

ENVIRONMENT ASSESSMENT (SUMMARY)¹

1. The State of the Environment

1. Since the last country environment analysis of the Asian Development Bank (ADB) for Uzbekistan in 2004, environmental issues in the country have remained largely the same.² Progress on better water management, its use, and treatment has been slow. Uzbekistan is a “downstream” country, and continues to receive polluted water from upstream countries where the major rivers of Uzbekistan originate. Protection of the country’s biodiversity and management of its solid waste needs ongoing attention. Uzbekistan energy use remains high and carbon-intensive, which contributes to greenhouse gas (GHG) emissions and climate change. Environmental management and environmental protection in the country in these circumstances needs to be made a basic component of resource and infrastructure development. Environmental management also needs to become an up-front and active mainstream development activity. There is a need for greater cooperation and information sharing among the public agencies responsible for environmental protection. Addressing all these and other environmental challenges in partnership with the government is a strategic objective of ADB. ADB plans to strengthen its environmental commitment and encourage the government to address key environmental resource use and degradation issues.

1.1 Agriculture, Soils, and Land Degradation

2. The Uzbek population has increased rapidly from 26.7 million in 2007 to 29.3 million in 2011. Some 48% of the total population continues to live in rural areas. Of these, almost two-thirds (about 9.3 million people) who make their living from agriculture, live under the threat of desertification. Given the present water use practices, this figure is expected to rise.

3. The government’s 2010 State of the Environment report stated that soil salinization had dropped from 66% of arable land in 2006 to 50% in 2009.³ In 2009, the water quality analysis of “return” flow water (i.e., used water being discharged back into watercourses and aquifers) of more than 15.7 million cubic meters (m³) indicated poor treatment and contamination. The use of livestock manure was also on the decline, forcing a greater dependence on artificial fertilizers. Overgrazing had affected nearly 74% of grazing lands, fuelling erosion and desertification.

1.2 Water Resources

4. While Uzbekistan’s present annual per capita water endowment of 1,850 m³ is adequate (as it is above the 1,700 m³ threshold of water stress), Uzbekistan faces increasing water scarcity on account of too much irrigated land and over-allocated water. Linked to this, a 2010 report from the United Nations Economic Commission for Europe (UNECE) described a growing degradation of the major rivers and inadequate treatment facilities to treat water properly as a result of aging facilities and lack of maintenance.⁴ The 2010 State of the Environment report findings closely matched UNECE’s results. The government, with help from development partners (including ADB), has been aggressively improving this situation through new potable water and wastewater treatment projects. However, transboundary water issues also need to be addressed.

¹ This summary is based on Asian Development Bank (ADB). 2011. *Uzbekistan Country Environmental Analysis*. Manila. Unpublished. Available on request.

² ADB. 2004. *Country Environmental Analysis for Uzbekistan*. Manila. Unpublished.

³ State Committee for Nature Protection (Goskompriroda). 2010. *Environment and Use of Natural Resources in the Republic of Uzbekistan in 2007-2009*. Tashkent.

⁴ United Nations Economic Commission for Europe. 2010. *Second Environmental Performance Review for Uzbekistan*. Geneva.

1.3 Energy and Environment

5. Uzbekistan is the world's 6th largest producer of natural gas and is also an oil producer. Oil, gas and coal continue to be the main sources of electricity production. In 2009, more than 30% of all air pollution came from the production of fossil fuels and their use to generate electricity. By having to rely on outdated and high-loss transmission lines and gas pipelines, the power sector experiences big losses and waste of electricity and natural gas. In 1997, a Law on the Rational Use of Energy was promulgated, and in 2003 amended, to address environmental safeguards certification.

6. A Presidential Decree in 2009 defined a plan for the construction of at least 15 hydroelectric facilities, saving nearly 500 million m³ of gas and 2.3 million tons of coal each year. This was a big step toward reducing the country's carbon footprint. The decree was in recognition of the fact that since 1998 power generation from hydroelectric facilities had steadily declined, and was estimated to be about 50% of the 1998 level of 6,000 gigawatt-hours (GWh). A number of new renewable energy projects are also being implemented with various partners.

1.4 Transportation and Environment

7. The transport sector continues to receive strong government and development partners' support for national road and rail upgrading. Roads are constantly being improved, reducing travel time and vehicle emissions. The passenger and freight rail system is also being upgraded. Refineries are producing cleaner fuels for vehicular use and the gas sector is installing more natural gas filling stations, albeit slowly. Recognizing that more than 60% of the country's air pollution comes from vehicles, Goskompriroda, the State Committee for Natural Protection, has made clean transportation one of the four pillars of its green economy strategy.

8. Uzbekistan's Republican Road Fund and the railroad agency Uzbekistan Temir Yollari are quite advanced in terms of incorporating environmental safeguards into their regular operations. For a growing number of projects financed by international development partners, all requiring compliance with environmental and other safeguards, these agencies have established environmental focal areas within their organizations. However, implementation of environmental protection measures, compliance monitoring of mitigating measures, and consistent record keeping continue to need substantive improvement.

1.5 Ecological Resources and Biodiversity

9. The government has set a target of 10% of territory under protected status by 2012. This is an impressive statistic since most developed countries have far lower percentages. However, the State Committee on Statistics indicates that there has been no appreciable increase in the nationally protected area from 1990 to 2009. The statistics further indicate that since 2006, the number of threatened or endangered plants and animals has increased—from 21 mammals in 2006 to 23 in 2009 and from 305 plant species in 2006 to 324 in 2009. Most of the country's rivers are designated environmentally protected zones, but compliance appears insufficient. Biodiversity protection can alleviate poverty by creating sustainable employment opportunities for local communities. If the establishment of biodiversity reserves and protected areas is carefully planned to engage local communities, this can also stimulate better environmental management.

