

# **Azerbaijan: Country Environmental Analysis**

## **Priorities, Public Environmental Expenditures, and Institutional Readiness**

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## Azerbaijan: Country Environmental Analysis

### Priorities, Public Environmental Expenditures, and Institutional Readiness

#### Contents

Abbreviations and Acronyms .....	6
Acknowledgments .....	8
Executive Summary .....	9
Introduction .....	14
A. The approach .....	15
B. Key environmental issues and priority setting .....	15
C. The State Environment Program .....	20
i. The process of formulation and implementation.....	20
ii. Selection of priority interventions.....	21
iii. Assessing progress to date.....	23
iv. Setting budgets .....	27
v. Quality of SEP actions' technical preparation .....	27
vi. Interagency collaboration.....	28
D. Environmental expenditure accounting in Azerbaijan: current conventions .....	28
i. Modified estimates of environmental expenditure.....	30
E. Financial monitoring of the State Environment Program .....	34
F. Integrating SEP into a public expenditure program: Suggestions for reform .....	36
G. Institutional constraints to SEP implementation .....	36
i. Multiple actions, multiple actors .....	37
ii. Broad direction of recent institutional changes and its implications.....	38
iii. The roles of MENR and other agencies .....	38
iv. Beyond Baku: Addressing municipal and rural environmental priorities.....	40
v. Role of development partners vis –a- vis SEP priorities.....	41
H. Conclusions .....	41
I. Recommendations .....	42
List of references .....	46
Appendix 1: List of People and Institutions Consulted.....	48

Appendix 2: Principal Environment-related Investments Supported by IFIs and other Development Partners since 2006 .....	51
Appendix 3: State Environment Program 2006–2010 .....	54
Appendix 4: Priority Setting Using Multi-Criteria Analysis .....	63
Appendix 5: Inter-Agency Working Group Multi-Criteria Analysis Worksheet .....	64
Appendix 6: Preliminary List of SEP Additional Projects for Implementation During 2011–14 .....	65
Appendix 7: The Budget System of Azerbaijan.....	71
Appendix 8: Revised Environmental Expenditure in Azerbaijan, 2004–2009 (million AZN).....	74
Appendix 9: MENR budgets, 2004–2009 (million AZN).....	76
Appendix 10: SOCAR Environmental Expenditure .....	77
Appendix 12: Foreign Investment in the Water Supply and Sanitation Sector .....	79
Appendix 13: SOFAZ and Environment-related Investments .....	80
Appendix 14: Quantitative Tools for Priority Setting .....	82
Appendix 15: Summary of Recommendations for SEP Institutional Responsibilities .....	83

### **Boxes**

Box 1: Azerbaijan’s Environmental Policy and Planning Framework .....	17
Box 2: Definitions of Environmental Expenditure .....	29
Box 3: Strategic Framework for Improved Public Sector Governance .....	36
Box 4: Institutional Changes in Environmental Management in Azerbaijan: A Case Study .....	38
Box 5: Environmental Investments and MENR Institutional Capacity .....	39

### **Figures**

Figure 1: Environmental and Public Expenditure, 2004–2009 (million AZN).....	33
Figure 2: Share of Environmental Expenditure in Public Spending (%) .....	33

### **Tables**

Table 1: Mapping of 2006–2010 SEP Actions to 1998 NEAP Priority Areas .....	21
Table 2: Mapping of 2011–2014 SEP Actions to 1998 NEAP Priority Areas .....	22
Table 3: Top 10 Criteria for Ranking SEP Actions <sup>1</sup> .....	22
Table 4: Current Status of 2006–2010 SEP .....	25
Table 5: Completed 2006-2010 SEP Actions as of 2010.....	26
Table 6: Percentage of SEP Projects with Proper Documentation.....	28

Table 7: Official Environmental Expenditures and Revenues in Azerbaijan, 2002–2008 .....30

Table 8: Mapping Modified Estimates of Environmental Expenditure to 1998 NEAP Priority Areas (million AZN) .....32

Table 9: State Ministries or Agencies with Environmental Responsibilities.....37

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## Abbreviations and Acronyms

ADB	Asian Development Bank
AIC	Azerbaijan Investment Company
AREA	Absheron Region Executive Authority
ARP	Absheron Rehabilitation Program
AZN	Azerbaijan manat (until 2006, AZM)
BMO	Baku Mayor's Office
BSL	Budget System Law
CEA	Country Environmental Analysis
CJCS	Closed joint stock company
CoM	Cabinet of Ministers
CSC	Caspian Shipping Company
DFID	Department for International Development (U.K.)
EBRD	European Bank for Reconstruction and Development
EITI	Extractive Industries Transparency Initiative
EU	European Union
GDP	Gross domestic product
GEF	Global Environment Facility
GoA	Government of Azerbaijan
IAWGE	Inter-Agency Working Group on Environment
IBRD	International Bank for Reconstruction and Development
IFI	International financial institution
JBIC	Japan Bank for International Cooperation
JICA	Japan International Cooperation Agency
JSC	Joint Stock Company
KfW	Kreditanstalt für Wiederaufbau-Development Bank (Germany)
MCA	Multi-Criteria Analysis
MED	Ministry of Economic Development
MENR	Ministry of Environment and Natural Resources
MES	Ministry of Emergency Situations
MoA	Ministry of Agriculture
MoCT	Ministry of Culture and Tourism
MoD	Ministry of Defense
MoE	Ministry of Education
MoF	Ministry of Finance
MoH	Ministry of Health
MoHA	Ministry of Home Affairs
MoIE	Ministry of Industry and Energy
MoJ	Ministry of Justice
MoT	Ministry of Transport
NEAP	National Environmental Action Plan
NGO	Nongovernmental organization
NWSS	National Water Supply and Sanitation (Project)
OJSC	Open joint stock company
OPG	Office of Prosecutor-General
OSCE	Organization for Security and Cooperation in Europe
PEER	Public environmental expenditure review
PEFA	Public expenditure and financial accountability
PEM	Public expenditure monitoring
PER	Public Expenditure Review
PID	Public Investment Department (of MED)
PIP	Public Investment Program
PMF	Performance measurement framework
SAIC	State Amelioration and Irrigation Committee

SASMP	State Agency for Standards, Meteorology and Patents
SAWM	State Amelioration and Water Management (JSC)
SAWMA	State Amelioration and Water Management Agency (pre-SAWM)
SECO	State Secretariat for Economic Affairs (Switzerland)
SEP	State Environment Program
SLCC	State Land and Cartography Committee
SOCAR	State Oil Company of Azerbaijan
SOFAZ	State Oil Fund of Azerbaijan
SPC	State Property Committee
SPMC	State Property Management Committee
SPPRED	State Program of Poverty Reduction and Economic Development
SPPRSD	State Program of Poverty Reduction and Sustainable Development
SSC	State Statistical Committee
SUPAC	State Urban Planning and Architecture Committee
SWM	Solid waste management
TA	Technical assistance
UNCCD	United Nations Convention to Combat Desertification
UNDP	United Nations Development Program
UNECE	United Nations Economic Commission for Europe
UNFCCC	United Framework Convention to Combat Climate Change
USAID	United States Agency for International Development
WSSD	World Summit on Sustainable Development

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## Executive Summary

The explosive growth in resource-financed public revenue since 2005 has given the Government of Azerbaijan an opportunity to seriously address many of its economic, social and environmental issues. Chief among these is a commitment to an ambitious environmental protection program as part of its proactive response to address critical environmental constraints to sustainable, poverty reducing growth.

This Country Environmental Analysis (CEA) is intended to assist the Government of Azerbaijan to strengthen the strategic planning of public investments for environmental protection. It reviews a selected set of policy issues based on their relevance to national environmental priorities, public environmental expenditures and the supporting institutional framework. The CEA focuses on the State Environmental Program (SEP), the most significant State plan directed towards environmental protection. The SEP recognizes the need for inter-agency collaboration; provides a framework for mobilizing financing and assigns primary responsibilities for execution. This report presents a set of policy recommendations that can help realize the benefits of the SEP and its multi-agency driven approach to tackling environmental issues while avoiding potential drawbacks to the extent possible.

Environmental issues in Azerbaijan fall under the following areas, originally stated in the 1998 National Environmental Action Plan (NEAP), and still valid today:

- Severe pollution damage caused by heavy industry, oil exploration and production, and energy production;
- Threat of irreversible collapse of the sturgeon stock triggered by a loss of reproductive capacity, pollution and overfishing;
- Deteriorating water quality, especially of drinking water, both in rural and urban areas, causing an increase in water borne diseases;
- Loss of fertile agricultural land from erosion, salinization, pollution from heavy metals and chemicals, and deteriorating irrigation systems; loss of forestry cover, mainly in war-affected areas; and threats to protected areas leading to losses in biodiversity;
- Damage to the Caspian coastal zone caused by flooding from sea level rise and pollution; and
- Deterioration of cultural heritage, due to natural causes, aggravated by modern environmental problems such as acid rain and uncontrolled development.

*The State Environment Program – formulation, linkage to national priorities and progress to date*

National environmental policies of Azerbaijan are embedded in many sector strategies, but the most relevant is the National Program on Environmentally Sustainable Social and Economic Development (2003–2010). In 2005, the National Program was complemented by the *Comprehensive Action Plan on Improvement of the Environmental Situation for 2006–2010* or the State Environment Program (SEP), which aims to improve the environmental situation in areas affected by environmental degradation such as the Baku Bay, Bebiheybat area, the areas

adjacent to Heydar Aliyev International Airport, the Absheron Peninsula, and other parts of Azerbaijan. The SEP is a multi-year, multi-agency investment program with sixty five investment activities. It is broadly consistent with the NEAP priority areas – with an emphasis on health-related issues. It also assigns responsibilities to executing and supporting agencies and a timeline for implementation. The first phase of the SEP ended in 2010. A review of actions under the new SEP for 2011-2014, currently under preparation, also suggests consistency with NEAP priority areas.

The SEP targets particular environmental problems. It recognizes the need for interagency collaboration and calls for results. The SEP introduces a time-bound implementation schedule assuming that it would reduce discretion and will guide the daily operations of the Ministry of Environment and Natural Resources (MENR) and executing agencies. The evidence from this review is that SEP formulation follows a procedure similar to the development of other state programs through a consensus of sectoral plans and inputs from technical experts and nongovernmental agencies. The principle components are identified along with actions, themes the primary executing and collaborating agencies are assigned and, at times, a preliminary cost estimate. The final draft is prepared by MENR and sent to the Ministry of Economic Development (MED) and the Cabinet of Ministers. While this process sounds reasonable, in terms of financing and from a public finance perspective, the SEP could be better reconciled with other public expenditure programs (e.g., Public Investment Program [PIP]), while taking into consideration both internal and external funding sources. The policy implication is greater transparency and continuous feedback between expenditure planning of SEP, PIP and other programs in accordance with sound public finance management. Further improvements can be made by prioritizing initiatives and avoiding overlap by harmonizing activities with those that currently fall outside the SEP.

The CEA was an important step to engage the Government of Azerbaijan and state corporations in a constructive dialogue to discuss environmental priorities within the SEP. Members of the Inter-Agency Working Group on the Environment took part in a Multi-Criteria Analysis (MCA) exercise designed to assess the considerations in ranking SEP priorities. Results from the MCA identified health-related impacts as the most significant criteria in ranking projects.

The report highlights ample evidence that the SEP provides a means to assemble project concepts and combine environmental priorities into themes in a structured yet flexible framework for *mobilizing* finance, but it is not a catalogue of “shovel-ready” projects with secured financing. A survey of SEP implementation progress revealed the following:

- Only 40 percent of all SEP projects were completed. 38 percent remain “in progress” and 17 percent were slated for transfer to the 2011-2014 SEP. Among completed activities, a significant number were merely feasibility studies that implicitly would lead to investments (e.g., strategy to reduce vehicular air emissions, study for reducing pressure on forest resources).
- Projects addressing land-based pollution constitute 48 percent of SEP activities. If these projects are indeed among those of highest priority, implementation needs significant improvement as many of the transferred projects were large-scale cleanup projects in the Baku Bay or the Absheron Peninsula with considerable technical and investment

requirements. At the same time, there has been some progress on projects targeting localized pollution hot spots (e.g., demolition of existing communication lines, transport of solid waste from villages, and closure of vintage oil wells), and projects under the Caspian Sea / Baku Bay initiatives (e.g., reduction of wastewater pollution from ships and spills from oil production at sea). Given the scale of environmental contamination in the coastal areas<sup>1</sup>, the likely cumulative impact of the completed projects is marginal.

- Wastewater treatment projects, identified as one of the key priority areas, remain largely in progress with only one completed project for rehabilitation of water treatment facilities on several offshore islands. This indicates that the links between priorities and implementation need to be strengthened.
- Major gaps exist in SEP project documentation and access to it. The review found that background documentation such as technical and social justification, budgets, executing agency roles, and environmental assessments were missing in nearly 50 percent of all cases. Significantly better is the reporting on *physical* progress which is a responsibility of the MENR. As a consequence assessing the performance or effectiveness of individual SEP projects is nearly impossible to gauge without sufficient baseline information.

#### *Public environmental expenditure review (PEER)*

The SEP represents a commendable set of actions to protect the environment; however, assessing program efficiency based on maximum improvements per dollar proved difficult to quantify. The issue of efficiency is broader than cost-benefit or cost-effectiveness analysis. Thus, questions related the effectiveness of environmental expenditures in meeting national environmental priorities is also reviewed in the report. A broad test of prioritization consistency is used, reviewing how expenditures are defined and allocated and whether they match policy goals. Based on current Azeri legislation<sup>2</sup>, definitions of environmental expenditure fall into three broad groups:

- *Combating degradation and environmental pollution* related expenditures to prevent land, water, groundwater and air pollution; expenditures for protection from radiation, noise and vibration, including associated indirect costs such as management, monitoring, prevention, etc.
- *Resource-related public expenditures* protecting biodiversity and landscape for flora and fauna protection and protection of forest reserves and parks; and
- *Other environmental expenditures not included in the first two categories*<sup>3</sup>

The review of expenditures since 2005 found that public investments relating to the modernization of urban environmental infrastructure and pollution reduction are broadly consistent with the 1998 NEAP priorities and are on the rise. At the same time, total spending in

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<sup>1</sup> The United Nations' State of the Environment Report of Azerbaijan, 2002, found that nearly 30 percent of the coastal areas and more than half of the country's large rivers are contaminated.

<sup>2</sup> Environmental Protection Law (1999) and Decree No. 149 of the Cabinet of Ministers from 2004.

<sup>3</sup> Legislation is unclear as to the types of expenditures which might fall into this category.

response to traditional environmental concerns such as forestry, land conservation, biodiversity, pastures management and institutional development and policies remained largely unchanged.

There is ample evidence that the existing public environmental expenditure accounting system underestimates the actual amount of resources directed at environment-related priorities, mainly because it excludes a significant portion of environment investments made by key state corporations and off-budget environmental expenditure. This includes investments made by the State Oil Company of Azerbaijan (SOCAR), Azerenerji Joint Stock Company (JSC), Azersu JSC, and State Amelioration and Water Management (SAWM) JSC including the foreign portion of the investments. Actual public environmental expenditure is thus several times greater than the official figure.

A comparison of environmental expenditure levels in Azerbaijan with those of other countries may allow further insights into the reporting of public environmental expenditure. Using official statistics, expenditures represent only 0.5 percent of GDP which is comparable with other middle income countries such as Poland or Portugal. A more inclusive estimate, recording relevant corporate expenditure is on the order of 3 percent of GDP which is comparable to high income countries such as Germany, Denmark or the Netherlands. A reconciliation of the two estimates would demand, among other things, a new consensus in Azerbaijan on what constitutes environmental expenditure. The view taken in the report is that all environment-related activities of the increasingly important state corporations should be counted. To bridge this gap, Azerbaijan may wish to adopt the OECD methodology for the calculation of Pollution Abatement and Control Expenditure (PAC expenditure) which provides internationally acceptable procedures for such estimation.

#### *Institutional constraints to SEP implementation effectiveness*

The institutional review identified two main constraints to implementation effectiveness. First, the lack of clear roles and responsibilities for each collaborating agency is perhaps the main factor leading to poor implementation effectiveness. The issue is compounded by the agencies' different mandates and procedures, leading to conflicts or misunderstanding. Second, the manner in which agencies' budgets are set is sub-optimal. The current process for SEP formulation does not require budgets to be allocated by the executing agencies at the outset. Rather, the SEP is circulated for approval based on the list of actions, and at times with cost estimates attached. At that time, executing and supporting agencies must internalize the SEP actions into their own set of priorities. SEP budget allocations are actualized only when designated principal implementing agencies adopt broad program priorities which are integrated into activity plans and budgets, since most implementing agencies depend on the State budget. This process is inefficient and is one of the leading causes of slow implementation.

#### *Key recommendations*

Azerbaijan has made some notable achievements in environmental prioritization and investments. This analysis points to areas of improvement not only to maximize the efficiency and effectiveness of public environmental expenditure but also to ensure that the process established by SEP is comprehensive and fundamentally sound to meet the goals of the National Program on Environmentally Sustainable Social and Economic Development for 2003-2010. The following

key recommendations emerged from analyzing country priorities, the associated planning process, institutional and investment mandates, and SEP implementation status:

- Set priorities in the updated National Program on Environmentally Sustainable Social and Economic Development using criteria such as the cost of environmental degradation with explicit linkages to health and poverty.
- Strengthen MENR to improve its capacity as an information clearinghouse for public environmental expenditure information, which would ensure comprehensive coverage of SEP priorities and improved alignment of environmental policy with environmental expenditures.
- Improve the process of project planning and implementation through public disclosure of SEP project concepts in an agreed format. International good practice point to the benefits of increased transparency relating to institutional roles and responsibilities.
- Clarify the status of the Inter-Agency Working Group on Environment (IAWGE) to further support and strengthen interagency coordination on SEP implementation.
- Create a process for each principal executing agency to clarify how its SEP-related activity relates to other environment-related activities in its mandate, so as to strengthen the cross-sectoral benefits of SEP and non-SEP environmental expenditures.
- Establish and maintain publically available information center with information on all SEP projects, which will promote increased transparency and accountability.
- Encourage major economic stakeholders such as Azerenerji JSC and SOCAR to include information on environmental expenditures in annual reports as part of an initiative on corporate environmental and social responsibility. Similarly, encourage Azersu JSC and SAWM JSC to consider public disclosure of their audited annual financial reports.
- Initiate preparation of an analytical paper on environmental expenditure by the State Oil Fund of Azerbaijan (SOFAZ) so as to expand the public benefits of natural resource revenues.
- Develop a comprehensive set of environmental expenditure definitions based on internationally recognized standards, which will support SEP planning, implementation, and monitoring and evaluation.

The first phase of the SEP recently concluded. This is an opportune time for Government to use recommendations provided in this report as a means to improve SEP efficiency and realize greater public benefits from environmental expenditures. There remains significant potential to improve the SEP process at each step, namely: (a) selecting priorities, (b) translating priorities into investment proposals, (c) matching budget resources to priorities, and (d) ensuring effective implementation of programs and projects.

## Introduction

1. The Government of Azerbaijan (GoA) committed to an ambitious investment program directed at improving the national environmental situation. The State Environment Program (SEP 2006–2010) instituted in 2006 by Presidential Decree (No. 1697)<sup>4</sup> is part of a proactive government response to Azerbaijan’s environmental development challenges, first outlined in the 1998 National Environmental Action Plan (NEAP). The Program, with 65 wide-ranging activities and including 30 government or public stakeholders, also addresses environmental priorities in the 2003–2005 State Program for Poverty Reduction and Economic Development (SPPRED). The comprehensive action plan includes activities to clean up and remediate the effects of hazardous and nonhazardous waste, and modernizing environmental management by renovating facilities and updating laws and regulations. Under the Decree, overall coordination and supervision was assigned to the Cabinet of Ministers, demonstrating the high-level commitment that has been transmitted to key ministries and agencies. The first SEP planning period is ending, and a second is anticipated, to begin in 2011. This report reviews the first phase of SEP implementation – successes, weaknesses, and opportunities for improvements – and offers recommendations for the GoA to increase efficiency and effectiveness of future environmental investments.

2. For several decades, national governments and their development partners have been seeking better ways to use public expenditure to support policy objectives, which is the subject of this report.<sup>5</sup> Specifically, this report concentrates on environment-related public expenditure in Azerbaijan: how policy objectives are formulated; how objectives are converted into investment proposals; and whether objectives are supported by budgets. In collaboration with the GoA, the World Bank undertook analytical work to assess and summarize country experience with prioritizing environmental investment and the public expenditure and institutional systems that support those investments, focusing on the SEP as the central plan for environmental action.

3. This Analytical and Advisory Activity was designed as a focused CEA, adapted to take into account the extensive strategic planning already underway in Azerbaijan. The analysis benefitted from consultations with national agencies and stakeholders charged with implementing actions under the SEP, including the Ministries of Finance, Economic Development, Environment and Natural Resources, Emergency Situations, Industry and Energy, Health, and other corporatized state agencies, such as the State Oil Company (SOCAR). These agencies are also the key audience of this analysis.

4. The report is organized as follows. Section A describes the approach and methodology taken in this report. Section B describes Azerbaijan’s key environmental issues and priorities as identified in national plans and strategies. Section C introduces the State Environment Program, how it is formulated, its underlying priorities and an evaluation of completed initiatives to date. Section D includes a public environmental expenditure review (PEER) and provides a revised accounting of expenditures under a more comprehensive definition. Sections E and F

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<sup>4</sup> Comprehensive Action Plan for Improving the Environmental Situation in Azerbaijan 2006–2010, based on Presidential Decree No. 1697 of September 28, 2006.

<sup>5</sup> Two related questions include: (a) how to mobilize government revenue, and (b) how to design suitable taxation systems to mobilize revenue, but these are beyond the scope of this report.

complement the PEER with a discussion of SEP financial monitoring and alignment with other public investment programs. Section G reviews institutional constraints to SEP implementation. Section H provides summary conclusions and Section I outlines several concise recommendations that could be undertaken by relevant agencies.

