

Annex 2. Environment and Natural Resource Management Strategy

TABLE 2.A. STATUS OF SUSTAINABLE NATURAL RESOURCE MANAGEMENT IN ECA

	<i>Forests</i>	<i>Biodiversity</i>	<i>Water</i>	<i>Land</i>	<i>Total score</i>
<i>Poland, Baltic Republics, Belarus</i>					
Belarus	3	5	4	4	16
Estonia	7	7	6	7	27
Latvia	7	6	6	6	25
Lithuania	6	6	5	5	22
Poland	7	6	6	6	25
<i>Danube and Carpathians</i>					
Czech Republic	8	7	9	7	31
Hungary	8	7	7	8	30
Moldova	5	5	5	6	21
Romania	5	6	6	6	23
Slovak Republic	8	8	8	8	32
Ukraine	4	5	4	4	17
<i>The Balkans</i>					
Albania	4	4	7	6	21
Bosnia	4	3	5	5	17
Bulgaria	5	7	7	4	23
Croatia	4	5	6	6	21
Macedonia	6	6	6	6	24
Slovenia	8	6	6	8	28
<i>Turkey and the Caucasus</i>					
Armenia	3	3	4	2	12
Azerbaijan	4	4	5	3	16
Georgia	4	5	5	6	20
Turkey	4	4	5	6	19
<i>Central Asia</i>					
Kazakhstan	4	2	4	4	14
Kyrgyz Republic	4	5	5	3	17
Tajikistan	2	2	4	2	10
Turkmenistan	2	2	2	2	8
Uzbekistan	2	4	4	3	13
<i>Russia</i>	5	6	4	5	20

Note: A score of 1–2 indicates that four of the elements for sustainable, transparent natural resource management are in place; a score of 9–10 indicates a very good framework for sustainable natural resource management.

An explanation of the numerical ratings is given in table 2.B.

Source: World Bank estimates.