1.6 Institutional Challenges

10. Environmental protection needs to be mainstreamed in Uzbekistan's national policies and strategies. Fragmentation of environmental powers among ministries and agencies has to be overcome to allow for more effective, coordinated, and timely decision making on environmental matters. In this regard, the capacity and authority of Goskompriroda, as the key environmental enforcement authority, needs significant strengthening. Information, analysis, and data availability on the environment have to be improved for timely and informed decision making. Regular preparation of high quality and widely available documentation on the state of the environment would help in this regard.

2. Uzbekistan's Climate Change Priorities and Plans

11. Carbon dioxide (CO₂) accounted for 54% of total GHG emissions in Uzbekistan in 2000, methane 45%, and nitrous oxide 5%. Annual CO₂ emissions decreased from 113.3 million tons in 1990 to 100.4 million tons in 2005,⁵ but rose to 114.9 million tons in 2008 or 4.1 tons per capita per year.⁶ As a signatory to the Montreal Protocol on Substances that Deplete the Ozone Layer, and having passed its own regulation on this, the government's actions led to a halving of the accumulative oxygen depleting pollutants per person from 4 tons per person per year in 1991 to 2 tons per person per year in 2008.⁷

12. Three key actions, defined by the government as essential for addressing climate change, include (i) improving monitoring, reporting, and statistical analysis of climate change data; (ii) changing the pattern of energy and water use and agricultural production (including reducing desertification); and (iii) building institutional capacities of agencies responsible for climate change actions.

13. The national GHG emissions reduction strategy is examining market pricing of energy, as well as starting to introduce modern electricity and gas metering. There is also a campaign to lower energy consumption through awareness raising and conservation. Heat and power plants are slowly realizing energy savings through reducing wasteful practices. In the oil and gas industry, which contributes one-third of total emissions, mitigation programs dealing with GHG emission reductions are being implemented. In summary, Uzbekistan has initiated ambitious work on climate change, and has received considerable support from development partners. Results of these projects need to be measured to assess their climate change benefits.

3. Environment and Climate Change Programs of ADB and Other Partners

14. Over the period of the last country strategy and program (CSP), 2006–2010, and into 2011, ADB has continued to assist environment and climate change issues through various investment projects. This has included projects in the areas of potable water supply and sanitation, water treatment, and irrigation. ADB is also supporting projects linked to renewable and solar energy development and energy efficiency.

15. The United Nations Development Programme (UNDP) is assisting the identification of climate change threats to suggest measures to reduce the country's contribution to climate

⁵ Government of Uzbekistan. 2010. *Second National communication of Uzbekistan under the UN Framework Convention on Climate Change*. Tashkent. <http://www.global-issues-rtd.info/programmes/2189.html>.

⁶ International Energy Agency. 2010. *World Energy Outlook: CO₂ Emissions from Fuel Combustion Highlights*. Paris.

⁷ Asian Development Bank. 2010. *Key Indicators for Asia and the Pacific*. Manila. http://www.adb.org/Documents/Books/Key_Indicators/2010/pdf/Goal-07.pdf.

change and to deal with climate change-related effects. It is implementing a project on climate change risk management and transition to a low-emission development strategy. The European Commission is helping Uzbekistan implement the Kyoto Protocol. The World Bank initiated a climate change and agriculture program in 2010. The World Health Organization (WHO) also initiated a project in 2010 to address climate change and human health.

4. Recommendations for Future ADB Support for Environment and Climate Change

16. ADB has supported the preparation of Uzbekistan's new Welfare Improvement Strategy (WIS II), in which environmental improvement for sustainable development is a crosscutting theme. ADB has reaffirmed its commitment to the delivery of environmental management and safeguard elements by appointing a senior safeguards specialist to the Uzbekistan Resident Mission in Tashkent.

17. Under the new country partnership strategy for 2012–2016, ADB will continue its focus on strengthening environmental management and the use of environmental safeguards at the sector level. For example, in the transport sector, support to Uzbekistan will be aligned with ADB's Sustainable Transport Initiative, which calls for increased focus on environmental sustainability. ADB could also further support climate change initiatives by including climate change components into relevant projects, and regularly monitoring and reporting on progress made on these components.

18. Specific areas in which further support could be provided include the following:

- (i) **Improving delivery of environmental safeguards.** Using ADB's existing water and municipal services sector loan projects in Uzbekistan as case studies, ADB could conduct policy dialogue with the government to improve compliance and build capacity to upgrade the quality of environmental impact assessments. This could involve a combination of on-the-job training as well as workshops focused on the preparation of environmental assessments, and the implementation, monitoring, and enforcement of environmental management plans.
- (ii) **Addressing transboundary issues.** Through regional technical assistance, ADB could continue to support the efforts of regional countries to address critical transboundary resource use issues, including those related to water and pollution.
- (iii) **Solid waste management project.** Building on its previous and ongoing investments in water supply and sanitation for environmental improvement, ADB may consider support for a solid waste management project for Uzbekistan. Given the large scale of assistance required in this area, a phased approach could be considered. This will support key investments and regulatory and institutional reforms for solid waste management improvement in the major regions of Uzbekistan over the medium term.
- (iv) **Energy efficiency and renewable energy initiatives.** ADB would continue to support greater efficiencies in traditional power generation through upgrading transmission and distribution networks, and promoting better electricity metering. ADB would also continue to support renewable energy projects, including solar, to promote greater non-fossil fuel generation in the energy mix.
- (v) **Protecting Uzbekistan's biodiversity.** ADB and other development partners, including the Global Environment Fund, could hold policy dialogue with the government on biodiversity protection, which is a cornerstone of Uzbekistan's new green economy policy, to assess needs and identify potential areas of support.