## A. The approach

5. This report presents a review of environmental priorities, public environmental expenditures and the supporting institutional framework. The adopted methodology uses a combination of available Government data and survey-based tools. To gauge whether Azerbaijan is addressing its national environmental priorities, a public environmental expenditure review (PEER)<sup>6</sup> was undertaken matching expenditures with priorities. Priorities were further validated through the formation of an Inter-Agency Working Group on the Environment<sup>7</sup> who ranked project criteria in terms of their relative importance using a Multi-Criteria<sup>8</sup>, or consensus-based, approach. Progress in addressing environmental priorities is measured through a survey of completed actions under the SEP – currently the largest and most significant planning initiative directed towards achieving environmental goals. The survey also investigated qualitative aspects of SEP projects through the availability of background technical, financial and environmental documentation. Institutional constraints to SEP implementation are also assessed, with particular attention to the challenges that arise in co-financing, coordination and implementation.

## B. Key environmental issues and priority setting

6. **A review of strategy and policy development in Azerbaijan suggests that there has been no shortage of policy reflection or attempts to prioritize.** Azerbaijan has developed a large and complex list of planning and strategy documents that are related to the environment (see Box 1). Although a large number of assessments often overlap, repeat, and duplicate, there nonetheless emerges a broad idea on the part of the GoA of what is important and what is not.

7. The first concerted effort began in 1998 with the country's first National Environmental Action Plan (NEAP), which identified the environmental problems that still remain as key priority areas today:

*a) Severe pollution damage caused by heavy industry, oil exploration and production, and energy production.* These sectors have been a source of severe air, water and soil pollution in Azerbaijan, particularly in Sumgayit and parts of Baku. The main reasons are outdated technology, malfunctioning or even lacking end-of-pipe pollution abatement equipment and

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<sup>6</sup> Public environmental expenditure reviews offer a way of systematically assessing the equity, efficiency, and effectiveness of public environmental spending.

<sup>7</sup> The core working group consisted of representatives from the Ministries of Finance, Economic Development, Environment and Natural Resources, Emergency Situations, Health, and SOCAR. Broadening the constituency was anticipated in future rounds to include other agencies, donors, NGOs, and representatives of civil society.

<sup>8</sup> Multi-criteria analysis (MCA) is a method that assigns weights to a set of quantitative or qualitative criteria to derive a ranking of choices in a more rigorous fashion. See Appendix 4 for further details on the methodology.

use of low quality raw materials generating high pollution emissions and waste. While pollution decreased as industry declines, there is evidence that per-unit-of-output pollution has increased in many enterprises. Thus, pollution may rapidly increase as a result of industrial recovery if no measures are taken to improve the industry's environmental performance.

*b) Threat of irreversible collapse of the sturgeon stock triggered by a loss of reproductive capacity, pollution, and overfishing.* The seven species of sturgeon in the Caspian Sea are among the oldest fish species still living on earth. They have very high value as the source of 90 percent of all black caviar produced in the world. The natural habitat for spawning sturgeon in rivers largely disappeared during the 1950s with the construction of dams, and sturgeon is currently bred in some 20 hatcheries in Russia, Kazakhstan, Iran and Azerbaijan. Many of these hatcheries have been seriously damaged by flooding, and unless hatchery production increases, the sturgeon stock faces extinction.

*c) Deteriorating water quality, especially of drinking water, both in rural and urban areas, causing an increase in waterborne diseases.* Water resources are critical for the country's economy. Water resources are limited and losses during distribution are high, reaching 50 percent in agriculture which accounts for 70 percent of total water usage. Piped drinking water is available to less than 50 percent of the population and many areas experience drinking water shortages.

*d) Loss of fertile agricultural land from erosion, salinization, pollution from heavy metals and chemicals, and deteriorating irrigation systems; loss of forestry cover, mainly in war-affected areas; and threats to protected areas leading to losses in biodiversity.* About half of the country's land resources are being used for agriculture. Some 1.2 million ha is affected by high salinity; many soils are exhausted by years of poor agricultural practices and policies; and many areas are damaged by erosion. Loss of productive land in some locations is resulting in increased pressure on fragile lands and resources in other locations. Azerbaijan possesses very diversified flora and fauna, with some species having considerable commercial value. Many of these species are threatened or endangered. The country established a network of 14 strict preserves and 20 state reserves, but they do not include many critical sites and species, and their effectiveness has dramatically decreased due to lack of funds. Forest land, in particular, is declining at an alarming rate.

*e) Damage to the Caspian coastal zone caused by flooding from the rise in sea level and pollution.* Since 1978, the water level of the sea has risen almost 2.5 meters, and extensive flooding damage has occurred along Azerbaijan's coast due to the relative flatness of the terrain and dense coastal development; that said, there are indications of a decline in the water level most recently. Damages that have already occurred are pervasive with substantial social, environmental and economic costs. Damage is ongoing in some areas because of wave action and significantly higher groundwater levels. A total of 807 km<sup>2</sup> of land had been flooded by 1998 and sea levels were projected to rise in the future

*f) Deterioration of cultural heritage, due to natural causes, aggravated by modern environmental problems such as acid rain and uncontrolled development.* Azerbaijan has a long pre-history, dating back to the Paleolithic era. Many of Azerbaijan's historical sites are

in a serious state of disrepair or deterioration. Some of the architectural monuments are structurally damaged and unsound. A number of monuments are currently under Armenian control and their condition is uncertain. These sites have survived throughout time, but are subject to natural causes, such as wind, rain, and earthquakes and this trend is aggravated by acid rain, air pollution and other human-induced environmental problems.

8. The 1998 NEAP also stressed the importance of policy reform and of integrating environmental and economic policies. As a result of reviewing and analyzing the above main environmental issues, the NEAP put forward a list of 32 objectives grouped into four priority action areas. Note that these areas are used to group environmental expenditures in later sections.

- Pollution from industrial production, energy production, transport, and other sources
- The Caspian Sea
- Forestry, land, and biodiversity
- Institutional development and policy

9. Actions to achieve objectives were prioritized on the basis of human health, irreversible damage to natural resources, and impediments to economic development. Each action was also assigned to a specific government agency responsible for their implementation.

### **Box 1: Azerbaijan's Environmental Policy and Planning Framework**

Key economy-wide strategic planning documents include: (i) *State Program for Poverty Reduction and Economic Development (SPPRED)*. Adopted in 2002, for an initial phase of 2003–05, this program is now in its second phase, 2008–15, and has been renamed the State Program of Poverty Reduction and *Sustainable* Development, or SPPRSD. Among its priorities are sustainable development and infrastructure.

(ii) *State Program on the Socio-Economic Development of the Regions*. Adopted in 2004, for an initial phase of 2004–08, this program is now in its second phase, 2009–13. Its primary objective is to generate employment and income for people living in secondary towns, and it has relatively modest environmental aims. For now, it remains official policy on local economic development.

(iii) *Sectoral action plans and strategies*. Several recently prepared documents have some relevance to environmental management: the *2004 State Program on the Use of Alternative and Renewable Energy Sources*; the *2005 State Program for Development of Fuel and Energy Sector* for 2005–15, the *State Strategy on Employment* for 2006–15; and the updated *State Program on Tourism Development* for 2010–14.

(iv) *State corporation environmental plans*. Another significant development is recent formulation of environmental plans by the rapidly evolving SOCAR and Azerenerji, which contrast with less dynamic and less affluent State corporations, such as Azersu JSC, and State Amelioration JSC.<sup>1</sup>

Other planning documents that remain influential, despite declining technical validity, and constitute the background for focused policy development and prioritization, developed for the most part with the support of development partners, include the following:

- *1998 National Environmental Action Plan*
- *2003–10 National Program of Environmentally Sustainable Socio-Economic Development*
- *2003 National Plan for Restoration and Expansion of Forests*
- *2003 National Caspian Action Plan*
- *2004 State Hazardous Wastes Management Strategy*
- *2004 Efficient Utilization of Hayfields and Summer-Winter Pastures and Prevention of Desertification*
- *2004 National Development Program of Hydrometeorology or 2004 State Program on the Use of Alternative and Renewable Energy*<sup>2</sup>

- *Comprehensive Action Plan for Improving the Environmental Situation in Azerbaijan 2006–2010*, cited in the 2006 Presidential Decree No. 1697 (also known as the State Environment Program, or SEP).

The following strategies and master plans in environment-related sectors were formulated with support from development partners:

- *Master Plan on Integrated Environmental Management in Greater Baku* (JICA 2000)
- *Greater Baku Water and Wastewater Master Plan* (World Bank 1998)
- *Water Sector Strategy* (World Bank 2006)
- *Transport Sector Development Strategy* (Asian Development Bank 2006).

Sectoral investment projects or programs based on detailed prioritization include several World Bank-supported projects:

- *Greater Baku Water Supply Rehabilitation* (1996–2006)
- *Absheron Rehabilitation Program* (2007–2010)

Azerbaijan has ratified the principal international environmental conventions. They add a global dimension to domestic environmental stocktaking. The main policy statements include:

- *Initial National Communication to UNFCCC* (2001)
- *National Report on the Implementation of UNCCD or National Strategy* (2002)
- *National Capacity Needs Self-Assessment for Global Environmental Management* (2005)
- *Action Plan on Conservation and Sustainable Use of Biodiversity* (2006).

Azerbaijan’s aim is to align its environmental action with the direction advocated by the international development assistance community. The EU, OECD, and UNEP have supported projects to introduce international good practices, standards, norms, and technology. UNDP and World Bank have collaborated on transboundary water and coastal issues. The most significant among these international efforts are:

- *Caspian Environmental Program* (since 1995)
- *EU-Azerbaijan Partnership and Cooperation Agreement* (1999) and subsequent *EU-Azerbaijan Action Plans*
- *Azerbaijan’s participation in the Environment for Europe (EfE) process*.

There are a number of bilateral environmental cooperation agreements that serve the prioritization process. See Appendix 2 for a list of development-partner-supported initiatives of most relevance to this assessment.

*Note:* 1. See SOCAR Environmental Policy 2008 ([www.socar.az](http://www.socar.az)) or draft environment program of Azerenerji ([www.azerenerji.com](http://www.azerenerji.com)). Several other policy documents were drafted between 2004 and 2005 by MENR. They were not translated into official policy but they have influenced MENR’s thinking. These include, for instance, the “State Program on Ensuring Environmental Balance and Regulation of the Use of Natural Resources,” and the draft Presidential decrees “On the Implementation of Urgent Measures in the Area of Solid Municipal Waste Management” and “On the Protection of Lands and Water Bodies from Pollution, Inventory of Contaminated Lands, and Prevention of Recurrent Pollution.”

Source UNECE 2010;USAID

**10. Unrealistic budgets and a lack of meaningful prioritization led to slow implementation and an implied reliance on outside assistance.** The 1998 NEAP provided rough estimates for each action (between US\$5,000 and US\$5,000,000), with a plan total of around US\$42.5 million. Actions identified as ‘top’ priorities were to be completed within one to two years, and others within two to five years. However, since 33 of the 46 actions were a ‘top’ priority, financing these expenditures would have represented 1 to 3 percent of the entire state budget if completed in the two-to-five-year time frame (1998–2003). This was unrealistic at the time, given the low priority of environmental protection, both in the country and the region. In addition, the financing gap implied dramatic transfers from other budgets or from outside sources such as international donors or the private sector.

11. As a result of the immense budgetary requirements in order to fulfill the Action Plan, only twenty percent of the activities listed in the NEAP were completed (UNECE 2004). Another key constraint to implementation was insufficient environmental progress in economic sectors, including the prevention of new pollution and clean-up of legacy pollution. Progress had been made in policies, such as new legislation, but many implementation regulations and bylaws were still nonexistent. The only significant institutional change at the time was the establishment of the Ministry of Ecology and Natural Resources in 2001.

**12. Environmental planning in Azerbaijan evolved but was carried out through a series of add-on action plans rather than a unified national strategy.** In the absence of a follow-up NEAP, the second main environmental policy document has been the National Program on Environmentally Sustainable Social and Economic Development for 2003–2010. The National Program covers environmental aspects of the country’s overall development strategy and was accompanied by an Action Plan for the period 2003–2010. The Action Plan focused on five major areas: (a) environmental protection and use of natural resources; (b) global environmental problems; (c) industrial complexes; (d) agriculture and tourism; and (e) education, science, and culture. The National Program and its Action Plan were further complemented by the Comprehensive Action Plan on Improvement of the Environmental Situation for 2006–2010, also known as the State Environment Program (SEP), which dealt with improving the environmental situation in various areas (e.g., Baku Bay, Bebiheybat, areas adjacent to Heydar Aliyev International Airport, Absheron Peninsula). The SEP also aimed to address general ecological problems and improve legislation. To date, the SEP remains the most current set of comprehensive actions directed toward environmental protection, and is the focus of this analysis. The SEP is currently undergoing draft review for a second planning period (2011–2014), so the results from this analysis may serve as a useful input into that implementation process.

**13. Mainstreaming environmental issues with poverty-related objectives was a positive step, but the Action Plan lacked a more rigorous prioritization strategy.** Problems of poverty are exacerbated by environmental degradation. Azerbaijan’s environment suffers from over a century of legacy pollution from petroleum production and decades of chemical production. As a result, nearly 30 percent of the coastal area and more than half of the country’s larger rivers are contaminated.<sup>9</sup> Recognition of poverty-environment linkages was part of the State’s Program on Poverty Reduction and Economic Development 2003–2005 (SPPRED), now in its second phase (2008–2015), which included environment as one of its national priorities. It focuses on environmental conditions as a cause of poverty and as a tool to reduce it. The SPPRED lists many of the same priorities as in the NEAP (e.g., water resources, land, air, forests, and the Caspian Sea), and included an Action Plan detailing 50 activities along with responsible implementing agencies. Many of these activities appear to be repeated from previous Action Plans with new additions, such as piloting renewable energy and climate change initiatives. However, the SEP does not rank any of these actions, nor does it provide an assessment of costs and benefits.

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<sup>9</sup> United Nations’ State of the Environment Report–Azerbaijan, 2002; <http://www.grida.no/enrin/htmls/azer/soe/ecology/index.html>.

## C. The State Environment Program

14. The State Environment Program is multi-year, multi-agency investment program with 65 activities under 7 action areas – mostly geographical in nature. The SEP groups and orients individual projects toward common objectives such as improving environmental conditions in the Absheron Peninsula (See Appendix 3). It was originally an amendment to the National Program on Environmentally Sustainable Social and Economic Development (2003-2010), but now represents the most comprehensive and current effort by the Government on environment. The SEP lists the main executing and supporting agencies responsible for implementation and the time period in which activities are expected to take place.

### *i. The process of formulation and implementation*

15. **The formulation process for the SEP represents progress in the continuum of environment-related efforts. The SEP recognizes the need for interagency collaboration; assigns responsibilities; calls for results; and is time-bound, thus aiming to reduce discretion and guide the daily operations of the Ministry of Environment and Natural Resources (MENR) and executing agencies.** The process for formulating and implementing the SEP is being adopted widely in Azerbaijan for state programs in priority areas.<sup>10</sup> A Presidential decree designates the Cabinet of Ministers responsible to ensure implementation of a time-bound action plan formulated by a designated agency. For the SEP, MENR is the designated agency, and the MENR policy department prepares the Action Plan. It reflects MENR consensus based on the strategic and planning documents described above and on inputs from external technical experts, often including academics, and nongovernmental agencies. The Action Plan identifies the principal components, and for each component, constituent projects; primary executing agency; collaborating agencies; and, in some instances, a tentative estimate of project costs.<sup>11</sup> The draft Action Plan is circulated among proposed executing agencies for their comments or modifications, which MENR considers before sending a final draft to the Ministry of Economic Development (MED) and the Cabinet of Ministers.

16. The final SEP Action Plan draft is then reviewed in the context of potential government financing and international financial institution (IFI) support for selected projects, among other budget considerations.<sup>12</sup> Financing prospects could mean that some projects are postponed or rescaled. The Cabinet of Ministers modifies and approves the SEP Action Plan, which is then formally reconciled with the Public Investment Program (PIP)<sup>13</sup> and returned to MENR, which

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<sup>10</sup> For example, the State Program on the Utilization of Alternative and Recyclable Energy Sources of 2004 or the State Program for the Development of Fuel and Energy Sector in Azerbaijan (2005–2015).

<sup>11</sup> This is based on initial budget instructions to individual ministries by the Ministry of Finance.

<sup>12</sup> During budget reconciliation, each SEP executing agency negotiates its initial “wish list” budget allocation with MED, which is familiar with the financial picture of each SEP executing agency. Some agencies such as SOCAR or Azerenerji do not depend on government for their primary budget support; their SEP projects may be wholly or partially financed from their own revenues; other executing agencies depend entirely on government budget support, sometimes supplemented by foreign borrowing or grant assistance. Each SEP activity has a firm budget commitment for the initial year, but subsequent allocations are tentative for the following years and may be increased or reduced. See Appendix 7 for Azerbaijan budget process information.

<sup>13</sup> The PIP is the investment or capital expenditure component of the state budget, as opposed to budget allocations for government entities’ recurrent costs.

oversees implementation and reports on progress. The main executing agencies must complete project documentation, typically a technical study and a financing plan.<sup>14</sup> Appendix 3 provides details on the current SEP for 2006–2010.

17. The SEP implementation period can be carried forward and extended, similar to other state programs. A SEP follow-up program was underway in 2010, as this report was being prepared using the process outlined above. Initially, only projects that *augment* the original SEP are formulated (see Appendix 6); original but unfinished SEP projects are expected to continue in the new planning period (2011–2014).

*ii. Selection of priority interventions*

**18. Actions in the 2006–2010 SEP are largely consistent with environmental issues identified in previous environmental planning documents.** Mapping SEP actions to those initially described in the 1998 NEAP reveal a close matching of priorities. As Table 1 shows, 60 percent of the actions are directed toward reducing pollution from industry, energy, and other production processes identified as the most pressing environmental issue. A near-even split is directed toward initiatives that reduce pollution in the Caspian Sea (including the Baku Bay) and institutional/policy reform. The remaining actions include forest protection, addressing land degradation, and promoting biodiversity conservation. Budgets are similarly distributed, with the exception of institutional development and policy, for which no information was available.

**Table 1: Mapping of 2006–2010 SEP Actions to 1998 NEAP Priority Areas**

1998 NEAP priority area	SEP (2006–2010)			
	No. of actions	Percent	Budget allocation (AZN)	Percent
Pollution from industrial production, energy production, transport, and other sources <sup>1</sup>	39	60.0	238,568,282	66.7
The Caspian Sea <sup>2</sup>	10	15.4	90,366,500	25.3
Forestry, land, and biodiversity	4	6.2	28,752,000	8.0
Institutional development and policy <sup>3</sup>	12	18.5	—	—
<b>Total</b>	<b>65</b>	<b>100.0</b>	<b>357,686,782</b>	<b>100.0</b>

Note: --- Not available.

1. Includes air, land, and water pollution actions in the SEP (mostly wastewater treatment).

2. Includes actions related to the cleanup of Baku Bay.

3. Includes legislation and regulation reform.

**19. Actions under the draft 2011–2014 SEP place greater emphasis on pollution-related issues, institutions, and policy.** A draft 2011–2014 SEP was available at the time of writing; comprising 44 actions across 9 main action areas (see Appendix 6). Unfortunately, relatively few actions possess a budget allocation since this is not a requirement in the formulation of the Action Plan. Regardless, upon mapping new and transferred actions in the SEP to those priorities stated in the 1998 NEAP, there is a slight shift toward pollution-related issues and institutional development and policy (Table 2).

<sup>14</sup> In theory, all technical ministries' *initial* submissions for funding to MED should include feasibility studies, cost estimates, and financing plans. In practice, initial submissions often fall short of this requirement (see Section v). In fact, Government line agencies are not legally required to submit a project environmental assessment (Box 5).

**Table 2: Mapping of 2011–2014 SEP Actions to 1998 NEAP Priority Areas**

1998 NEAP priority area	SEP (2011–2014)	
	No. of actions	Percent
Pollution from industrial production, energy production, transport, and other sources <sup>1</sup>	30	68.2
The Caspian Sea <sup>2</sup>	4	9.1
Forestry, land, and biodiversity	4	9.1
Institutional development and policy <sup>3</sup>	6	13.6
<b>Total</b>	<b>44</b>	<b>100.0</b>

*Note:* 1. Includes air, land, and water pollution actions in the SEP (for example, wastewater treatment and other transport-related initiatives).

2. Includes actions related to the cleanup of Baku Bay.

3. Includes legislation and regulation reform.

20. A **Multi-Criteria Analysis (MCA)**<sup>15</sup> exercise revealed that the most important consideration in ranking SEP actions is environmental health. In 2010, an Inter-Agency Working Group<sup>16</sup> was formed to discuss environmental priorities within the SEP and to perform a MCA exercise. The purpose of the exercise was to rank alternative criteria by which SEP actions should be measured and ranked. Participants in the first working session included representatives from several ministries and the general public.<sup>17</sup> Twenty-two sociopolitical, economic, technical, and environmental criteria were evaluated where environmental health was consistently ranked highest among the working group, followed by environmental impact and social acceptability (Table 3). Environmental health was also the main criterion in which priorities were initially set in the 1998 NEAP. Interestingly, other than total cost, most economic criteria ranked quite low, revealing a preference for the nonfinancial impacts of action implementation. Although the final results are a function of only those represented, the exercise highlighted the importance of nonfinancial criteria in balancing environmental priorities.

**Table 3: Top Criteria for Ranking SEP Actions<sup>1</sup>**

Rank	Criterion
1	Health impact
2	Environmental impact
3	Social acceptance of the project/Action
4	Consistency of the project/Action with the national policy objectives
5	Technical risk
6	Estimated full cost of the project/Action

<sup>15</sup> Multi-criteria analysis (MCA) is a method that assigns weights to a set of quantitative or qualitative criteria to derive a ranking of choices in a more rigorous fashion. See Appendix 4 for further details on the methodology.

<sup>16</sup> The core working group consisted of representatives from the Ministries of Finance, Economic Development, Environment and Natural Resources, Emergency Situations, Health, and SOCAR. Broadening the constituency was anticipated in future rounds to include other agencies, donors, NGOs, and representatives of civil society.

<sup>17</sup> Represented were the Ministries of Environment and Natural Resources, Emergency Situations, Health, SOCAR, and two observers from the general public.

