environmental impact assessment (EIA) and permitting, enforcement, monitoring, environmental education, and public awareness.⁶ In 2014, the MoENRP began to develop a new EIA and SEA legislation with the support from the multi-partner initiative Greening Economies in the European Union's Eastern Partnership Countries Programme. This initiative is supporting Georgia in strengthening its national capacity to integrate EIA and SEA procedures into national legal, regulatory, and administrative frameworks to enable it to join the Espoo Convention and its protocol on SEA.⁷

13. The main government agency responsible for the environment in Georgia is the MoENRP with a new name, status, and functions based on proposed legal amendments of November 2012, which returns natural resources protection, environmental inspectorate, and other relevant functions to the MoENRP.

C. ADB and other Development Partners in Environment and Climate Change

14. The priorities of the Asian Development Bank (ADB) have been identified based on alignment with the government's development agenda, selectivity in focusing limited resources on a small number of priority areas, and complementarity with other development partners. Ongoing ADB assistance that has direct environment benefits include the (i) Urban Services Improvement Investment Program to improve water supply and sanitation services in seven of Georgia's secondary towns; and (ii) Sustainable Urban Transport Investment Program to provide efficient, reliable, and affordable urban transport services.

15. Georgia receives financial and technical assistance on environmental issues from several development partners. The main environmental themes supported include environmental governance and monitoring (the European Union [EU], Germany, and the United Nations [UN]); climate change and natural hazards (the EU and the Global Environment Facility [GEF]); air quality (the EU, the Netherlands, and the UN); water management (the EU, the GEF, the UN, and the United States), waste management (the European Investment Bank, the EU, the GEF, the Netherlands, Sweden, and the UN); and biodiversity, protected areas, and forestry (the EU, the GEF, Germany, the United States, and the World Bank). ADB is providing regional technical assistance to expand Georgia's capacity on climate change.⁸ The technical assistance supported the development of a wind and solar energy atlas, and training of Georgian experts.

D. Recommendations for ADB Support for Environment and Climate Change

16. Under the country partnership strategy, 2014–2018 for Georgia, ADB will try to better mainstream environmental protection into support in the key sectors. Assistance will (i) keep environmental sustainability as the major strategic objective; (ii) comply with government priorities declared in the NEAP-2; (iii) address the challenges outlined in the country environment note; (iv) use ADB's comparative advantages in promoting knowledge products

⁶ Environmental issues are widely reflected in formal and informal education.

⁷ See United Nations Economic Commission for Europe. 2014. Start Up Workshop for the Development of a New Law on EIA and SEA in Georgia. <http://www.unece.org/index.php?id=35879>

⁸ ADB. 2009. *Technical Assistance to Georgia for Enabling Climate Change Interventions in Central and West Asia*. Manila.

and providing policy advisory services; and (v) fill gaps and achieve synergies with the activities of other development partners.

17. Climate change considerations will be mainstreamed in ADB operations, and will be a focus of ADB's support for energy, transport, and urban development, where there are clear links to climate change mitigation. ADB will support climate change considerations through policy dialogue, capacity development, and knowledge services.⁹ The same mainstreaming approach will be used to support disaster risk management, especially under ADB-financed assistance for urban planning and transport policy development.

18. Cleaner urbanization models should be encouraged to support Georgia's development. ADB's support for water supply and sanitation infrastructure is vital for Georgia's cities, and ADB will continue work in this area. In addition to water supply and wastewater treatment, ADB may support solid waste management, where potential areas are waste reuse, reduction, and recycling. Rehabilitation and development of wastewater treatment facilities, as planned under ADB's urban water supply and sanitation assistance, will continue to help reduce surface water pollution, including in the Black Sea coast area. ADB may also participate in and contribute to revisions and updates of regional and municipal development plans and city planning to make cities greener and more livable.

19. **Sustainable transport.** Opportunities exist to encourage sustainable transport to reduce road transport constraints on economic activity and achieve greenhouse gas reduction targets. ADB will assist through the improvement of road networks leading to reduced vehicle damage and lower pollution; and improved public transport (supporting low-emission transport systems). The focus on public transport will be to make it as affordable and available as possible, and less damaging for environment. Options include metro, light rail, tram, trolley bus, and franchise bus schemes. As an implementing agency of the GEF, ADB could explore long-term opportunities to cofinance GEF projects to promote low-carbon transport and urban systems.

20. **Expansion of clean energy use.** ADB will support Georgia's priority of hydropower development and sustainable water resources management. ADB will coordinate, as needed, with the World Bank's support for an SEA for the hydropower sector. This assessment will complement ongoing work of development partners and help inform public and private sector investment in hydropower generation. ADB will continue to support power transmission and distribution to reduce losses and improve energy efficiency.

21. **Environmental safeguards and governance.** ADB will also provide policy advice and knowledge products to strengthen institutional and legal capacity for environmental management. Environment and natural resource governance will be strengthened through measures to build capacity on environmental safeguard compliance in implementing agencies of ADB-supported projects. ADB will assess Georgia's capacity to apply environmental safeguards to investment projects, and will help the executing and implementing agencies of ADB-financed projects build capacity for compliance with environmental safeguards. ADB will develop a country safeguard framework to assist with effective safeguard design and implementation for compliance with both the ADB Safeguard Policy Statement (2009) and national requirements.¹⁰

⁹ Three geographic areas (coast, desert, and mountains) were identified by Georgia as priority areas for climate change adaptation measures.

¹⁰ A draft country safeguard framework will be finalized during the country partnership strategy period.