- 7 Political acceptance of the project/Action
- 8 Access to technology by local agents
- 9 Duration of the preparation phase

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*Note:* 1. Ties are possible since one criterion may receive the same overall average ranking as another (that is, the seventh-ranked criteria). A full set of criteria is contained in Appendix 4.

### *iii. Assessing progress to date*

**21. 40 percent of the 2006–2010 SEP has been completed, led by the number of completed land-based pollution management projects; 38 percent of all projects remain to some degree “in progress.”** Consultations were held with implementing agencies on all aspects of project implementation, including implementation status. Physical progress of projects was obtainable in all cases, but in some instances original budget allocations were unknown. This was most prevalent for legislative and institutional initiatives, so conclusions related to budget allocations should be interpreted with caution, and potentially represents a lower bound. Actual expenditures by project were unavailable so one cannot draw conclusions on cost-effectiveness. Reorganizing actions by major environmental theme and SEP action area, Table 4 summarizes the current status of the 2006–2010 SEP at the end of 2010. Organizing by environmental theme in this fashion also allows for comparison with official expenditure data in the next section. 40 percent of activities have been completed, 38 percent partially completed, 17 percent transferred to the new SEP and the remaining 5 percent dropped. Completion rates are lowest among those related to Caspian Sea / Baku Bay cleanup, with one-half slated for transfer to the new programming period. This is likewise the case for land-based pollution projects, with 48 percent completed, and 35 percent transferred to the new SEP.

**22. Geographically, projects aimed at the rehabilitation of Baku Bay and the Absheron Peninsula are mostly incomplete or are being transferred to the new SEP programming period.** The 2006–2010 SEP has a geographic focus comprising seven action areas varying from site-specific initiatives (e.g., near Heydar Aliyev International Airport) to much larger geographic areas (e.g., Absheron Peninsula). Completion rates are significantly lower in areas requiring large clean-up projects (e.g., Baku Bay, Absheron Peninsula). A significant number of these projects are considered high priority yet were not completed and thus have been transferred to the next SEP. Most projects related to environmental conditions around Heydar Aliyev International Airport were completed, whereas legislative and institutional development appears to be quite slow as indicated by the number of incomplete activities.

**23. Within the completed actions, with respect to air pollution, only a number of studies were completed.** Completed air pollution projects (Actions #5.4 and 6.2 in Table 5) include two studies, one related to strengthening vehicle emission standards and reducing urban congestion and the second related to establishing an early warning system for significant hydro-meteorological events (or disasters). Greater attention to actions that mitigate air pollution emissions are clearly warranted. Air pollution was cited in the 1998 NEAP as one of the most pressing urban environmental issues. In contrast, concrete action has been seen among land-based pollution management projects, such as the demolition of existing communication lines (#2.1), transport of solid waste from villages (#4.5), and the closure of old oil wells (#4.19). It is

difficult to judge the effectiveness of these actions since technical documentation, along with baselines, were not available (see Section V below). However, given the scale of such pollution, there is much more that can be done, as indicated by the large number of projects still in progress. A similar observation can be made with Caspian Sea / Baku Bay initiatives, which include those to reduce wastewater pollution from ships (#1.5), leakages from oil production at sea (#4.17), and a study on the recreational potential of the Caspian coast (#5.1). The majority of large cleanup investments have yet to materialize.

24. Only one water quality and treatment project, confined to several islands, was completed (#4.4); by way of contrast, a number of such projects are still in progress (e.g. #4.23). The other three completed actions dealing with water quality are actually proposals for further work in specific areas. The bulk of actual wastewater treatment upgrading remains incomplete.

25. Two studies on reducing forest pressure were completed (#5.5, 5.8), an important contribution given that only about 10 percent of Azerbaijan contains forest cover (NEAP, 1998). Protection of the remaining resources will be critical, but currently this is given little treatment in either the 2006-2010 or 2011-2014 SEP.

**Table 4: Current Status of 2006–2010 SEP**

<b>SEP 2006–2011</b>								
<i>By environmental theme</i>	Amount allocated (AZN)	Percent	Completed (90–100%)	In progress (20–89%)	Transferred to new SEP	Dropped	Total	Percent complete
Air pollution <sup>1</sup>	31,100	0.0	2	1	2	0	5	40%
Land pollution <sup>2</sup>	199,140,082	55.7	11	8	3	1	23	48%
Water quality and treatment	39,397,100	11.0	4	3	4	0	11	36%
Caspian Sea / Baku Bay	90,366,500	25.3	3	5	2	0	10	30%
Management of parks, preserves, forestry, and protection of biodiversity	28,752,000	8.0	2	2	0	0	4	50%
Legislation and institutions	N/A	0.0	4	6	0	2	12	33%
<b>Total</b>	<b>357,686,782</b>	<b>100.0</b>	<b>26</b>	<b>25</b>	<b>11</b>	<b>3</b>	<b>65</b>	<b>40%</b>
<i>By SEP Action Area</i>								
1. Improvement of env. condition of Baku Bay	57,624,500	16.1	1	3	2	0	6	17%
2. Improvement of env. conditions in Bibiheybat	5,127,728	1.4	1	0	1	0	2	50%
3. Improvement of env. conditions around Baku Airport	1,700,000	0.5	3	0	0	0	3	100%
4. Improvement of env. conditions in Absheron Peninsula	232,177,154	64.9	9	9	5	1	24	38%
5. Improvement of env. conditions elsewhere in Azerbaijan	61,057,400	17.1	5	7	1	0	13	38%
6. General environmental improvements	N/A	0.0	4	0	2	0	6	67%
7. Legislative development	N/A	0.0	3	6	0	2	11	27%
<b>Total</b>	<b>357,686,782</b>	<b>100.0</b>	<b>26</b>	<b>25</b>	<b>11</b>	<b>3</b>	<b>65</b>	<b>40%</b>

*Note:* N/A = not available.

1. Includes Hydromet and monitoring activities.

2. Includes initiatives on solid waste.

**Table 5: Completed 2006-2010 SEP Actions as of 2010**

<i>By environmental theme</i>	<b>Action # completed</b>	<b>Project Type <sup>1</sup></b>	<b>Description</b>
Air pollution	5.4	S	Strengthening control over technical conditions of vehicles, adjustment of vehicle emission standards to European standards (Euro 3), establishment of control-measurement points, organization of disposal of vehicles dropped out of exploitation, elimination of congestions by introducing modern equipment and devices for regulating traffic, increasing "pedestrian zones" in cities, and implementation of other measures in order to reduce poisonous gases emissions from vehicles
	6.2	S	Establishment of early warning system to mitigate damage from dangerous hydro-meteorological events related to climate change
Land pollution	2.1	Ph	Demolition of existing communication lines, engineering objects and facilities, buildings and rehabilitation and re-cultivation of the area
	3.1	Ph	Designing and implementation of a dendrological project in connection with reconstruction of the road to Heydar Aliyev International Airport
	3.2	S	Carrying out comprehensive studies with a view of environmental sanitation of the airport area and preparation and implementation of environmental rehabilitation project
	3.3	Ph	Removal of Sadarak and Bina shopping areas in order to ensure environmental safety of the area around airport and rehabilitation of the natural landscape
	4.5	Ph	Ensuring transportation of solid waste from villages and recreation facilities in Absheron peninsula for disposal
	4.6	Ph	Design and implementation of rehabilitation program to improve sanitary situation at recreation centers in Absheron
	4.7	S	Identification of oil polluted and water inundated areas in operation zones of oil-gas companies in Absheron peninsula and other areas polluted by production wastes and preparation on large-scale (1:10 000) ecological map of Absheron peninsula
	4.9	S	Preparing proposals for using formation water from oil extraction in producing iodine and bromine
	4.10	S	Assessment of impact of environmental pollution to human health and creation of information bank
	4.19	Ph	Preparation and implementation of actions aimed at closure of oil wells future utilization of which is considered inexpedient in order to improve environmental condition of oil field areas
	6.4	S	Determination of users of Earth interior and quantities of natural resources extracted by them (with exception of oil and gas) and their inclusion to State Mines Balance
Water quality and treatment	4.4	Ph	Reconstruction of treatment facilities in Pirallahi, Chilov, Qum islands and Neft Daslari (Oily Rocks) in conformity with modern standards
	4.15	S	Preparation of proposals for and implementation of more precise definition of pollution sources of Bulbule, Xocasan, Masazir, Qizilnohur and other natural and artificial lakes, regulation of their levels and establishing recreation zones around them and/or their drainage
	5.10	S	Preparation of proposals on and implementation of local water purifying systems to improve water supply to rayon center and villages
	6.1	S	Establishment of open hydrologic monitoring system for accurate estimation of water resources, prevention of pollution and optimal management
Caspian Sea / Baku Bay	1.5	Ph	Establishment of a centralized system that will have modern receiving stations ensuring treatment of wastewater from operation of ships and collected from the sea surface
	4.17	Ph	Prevention of leakages to the sea from wells, pipeline and platforms in Neft Daslari and other offshore oil fields
	5.1	S	Assessment of recreation potential and current status of Caspian coastal areas (including Absheron peninsula), as well as making proposals on better use of health and natural medicinal opportunities of these areas
Management of parks, preserves, forestry, and protection of biodiversity	5.5	S	Completion of forest regulation and design work in order to reduce human-made pressure on forests, and determination of perspective areas for planting new forests based on climatic and soil conditions and organic planting methods
	5.8	S	Strengthening protection of trees and shrubberies which are not part of forest fund, improving accounting system for improving verdure in towns
Legislation and institutions	6.3	S	Strengthening environmental awareness and education, more focus on environmental issues in educational institutions, and training of human resources in this field
	7.1	S	Develop draft laws in making the following amendment to Administrative Derelicts Code: - strengthening administrative punishment for offences against environmental safety; Determination new types of punishment of administrative offences against environmental safety
	7.4	S	Draft laws on following amendments of Law on Earth Interior: - improving use of Earth interior; - improvement of legal framework on soil protection and reclaiming; - determination of requirements regarding salinization
	7.6	S	Draft laws on following amendments to Criminal Code: Improving norms determining responsibility for environmental crimes; Adding new norms envisaging responsibility for environmental crimes

*Notes:* 1 – Studies (S): includes research, studies, preparation of maps, education and activities for improvement of legislation; Physical works (Ph): construction, clean up, installation of treatment facilities, etc.

*iv. Setting budgets*

**26. SEP budget allocations are actualized only when designated principal implementing agencies adopt their broad priorities and are integrated into activity plans and budgets.** The SEP provides a useful mechanism for assembling project concepts and combining environmental priorities into themes; assigning principal agencies responsibility for priorities; and adapting to the timing of SEP investments. However, information on the overall SEP budget<sup>18</sup> is incomplete and cannot be referenced through one centralized source.

**27. Non-state budgets are an important source of SEP financing.** SEP Action #4.3 involves reconstruction of Zig mechanical wastewater treatment facility as a Phase 1 activity to be implemented by Azersu JSC. Though listed in the 2006–2010 SEP, this project was deferred to the 2011–2014 SEP, revealing that SEP represents a *framework for mobilizing finance* rather than an aggregation of “shovel-ready” projects with secured financing. Reconstruction of the Zig facility is likely to be implemented under the National Water Supply and Sanitation II Project (NWSS); however, only when actual budgetary expenditures take place does this SEP project move from proposal to reality. These issues are detailed further in Section E.

*v. Quality of SEP actions’ technical preparation*

**28. Major gaps exist in SEP project documentation and access to it.** Where SEP actions are supported by IFIs or other development partners, adequate documentation exists and information is disclosed in line with IFI disclosure requirements. Typically, IFI documentation includes a detailed project record or full feasibility study and environmental assessments. For SEP actions with only national budgetary support, project documentation may exist but cannot be easily accessed in the executing agency, in MENR or MED, the agency responsible for matching investment proposals with budget resources (see Appendix 7). Therefore, because it must be assembled from several sources, project-related information is vulnerable to omissions or inaccuracies. It appears that the Government has yet to develop information systems to access complete project documentation on each activity.<sup>19</sup>

**29. A survey of SEP project documentation reveals that although progress reporting is quite good, it falls short in other important areas such as technical and social justification, budgets, executing agency roles, and environmental assessment.** The survey of SEP actions also included an assessment of information on budgets, technical preparation, roles and responsibilities of executing agencies, and environmental assessments. Table 6 shows commendable progress reporting (which is the only current mandate), but falls short in nearly all aspects related to quality technical preparation. On average, only half of all projects include publically available technical or social documentation, budgetary information (whether original

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<sup>18</sup> Neither the original decree calling for the formulation of SEP, nor any other official document, contains the Program’s *overall* budget. Preliminary budget estimates of only a few individual components are found in the MENR or MED at the Program’s outset.

<sup>19</sup> MED’s Public Investment Department (PID) and Regional Development and State Programs Department are formally responsible for monitoring of SEP projects. Opportunities for discussion with PID were limited and the resulting conclusions may be too generalized.

proposal or approved amount), roles of implementing agencies, or environmental assessment. Notable exceptions include budgets in the case of Baku Airport and Bibiheybat, and executing agency roles and environmental assessments for general environmental improvement projects.

**Table 6: Percentage of SEP Projects with Proper Documentation**

SEP Action Area	No. of SEP projects	Percentage of projects for which:				Progress reports regularly prepared and available to MENR
		Technical and social justification accessible	Original budgets and any budget revisions available	Role of each executing agency clearly specified in writing	Environmental assessment undertaken	
1. Improvement of env. condition of Baku Bay	6	33.3	33.3	33.3	50.0	100.0
2. Improvement of env. conditions in Bibiheybat	2	50.0	100.0	50.0	50.0	100.0
3. Improvement of env. conditions around Baku Airport	3	66.7	100.0	66.7	66.7	100.0
4. Improvement of env. conditions in Absheron Peninsula	24	50.0	79.2	66.7	58.3	91.7
5. Improvement of env. conditions elsewhere in Azerbaijan	13	61.5	53.8	61.5	61.5	84.6
6. General environmental improvements	6	50.0	16.7	83.3	83.3	100.0
7. Legislative development	11	54.5	0.0	45.5	0.0	63.6
<b>Total</b>	<b>65</b>	<b>52.3</b>	<b>54.7</b>	<b>58.1</b>	<b>52.8</b>	<b>91.4</b>

*vi. Interagency collaboration*

**30. The lack of clear roles and responsibilities for each collaborating agency is another important factor leading to poor implementation.** The SEP recognizes the importance of interagency collaboration and most SEP projects indicate the principal executing agency and collaborating government agencies. However, the scope and scale of collaboration arrangements and budget implications are rarely specified, creating enormous potential for future misunderstandings or conflicts, since each agency will have different operational guidelines and expectations.

**D. Environmental expenditure accounting in Azerbaijan: current conventions**

31. Understanding the financing and monitoring of environment-related activities in Azerbaijan requires a closer look at how environmental expenditures are defined and accounted for in government statistics, methodological challenges, and whether activities are included in the SEP. As noted earlier, official statistics tend to mask overall activity partly due to unclear mandates in agency reporting, but also as a consequence of more fundamental issues such as what constitutes environmental expenditure.

**32. Current definitions of environmental expenditure are too broadly defined and do not appear in major legislation or laws related to water supply and wastewater treatment or pollution management.** Azerbaijan has yet to develop a system of official definitions of environmental expenditures that would apply to national environmental legislation, the Environmental Protection Law (1999), or legislation governing environmental concerns such as

water supply and wastewater treatment, or land protection. Partial guidance is found in Decree No. 149, issued by the Cabinet of Ministers in 2004, which divides environmental expenditures into the following broad groups:

- *Combating environmental pollution*: Expenditures to prevent land, groundwater, and air pollution; and expenditures for protection from radiation, and noise and vibration, including associated indirect costs such as management, monitoring, and prevention
- *Protecting biodiversity and landscape*: Expenditures to protect flora and fauna, and to protect and manage forest reserves and parks
- *Other environmental expenditures not included in the other two categories.*<sup>20</sup>

33. Article 23.3 of the Environmental Protection Law defines environmental revenues as consisting mainly of environmental fines and penalties. The law also stipulates that environmental expenditures can be financed from local and state budgets, environmental protection funds, ecological insurance proceeds, user fees and fines, user charges for natural assets, donations from individual and legal entities, and grants and other allocations from international institutions.

34. The broad definition of expenditures suggests they could be more specific and include new categories by environmental function, such as monitoring and enforcement (see Box 2).

#### **Box 2: Definitions of Environmental Expenditure**

Different methodologies of defining environmental expenditure are found worldwide. One of the most popular is the OECD framework which groups environmental expenditures into four categories: (a) *Pollution abatement and control* (PAC); (b) *Technological improvements* (Enterprise investments and actions taken for commercial reasons that nonetheless have environmental benefits); (c) *Nature protection activities*; and (d) *Drinking water supply and other natural resources management investments and operations*, a category only now being classified as environmental expenditure in most Newly Independent States.

A review of existing methods to classify environmental expenditure suggests that a comprehensive list would include (a) control of outdoor air pollution; (b) water supply, sanitation, and hygiene; (c) reduction of vulnerability to natural disasters; (d) control of indoor air pollution; (e) control of soil degradation; (f) watershed and water resources management; (g) control of deforestation and reforestation; (h) protection of biodiversity, landscape, and national protected areas; (i) public space and urban environmental management; (j) wastewater treatment; (k) hazardous waste management; (l) municipal solid waste disposal; (m) mitigation of emissions of greenhouse gases and ozone-depleting substances; and (n) other environmental protection expenditures. In addition to its purpose, environmental expenditure can be classified by (a) institutional responsibility, possibly identifying core and noncore environmental agencies; (b) investment vs. recurrent cost dimension; (c) management components (policy formulation, enforcement, research and development); and (d) other dimensions (e.g., household, municipal, regional) Source: OECD

**35. Environmental expenditures, defined by official statistics, represent 0.5 percent of GDP, which is comparable to other middle-income countries, with the bulk going to water treatment and capital investments.** National statistics broadly structured along the definitions

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<sup>20</sup> Legislation is unclear of what types of expenditures might fall into this category.

above are summarized in Table 7, along with macroeconomic totals added for perspective. Notional budget allocations were not available in official statistics so it is not possible to estimate public spending efficiency. Environmental expenditures in 2008 amounted to AZN 175.6 million, which represents about 0.5 percent of GDP, which is comparable to other middle-income European countries (e.g., Poland, Portugal). The bulk of expenditures relate to water supply and sanitation with a substantial proportion dedicated to capital investments; however a disaggregation of types of investment is missing from official records. Recurrent expenditures grew in proportion to overall expenditures, but now comprise a lower share of overall spending, declining from 73 percent in 2002 to 35 percent by 2008. Finally, environmental revenues collected from fines and penalties, typically earmarked for environmental objectives, are miniscule, which suggests the need for further discussion within government on the role of environmental fees and payments.

**Table 7: Official Environmental Expenditures and Revenues in Azerbaijan, 2002–2008**  
(million AZN)

	2002	2003	2004	2005	2006	2007	2008
Gross Domestic Product (GDP)	6062.5	7,146.5	8,530.2	12,522.5	18,746.2	28,360.5	38,005.7
Public Investment Program (PIP)	N/A	84.9	96.9	159.9	879.6	1902.2	4275.2
<b>Environmental expenditures</b>	<b>16.0</b>	<b>20.7</b>	<b>28.1</b>	<b>30.9</b>	<b>42.6</b>	<b>104.2</b>	<b>175.6</b>
Of which: Recurrent expenditures	11.6	15.2	21.1	21.4	26.0	36.0	61.4
Maintenance and rehabilitation works at environmental objects	1.2	1.7	1.8	1.9	1.8	3.0	5.5
Management of parks, preserves, forestry, and protection of biodiversity	0.8	0.8	3.2	4.7	5.9	9.7	10.9
Capital investments	2.4	3.0	1.9	2.9	8.9	55.5	97.9
Of which: Water treatment	11.7	14.4	20.7	20.7	28.9	49.5	118.5
Air pollution	3.1	3.3	3.2	3.9	4.8	4.5	6.9
Land protection	0.4	2.2	0.9	1.5	3.0	40.5	39.3
Mgmt of parks, preserves, forestry, and protection of biodiversity	0.8	0.8	3.2	4.7	5.9	9.7	10.9
Collection of environmental fines	0.05	0.05	0.35	0.15	0.16	0.25	1.73
Of which: Water fines	0.02	0.02	0.21	0.04	0.03	0.06	0.30
Air fines	0.02	0.02	0.01	0.03	0.03	0.03	0.22
Land fines	0.02	0.01	0.12	0.07	0.10	0.16	1.21
Environmental expenditures in PIP	N/A	0.5	0.5	0.9	1.3	23.0	118.4

Sources: State Statistical Committee; MED.

*i. Modified estimates of environmental expenditure*

**36. A more complete picture of environmental expenditures would include those from state corporations, SOFAZ, and other donor-funded initiatives.** The State Statistical Committee estimates total environmental expenditures based on the annual breakdown of state budget

figures, which includes current and investment expenditures.<sup>21</sup> In principle, environmental investment expenditures are included in the Public Investment Program (PIP) component of the state budget.<sup>22</sup> Some small statistical inconsistencies occur, but these are less important than evaluating the underlying methodology of expenditure tracking.

37. First, **existing estimates of total environmental expenditure exclude or underestimate environmental expenditures by state corporations, which are substantial.** Several state corporations have a predominantly environment-related mandate (e.g., Azersu, SAWM), and others have expanded their environmental activities (e.g., Azerenerji, Caspian Shipping Company, SOCAR).<sup>23</sup> Investment expenditures of financially weak corporations such as Azersu and SAWM come from the state budget *and* from international financing; however, their current expenditures do not. All environmental expenditures for financially strong SOCAR, and for increasingly strong Azerenerji, are largely internally funded.

38. Second, the source of official estimates of environmental expenditure, the state budget, includes current and investment expenditures for MENR, MES, and MoH, the three ministries most directly concerned with the environment and with investment expenditures for municipal governments.<sup>24</sup> However, the state budget *excludes* all current, and some investment, expenditures of state corporations.

39. A more accurate picture of total environmental expenditure would include the following:

- All current and investment expenditures by relevant state ministries: MENR, MES, and MoH<sup>25</sup>
- All expenditures by relevant state corporations (e.g., Azersu and SAWM):
  - Domestic-funded investment expenditure included in PIP<sup>26</sup>
  - Foreign-funded investment expenditure (IFI loans, credits)
  - All current expenditures
- All environmental expenditures by other relevant state corporations (e.g., Azerenerji, Caspian Shipping Company, SOCAR) including PIP-financed or non-PIP-financed

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<sup>21</sup> Criteria for including budget items are not well understood due to the imprecise definition of “environmental expenditures” (see para. 32).

<sup>22</sup> Proceeds of IFI loans or grants are an important source of environmental investment expenditure, but are not included in state budget documentation. These funds are accounted for separately.

<sup>23</sup> Government inclusion of these corporations in the State Environment Program attests to their status as environment-related entities, as is the case for wastewater treatment, and water supply, although to a lesser degree. Most wastewater treatment and water supply activities are combined, which makes it difficult to disaggregate “environmental” expenditures from environment-related or “other” expenditures. However, it may be assumed that *all* Azersu and SAWM activities are environmental and consider their combined total expenditures as an upper estimate.

<sup>24</sup> The state budget records *amounts* transferred to individual municipalities but not their purpose, and some municipalities may supplement the transfer from their own revenue to support environmental activities (for example, solid waste management in Baku).

<sup>25</sup> Some ministries (for example, Ministry of Environmental Situations) receive foreign investment funds and matching PIP allocations.

<sup>26</sup> Azersu and SAWM (unlike SOCAR or Azerenerji) lack capacity to mobilize their own investment funds and depend entirely on the state budget and IFIs.

(domestic or foreign) investment components and corresponding portions of current expenditure

- Environmental expenditures by SOFAZ<sup>27</sup>
- Donor-funded environmental technical assistance directed primarily, although not exclusively, to MENR (see Appendix 2)

**40. Expanding the definition of environmental expenditures shows that pollution-related initiatives constitute over 90 percent of all activity.** Table 8 estimates total environmental expenditure in Azerbaijan following the methodology described above and matches it with environmental priorities identified in the 1998 NEAP (see Appendix 8 for further details).<sup>28</sup> The modified estimates suggest that environmental expenditure is concentrated in pollution-related issues to a greater degree than what is reflected in the 2006–2010 SEP. The amounts allocated to the Caspian Sea are lower in this representation. However, this does not change the conclusion that most activities are oriented to pollution-related cleanup operations.

**41. Azerbaijan’s strong revenue growth has led to an increasing trend of corporatizing environmental expenditure, mostly allocated to infrastructure, thereby marginalizing green-related environmental investments.** Two major trends have surfaced over the past decade related to public environmental expenditures. First, an explosion in government revenues in 2005 enabled massive modernization of urban environmental infrastructure, which is now capturing an increasing share of total environmental spending and total public spending, thereby reducing the share devoted to traditional environmental concerns such as forestry, natural resources management, and biodiversity conservation (see Table 8). Second, there has been an increasing role of state corporations related to the national environmental agenda, so policy discussion should include these new stakeholders.

**Table 8: Mapping Modified Estimates of Environmental Expenditure to 1998 NEAP Priority Areas (million AZN)**

1998 NEAP priority area	2004	2005	2006	2007	2008
Pollution from industrial production, energy production, transport, and other sources	87.8	244.8	407.0	708.1	963.6
The Caspian Sea	2.0	2.0	2.0	6.1	5.1
Forestry, land, and biodiversity	3.2	4.7	5.9	9.7	10.9
Institutional development and policy	1.0	2.0	2.0	2.0	2.0
<b>Total</b>	<b>94.1</b>	<b>253.5</b>	<b>416.9</b>	<b>726.0</b>	<b>981.6</b>

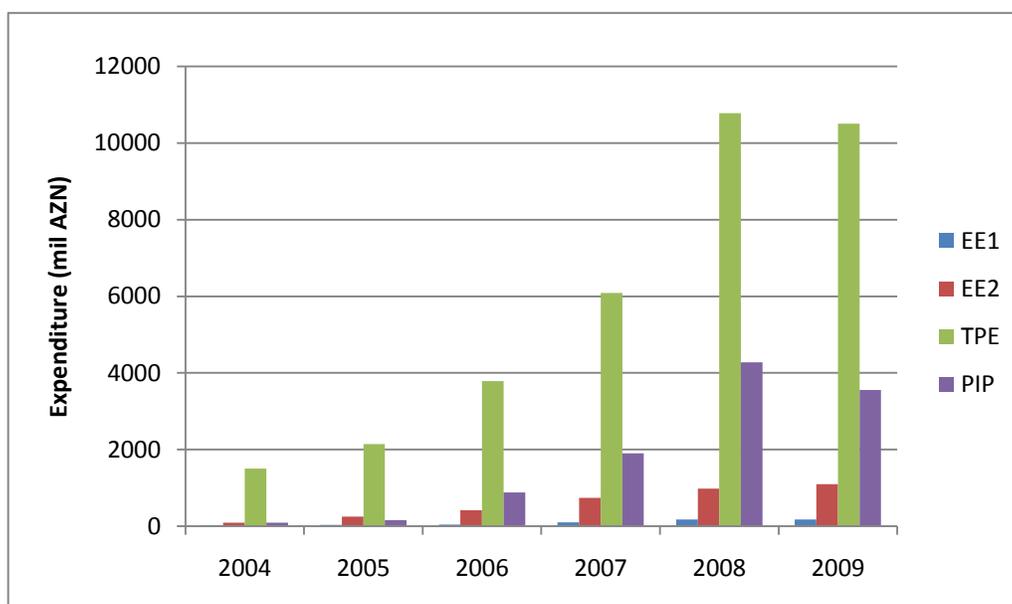
*Source:* Author’s calculations.

<sup>27</sup> This aligns with the logic of considering Azersu and SAWM as predominantly environmental entities.

<sup>28</sup> Further data refinements are possible, but major improvements are unlikely in the short run due to the data gaps in agencies’ records. Therefore, this analysis represents the initial efforts toward fully accounting for environmental expenditures in Azerbaijan, which could evolve in future as data availability improves.

42. **Revised environmental expenditure figures represent over 3 percent of GDP and over 10 percent of total public spending.** The total volume of environmental expenditure in Azerbaijan and its share in national macroeconomic or fiscal totals appears to be far greater than assumed, especially in recent years (Figure 1 and Figure 2).<sup>29</sup> This remains true even if borderline expenditure categories are excluded, such as water supply. Although this may be insufficient to defuse concerns about the adequacy of environmental expenditure in Azerbaijan, its growing importance is difficult to ignore.<sup>30</sup> Moreover, this accounting of environmental expenditure reveals a major shift in composition away from that depicted by historical statistical convention. Specifically, national environmental expenditures are now dominated by state corporations rather than MENR due to the pollution legacy, the existing configuration of skills and experience in state entities, and the trajectory of corporatization, among other factors. Therefore, it seems clear that analyzing environmental spending in Azerbaijan requires expanding the boundaries to include off-budget environmental expenditures. Tackling the wide scope of numbers between official statistics and those presented in Appendix 8 would be an excellent starting point.

**Figure 1: Environmental and Public Expenditure, 2004–2009 (million AZN)**

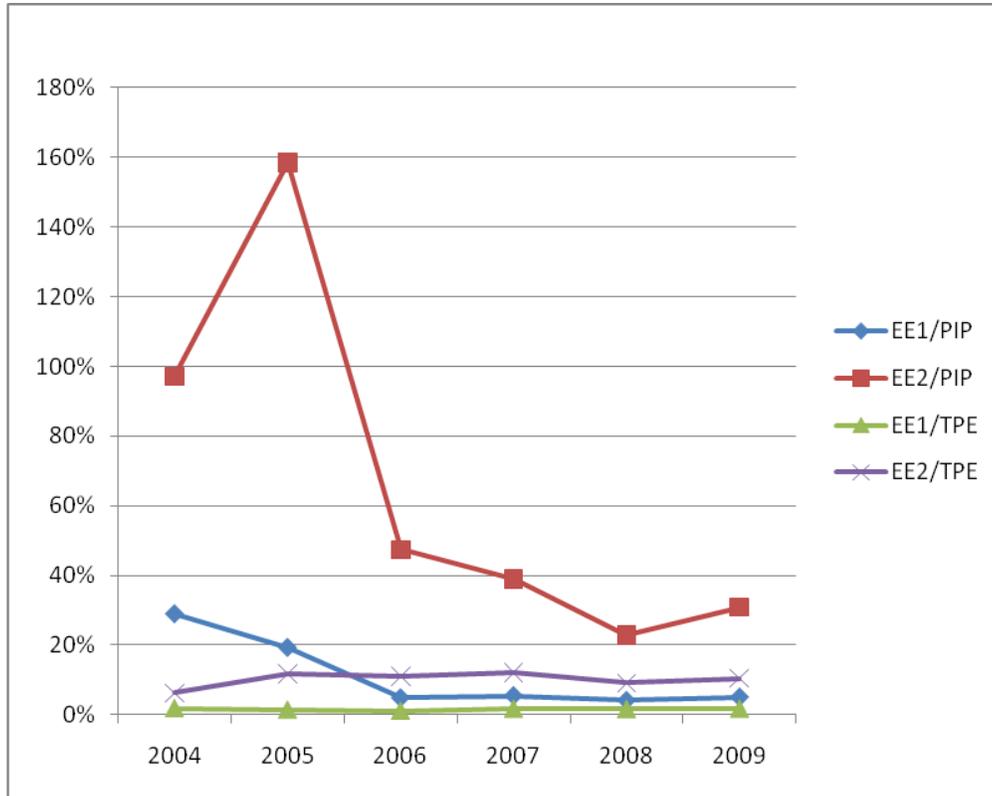


Note: EE1 = public environmental expenditure as currently defined.  
 EE2 = public environmental expenditure under modified definition.  
 TPE = total public expenditure.  
 PIP = Public Investment Program.

**Figure 2: Share of Environmental Expenditure in Public Spending (%)**

<sup>29</sup> The percentage in excess of 100 percent of PIP in Figure 2 indicates the importance of foreign funding of environmental investment expenditure in the years concerned.

<sup>30</sup> Vast methodological differences in this context make comparisons difficult between Azerbaijan and other countries.



Source: Appendix 8 and sources therein.

Note: EE1 = public environmental expenditure as currently defined.

EE2 = public environmental expenditure under modified definition.

TPE = total public expenditure.

## E. Financial monitoring of the State Environment Program

43. **The SEP's financial status is difficult to gauge since the MENR is responsible for physical progress while MED tracks expenditures, which leads to ambiguities. In addition, the SEP is not monitored as a program, which limits efficiency and effectiveness gains which could be realized.** At present, responsibility for SEP financial management is ambiguous because MENR and MED pass responsibilities back and forth, which makes the Program's financial status difficult to establish.<sup>31</sup> Monitoring the program as a whole<sup>32</sup> would be advantageous because it would:

- Establish the SEP in a broader environmental and total public expenditure perspective<sup>33</sup>

<sup>31</sup> Monitoring *physical* progress should retain its project-by-project basis since physical aggregation within a diverse program like SEP would not be useful.

<sup>32</sup> Understood here as a system that aggregates agreed-upon information on each SEP project/component, ensures regular information updates and distribution to all SEP participants, and prevents information inconsistencies.

<sup>33</sup> Without an initial overall SEP budget, estimates would not help to evaluate whether the overall SEP is implemented efficiently. As long as the existing approach remains, that sort of exercise, vital for Azerbaijan, will have to remain project-specific.

- Inform each government agency and state corporation of their resource envelope for SEP priorities
- Generate information on implementation efficiency for the Program and individual SEP projects
- Provide incentives to improve project preparation and project documentation
- Become a core of environment performance reporting.

**44. Cost efficiencies could be realized by linking project implementation and budgets of the MED, MENR, and MoF.** The SEP obscures fundamental difficulties that most government agencies encounter in obtaining adequate expenditure information. MENR, which serves as the coordinator for SEP, lacks sufficient information to link reporting on implementation progress to project disbursements, which is one means for monitoring project implementation. SEP executing agencies provide MENR with reports on physical implementation, with little if any information on budget utilization. Azeri agencies vary in their ability to link project implementation with budget. When information on project implementation and project disbursements are made, results are frequently communicated to other government agencies in a way that impedes program monitoring or determination of cost-effectiveness. The entire SEP could benefit through the establishment of a comprehensive monitoring system, environmental investment impact evaluations, and appropriate budget allocation levels for implementation, monitoring and evaluation.

**45. SEP financial monitoring requires a consolidated database to gauge project progress.** It appears that the SEP is not included in budget reporting on the structure and magnitude of environmental expenditures because no convenient statistical holder exists for it, despite the Program's political importance. Instead, domestic resource allocations to the SEP are included in a lengthy list of individual project or agency allocations and project labeling that can be inconsistent, complicating disaggregation. In addition, multiple agencies implement SEP projects, requiring aggregation of agency expenditures when compiling total project expenditures.<sup>34</sup> Finally, the documentation is unclear on whether SEP projects are investment projects only, or whether recurrent costs will be incurred by implementation partners.<sup>35</sup> As it is, expenditure information can be generated, with considerable difficulty, about individual SEP components, but not the entire Program. As such, accurate calculations of environmental expenditures cannot be based on the SEP alone, and financial monitoring of SEP implementation is incomplete to provide sufficient information to evaluate or recalibrate environmental priorities.

**46. Financial information on the SEP should be publically available.** In addition to assessing aggregate SEP expenditures, disaggregated budget-related information was reviewed, in particular with respect to accessibility for decision makers and SEP stakeholders. No consolidated record on annual budgets allocated to each SEP activity could be located in MED or MENR; some partial budget information exists, albeit with inconsistencies.

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<sup>34</sup> MENR sees the role of associated agencies primarily as consultative, but this role has recurrent costs. Perhaps broad orders of expenditure magnitudes could ignore these costs.

<sup>35</sup> Only by ignoring current costs and foreign-funded investment costs could SEP be considered a subcomponent of the PIP.

## **F. Integrating SEP into a public expenditure program: Suggestions for reform**

47. **It is unclear whether the SEP is reconciled with the Public Investment Program (PIP), which would increase its transparency and minimize the potential for overlap.** Future action directed at improving the SEP process could be considered part of the integrated efforts to enhance PIP formulation and improve public sector governance (see Box 3). Boosted by a USAID-supported Public Investment Policy Project 2005–2008,<sup>36</sup> these efforts are continuing under an International Development Association (IDA)-financed Public Investment Capacity Building Project.

### **Box 3: Strategic Framework for Improved Public Sector Governance**

The Government of Azerbaijan has cited improving the transparency and quality of public sector governance as a priority.

The World Bank Group's 2008 Country Partnership Strategy Review notes important recent reform efforts of relevance to the SEP, including strengthened coordination of ministries and agencies with the creation of the Inter-Ministerial Commissions on (i) Expenditure and Revenue and (ii) Macroeconomics, in 2007 and 2008, respectively; gradual introduction of international accounting standards in large state-owned enterprises; initial efforts to strengthen the Public Investment Department of MED, and the SECO/World Bank-funded comprehensive Public Expenditure and Financial Accountability (PEFA) assessment (with particular regard to oil revenues) in 2007–2008. The PEFA framework (see [www.pefa.org](http://www.pefa.org)), with a system of indicators that capture the principal dimensions of public finance performance, is gradually making its way into government practice.

In addition to official mechanisms of public expenditure monitoring (enhanced by initiatives such as the World Bank-supported Public Expenditure Review), Azerbaijan has an active NGO constituency that monitors aspects of public finance and promotes better public understanding of budget-related issues and transparency in budget-related decisions. Among the most active organizations are the following:

Centre for Economic and Social Development (CESD; [www.cesd.az](http://www.cesd.az)), a think tank specializing in public policy issues including public expenditure

National Budget Group (NBG; [www.nbg.az](http://www.nbg.az)), which specializes in budget and finance issues and in tracking budget expenses

Public Finance Monitoring Centre (PFMC; [www.pfmc.az](http://www.pfmc.az)), which focuses on revenue monitoring and SOFAZ

Economic Research Centre (ERC, [www.erc-az.org](http://www.erc-az.org)), an economic think tank

OSI-Assistance Foundation Azerbaijan (national partner of the Revenue Watch Institute [RWI] [www.revenuwatch.org](http://www.revenuwatch.org)) and its Transparency of Oil Revenues and Public Finance (TORPF), plays a lead role in monitoring the Extractive Industry Transparency Initiative (EITI) in Azerbaijan.

*Source:* World Bank.

## **G. Institutional constraints to SEP implementation**

48. Effective implementation of the SEP depends clear responsibilities of multiple actors and the necessary implementation capacity.

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<sup>36</sup> See USAID (2008).

*i. Multiple actions, multiple actors*

49. **The GoA recognizes the need for interagency implementation, but the lack of coordination hinders SEP implementation.** The Government understands that a healthy and resilient environment is the collective result of the actions of many actors. The Government has demonstrated this understanding in the SEP process itself, which demands the active engagement of several agencies with major influence on environmental management. This multiple-agency approach represents a significant advance over the era when environmental concerns were largely agency-specific and the relationship between individual agency’s actions to overall environmental outcomes was poorly articulated.<sup>37</sup> However, coordination remains hampered without a clear set of institutional coordination rules for SEP implementation. As Table 9 shows, the division of responsibilities among environmental issues requires careful coordination planning and reporting mechanisms among agencies.

**Table 9: State Ministries or Agencies with Environmental Responsibilities**

Air quality	MENR, MoH, and MoT
Biodiversity, Forestry, Fisheries	MENR
Land and Soils	MENR, State Committee on Land and Cartography, and MoA
Water quality	MENR, Azersu Joint Stock Company, MoH, Agency for Amelioration of Water Resources, MoA
Oil pollution	SOCAR, MENR
Hazardous waste	Ministry of Emergency Situations, MENR, MoH
Waste	MED, MENR, executive powers, and municipalities
Mineral resources	MENR
Sustainable development	MED is the lead institution for coordinating sustainable development activities.
Climate change	MENR

Source: UNECE 2010.

50. The SEP goes beyond traditional environmental mainstreaming, which promoted inclusion of environmental considerations in decision making by economic entities and citizens. In principle, the SEP seeks to *coordinate* actions by organizations that are at different stages of the environmental mainstreaming process, and consolidate the benefits of such coordination. Institutional readiness to support SEP depends on the degree of success on these two fronts: agency-specific progress, including some major governance changes, and effective cross-agency coordination. Unfortunately, SEP remains fragmented, piecemeal and thus unable to have a significant impact on Azerbaijan’s major environmental issues.

<sup>37</sup> It could be argued that the 1998 NEAP pioneered such an integrated approach, despite its central planning focus, but lacked both political support now enjoyed by the SEP and clear procedures for implementation.

*ii. Broad direction of recent institutional changes and its implications*

**51. Increased corporatization and decentralized mandates resulted in agencies taking nontraditional roles in environmental management.** The scale of institutional change that has largely coincided with SEP implementation is commendable. Azerbaijan has extended corporatization of previously administrative government functions from oil production and processing to water and wastewater management, and energy production. These new public utility entities have been modernizing their governance and environmental programs.

52. These institutional changes affect collaboration between government and development partners, because assistance needs to be structured to support the corporatization trend. This has been recognized, for instance, in World Bank support to establish and assist the efficient functioning of Tamiz Shahar (see Box 4), or in several donor-supported capacity-building projects directed towards Azerenerji or Azersu. More of these efforts are needed; for example, efforts to improve SOCAR financial reporting will enable SOCAR to evaluate its environmental performance and its role in SEP.

53. Institutional and administrative changes to environmental management are likely to continue, most notably toward decentralized environmental management. For instance, MENR rather than Azersu has undertaken a program of decentralized water supply and wastewater treatment in small settlements in Kura Basin, in advance of resolving which entity will be ultimately responsible for managing these units. Similarly, MED has assumed responsibility for solid waste management, not a traditional role for MED. Some of these arrangements appear to be temporary and will require future reconsideration to ensure maximum efficiency and effectiveness. While this process sounds reasonable, from a policy perspective greater transparency and continuous feedback among corporate entities and SEP agencies on expenditure planning would provide for aligning investment activities within SEP and PIP and maximizing the efficiency of public investments.

**Box 4: Institutional Changes in Environmental Management in Azerbaijan: A Case Study**

Important changes have taken place in Baku in the long-neglected sphere of waste management. The collection and transportation of solid waste, regardless of origin, remains the responsibility of the Baku City government. In 2008, the Presidential Decree on Improvement of Management of Solid Household Waste in Baku City clarified this institutional aspect. Simultaneously, the Decree establishes Tamiz Shahar (Clean City) JSC to ensure, under the supervision of MED and the State Property Management Committee, that modern standards of collection and disposal of solid household waste and urban environmental improvement apply, using the principles of a market economy.

Sources: [www.tamizshahar.az](http://www.tamizshahar.az).

*iii. The roles of MENR and other agencies*

**54. MENR's role of SEP coordinator could be strengthened.** The evolving institutional landscape raises questions about the administrative responsibility for environmental investments in Azerbaijan, and the tasks of MENR in particular. The role of MENR as SEP coordinator is relatively new compared to the Ministry's more traditional (and statutory) role as policy maker and regulator. Previous institutional and capacity assessments have identified a number of key problematic areas that need to be tackled (see Box 5).

55. Historically, MENR's direct experience in project formulation and implementation has been with grant-funded technical assistance projects in which cost efficiency and budget monitoring was secondary, rather than oversight of large investment projects. In keeping with that experience, current MENR monitoring of SEP is typically limited to physical progress and environmental compliance, and the Ministry considers the task of monitoring budgetary efficiency of SEP activities as the responsibility of MED and MoF. While MED and MoF monitor financial progress, they depend on progress reports from SEP executing agencies or, selectively, on indirect control mechanisms. This review notes that standards of accuracy fall well short of internationally recognized results monitoring. Linking reporting on physical progress and disbursements would be extremely beneficial.

56. However, questions remain. Which entity should be responsible for making that link? Would a source of comprehensive SEP-wide information be useful? Or, is it more useful to continue to focus on improving implementation and monitoring quality at the level of individual SEP projects? The SEP includes investments in improved water supply and wastewater treatment, and remediation, among others, and these areas are being actively corporatized and remain outside MED and MENR responsibility. In this case, monitoring quality seems unsuitable for either agency and neither has expressed strong interest in assuming it. Therefore, it seems that establishing a comprehensive repository of environmental investment information would have considerable value to Azerbaijan, but it will require a clear and agency-specific delegation of responsibility. Furthermore, to improve monitoring effectiveness, current methods need to be *consistent*. To achieve this both MED and MENR will need to undertake progress monitoring and share the overall results with stakeholders.

57. Institutionally, coordination and communication among agencies involved in the SEP remains a challenge. Notwithstanding that SEP implementation has a positive effect on agency's coordination, and the next step would be to increase the sense of shared ownership among investments with several agencies responsible for implementation.

#### **Box 5: Environmental Investments and MENR Institutional Capacity**

This report examines the allocative and operational efficiency of public expenditure in relation to MENR's ability to influence the quality of the SEP and other environmental investments. MENR's institutional capacity and performance has been assessed by several development partners, including UNECE (2004) and USAID (2009). Those assessments focused on MENR regulatory functions that are not addressed in this report. Several weaknesses among those identified are relevant to this analysis. They are:

- *Uneven application of environmental assessment.* Line ministries undertaking infrastructure projects (several of which feature in the SEP) are not legally obliged to submit the projects' environmental assessment (IFI-financed projects are an exception because they apply their own environmental impact assessment requirements). Line ministries that submit environmental impact data to the MENR often do so after the infrastructure projects have been approved. A more stringent application of environmental assessment obligations would result in a better quality of SEP projects, which may also increase the cost.
- *Monitoring complexity gaps and overlaps.* Environmental monitoring in Azerbaijan has a number of weaknesses (USAID 2009). An organization that is expected to effectively monitor environmental compliance will be essential for the operational efficiency of the SEP.
- *Poor interaction between the MENR, the regulated community, collaborators, and stakeholders.* The interaction between the MENR and line ministries involved in the PIP (especially the SEP) is insufficient, in part because (a) the existing legal and regulatory provisions do not provide clarity in the structure of mutual obligations (the relationship between the MENR and SOCAR are a good example); and (b) institutional competition for projects,

budgets, and influence among different government agencies stands in the way of transparency. Both adversely affect the formulation and implementation of the SEP.

- *Absence of environmental policy reform and institutional strengthening of the MENR in the SEP.* An unspoken assumption in the MENR is that further development of its capacity will be financed out of recurrent (growing) budgets supplemented by grant donor assistance. With only one exception in the 2011–2014 SEP update (see Appendix 6), the SEP does not envisage investment in MENR capacity strengthening. Several recommendations in this report call for adding new tasks or performing existing ones differently, based on the expectation that the cost of such modifications and extra work would be justified by a better formulated and implemented SEP. The SEP should include investments for improving the Program’s own efficiency through “program efficiency overheads.”
- *Institutional fragmentation, especially in the area of waste management.* A number of institutions are involved (or have a statutory role) in waste management, from legacy oil pollution to municipal solid or hazardous waste management. The role of the MENR vis-à-vis SOCAR, the MED, and municipal bodies remains unclear. Such institutional uncertainties are likely to affect the operational efficiency of SEP projects aimed at waste management.

Sources: UNECE 2004; USAID 2009.

#### *iv. Beyond Baku: Addressing municipal and rural environmental priorities*

##### **58. Municipal environmental infrastructure was under-represented in the 2006-2010 SEP.**

In Azerbaijan, municipal environmental infrastructure such as water supply, wastewater treatment, and solid waste management in secondary and tertiary cities and settlements are in a deteriorated state.<sup>38</sup> Post-Soviet-era underinvestment in water supply and wastewater treatment infrastructure is being addressed gradually, and these are prominent in the PIP and are supplemented by IFI development assistance from the Asian Development Bank (ADB), the World Bank, the KfW Development Bank, the Japan International Cooperation Agency (JICA), and the Saudi Fund for Development. (See Appendix 2 and Appendix 12 for details). In 2009, waste management began to command attention, but investments still appear to be some way off, according to the new 2011–2014 SEP.<sup>39</sup>

59. Institutional aspects of municipal infrastructure development and maintenance remain grossly underdeveloped; recently, Azersu JSC unified water supply and wastewater treatment under national management, and must next resolve the issues of financing and cost recovery.<sup>40</sup> Financing solid waste management is an issue for future consideration and is not on the immediate agenda.

60. Municipal environmental infrastructure financing and maintenance is part of the broader topic of fiscal decentralization now confronted in policy debate in Azerbaijan.<sup>41</sup> Organization for Economic Co-operation and Development country experience shows that municipal environmental infrastructure financing is key to creating essential preconditions for sustainable environmental development of secondary towns. Several development partners, such as the

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<sup>38</sup> Most assessments of local conditions are outdated in the rapidly evolving conditions; one exception is Hunt (2006).

<sup>39</sup> KfW-supported Integrated Solid Waste Management for Ganja, now at the stage of a feasibility study, may be a harbinger of things to come.

<sup>40</sup> The ADB experience with municipal development projects, and the KfW pilot water project in Imishli, are worth study. For the latter, see Mukhtarov (2006). The MENR role in promoting decentralized water supply and treatment, and the sustainability of these efforts, also deserve careful consideration.

<sup>41</sup> This topic is covered in Bayramov (2006) and Mikayilov (2007), and by Azerbaijan development partners, including the World Bank in a 2003 Public Expenditure Review, which argues forcefully for prioritizing fiscal decentralization.

European Union, strongly advocate sharing that experience with Azerbaijan, for example, through twinning initiatives.

v. *Role of development partners vis –a- vis SEP priorities*

**61. External donors and IFIs have an important role in strengthening the linkages between external finance and SEP priorities.** State environmental priorities are supported by combined domestic and foreign funding, which has the value-added benefit of introducing international good practices. External funding sources support capital investment in overall environmental spending, but external support and the SEP are not closely matched. Several externally funded environment-related projects have no formal relationship to the SEP, and some SEP priorities have elicited little interest from development partners (see Appendix 2). Therefore, the next round of Country Partnership Strategy discussions among principal development partners and the GoA might include the degree to which external support should be directed to SEP implementation priorities, rather than acting outside the SEP. Coming to an agreement on this would be useful to evaluate SEP status as the main vehicle of environment-related actions in Azerbaijan, and may have the effect of increasing development partner participation in selecting SEP priorities, which the GoA may, or may not, welcome.

## H. Conclusions

**62. Azerbaijan has made some notable achievements in environmental prioritization and investment.** The focus of this report is to identify areas for improvement and changes, not only to maximize the efficiency and effectiveness of public expenditure on environment-related areas, but also to ensure that the process of establishing environment-related priorities is sufficiently *comprehensive*.

**63. Since 2005, Azerbaijan’s rapid economic growth has led to increased spending on environment-related activities, in both absolute and relative terms.** Activities with direct links to public health such as water supply, wastewater management, and industrial site decontamination have been priorities, and these are broadly in line with those stated in the 1998 National Environmental Action Plan (NEAP) and the National Program on Environmentally Sustainable Social and Economic Development for 2003–2010. The Absheron Peninsula has dominated priority environmental investments due to the large population, national economic contribution, and tremendous legacy of environmental contamination. It is a matter of debate whether this geographic and economic imbalance justifies a parallel imbalance in environmental expenditure. This report concludes that it does, but perhaps not to the degree reflected in 2006–2010 SEP.

**64. Investment effectiveness is key to environmental improvements.** Only 40 percent of projects contained in the 2006–2010 SEP were complete as of 2010, with 38 percent still in progress and 17 percent transferred to the new programming period 2011–2014. Implementation was hindered by funding uncertainty, poor interagency coordination, lack of information tracking, and limited monitoring and evaluation.

65. This assessment builds on the World Bank 2003 Public Expenditure Review (PER) and argues that operational efficiency of public expenditure should be the priority at this stage, because cost efficiency offers the greatest scope for improved environment-related public spending in Azerbaijan.<sup>42</sup> Changing SEP priorities, which are fundamentally sound, would not provide the same magnitude of improvement. Rather, the focus should be on strengthening existing mechanisms and procedures.

**66. Formulating the SEP is a positive development; it provides a sense of purpose, aims for a results orientation, and encourages interagency cooperation. However, the SEP's relevance and usefulness are curtailed by a lack of financial commitment and poor coordination.** SEP components do not represent firm commitments, but a flexible collection of project ideas with widely differing stages of technical readiness and financial backing. In addition, unclear responsibilities and lack of program-level performance data limits the SEP in its ability to deliver a comprehensive picture of public environmental commitments. If MENR is selected as the agency to initiate and monitor a cross-sectoral environmental program, the SEP formulation process raises important questions about capacity to address program-level cost-efficiency. What sort of agency should MENR become? Would it remain primarily a regulatory body? Would it expand its mandate? An in-depth functional review of agencies implementing the SEP would provide a more comprehensive answer to these questions.

**67. Information on public environmental expenditures and investments is limited.** First, official figures of environmental expenditure in Azerbaijan have a narrow base in the state budget, and have yet to capture environmental investments by state corporations and other off-budget expenditures, which are increasing in magnitude and importance. According to official figures, environmental expenditures represent only 0.5 percent of GDP, while an expanded definition suggests such spending is around 3 percent of GDP annually.

68. Second, Azerbaijan's environmental actions, subject to uneven levels of oversight, generate uneven information. By contrast, requirements for information disclosure on IFI financed programs ensure that information is transparent and widely disseminated. It is recommended that Government initiate improvements to information flows regarding about investments, which would facilitate program-wide monitoring of progress and efficiency. In this regard, establishment of an information clearinghouse for investment information would allow for increased participation in decisionmaking and strengthen ownership of decisions regarding public resources.

## **I. Recommendations**

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<sup>42</sup> World Bank (2003). Among other things, the PER argues that (p.xvi) stronger links should be made between budgetary finance allocation decisions and operational outcomes. Moving away from allocating resources based on norms to a "program/performance" based-budget model is key. This requires strengthened financial analysis capabilities in the line ministries and the Public Investment Appraisal Department of the MED. State budgets should be much more explicit in defining the responsibilities and accountabilities of spending units in budget implementation. This will clarify responsibilities for budget execution between the MoF and line ministries. Output indicators of performance and the quality of service delivery should be defined and monitored.

69. Effective implementation of SEP by its nature is and should remain cross sectoral and multi institutional. It involves a number of lead agencies. It will also require effective cooperation and coordination of a range of institutional stakeholders whose responsibilities are summarized in Appendix 15. The report identifies areas and important recommendations for actions which can guide SEP implementation.

#### *Environmental prioritization*

70. The Government should consider updating the National Program on Environmentally Sustainable Social and Economic Development 2003-2010 and embed environmental priority actions within its mandate rather than establishing an additional plan. Environmental priorities should also be based on methods similar to those first used in the 1998 NEAP such as the cost of environmental degradation with explicit linkages to environmental health and poverty reduction (see Appendix 14: Quantitative Tools for Priority Setting).

#### *SEP monitoring and institutional change*

**71. Without significant political backing, monitoring environmental progress will continue to be based on individual project records.** However, suggesting improvements for the individual project approach is inconsistent with the overall intention of the SEP, which is to have a clearinghouse tasked with assembling comprehensive environment related information on investments. If MENR is provided the mandate to become such an entity, major institutional strengthening is required. The following recommendations are a logical extension of that observation.

**Recommendation 1:** An agency should play the role of assembling and disseminating up-to-date information on all SEP activities, including project documentation with appropriate level of detail, specified roles of implementing agencies, environmental assessment, and budget-related information.

**Recommendation 2:** If MENR is to serve the role mentioned above, it should receive assistance (i) to provide training to staff relating to project/program administration as well as program monitoring and evaluation; and (ii) to design an interagency information-sharing mechanism to enable a unified monitoring.

**72. Without a clear decision on monitoring, the SEP will ultimately fall short of its potential.** It may serve as a channel for organizing environmental priorities, but will lack the insights provided by aggregate, performance-based monitoring. Relatively simple changes such as a more disciplined and transparent approach to prioritization will achieve significant improvements.

**Recommendation 3:** MENR should consider preparing a project concept document for each SEP candidate project, in a format approved by MED and MoF and made publicly available.

**73. Interagency collaboration is an important dimension of SEP formulation and implementation and is one of its greatest strengths.** This collaboration needs to be followed through by specifying the role of each collaborating agency in SEP implementation. Primary executing agencies receive budget allocation for SEP implementation. However secondary executing agencies may lack resources to support implementation since they are financed out of

their regular agency budget. In other cases, the SEP activity may include investments by primary *and* collaborating executing agencies that receive special budget allocations. SEP documentation should clarify this distinction.

**Recommendation 4:** Ensure that the role and investment budget of *each* agency implementing a SEP activity is specified by the agency responsible for developing project documentation.

**Recommendation 5:** Clarify the future role and status of the Inter-Agency Working Group on Environment (IAWGE), preferably at the level of the Cabinet of Ministers (CoM). IAWGE's potential contributions could be to (a) align donor assistance with SEP and other environmental priorities, (b) monitor SEP implementation progress and performance, (c) ensure reliable and consistent environment-related information in Azerbaijan, and (d) support information dissemination, which could form the basis of the CoM's assessment of the value that IAWGE activities could create.

**74. The SEP is one dominant component of public environmental expenditure. However, several other channels of environmental expenditure exist in Azerbaijan.** It is crucial to understand their magnitude, significance, and financing mechanisms. Likewise, this separation of SEP and non-SEP environmental investments should be better understood.

**Recommendation 6:** Include an addendum in project documentation prepared by the primary executing agency to explain how the SEP activity relates to the agency's other environment-related activities.

**Recommendation 7:** Encourage MENR to post *all* existing and proposed projects and programs on its Web site in the manner used by agencies (e.g., EBRD, ADB, World Bank).

**Recommendation 8:** Require Azerenerji and SOCAR, government agencies with a special position in the national economy and important environmental actors, to include environmental expenditures in their annual reports.

**Recommendation 9:** Require Azersu JSC and SAWM JSC, state corporations with an environment-related mandate, to make their audited annual financial reports publicly available.

**Recommendation 10:** Encourage MED, in consultation with MENR and SOFAZ, to prepare a discussion paper on SOFAZ policy on environmental expenditure as a prelude to a formal policy of environmental financing by SOFAZ.

**75. Current environmental definitions are narrow and do not feature in key pieces of legislation.** Developing specific definitions is fundamental to reconciling expenditures and investments, as is separating capital investments from recurrent operating and maintenance expenditures, and disaggregating agencies, functions, and financial dimensions. This would facilitate expenditure tracking, evaluation of cost-efficiency, and distinguish SEP from non-SEP investments:

**Recommendation 11:** Develop a standardized set of definitions for environmental expenditures and investments based on internationally recognized methods.

76. Overall, this report is an invitation to all relevant stakeholders in Azerbaijan to work toward a more accurate and widely shared understanding of prioritization of environmental investments in Azerbaijan and to consider adopting a more cost-conscious and information-transparent culture.

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[www.azerenerji.com](http://www.azerenerji.com) (Azerenerji JSC)

[www.azstat.org](http://www.azstat.org) (State Statistical Committee)

[www.eco.gov.az](http://www.eco.gov.az) (Ministry of Environment and Natural Resources)

[www.economy.az](http://www.economy.az) (Ministry of Economic Development)

[www.maliyye.gov.az](http://www.maliyye.gov.az) (Ministry of Finance)

[www.oilfund.az](http://www.oilfund.az) (State Oil Fund of Azerbaijan)

[www.president.az](http://www.president.az) (Office of the President)

[www.socar.az](http://www.socar.az) (State Oil Company of Azerbaijan)

[www.un-az.org](http://www.un-az.org) (UNDP Azerbaijan)

[www.worldbank.org](http://www.worldbank.org) (World Bank)

## **Appendix 1: List of People and Institutions Consulted**

### **A. Government of Azerbaijan and state corporations**

#### Azerenerji

Mr. Rafael Abbasov, Head, Investment Department

Mr. Famil Aliyev, Analyst, Project Appraisal and Analysis Division, Investment Department

Mr. Zaur Mammadov, Head, Environment Department

#### Azersu Joint Stock Company

Mr. Ahmed Mammadov, Deputy Director

#### Ministry of Economic Development

Mr. Azad Musayev, Head of Sector, Monitoring and Assessment of Public Investment Projects,  
Public Investment Department

Mr. Natig Mammadli, Head of Sector, Social Policy and Sustainable Development, Department  
of Economic Policy, Analysis and Forecast

Mr. Hyseyn Guliyev, Senior Adviser, Division of Cooperation with IFIs (member of IAWGE)

#### Ministry of Emergency Situations

Mr. Tariel Husseinov, Director, Main Department of Infrastructure Development

Mr. Yusif Zamanov, Deputy Head, Main Department of Infrastructure Development

Mr. Elkhan Tariverdiyev, Deputy Head, Main Department of Infrastructure Development  
(member of IAWGE)

Mr. Kamil Kamilov, Chief Adviser, Finance and Economy Division

Mr. Faig Babayev, Chief Adviser, Finance and Economy Division

Mr. Ilkin Kangarli, Chief Adviser, Strategy Planning Department

#### Ministry of Environment and Natural Resources

Mr. Mutallim Abdulhasanov, Division Head, Department of Ecology and Environmental  
Protection Policy

Ms. Matanat Avazova, Deputy Head, National Environmental Monitoring Department

Mr. Ogtai Jafarov, Specialist, Environmental Expertise Administration, UNCCD Focal Point

Ms. Tatyana Javanshir, Environmental Expertise Administration

Mr. Azer Aslanov, Head Environmental Expertise Administration

Ms. Gulshan Hajiyeva, Senior Adviser, Finance and Economy Department

Mr. Elnur Sofiyev, Adviser, Investments and Innovations Department

Mr. Rasim Sattarzade, Head, Environment Protection and Policy Department

Mr. Amil Sefiyev, Senior Adviser, Environmental Protection and Policy Department

Mr. Ruslan Ajalov, Head of Sector, Finance and Economy Department (member of IAWGE)

#### Ministry of Finance

Mr. Fuad Ganjaliev, Head of Sector, Budget Department

#### Ministry of Health

Ms. Gunel Mahmudova, Lead Adviser, Finance and Economy Department

Mr. Jeyhun Mammadov, Chief Adviser, Department of Financing and Planning of Health Facilities' Development

Mr. Mirza Kazimov, member of IAWGE

Mr. Assadula Gurbanov, staff

Ministry of Industry and Energy

Mr. Jamil Malikov, Deputy Director, State Agency of Alternative and Renewable Energy

Permanent Parliamentary Commission on Natural Resources, Energy and Environment

Mr. Shamil Huseynov, member

State Amelioration and Water Management Joint Stock Company

Mr. Mammad Asadov, Head, Projects, Science and International Relations Department

State Oil Company of Azerbaijan (SOCAR)

Mr. Ramiz Aliyev, Head, Department of Environment Projects Management

Mr. Nadir Amiraslanov, Head of Construction Department, Capital Investment Division

**B. International and bilateral development partner institutions**

Asian Development Bank

Mr. Faraj Huseynbeyov, Action Head, ADB Resident Mission

EBRD, Azerbaijan Office

Mr. Ali Kamalov, Principal Banker

EU, Delegation to the Republic of Azerbaijan

Mr. Parviz Yusifov, Program Manager,

Mr. Doug Hickman, Deputy Team Leader, Waste Governance – ENPI East Project

GTZ

Ms. Shafiga Hadjiahmedova, Program Manager

Mr. Hartmut Junge, Expert

KfW, Azerbaijan Office

Mr. Natig Abdullayev, Local Representative

OSCE

Mr. Jan Olsson, Head, Economic and Environment Unit

UNDP Azerbaijan

Ms. Jamila Ibrahimova, Assistant Resident Representative (Program)

Mr. Chingiz Mammadov, Senior Program Advisor

UN ECE

Mr. Antoine Nunes, Environmental Affairs Officer

Ms. Gulnara Roll, EU Water Initiative

USAID

Mr. Kanan Mustafayev, Development Assistance Specialist

**C. Others**

Baku State University

Mr. Farda Imanov, Head, Hydrometeorology Department

Caucasus Environmental NGO Network (CENN)

Mr. Islam Mustafayev, Azerbaijan Country Coordinator

National Academy of Sciences

Mr. Qahraman Hasanov, Director, Special Office of Engineering Design of Complex Treatment  
of Mineral Raw Materials

NGO Azerbaijan Society for Protection of Animals

Mr. Azer Garayev, member

NGO Ecoil

Ms. Zemfira Iskenderova, member

NGO Green

Mr. Elchin Sardarov, member

NGO National Center of Environmental Forecasting

Mr. Telman Zeynalov, member

**Appendix 2: Principal Environment-related Investments Supported by IFIs and other Development Partners since 2006**

Name of project	Supported by	Status, period of implementation	Included or not in SEP 2006–2010 (No.)
Hovshan Wastewater Outfall Project	World Bank (IBRD), \$92.0 mil with Azersu	Pipeline	4.2
Public Investment Capacity Building	World Bank (IDA) \$8.0 mil, with MED	Active, since 2009	
Corporate and Public Sector Accountability (CAPSA) has relationship with EU-supported Energy Reform Support Program (see below)	World Bank (IDA) \$20.0 mil with MoF	Since 2008	
Public Investment Program (PIP) Project	USAID grant \$5.2 mil with MED	2005–2008	
Integrated Solid Waste Management (ARP II)	World Bank (IBRD), \$29.5 mil with MED	Active, since 2008	4.11
Second National Water Supply and Sanitation	World Bank (IBRD), \$260.0 mil with Azersu	Active, since 2008	4.16
National Water Supply and Sanitation	World Bank (IBRD), \$230.0 mil with Azersu	Active, since 2007	1.1 , 4.22
Contaminated Sites Rehabilitation (ARP I)	World Bank (IBRD), \$74.5, with MES	Not supported by GoA and abandoned in 2008	4.12, 4.20
Large Scale Oil-Polluted Land Clean-up (ARP III)	World Bank (IBRD), \$60.0 mil with SOCAR	Not supported by GoA and abandoned in 2008	4.7–4.9, 4.19
Rehabilitation and Completion of Irrigation and Drainage (Supplementary)	World Bank (IDA) \$5.0 mil (supplementary to original 2000 loan)	2006–2008; now closed	
Water Supply and Sanitation Investment Program (Multi-tranche Financing Facility)	ADB \$600.0 mil with Azersu, SMWEA of Nakhchevan	Since 2009, in tranches (first one signed in 2009)	
Urban Water Supply and Sanitation	ADB \$30.0 mil with Azersu	Since 2006	1.1, (2.2?), 4.2, 4.3
Power Distribution Development Investment Program	ADB TA grant, \$1.0 mil with Azerenerji JSC	2009–2010	
Renewable Energy Development	ADB TA grant \$0.7 mil with MIE	2006–2008	

Name of project	Supported by	Status, period of implementation	Included or not in SEP 2006–2010 (No.)
<b>Water Supply and Sewerage Project in Secondary Cities, Phase II</b> (also as “Open Program Municipal Infrastructure II”)	<b>KfW and SECE Euro 37.0 mil (KfW) Euro 10 mil grant (SECO) with Azersu</b>	<b>Since 2006</b>	
<b>Provincial Cities Water Supply and Sewerage Project</b>	<b>JICA/JBIC Loan \$32.0 mil eq.</b>	<b>Since 2009</b>	
<b>Samur Absheron Irrigation Rehabilitation</b> (builds on older WB-supported Greater Baku Water Supply Rehabilitation Project, 1996–2006; also linked to WB-supported Irrigation and Drainage Rehabilitation Project (RIDIP) that rehabilitates parts of S-A canal system)	<b>IDB, SDF and OPEC FID \$42.6 mil with SOFAZ, SMWEA</b>	<b>Since 2006</b>	
<b>Expansion and reconstruction of water supply and sewerage system of towns and villages around Baku</b>	<b>Saudi Dev Fund \$25.0 mil eq.</b>	<b>Since 2009</b>	<b>2.2, 4.14, 4.23</b>
<b>Water Governance – ENPI East</b>	<b>EU grant Azerbaijan component of a regional program with Azersu</b>	<b>2008–2010</b>	<b>7.8</b>
<b>Trans-Boundary River Management Phase II for the Kura River Basin</b>	<b>EU grant</b>	<b>Since 2008</b>	<b>7.8</b>
<b>Waste-to-Energy Plant</b> (BOOT scheme, implemented by CNIM S.A. and MED’s affiliate Clean City JSC (Temiz Shehar); linked to WB-supported Integrated Solid Waste Management Project that supports, inter alia, institutional reform, including the creation and functioning of Temiz Shehar JSC)	Approaches to EBRD and IDB for financing; for now only state budget; total cost E346 mil budget allocation AZN 123 mil, with MED and Temiz Shehar JSC	<b>Since 2008</b>	<b>4.11</b>
<b>SOCAR Waste Management Facility</b>	<b>USTDA grant \$0.572 mil with SOCAR</b>	<b>Since 2009</b>	<b>1.2 ,1.5</b>
<b>Waste Governance in the Western EECCA</b>	<b>EU grant Azerbaijan component of a regional program with MED</b>	<b>Since 2010</b>	<b>5.3, 7.8</b>
<b>Solid Waste Management Improvement Project (SWMIP)</b> Possibly incorporating an earlier (2008) Norway-financed capacity building in waste management in local communities in Azerbaijan	<b>UNDP/Norway Grant 0.9 mil with MENR</b>	<b>Since 2009</b>	<b>5.3, 7.10</b>
<b>Capacity Building and On-the-Ground Investments for Integrated and Sustainable Land Management</b>	<b>UNDP/GEF/Norway Grant 0.7 mil with MENR</b>	<b>2007–2010</b>	

Name of project	Supported by	Status, period of implementation	Included or not in SEP 2006–2010 (No.)
<b>Promoting Development of Small Hydropower</b>	UNDP/Norway grant \$1.5 mil with MIE	2007–2010	
<b>Energy Reform Support Program</b>	EU grant E 19.0 mil Direct budget assistance (MoF)	Since 2007	
<b>Alternative Energy and Energy Efficiency</b> [under Env. Awareness and Improvement Program (EAIP)]	BTC Consortium and DEFRA (UK)	2006	
<b>Cleaner Production and Energy Efficiency</b> continuation of an older (2002–2004) program	Norway Grant Nkr 2.8 mil with CPEE Center Baku	Since 2008	
<b>Preparation of the Second National Communication to UNFCC</b>	UNDP grant \$0.4 mil with MENR	2006–2010	
<b>Strategic Environmental Assessment</b>	UNDP/CIDA Grant 0.15 mil with MENR	Since 2009	
<b>Shah Dag Rural Environment Project</b> delayed project under UEIP	WB(IDA)/GEF Loan \$7.0 mil, GEF grant \$5.0 mil	2005–2009	
<b>Program for Phasing Out Ozone Depleting Substances</b>	GEF/UNEP Grant \$6.9 mil	Since 2005	7.7
<b>Environmentally Sound Management and Disposal of PCBs</b>	GEF/UNIDO Grant 2.2 mil with MENR	Since 2008	
<b>Caucasus Protected Areas Fund</b> (Azerbaijan components)	KfW/WWF/CI Grant \$9.4 mil with MENR and NGOs	Since 2004	
<b>Environmental Irrigation Practices</b>	Norway Grant Nkr 0.17 mil with Ganja local bodies	2008–2010	
<b>Caspian Environment Program II and III</b> (continuation of CEP as launched by GEF/UNDP/EU/WB/EU in 1996) To support implementation of Tehran Convention, restore depleted fisheries, consolidate regional environmental governance, formulate Caspian Water Quality Monitoring and Action Plan for Areas of Pollution Concern, etc.	GEF II, III/ UNDP/UNEP/WB/EU Grant \$6.5 mil uncertain additional amounts since	Since 2004	

### Appendix 3: State Environment Program 2006–2010

(COMPREHENSIVE ACTION PLAN FOR IMPROVING ENVIRONMENTAL SITUATION IN AZERBAIJAN 2006–2010)

No.	Action	Implementing Agencies	Implementation Period and % Complete
<b>1. Improving environmental situation in Baku Bay</b>			
Phase 1			
1.1	Isolating industrial-household wastewater network from rain drainage network and preventing discharge of fecal wastes to Baku Bay	Azersu, BMO	2006–2008 60%
1.2	Installation of local treatment facilities ensuring treatment of wastewater of industrial facilities located on coastal zone (shipyards, oil refineries, etc.) up to modern standards	Azerenerji, BMO, CSC, MENR, MoD, SOCAR	2006–2009 30%
1.3	Clearing up of Baku Bay from sunk and semi-sunk ships, dilapidated metal, and concrete constructions and other big wastes	BMO, CSC, MED, MENR, MoD, MoES, SFS, SOCAR	2006–2007 50% transferred
Phase 2			
1.4	Carrying out rehabilitation and reconstruction work meeting modern technical, technological, and environmental standards at jetties and piers of Baku International Seaport and in the coastal zone	CSC, MoD, SFS, SOCAR	2007–2008 40% transferred
1.5	Establishment of a centralized system that will have modern receiving stations ensuring treatment of wastewater from the operation of ships and collected from the sea surface	AMEA, CSC, MENR, MoD, SFS, SOCAR	2007–2008 90%
1.6	Preparation of proposals for, and implementation of, removal of enterprises located at Baku Bay and negatively impacting environment to suburbs of the city	BMO, CoM, CSC, MENR, MoD, MoES, MoIE, SFS, SOCAR, SPC, SUPAC,	2007–2010 60%
<b>2. Improving environmental situation at Bibiheybat area</b>			
Phase 1			
2.1	Demolition of existing communication lines, engineering objects and facilities, buildings, and rehabilitation and recultivation of the area	Azerenerji, Azerigaz, Azersu, BMO, MENR, MoES, MoHA, SOCAR, SPC, SUPAC	2006–2009 90%
Phase 2			
2.2	Construction of treatment facility in Bibiheybat and creation of industrial-household wastes and rain drainage networks in the area	Azersu, BMO, MENR, SOCAR	2007–2009 50% transferred

No.	Action	Implementing Agencies	Implementation Period and % Complete
<b>3. Improving environmental situation in areas adjacent to Heydar Aliyev International Airport</b>			
Phase 1			
3.1	Designing and implementation of a dendrological project in connection with reconstruction of the road to Heydar Aliyev International Airport	Azersu, BMO, MENR, SAWM JSC, SLCC, SOCAR, local authorities, municipalities,	2006–2009 100%
3.2	Carrying out comprehensive studies with a view of environmental sanitation of the airport area and preparation and implementation of environmental rehabilitation project	AMEA, Azal, Azerenerji, Azersu, BMO, MENR, MoES, SAWM JSC, SLCC	2006–2008 100%
Phase 2			
3.3	Removal of Sadarak and Bina shopping areas in order to ensure environmental safety of the area around airport and rehabilitation of the natural landscape	BMO, MENR	2007–2009 100%
<b>4. Improving environmental situation in Absheron Peninsula</b>			
Phase 1			
4.1	Design and implementation of a project for cleaning up Boyukshor Lake, beautification of the area, and use as recreation area for the city residents	AMEA, Azersu, BMO, MENR, MoCT, MoH, SOCAR, SUPAC	2006–2010 50%
4.2	Preparation of proposals for recycled use of water from Hovsan Aeration Station and other treatment facilities treated up to modern standards	AMEA, Azersu, MENR, MoH, SAWM JSC	2006–2007 0% transferred
4.3	Reconstruction of Zig mechanical treatment facility	Azersu	2006–2008 0% transferred
4.4	Reconstruction of treatment facilities in Pirallahi, Chilov, Qum islands, and Neft Daslari (Oily Rocks) in conformity with modern standards	MENR, SOCAR	2006–2007 100%
4.5	Ensuring transportation of solid waste from villages and recreation facilities in Absheron Peninsula for disposal	AREA, BMO, MENR, SMO	2006–2007 100%
4.6	Design and implementation of rehabilitation program to improve sanitary situation at recreation centers in Absheron	AREA, BMO, MENR, MoH, MoHA, SMO	2006–2007 100%
4.7	Identification of oil-polluted and water-inundated areas in operation zones of oil-gas companies in Absheron Peninsula and other areas polluted by production wastes and preparation on large-scale (1:10 000) ecological map of Absheron	BMO, MENR, SLCC, SOCAR, local authorities	2006–2007 90%

No.	Action	Implementing Agencies	Implementation Period and % Complete
	Peninsula		
4.8	Ensuring disposal of sludge, drilling solutions, and other hazardous waste emerging during drilling oil and gas well in field at the hazardous waste landfill	MENR, SOCAR	2006–2010 70%
4.9	Preparing proposals for using formation water from oil extraction in producing iodine and bromine	AMEA, Azerkimya, MED, MoES, MoH, MoIE, SOCAR	2006–2007 100%
4.10	Assessment of impact of environmental pollution on human health and creation of information bank	MENR, MoH, MoIE, SSC	2006–2008 100%
4.11	Construction of waste disposal plant for solid waste from Baku and Sumgayit, and suburban settlements in the area	BMO, CoM, MED, MENR, MoES, MoIE	2006–2009 30%
4.12	Disposal of radioactive coal waste from production of iodine-bromine in Surakhani district	AMEA, Azerkimya, MENR, MoES, MoHA	2006–2008 20% transferred
4.13	Transportation and utilization of mercury-containing waste from chlorine production at Sumgayit surface-active substances plant	Azerkimya, MENR, MoES, MoHA	2006–2009 80% transferred
4.14	Ensuring connection of wastewater from new village in the eastern slope on Jeyranbatan water reservoir to new wastewater collector	AREA, Azersu, MENR	2006–2007 80%
Phase 2			
4.15	Preparation of proposals for, and implementation of, more precise definition of pollution sources of Bulbule, Xocasan, Masazir, Qizilnohur, and other natural and artificial lakes, regulation of their levels, and establishing recreation zones around them and/or their drainage	AMEA, Azersu, BMO, MENR, MoCT, MoES, MoH, SOCAR, SUPAC	2006–2010 90%
4.16	Rehabilitation of Hovsan Aeration station and construction of underwater line to the sea to prevent discharge of waste flows to the sea via emergency pipeline	Azersu, BMO, MENR	2007–2009 0% transferred
4.17	Prevention of leakages to the sea from wells, pipeline, and platforms in Neft Daslari and other offshore oil fields	MENR, SOCAR	2007–2009 100%
4.18	Reconstruction of Hovsan open canal as closed canal and construction of treatment facility at its end in order to reduce the negative impact to the environment and prevent discharge of oil-polluted wastewater into the Caspian Sea	Azersu, BMO, MENR, SOCAR	2007–2009 80%
4.19	Preparation and implementation of actions aimed at closure of oil wells the future	MENR, MoES, SOCAR	2007–2009

No.	Action	Implementing Agencies	Implementation Period and % Complete
	utilization of which is considered inexpedient, in order to improve environmental condition of oil field areas		100%
4.20	Study of qualitative and quantitative parameters of radioactive pollution in Absheron, mapping of polluted areas, making proposals for deactivation to improve ecological situation	AMEA, MENR, MoES, MoH, SOCAR	2007–2008 0% dropped
4.21	Preparation of feasibility study for reconstruction of Absheron main canal with a view of prevention of leakages and bogging of areas	SAWM JSC, local authorities	2007–2008 60%
4.22	Preparation of unified landscape-architecture plan of Baku in line with the city's Master Plan, which will ensure improvement of natural climatic, sanitary-hygienic, and health conditions of Greater Baku, and prevent development in green areas of the city	AMEA, BMO, MENR, SUPAC	2006–2008 60%
4.23	<p>Construction of treatment facilities and sanitation systems for treatment and flow of wastewater from Baku, suburban areas, and Absheron rayon</p> <p>In particular, as priority action:</p> <p>Treatment of wastewater in Turkan, Zira and Qala villages of Azizbayov rayon:</p> <ul style="list-style-type: none"> <li>- Construction of sanitation network – 56 km</li> <li>- Construction of treatment facility with capacity 7000 m<sup>3</sup> per day</li> </ul> <p>Treatment of wastewater in Bilgah village of Sabunchu rayon:</p> <ul style="list-style-type: none"> <li>- Construction of sanitation network – 22.5 km</li> <li>- Construction of treatment facility with capacity of 3,000 m<sup>3</sup> per day</li> </ul> <p>Construction of treatment facility for wastewater from Novxani, Mehdiabad, Mashtaga, Pirshagi zone with capacity of 30,000 m<sup>3</sup> per day</p> <p>Construction of treatment facility for wastewater from Xocasan-Lokbatan area with capacity of 200,000 m<sup>3</sup> per day</p> <p>Treatment of wastewater in Alat:</p> <ul style="list-style-type: none"> <li>- Construction of sanitation network – 15 km</li> <li>- Construction of treatment facility with capacity of 3,500 m<sup>3</sup> per day</li> </ul> <p>Treatment of wastewater in Shixlar village:</p> <ul style="list-style-type: none"> <li>- Construction of sanitation network – 2 km</li> <li>- Construction of treatment facility with capacity of 300 m<sup>3</sup> per day</li> </ul> <p>Treatment of wastewater in Qobustan:</p> <ul style="list-style-type: none"> <li>- Construction of sanitation network – 18 km</li> <li>- Construction of treatment facility with capacity of 4,500 m<sup>3</sup> per day</li> </ul>	Azersu, BMO, MENR, local authorities	2006–2008 50%

No.	Action	Implementing Agencies	Implementation Period and % Complete
	Treatment of wastewater in Sangachal: <ul style="list-style-type: none"> <li>- Construction of sanitation network – 9.5 km</li> <li>- Construction of treatment facility with capacity of 1,500 m<sup>3</sup> per day</li> </ul> Construction of treatment facility with capacity of 2,500 m <sup>3</sup> per day for wastewater in Mushviqabad Treatment of wastewater in Pirakushkul village of Absheron rayon: <ul style="list-style-type: none"> <li>- Construction of sanitation network – 4.5 km</li> <li>- Construction of treatment facility with capacity of 500 m<sup>3</sup> per day</li> </ul>		
4.24	Prevention of discharge of formation waters from production areas of oil and gas production enterprises of SOCAR, justification of use of historically emerged lakes, draining of excessive lakes, abolishment of industrial-household landfills (polygons) in the area, reclamation of polluted land, and phased rehabilitation of oil field areas based on landscape-architecture plans—2,705 hectares (ha) (1,277 ha in Qaradag district, 183 ha in Binaqadi district, 410 ha in Sabunchu district, 533 ha in Suraxani district, 302 ha in Azizbayov district)	BMO, MENR, SOCAR, local authorities	2006–2010 80%
<b>5. Improvement of environmental situation in other parts of Azerbaijan</b>			
Phase 1			
5.1	Assessment of recreation potential and current status of Caspian coastal areas (including Absheron Peninsula), and making proposals on better use of health and natural medicinal opportunities of these areas	AMEA, BMO, MENR, MoCT, MoH, SOCAR, local authorities	2007–2008 100%
5.2	Preparing proposal for, and implementation of, sanitation networks and local wastewater treatment facilities in resorts, tourist and catering institutions, beaches, and private houses along Caspian coast (including Absheron Peninsula)	Azersu, BMO, MED, MENR, MoCT, MoH, local authorities	2007–2009 60%
5.3	Abolishment of illegal dumps with territory of human settlements, construction of landfill for solid wastes, and organization of collection and transportation of solid waste by category	MENR, MoHA, MoIE, SASMP, SOCAR, local authorities	2006–2008 60%
5.4	Strengthening control over technical conditions of vehicles, adjustment of vehicle emission standards to European standards (Euro 3), establishment of control-measurement points, organization of disposal of vehicles dropped out of exploitation, elimination of congestion by introducing modern equipment and devices for regulating traffic, increasing “pedestrian zones” in cities, and implementation of other measures to reduce poisonous gases emissions from vehicles	MENR, MoHA, MoIE, SASMP, SOCAR, local authorities	2006–2008 100%
5.5	Completion of forest regulation and design work to reduce human-made pressure on forests, and determination of prospective areas for planting new forests based on	MENR, MoA, SLCC, local authorities	2006–2010

No.	Action	Implementing Agencies	Implementation Period and % Complete
	climatic and soil conditions and organic planting methods		100%
<b>Phase 2</b>			
5.6	Establishment and reconstruction of sanitation systems in Sumgayit and adjacent areas to prevent discharge of wastewater into the Caspian sea, and improve sanitary and ecological condition of the area	Azerkimya, Azersu, MENR, MoH, SMO	2007–2010 80%
5.7	Installation of treatment equipment, including gas-dust absorbers, to ensure operation of polluting fuel, energy, and heating supply systems and other industrial facilities in Baku, Naxchivan, Ganja, Sumgayit, Ali Bayramli, Mingechevir, and other towns, in conformity with environmental standards	Azerenerji, MENR, MoHA, MoIE, SOCAR	2007–2009 20%
5.8	Strengthening protection of trees and shrubberies that are not part of forest fund, improving accounting system for improving verdure in towns	MENR, MoT, SAWM JSC, local authorities	2007–2008 100%
5.9	In order to prevent felling of forests, ensure supply of coal to hospitals, schools, and military units in non-gasified regions	MED, MENR, MoD, MoE, MoH	2007–2010 20%
5.10	Preparation of proposals on and implementation of local water-purifying systems to improve water supply to rayon center and villages	Azersu, MENR, SAWM JSC	2006–2010 90%
5.11	Ensuring inventory, collection, and disposal of toxic, unusable, and prohibited pesticides and agrochemical substances	MENR, MoA, MoH, local authorities	2006–2009 80%
5.12	Phased reclamation and rehabilitation of oil-polluted areas in Siyazan, Neftchala, Ali Bayramli, etc.	MENR, MoES, SOCAR, local authorities	2007–2010 40%
5.13	Design and implementation of a project to eliminate negative environmental impact of alunite sludge emerged as a result of operation of Ganja Aluminum Plant and collected in the suburbs of the city	AMEA, GMO, MENR, MoIE, SLCC	2007–2009 0% transferred
<b>6. Actions Aimed at Addressing General Ecological Problems</b>			
<b>Phase 1</b>			
6.1	Establishment of open hydrologic monitoring system for accurate estimation of water resources, prevention of pollution, and optimal management	AMEA, Azerenerji, MENR, MoES, MoH, SAWM JSC	2006–2008 100%
6.2	Establishment of early warning system to mitigate damage from dangerous hydrometeorological events related to climate change	AMEA, MENR, MoES	2006–2008 100%

No.	Action	Implementing Agencies	Implementation Period and % Complete
6.3	Strengthening environmental awareness and education, more focus on environmental issues in educational institutions, and training of human resources in this field	ABC CJSC, AMEA, MENR, MoE	2006–2010 100%
6.4	Determination of users of Earth interior and quantities of natural resources extracted by them (with exception of oil and gas) and their inclusion to State Mines Balance	MENR	2006–2007 100%
Phase 2			
6.5	Establishment of air and water treatment equipment, measurement devices on the basis of existing mechanical engineering factories	AMEA, MED, MoIE	2006–2010 0% transferred
6.6	Organization of monitoring of air pollution in Baku (establishment of comprehensive automatic system)	MENR	2006–2008 0% transferred
7. Improvement of Legislation			
Phase 1			
7.1	Develop draft laws in making the following amendment to Administrative Delicts Code: - Strengthening administrative punishment for offences against environmental safety - Determine new types of punishment of administrative offences against environmental safety	AMEA, MENR, MoHA, MoJ	2006–2007 100%
7.2	Draft laws on the following amendments to Law on Protection of Environment: - Improvement of environmental norms - Assessment of environmental impact - Monitoring of environment and natural resources - Establishment of environmental protection funds - Improvement of rights to use natural resources - Strengthening financial responsibility for illegal use of natural resources - Strengthening ecological control	AMEA, MED, MENR, MoD, MoHA, MoIE, MoJ	2006–2007 50%
7.3	Draft laws on the following amendments to the Forest Code of Azerbaijan: - Formation of forest fund - Cadastre, use, and protection of trees and shrubberies that are not part of the forest fund - Improving forest use rights - Aforestation and forest rehabilitation measures - Determination of principles of estimating damage to forests	AMEA, MENR, MoA, MoJ, SLCC	2007–2008 0% dropped

No.	Action	Implementing Agencies	Implementation Period and % Complete
7.4	Draft laws on the following amendments to the Law on Earth Interior: <ul style="list-style-type: none"> <li>- Improving use of Earth's interior</li> <li>- Improvement of legal framework on soil protection and reclaiming</li> <li>- Determination of requirements regarding salination</li> </ul>	AMEA, MENR, MoJ, SLCC	2006–2007 100%
7.5	Draft laws on the following amendments to the Law on Specially protected Natural Areas and Objects: <ul style="list-style-type: none"> <li>- Improving features of special protection regime</li> <li>- Zoning of specially protected natural areas</li> <li>- Determination of types of limited economic activity allowed at specially protected natural areas</li> <li>- Addressing ecotourism and recreation issues in national parks</li> </ul>	AMEA, MENR, MoH, MoIE, MoJ	2006–2007 50%
7.6	Draft laws on the following amendments to the Criminal Code: <ul style="list-style-type: none"> <li>- Improving norms determining responsibility for environmental crimes</li> <li>- Adding new norms envisaging responsibility for environmental crimes</li> </ul>	AMEA, MENR, MoHA, MoJ	2006–2007 100%
7.7	Draft laws on the following amendments to the Law on Air Protection: <ul style="list-style-type: none"> <li>- Ensuring protection of the ozone layer</li> <li>- Determination of environmental norms</li> </ul>	AMEA, MENR, MoIE, MoJ	2007–2008 50%
7.8	Draft laws on the following amendments to the Water Code of Azerbaijan: <ul style="list-style-type: none"> <li>- Ensuring protection of fresh-water sources</li> <li>- Improving environmental norms</li> </ul>	AMEA, Azersu, MENR, SAWM JSC, MoJ	2008–2009 0% dropped
7.9	Develop Law on protection of Genetic Resources	AMEA, MENR, MoA, MoJ	2007–2008 30%
Phase 2			
7.10	Concerning other regulations: <ul style="list-style-type: none"> <li>- Adjusting existing tariffs for indemnification concerning environmental protection and damage to environment to current price level</li> <li>- Reworking methodology of determining payments for environmental damage</li> <li>- Develop new methodology of determining standards of air pollutants</li> <li>- Development of environmental certification methodology</li> <li>- Development of unified methodology of assessment of toxicity of substances used in water facilities</li> <li>- Review of construction norms and standards with a view to efficient use of energy and prevention of loss of heat</li> </ul>	AMEA, MENR, MoJ, other relevant government agencies	2006–2010 50%
7.11	Develop Ecological Code of Azerbaijan	AMEA, MENR, MoHA, MoJ	2009–2010

<b>No.</b>	<b>Action</b>	<b>Implementing Agencies</b>	<b>Implementation Period and % Complete</b>
			50%

#### **Appendix 4: Priority Setting Using Multi-Criteria Analysis**

**Multi-criteria analysis** (MCA) is a method that assigns weights to a set of quantitative (for example, costs, impacts) or qualitative (for example, social, political) criteria to derive a ranking of choices in a more rigorous fashion. MCA appeared in the 1960s as a decision-making tool and is mostly used to make comparative assessments of alternative projects or in multistakeholder settings. The method is designed to help decision makers integrate the different options, reflecting the opinions of different actors concerned, into a prospective or retrospective framework. Participation of the decision makers in the process is a central part of the approach, which normally comprises experts as well as other stakeholders and the public. MCA has been used extensively in water use.

The basic approach to MCA techniques is to first identify a representative group of stakeholders and a person to evaluate the judgments made by the group. Projects and criteria are judged (scored) and weights are created reflecting the relative importance of one project or criteria over another. A final aggregation of weighted priorities is formed by the evaluator and presented to the group. The process can be iterative to test the robustness of results, as well as variations in the subjective criteria. Below is a step-by-step procedure:

- Identification of stakeholders and an evaluator
- Definition of the projects or actions to be judged
- Definition of judgment criteria (and associated weights)
- Analysis of the impacts of the actions
- Judgment of the effects of the actions in terms of each of the selected criteria
- Aggregation of judgments.

Examples of studies using MCA for environmental planning:

Costa 2001; Janssen 2001; Kallis *et al.* 2006; and Kiker *et al.* 2005.

## Appendix 5: Inter-Agency Working Group Multi-Criteria Analysis Worksheet

Principle/Criterion	Ranking of importance					Rating of criteria
	1 Weakly important	3 Less important	5 Moderately important	7 More important	9 Extremely important	Percent (%)
<b><i>Sociopolitical</i></b>						
1. Consistency of the project/Action with the national policy objectives						
2. Political acceptance of the project/Action						
3. Social acceptance of the project/Action						
4. Scope of the Action versus needs to be satisfied – urgency						
5. Appropriateness of the implementing organizations						
<b><i>Economic</i></b>						
6. Estimated full cost of the project/Action						
7. Availability of funds						
8. Cost/benefit ratio						
9. Payback period						
10. Internal rate of return						
11. Present value						
12. Export potential – Import substitution						
<b><i>Technical</i></b>						
13. Technical feasibility						
14. Technical risk						
15. Access to technology by local agents						
16. Mastering of the technology by the local agents (maturity of project/Action)						
17. Readiness of the local agents to implement the project/Action						
18. Multiplicative effects on the local technology basis						
19. Duration of the preparation phase						
20. Duration of the implementation phase						
<b><i>Environmental</i></b>						
21. Environmental impact						
22. Health impact						
<b><i>Total</i></b>						<b>100</b>

### Appendix 6: Preliminary List of SEP Additional Projects for Implementation During 2011–14

No.	Name of actions/projects	Finance required (AZM '000)	Finance allocated for 2010 (AZM '000 )	Additional finance required for 2010 (AZM '000)	Executing agencies	Supporting agencies	Period of implementation
<b>1. Greening activities</b>							
1.1	Planting of greenery and drip irrigation in Bail area (20 districts) – 60 ha	4,291	4,291		MENR, State Forest Agency	BMO	2010
1.2	Growing of tree plants with covered root system in Absheron region	928	928		MENR		2010
1.3	Greening and drip irrigation between Alyat bridge and Atbulag settlement along Baku – Kazak highway (57.6 ha)	2,900	2,900		MENR, State Forest Agency	AREA, MoT, SAWM	2010
1.4	Greening along Baku–Astara highway supported by drip irrigation (40 ha)	2,000	2,000		MENR, State Forest Agency	AREA, MoT, SAWM	2010
1.5	Greening alongside Baku–Kuba highway (200 ha)	7,000		2,000	MENR, State Forest Agency	AREA, MoT, SAWM	2010–2013
1.6	Greening alongside Baku–Shamakha highway (82 ha)	2,800			MENR, State Forest Agency	AREA, MoT, SAWM	2011–2014
1.7	Greening and irrigation development between Baku International Airport and Zig lake (902 ha)	13,254	2,000	2,000	MENR, State Forest Agency	BMO	2010–2012
1.8	Greening in Zire-Bine area (80 ha)	3,503			MENR, State Forest Agency	BMO	2012
1.9	Greening and irrigation development in Zabrat II-Kurdakhani area (50 ha)	1,837			MENR, State Forest Agency	BMO	2013
1.10	Greening and irrigation development around Zig Lake (180 ha)	13,202			MENR, State Forest Agency	BMO	2012–2013
1.11	Preparation of the common landscape-architectural plan, corresponding with the				MENR, National Academy of Sciences	BMO, SCBC	2010–2012

No.	Name of actions/projects	Finance required (AZM '000)	Finance allocated for 2010 (AZM '000 )	Additional finance required for 2010 (AZM '000)	Executing agencies	Supporting agencies	Period of implementation
	Master plan of Baku City, to improve the natural climate of the Great Baku area and the sanitary hygienic and health situation, including prevention of construction on green zones						
1.12	Establishment of olive seeding on Absheron				MoA		2010–2012
<b>2. Sustainable management of water and land resources; improvement of water supply in regions</b>							
2.1	Implementing pilot project on desalination of seawater in Salyan district to use in irrigation	1,000	1,000		MENR	Mellioration Committee, MoA, local authority	2010
2.2	Construction of new drainage collector to improve land reclamation, decrease level of underground water, and prevent land degradation				MENR	Mellioration Committee, MoA, Land Committee, local authorities	2010–2014
<b>3. Managing of industry and household wastes</b>							
3.1	Construction of underground pipelines to discharge treated wastewater from Hovsan treatment plant into the Caspian Sea	128,000,000	128,000,000		Azersu	BMO, MENR	2010–2011
3.2	Realization of the pilot project for recycled use of water from Hovsan Aeration Station and other treatment facilities treated up to modern standards				MENR	Azersu	2011–2012
3.3	Application of modern technologies, meeting the standards for cleaning and recycling of wastewater formed on oil treatment units				SOCAR	MENR	2010–2014
3.4	Development of city wastewater collection network to prevent discharge of untreated wastewater into Baku Bay				Azersu	BMO, MENR	2010–2011
3.5	Construction of treatment facility in				Azersu	BMO, MENR,	2010–2014

No.	Name of actions/projects	Finance required (AZM '000)	Finance allocated for 2010 (AZM '000 )	Additional finance required for 2010 (AZM '000)	Executing agencies	Supporting agencies	Period of implementation
	Bibiheybat and creation of industrial-household wastes and rain drainage networks in the area					SOCAR	
3.6	Reconstruction of Zig mechanical treatment facility #1				Azersu	MENR	2010–2014
3.7	Reconstruction of Hovsan open canal as closed canal and construction of treatment facility at its end in order to reduce negative impact to environment and prevent discharge of oil-polluted wastewater to the Caspian Sea				Azersu	MENR, SOCAR	2010–2014
3.8	Construction of wastewater treatment facilities in Baku City and surrounding settlements and villages and establishment of sewage network				Azersu	BMO, MENR	2010–2014
3.9	Development of layer waters management				SOCAR	MENR	2010–2014
3.10	Establish production of treatment facilities				MED	MENR, MoEI, National Academy of Sciences	2010–2012
3.11	Cleaning up of Baku Bay from sunk and semi-sunk ships and dilapidated equipment on onshore and offshore fields; demolition of hydrotechnic facilities and other big wastes				SCS	BMO, MENR, MoD, SOCAR, Border Protection	2010–2014
3.12	Collection and transportation of low-pressure gases associated with oil production				SOCAR	MENR, MoEI	2010–2014
3.13	Preparation of national solid waste management strategy				MED	MENR, MoH, local authorities	2010–2011
3.14	Separation of waste for use in recycling and construction of pilot line				MED		2010–2011
3.15	Improvement of production and household waste register and accounting system				MENR	MED, Statistics Committee	2010–2012

No.	Name of actions/projects	Finance required (AZM '000)	Finance allocated for 2010 (AZM '000 )	Additional finance required for 2010 (AZM '000)	Executing agencies	Supporting agencies	Period of implementation
3.16	Ensure register of waste in state cadastre				MENR	MED, MoH, local authorities	2010–2012
3.17	Neutralization of alumnite sludge and hazardous waste collected around Sumgait City				MENR	Properties Committee	2010–2014
3.18	Neutralization of radioactive charcoal produced by iodine-bromine production in Surakhani region				MES	BMO, MED, MENR	2010–2014
3.19	Project preparation for neutralization of alumnite sludge collected around Ganja City				MES	MENR, MoEI, Properties Committee	2011–2014
3.20	Reconstruction and extension of waste disposal site in Garadagh region to manage wastes of oil and gas fields				SOCAR	BMO, MENR	2011–2014
3.21	Improvement of Balakhani land field to modern standards				MED	BMO, MENR	2011–2013
<b>4. Restoration of lakes and surrounding areas now polluted by oil wastes and other harmful materials</b>							
4.1	Cleaning up Zig Lake and surrounding lands from oil wastes (116 ha)	11,318			MENR	BMO, SOCAR	2011–2012
4.2	Improvement of environmental conditions of Boyuk Shor Lake through control of wastewater discharges and enhancement of surrounding area				“Azersu”	BMO, MENR, SOCAR, SUPAC, “Clean City”	2010–2014
4.3	Improving the environmental condition of Absheron Peninsula lakes (Bulbule, Chuhurdere, Dashgil, Gala, Gırmızıgel, Hacı Hesən, Masazır, Mirzeledi, Puta, Zabrat)				MENR	BMO, SOCAR “Azersu”	2011–2014
4.4	Prevention of contamination by sludge waters of areas adjacent to SOCAR production sites, drying of sludge ponds,				SOCAR	BMO, MENR	2010–2014

No.	Name of actions/projects	Finance required (AZM '000)	Finance allocated for 2010 (AZM '000 )	Additional finance required for 2010 (AZM '000)	Executing agencies	Supporting agencies	Period of implementation
	and recultivation of polluted lands						
<b>5. Protecting biodiversity</b>							
5.1	Provision of transport of staff to protected areas to enhance their protection	220	220		MENR		2010
5.2	Building administrative headquarters for Shahdag National Park	1,011	1,011		MENR		2010
<b>6. Environmental monitoring</b>							
6.1	Installation of automatic air quality monitoring stations in Baku and five other industrial cities (Ganja, Mengechevir, Shirvan, Sumgait)	1,250	500	750	MENR	local authorities	2010
6.2	Improvement of monitoring and forecasting systems for drinking water provision for the population depending on the waters of Kura and Araz rivers basins				MENR	MES, National Academy of Sciences	
6.3	Conduct monitoring of impact of environmental pollution on population health areas				MoH	MENR	
6.4	Strengthening vehicle technical compliance control, creation of control sites with modern measurement equipment in the regions				MIA	MENR	2010–2014
<b>7. Use of alternative energy</b>							
7.1	Pilot project preparation on provision of solar-powered water treatment facilities in Salyan and Neftchala regions				MENR	MoIE, municipalities	2010

No.	Name of actions/projects	Finance required (AZM '000)	Finance allocated for 2010 (AZM '000 )	Additional finance required for 2010 (AZM '000)	Executing agencies	Supporting agencies	Period of implementation
<b>8. Legislative development</b>							
8.1	Improvement legislation in the field of environmental regulation				MENR	MoJ	2010–2014
<b>9. Environmental public awareness activities</b>							
9.1	Activities aimed at environment promotion and education (including competitions and public actions, preparation of promotion materials and distribution)		50		MENR	AzTV, MoE	Continuous
9.2	Formulation of a state program of environmental education and public awareness				MoE	MENR	2010–2011
9.3	Design and construction of Azerbaijan Environmental Education Center				MENR		2011–2012
9.4	Design and construction of Academy of Environment and Use of Nature				MENR		2010–2012

## **Appendix 7: The Budget System of Azerbaijan**

(Adapted from “Azerbaijan Public Investment Policy and Efficiency Project,”  
Louis Berger, 2005, a submission to USAID)

A comprehensive Budget System Law (BSL) was enacted in 2002 and made more specific in subsequent presidential decrees and amendments. It defines the country’s budgetary system and sets out the procedure for preparing, approving, and administering public resources on an annual basis. The BSL is comprehensive, encompassing all previously separate budgets in a Consolidated Budget, including: “off-budget” or “extra-budgetary” expenditures, “implicit subsidies,” the budget of Nakhchivan Autonomous Region, and any future special-purpose budgets. Unity in the Consolidated Budget is to be achieved by using the same budget nomenclature, documents, and forms, as well as reports for all elements of the system. Municipalities are recognized as fully self-governing entities that are responsible for preparing, approving, and executing their own budgets, provided that they can do so from their own revenue resources. To the extent that municipalities (small units numbering more than 2,000) or state-owned enterprises seek subsidies from the State, they become in principle subject to the government’s procedures and priorities for financing.

A simplified calendar for the state budget, as set out in the BSL, is presented below. Work begins approximately 11 months before the beginning of the budget year, approximately February 1, for the following budget year beginning January 1.

### *A. Consolidated Budget Preparation (led by the Ministry of Finance)*

1. The Executive (MOF and MED) specifies the medium-term economic and social development program objectives by the end of February.
2. A draft framework of the state budget and investment program is prepared by MOF and submitted to the Cabinet of Ministers by April 15.
3. MOF prepares and distributes budget instructions for Ministries and other organizations.
4. Municipalities that require financial support from the state budget submit their requests by May 1.
5. Based on the submissions of the ministries, the MOF prepares a draft consolidated budget for the Cabinet of Ministers before July 1. MOF prepares a medium-term budget forecast (revenues, expenditures, deficit) and the investment program (budget year plus 3 future years).
6. The draft Consolidated State Budget is submitted to the Parliament (*Milli Majlis*) not later than October 15th and includes: (a) the draft law on the state budget; (b) economic and social indicators; (c) a description of fiscal policy; (d) information on debt; and (e) a comparison of revenue and expenditure forecasts, with actual achievements in prior years. The BSL also

requires the publication of the Consolidated Budget in the press, 10 days after submission to Parliament.

*B. Public Investment Program (PIP) Budget Preparation (led by the Ministry of Economic Development).*

The BSL requires that all capital expenditures be included in the PIP. Article 11.9.5 of the BSL states that the budget shall contain “the amount of expenditures on investment programs for the next year and for the following three years with indication of the financing source and breakdown by functional and economic paragraphs,” and that all budgetary expenditures be executed by the Treasury. The PIP is particularly important in a country like Azerbaijan, where a large share of utility and infrastructure investment (including environment-related infrastructure) is conducted by the public sector.

1. Requests for public investments are submitted to the Ministry for Economic Development (MED) by technical ministries (by April 15), the district governments, and municipalities. In general, each submission should include a feasibility study, current cost estimates, and a financing plan.
2. Through negotiations, the MED Department of Economic Policy and Forecasting winnows down these requests to a level consistent with the overall investment program level in the draft consolidated budget. The combined, four-year PIP is then submitted to the Cabinet of Ministers (by September 10, for the upcoming budget year), to be incorporated into the Consolidated Budget.
3. The BSL intends that the Cabinet of Ministers should also submit the PIP to Parliament as part of the budget presentation.

The place of PIP is described in the State Program of Poverty Reduction and Economic Development (SPPRED), approved by the President in February 2003, as follows:

*One important method by which the government will improve its spending is through the implementation of a Public Investment Program (PIP). All major capital projects financed from different sources will in the future be undertaken only as part of the PIP to ensure transparency of decision making and co-ordination of their implementation. The PIP itself will be fully consistent with the government’s Poverty Reduction Strategy. In order to ensure that this occurs, it is intended to strengthen the newly established PIP Division in the Ministry of Economic Development, with support from international donors. The Division will evaluate public investment projects on technical, financial and economic bases, and will select and prioritize capital works. The PIP will be presented as part of the MTEF to the Milli Majlis with the annual budget, and will show expenditure on (and, where relevant, revenues from) approved investment projects. (Main report, Section 4.2, p. 116.)*

The MED prepared its first PIP during 2003 to cover 2004–07; the second PIP covered 2005–08. The current PIP covers 2009–2012. The PIP includes all investment projects that are to receive funds from the Consolidated Budget or, alternatively, from cofinancing that is expected for those projects from donors, foreign debt finance, or own funds of state-owned enterprises. To develop

the PIP, MED formulated a set of “Rules for Formulation of the Public Investment Program.” Refinement and improvement of these rules has been a MED priority during the last several years, in part addressed under recent (2006–2008) USAID-supported technical assistance.

### *C. Parliamentary consideration*

1. The Executive defends the budget according to the rules of the Parliament.
2. The Parliament reviews the budget in more detail than in the past, including the approval of expenditure and deficit ceilings. The Parliament approves the budget by December 20.
3. Parliament’s approval includes important parameters, including total revenues, tax rates, and expenditures by functional paragraph, amount of the reserve fund, borrowing limits, and budget deficit ceiling.

In 2006, the Government of Azerbaijan drafted laws on State Financial Supervision and Internal Audit, signaling its commitment to strengthening public internal financial controls (PIFC) and combating corruption.<sup>43</sup> This direction has been supported by the World Bank project on Corporate and Public Sector Accountability (CAPSA) and implementation of public expenditure and financial accountability (PEFA) activities in the country (see Box 5 of the text).

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<sup>43</sup> Ultimately abandoned and replaced (July 28, 2007) by a Decree of the President promulgating National Strategy on Increasing Transparency and Combating Corruption.

### Appendix 8: Revised Environmental Expenditure in Azerbaijan, 2004–2009 (million AZN)

	2004	2005	2006	2007	2008	2009	2010 projected
1. Total government expenditure of which foreign-funded domestically-funded	1,502.1	2,140.7	3,790.0	6,086.2	10,774.0	10,503.9	12,275.3
1.1 Public Investment Program (PIP) of which foreign-funded domestically-funded	96.9	159.9	879.6 266.0 614.0	1,902.2 148.0 1,754.0	4,275.2 2,242.0 2,035.0	3,553.4 1,447.0 2,106.0	4,157.5
1.1.1 environment investments as currently defined	0.5	0.9	1.2	23.0	118.4	128.9	
<b>1.2 Environmental expenditure as currently defined:</b> (Of which current expenditures)	<b>28.1</b> (21.1)	<b>30.9</b> (21.4)	<b>42.6</b> (26.0)	<b>104.2</b> (36.1)	<b>175.6</b> (61.4)	<b>180.0</b> (n.a.)	
1.2.1. MENR total budget	10.8	13.9	17.4	40.3	56.9	52.5	
1.2.1.1 Investment expenditure	0.5	1.1	1.1	5.3	20.9	5.2	
1.2.1.2 Current expenditure	10.3	12.8	16.0	20.6	27.3	32.0	
<b>1.3 Other state-budget environmental expenditure not now counted as such:</b>							
1.3.1 Budget-financed component of local (municipal) solid waste management expenditure	<b>8.5</b>	<b>10.6</b>	<b>12.8</b>	<b>14.9</b>	<b>17.0</b>	<b>15.0</b>	
2. Nonstate budget environmental expenditure:							
2.1 MENR donor-supported technical assistance and misc. env. projects	1.0	2.0	2.0	2.0	2.0	2.0	
2.2 Azersu JSC expenditure							
2.2.1 Foreign-funded investment expenditure	30.5	92.4	96.5	92.0	94.9	72.0	
2.2.2 Current expenditure	15.5	32.7	38.2	52.1	54.1	62.7	
2.3 State Amelioration JSC expenditure							
2.3.1 Foreign-funded investment expenditure	5.7	5.7	10.7	24.7	24.7	24.7	
2.3.2 Current expenditure	2.8	2.8	5.4	12.4	12.4	12.4	
2.4 SOCAR environmental expenditure				23.1	57.6	55.6	
2.5 Azerenerji environmental expenditure	n.a.	74.4	79.7	147.0	207.9	420.8	n.a.
2.6 SOFAZ environmental expenditure			127.0	250.5	332.4	250.0	310.0
2.6.1 Oguz-Baku Water Supply project			90.0	173.6	211.8	120.0	200.0
2.6.2 Samur-Absheron rehab. project			37.0	76.9	120.6	130.0	110.0
2.7 Other	2.0	2.0	2.0	3.0	3.0	3.0	
<b>2. Total nonstate budget environmental expenditure</b> (=2.1 to 2.7), upper est.	<b>57.5</b>	<b>212.0</b>	<b>361.5</b>	<b>606.8</b>	<b>789.0</b>	<b>903.2</b>	
As percent of total public expenditure	3.8	9.9	9.5	10.0	7.3	8.6	
As percent of GDP	0.7	1.7	1.9	2.1	2.1	2.6	
<b>3. Total environmental expenditure, redefined</b> (= 1.2 + 1.3 + 2), upper est.	<b>94.1</b>	<b>253.5</b>	<b>416.9</b>	<b>725.9</b>	<b>981.6</b>	<b>1098.2</b>	
As percent of total public expenditure	6.2	11.8	11.0	11.9	9.1	10.5	
As percent of GDP	1.1	2.0	2.2	2.6	2.6	3.2	

n.a. = not applicable.

#### Notes and Sources:

1. and 1.1 *Source:* Ministry of Finance (expenditure and total PIP); Ministry of Economic Development (environmental component of PIP). Figures for 2004–2009 are actual expenditures/allocations, those for 2010 are projections. The split between domestic and foreign-funded PIP for 2006–2007 is based on consultant's own assumptions. 2007–2008 are official figures.

1.2 *Source:* MENR. The figure includes expenditure of all ministries classified as environmental (extracted from annual state budgets) and from the environmental component of PIP (including PIP allocations to state corporations [Azersu and others]). It excludes *current* environmental expenditure of state corporations. The excess of MENR's investment budget over total PIP environmental allocations in 2005 could be caused by inclusion into the MENR figure of a foreign-funded (that is, nonstate-budget) component. MENR budget figures are inclusive of the budgets of subordinated agencies such as Hydromet.

1.3.1 The figures are those of current expenditure and do not include (unknown) PIP allocations for SWM (such as those for the Surakhani waste-to-energy plant in [from 2009]) that are assumed to be nil until 2009. *Source:* Consultants' estimates. Official figures of actual expenditures by municipalities on SWM could not be obtained. The assumptions for 2008 are the following: 1. Total urban population of Azerbaijan 4.25 million, of this 50 percent in Absheron Peninsula.

2. Average annual per capita of expenditure on SWM: AZN 12 in Absheron, AZN 2 outside Absheron.

3. 50 percent of SWM expenditure financed by transfers from state budget in Absheron, 100 percent elsewhere.

4. Figures in 2004 assumed to be half of those in 2008 and extrapolated between those two years. To put the above assumptions in perspective: median urban household income was around AZN 120 in 2008, of which about 7.5 percent was spent on water, electricity, and gas (expenditure on solid waste disposal has not featured in the official statistics so far). Budget-financed local environmental expenditure other than that for SWM assumed to be nil until now. All local expenditure on water supply and wastewater treatment is included in the totals of Azersu JSC and SAWM JSCs (rows 2.2 and 2.3).

2.1 Combines a variety of bilaterally- and UN system-supported (including GEF) environmental projects coursed through MENR and other government ministries. *Source:* MENR and consultant estimates, based on a list of donor-funded projects (see Appendix 2 of the main report). Total of project budgets allocated to years by simple prorating of the totals by respective planned implementation periods.

2.2.1 *Source:* Consultant estimates based on existing foreign funding for Azersu (see Appendix 10), the totals allocated to years under an assumed pattern of disbursement. All domestic investment expenditure by Azersu assumed to be included in PIP (see row 1.1).

2.2.2 *Source:* Azersu JSC. Figures of operating expenditure rounded off to the nearest million.

2.3 *Source:* In the absence of official financial reports of SAWM JSC, which could not be released within the report preparation period, these are consultant estimates. SAWM JSC's water supply and irrigation/land rehabilitation expenditures are left unseparated. The figures for SAWM capital expenditures include the proceeds of the \$42.6 loan by the Islamic Development Bank, the Saudi Fund for Development, and the OPEC Fund for International Development under the Samur-Absheron Project, financed mainly by SOFAZ (see 2.6). The ratio of current to capital cost is assumed to be the same as that of Azersu. Other assumptions mirror those applied to Azersu (rows 2.2.1 and 2.2.2).

2.4 *Source:* SOCAR. Allocation of the total three-year (2007–2009) amount of AZN 136.0 is based on consultants' estimates.

2.5 *Source:* Azerenerji JSC.

2.6 *Source:* SOFAZ. Two SOFAZ-financed projects (Oguz-Baku water supply and Samur-Absheron rehabilitation) are considered to be environmental in character. The latter figure excludes associated loan of \$42.6 by the Islamic Development Bank, the Saudi Fund for Development, and the OPEC Fund for International Development.

2.7 A catch-all category including (a) environmental expenditure by the Caspian Shipping Company (data on the cost of marine clean-up at present unavailable); (b) donor environmental grant assistance channeled to state organizations other than MENR; (c) donor grant assistance to Azerbaijan environmental NGOs. Category (a) is assumed to coincide with the launch of the State Environmental Program in 2006; the expenditure amounts during 2007–09 are consultant estimates based on physical description of tasks to be undertaken by CSC. Category (b) is assumed to be equivalent of 30 percent of environmental assistance channeled to MENR. Category (c), poorly documented, are consultant estimates based on the number and types of environmental NGOs.

**Appendix 9: MENR budgets, 2004–2009 (million AZN)**

	2003	2004	2005	2006	2007	2008	2009
Total public expenditure	1,234.5	1,502.1	2,140.7	3,790.1	6,086.2	10,774.2	12,355.0
MENR budget	8.5	10.8	13.9	17.4	40.3	56.9	52.5
Of this: 1. investment expenditure	0.3	0.5	1.1	1.1	5.3	20.9	5.2
2. Inv. expenditure fin. by Pres. Reserve Fund	—	—	—	0.3	14.5	8.8	15.0
3. Total current environmental expenditure (=4+5)	8.1	10.3	12.8	16.0	20.6	27.3	32.3
4. Domestically funded env. Expenditure	7.2	9.4	11.9	14.9	19.0	25.5	30.3
Hydromet	1.5	1.8	2.3	2.4	3.8	4.9	5.6
Protection of water resources	0.2	0.2	0.4	0.8	1.2	1.4	1.7
Protection of biodiversity	0.4	0.6	0.8	1.1	1.5	2.1	2.6
Forest protection and rehabilitation	1.8	2.7	3.6	5.2	6.9	8.1	8.5
Geological exploration	2.3	2.5	2.7	3.1	2.4	5.0	5.4
Public gardens	—	—	—	—	—	—	1.6
Environmental safety	1.1	1.5	2.1	2.4	3.1	3.9	4.9
5. Foreign-funded environment. expenditure (=4-3):	0.9	0.9	0.9	1.1	1.6	1.8	2.0
Environmental expenditures by other ministries and public bodies	13.8	17.3	17.0	25.2	63.9	118.7	n.a.
<b>Total environmental investment expenditure by all public bodies</b>	2.3	1.9	2.9	8.9	55.5	97.6	
Of this: For protection and utilization of water	1.9	1.7	1.3	6.8	18.8	78.3	
For air quality management	0.9	0.9	0.2	1.5	1.6	1.1	
For land cons. and rehabilitation	0.1	—	0.1	0.4	35.6	18.4	

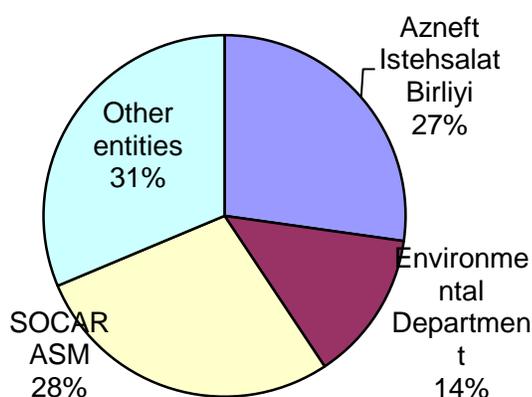
Source: MENR.

Note: — = not available.

## Appendix 10: SOCAR Environmental Expenditure

The State Oil Company of Azerbaijan Republic (SOCAR) is one of the main stakeholders of the State Environmental Program (2006–2010). SOCAR started implementation of its share of the SEP in 2007. Between 2007 and 2009, SOCAR spent around AZN 150 million for these measures. The majority of this amount was allocated for remediation of oil-contaminated lands and rehabilitation of obsolete environment-related infrastructure. These investments were executed through SOCAR departments and affiliated entities as shown in Figure A9.1 and Table A9.1:

**Figure A9.1: SOCAR Investments**



**Table A9.1: SOCAR Expenditures ('000 AZN)**

SOCAR departments	2007	2008	2009
“Azneft” Production Union	2,574.9	31,261.8	9,599.1
Caspian Oil fleet	225.1	3,089.2	2,146.3
Ecology Department	13,802.0	6,706.0	952.0
“Azerneftiyagh” Oil Refinery	212.3	819.7	102.2
Baku Oil Refinery	0.0	991.9	8,635.9
Oil Pipeline Department	1,060.9	2,509.9	
Deep Water Jacket factory		14.7	
Social Development Department	3,891.2		
Oil and Gas Construction Trust	373.5	599.7	724.9
Others	997.8	11,562.1	33,431.2
<b>Total</b>	<b>23,137.7</b>	<b>57,555.1</b>	<b>55,591.6</b>

## Appendix 11: Azerenerji Environmental Expenditure

**Table A10.1: Environmental Expenditure by Azerenerji, 2005–2009 ('000 AZN)**

Year	2005	2006	2007	2008	2009
Expenditure	74,420	79,735	146,954	207,903	420,833

*Source: Azerenerji JSC.*

**Table A10.2: Composition of Environmental Expenditure by Azerenerji, 2005–2009 ('000 AZN)**

	2005	2006	2007	2008	2009
Protection and efficient utilization of water resources	60,540	64,881	135,054	147,883	341,139
Air protection	13,660	12,393	10,700	59,600	69,800
Protection of soil from production and consumption wastes	1,200	2,460	1,200	0,420	9,894
Land recultivation costs	1,020	—	—	—	9,894
Overhaul costs on fixed assets as to environment protection	1,210	199,635	2,280	2,301	15,623

*Source: Azerenerji JSC.*

## Appendix 12: Foreign Investment in the Water Supply and Sanitation Sector

Description	Amount Approved (mil. USD)	Year
<b>A. Loans</b>		
<b>1. Asian Development Bank</b>		
Urban Water Supply and Sanitation Project (Loan 2119-AZE [SF])	20.00	2004
Urban Water Supply and Sanitation Project (Loan 2120-AZE)	10.00	2004
MFF-Water Supply and Sanitation Project, Tranche I	75.00	2009
<b>Subtotal (Asian Development Bank)</b>	<b>105.00</b>	
<b>2. World Bank</b>		
Greater Baku Water Supply and Rehabilitation	61.00	1995
Greater Baku Water Supply and Rehabilitation (supplementary financing)	13.00	2002
National Water Supply and Sanitation Project	230.00	2007
Second National Water Supply and Sanitation Project (under cons.)	(260.00)	2010
<b>Subtotal (World Bank)</b>	<b>304.00</b>	
<b>3. European Bank for Reconstruction and Development (EBRD)</b>		
Greater Baku Water Supply and Rehabilitation (cofinancing with the World Bank)	20.00	1995
<b>Subtotal (EBRD)</b>	<b>20.00</b>	
<b>4. German Development Cooperation through KfW</b>		
Open Program Municipal Infrastructure I	5.00	2000
Open Program Municipal Infrastructure II	48.00	2005
<b>Subtotal (KfW)</b>	<b>53.00</b>	
<b>5. Natexis Banques Populaires (France)</b>		
Upgrade and Extension of the Govsani Waste Water Facilities, Zikh 2 Pumping Station and Main Waste Water Transmission Lines	51.80	2005
<b>Subtotal (France)</b>	<b>51.80</b>	
<b>6. JICA (Japan)</b>		
Rehabilitation of Water Supply and Sanitation in 10 secondary towns	260.00	2009
<b>Subtotal (Japan)</b>	<b>260.00</b>	
<b>Subtotal (A)</b>	<b>1,053.80</b>	
<b>B. Grants</b>		
<b>1. Asian Development Bank</b>		
Urban Water Supply and Sanitation (TA 3774-AZE)	0.74	2001
Institutional Strengthening of the Water Supply and Sanitation Sector in Secondary Towns (TA 4465-AZE)	0.50	2004
<b>Subtotal (Asian Development Bank)</b>	<b>1.24</b>	
<b>2. German Development Cooperation through KfW</b>		
Municipal Infrastructure Development I	1.30	2000
Municipal Infrastructure Development II	1.30	2002
<b>Subtotal (KfW)</b>	<b>2.60</b>	
<b>3. Swiss Economic Cooperation Agency (SECO)</b>		
Municipal Infrastructure Development	13.00	2002
<b>Subtotal SECO</b>	<b>13.00</b>	
<b>4. Japan Social Development Fund (JSDF)</b>		
Rayon Community and Plumbing Rehabilitation Project (in conjunction with the World Bank National Water Supply and Sanitation Project)	2.94	2008
<b>Subtotal (JSDF)</b>	<b>2.94</b>	
<b>Subtotal (B)</b>	<b>19.78</b>	
<b>Total</b>	<b>1,073.58</b>	

Source: Asian Development Bank.

### Appendix 13: SOFAZ and Environment-related Investments

Like a number of other sovereign funds, the State Oil Fund of Azerbaijan (SOFAZ) was created to neutralize the impact of a temporary surge of government revenue on the country's macroeconomic stability and to strengthen economic development in the long term. Presidential Decree No. 240 of December 29, 1999, defines SOFAZ activities as being directed toward (a) preservation of macroeconomic stability, ensuring fiscal-tax discipline, decreasing dependence on oil revenues and stimulating development of the nonoil sector; (b) ensuring intergenerational equality and accumulating and preserving oil revenues for future generations; and (c) financing major national-scale projects to support socioeconomic progress. Such a formulation clearly makes it possible for SOFAZ revenue to be used to support environment-related projects of national importance.

Table A12.1 shows, among other things, (a) the importance that SOFAZ plays as a source of government income; (b) the scale of fluctuations in the SOFAZ budget (and budget adjustments) resulting from the volatility of hydrocarbon prices that “feed” the Fund; and (c) the structure of SOFAZ expenditure that includes two major investments (Oguz-Qabala-Baku water supply and Samur-Absheron rehabilitation) that can be said to complement and enhance the State Environment Program.

**Table A12.1: SOFAZ budgets (million AZN)<sup>1</sup>**

	2006 amend.	2007 amend.	2008 original	2008 amend.	2009 amend.	2010 amend.
<b>Revenues</b>						
1. Proceeds from sales of Azerbaijan's share of hydrocarbons (net of transportation costs, banking expenses, customs costs, surveyor, marketing and insurance costs, and revenues from SOCAR's share in projects in which it is an investor)	684.0	1,429.7	3,473.1	9,819.5	7,992.3	5,564.4
2. Dividends from oil and gas projects, transit fees, etc.	134.6	37.4	13.4	104.8	156.4	155.8
3. Revenues from management of SOFAZ's assets	35.3	55.1	121.9	148.9	211.4	241.9
4. Other revenues	0.1	0.2	0.9	70.6	0.9	0.9
<b>Total approved</b>	<b>854.0</b>	<b>1,555.7</b>	3,609.4	<b>10,144.7</b>	<b>8,361.0</b>	<b>5,963.1</b>
<b>Total executed</b>	<b>985.0</b>	<b>1,886.2</b>		<b>11,864.6</b>	<b>n.a.</b>	<b>n.a.</b>
<b>Expenditure</b>						
1. Social and settlement needs of refugees and internally displaced persons	110.3	154.2	145.0	145.0	90.0	80.0
2. Transfer to the State Budget	585.0	585.0	1,100.0	3,800.0	4,915.0	4,915.0
3. Construction of the Oguz-Qabala-Baku water supply system	90.0	173.6	211.8	211.8	120.0	200.0
4. Reconstruction of the Samur-Absheron irrigation system	37.0	76.9	120.6	120.6	130.0	110.0
5. Baku-Tbilisi-Kars railway	0.0	30.0	88.7	88.7	30.0	80.0
6. State Program on Education of Azerbaijan Youth in Foreign Countries in 2007–2015	0.0	0.0	5.0	5.0	10.0	10.0
7. Expenses linked to ACG oilfields, BTC pipeline, and Aze. Inv. Company	200.0	88.5	0.0	0.0	0.0	—

7. Operating expenses	4.0	7.4	9.8	9.8	24.5	33.4
<b>Total approved</b>	<b>1026.3</b>	<b>1,115.6</b>	1,680.9	<b>4,380.9</b>	<b>5,319.5</b>	<b>5,428.1</b>
<b>Total executed</b>	<b>981.4</b>	<b>1,061.2</b>		<b>4,291.7</b>	<b>n.a.</b>	<b>n.a.</b>
<b>SOFAZ budget surplus or (deficit)<sup>2</sup></b>	<b>3.6</b>	<b>825.0</b>		<b>7,572.9</b>	<b>3,041.5</b>	<b>535.0</b>
<b>Total state budget revenue</b>	5,248	7,949		10,763	10,326	n.a.
<b>Total state budget expenditure</b>	5,135	7,356		10,774	10,567	n.a.
<b>Total PIP</b>						
<b>SEP approved budget</b>						

Sources: 1. Compiled from SOFAZ financial statements (see [www.oilfund.az](http://www.oilfund.az)).

2. Table 1 of the text and the reference therein.

n.a. = .

Notes: <sup>1</sup>Takes into account amendments during the budget year in question; figures for 2008 show both original and amended amounts to illustrate the scale of adjustment that may occur during periods of instability of hydrocarbon prices.

<sup>2</sup>SOFAZ assets stood at AZN 13,049.7 million as of April 1, 2010, and the cumulative expenditure by the end of 2009 was said ([www.oilfund.az](http://www.oilfund.az)) to include AZN 10,265.0 million transferred to the state budget, and some AZN 919.0 million for the Oguz-Gabala-Baku and Samur-Absheron projects. The latter figure (from the same SOFAZ source) is below the sum of expenditure items 3 and 4 in the table, suggesting underspending or rolling over of the budget under the categories concerned.

Like several SEP projects, those supported by SOFAZ can be co-financed by foreign partners. This is the case of the Samur-Absheron rehabilitation, one component of which (construction of Velvelechay-Takhtakorpu canal) is being financed by loans of the Islamic Development Bank, the Saudi Fund for Development, and the Organization of the Petroleum Exporting Countries (OPEC) Fund for International Development. The project has benefited from an earlier (2004) Long Term Strategy and Feasibility Study for the Samur-Absheron Canal System sponsored by JICA and developed by Japan's Nippon Koei and its local partner.

SOFAZ is considering investments in renewable and alternative energy through the Azerbaijan Investment Company (AIC) of which SOFAZ is the founder and sole shareholder.

## Appendix 14: Quantitative Tools for Priority Setting

**At the macro-level:** A number of quantitative tools have been used for setting priorities linked with growth and poverty reduction. The most frequently used quantitative tool is the quantification of costs of environmental degradation, which measures the loss in a country's welfare due to environmental degradation. It includes loss of healthy life and well-being of the population because of pollution, and productivity losses because of natural resources depletion, such as that linked to deforestation and soil degradation. Cost-of-degradation estimates are often expressed as a percentage of gross domestic product to provide a useful benchmark for economic policy makers (see Bolt, Ruta, and Sarraf 2005). The Azerbaijan 1998 NEAP took this view in ranking priorities according to their relative health impact and irreversibility, and represents a way forward by adopting a similar methodology in future strategy and planning documents.

**At the micro-level:** In order to assess priorities linked with poverty reduction, available tools include use of surveys and distributional analysis of environmental priorities. For instance, the cost of degradation analysis can be supplemented by distributional analysis to assess environment-development issues relevant to people in different income quintiles.

*Source:* Pillai 2008.

### Appendix 15: Summary of Recommendations for SEP Institutional Responsibilities

<b>Recommendation</b>	<b>Responsible agency(s)</b>
Assemble and disseminate up-to-date information on all SEP activities, including project documentation with appropriate level of detail, specified roles of implementing agencies, environmental assessment, and budget-related information.	MENR, with support from other agencies
Technical and financial assistance provided (i) for training to staff relating to project/program administration as well as program monitoring and evaluation; and (ii) to design an interagency information-sharing mechanism to enable a unified monitoring.	MENR, with support from State budget or donors
Prepare a project concept document for each SEP candidate project, in a format approved by MED and MoF and made publicly available.	MENR, MED, MoF
Ensure that the role and investment budget of <i>each</i> agency implementing a SEP activity is specified by the agency responsible for developing project documentation.	Primary executing agency in collaboration with MENR
Clarify the future role and status of the Inter-Agency Working Group on Environment (IAWGE), preferably at the level of the Cabinet of Ministers (CoM).	Council of Ministers
Include an addendum in project documentation prepared by the primary executing agency to explain how the SEP activity relates to the agency's other environment-related activities.	Primary executing agency in collaboration with MENR
Encourage MENR to post <i>all</i> existing and proposed projects and programs on its Web site in the manner used by agencies (e.g., EBRD, ADB, World Bank).	MENR
Require Azerenerji and SOCAR, government agencies with a special position in the national economy and important environmental actors, to include environmental expenditures in their annual reports.	Azerenerji and SOCAR
Require Azersu JSC and SAWM JSC, state corporations with an environment-related mandate, to make their audited annual financial reports publicly available.	Azersu and SAWM JSC
Encourage MED, in consultation with MENR and SOFAZ, to prepare a discussion paper on SOFAZ policy on environmental expenditure as a prelude to a formal policy of environmental financing by SOFAZ.	MED

Develop a standardized set of definitions for environmental expenditures and investments based on internationally recognized methods.	MENR
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