TABLE 2.B. SCORING TABLE FOR TABLE 2.A

	<i>Framework for improved forest management</i>	<i>Framework for improved ecosystems biodiversity management</i>	<i>Framework for adequate water resource management</i>	<i>Framework for adequate land management</i>
1–2	<ul style="list-style-type: none"> -Regulatory, management, harvesting, and processing functions are state-owned and under same organizational structure -All forest land managed and utilized by the state -No public discussion of management plans -Forests managed to maximize timber yields rather than for sustained multiple use 	<ul style="list-style-type: none"> -No established protected area management or land classification system -No biodiversity strategy; information base on ecosystems/species not developed -No signature of international conventions -Poaching of rare species -Little involvement of civil society in ecosystems management -Little biological resource management in the production landscape -Poorly managed gene banks; weak links with in situ conservation 	<ul style="list-style-type: none"> -Investment decisions made on narrow production maximization objectives -No adequate water pricing -Centralized institutions and approach to decision making, with little accountability or community involvement -Ecological value of water not considered -River basin planning does not consider multisectoral and downstream impacts -Research narrowly focused with little regard for improving efficiency 	<ul style="list-style-type: none"> -Land, production, inputs, technologies managed by the state -Modern soil/moisture conservation practice not practiced -Widespread erosion and soil mining -Crop husbandry and range management poorly linked with maintenance of ecological functions and soil capability -No land use planning -Research focused on production maximization rather than longer-term maintenance of productivity and fertility -No cadastre registration
3–4	<ul style="list-style-type: none"> -Separation of regulatory authorities and management from harvesting and processing -Forest activities state-owned, but some movement to commercial management -Some environmental civic groups active -Multiple-use forest planning accepted in legislation 	<ul style="list-style-type: none"> -Strategy completed and international conventions signed -Protected areas system-managed for research or recreation with little community involvement -Database exists but fragmented and not publicly available -Inadequate funding for protected area system from state budgets -Production landscape managed with little regard for biological resources 	<ul style="list-style-type: none"> -Planning considers downstream impacts on salinity/ecosystems -Political pressure to maximize investment continues -Debates on pricing regulatory framework begin -Some piloting of decentralized approaches to operation and maintenance of irrigation and municipal water /wastewater systems -Data systems maintained 	<ul style="list-style-type: none"> -Some land privatization but inadequate technical services in soil fertility management -Inadequate use of inputs; use of inappropriate machinery continues -Poor range and pasture management -Research into land capability but results fragmented
5–6	<ul style="list-style-type: none"> -Privatization of harvesting and wood processing -Public forest organizations are accountable for sound forest and financial management -Community-based natural resource and watershed programs beginning 	<ul style="list-style-type: none"> -Environmental groups active in PA management -Alternative approaches to PA funding discussed -Ecosystem management approach and local participation developing in PA system -Public discussion of and research into biological resource conservation in production landscape 	<ul style="list-style-type: none"> -Progress with decentralization and formation of effective water use associations -Investments begin to assess ecological, watershed, drainage and salinity impacts -Coordination between water resource institutions; some cooperation on integrated water use -Water monitoring systems shared between institutes 	<ul style="list-style-type: none"> -Farm support services include some support in soil fertility and erosion control management -Private market developing for inputs -Demonstration programs for improved land management -Research ongoing into improved crop nutrient, range, and pasture management
7–8	<ul style="list-style-type: none"> -Forest land restituted -Private/community rights to manage forest land supported by government -Transparent forest leasing arrangements linked to sustainable management -Transparent, multipurpose forest land-use planning -Timber price reforms under way and functioning forest resource taxation system 	<ul style="list-style-type: none"> -Functioning protected-area system with emerging multiple sources of public and private funding and local management -Effective biodiversity information and education programs -Public accountability of protected-area programs -Adequate regulations and legislation in place and enforced -Emerging land care programs and partnerships with agriculture -Support for gene banks and live collections 	<ul style="list-style-type: none"> -Integrated, intersectoral approach to water use, including river-basin planning, with public accountability for key water institutions -Water pricing covers operational and maintenance costs -Decentralized, participatory water management -Integrated water monitoring systems in place and used by management -Adequate farmer support system for improved water management in place 	<ul style="list-style-type: none"> -Adequate fertility/land management support services and input availability -Incentive system and programs under way in biological resource conservation in production landscape -Decentralized approach to sustainable land management, with cooperation between users and community involvement -Research and information systems widely shared
9–10	<ul style="list-style-type: none"> -Full public accountability for forest land-use planning -Transparent pricing system for timber; NTFP -Adequately financed, transparent, public forest regulatory institutions -Forest inventories and management plans publicly available -Harvesting and processing privatized and accountable to clear rule of law -Certification/chain of custody systems functioning and providing independent verification of sustainable forest management 	<ul style="list-style-type: none"> -Civil society broadly involved in ecosystems management -Policies and programs under implementation for biodiversity conservation in production landscape -Community participation in protected-area management and effective funding mechanisms -Incorporation of biodiversity values in public sector management and investment decisions -Information systems in place and widely shared with local and international community -Gene banks maintained and widely used 	<ul style="list-style-type: none"> -Public accountability in water resource management and investment -Water pricing reflects costs adequately -Integrated approach incorporates externalities in investment decisions -Full decentralized responsibility for water management -Adequate river basin and water quantity and quality monitoring in place, with information publicly available 	<ul style="list-style-type: none"> -Soil managed to control erosion and maintain fertility and production levels -Carrying capacity of pasture and range increased; agricultural run-off at acceptably low levels -Farm practices allow for biodiversity in production landscape -Integrated crop protection systems in place -Land capability and land use information systems available to public -Cadastre in place and used in land markets

Source: World Bank estimates.

TABLE 2.C. ENVIRONMENT PERFORMANCE RATINGS

Criteria	Ratings			
	<i>Fast Reformers</i> (average for Poland, Slovenia, and the Czech Republic)	<i>Baltic Republics</i> (average for Estonia, Latvia, and Lithuania)	<i>Russia</i>	<i>Central Asia/Caucasus</i> (average for Azerbaijan, Turkmenistan and Kazakhstan)
<i>State of environmental management</i>				
Legal base	8.3	6.0	5.0	3.3
Knowledge/information base	7.7	6.0	3.0	3.0
Institutions	7.0	6.0	2.0	3.0
Regulatory framework	7.0	7.7	3.0	2.3
Financing	7.7	7.0	3.0	2.3
Public awareness/participation	5.7	5.0	4.0	2.7
<i>Economy-wide policies with impact on environment</i>				
Macroeconomic stability	8.7	7.0	2.0	5.3
Removing price distortions	7.3	7.0	7.0	5.3
Restructuring and privatization	8.3	6.3	6.0	4.0
Governance	9.0	7.3	3.0	2.6

Note: Table 2.C reflects the results of a rating exercise conducted in October 1998. The scores for each country were assigned by the Environment WPA PTL. The maximum score for each category is 10. Explanation of the numerical ratings is included in table 2.D.

Source: World Bank estimates.

TABLE 2.D. RATINGS KEY TO TABLE 2.C

<i>State of environmental management</i>						
Rating	<i>Legal base for environment management</i>	<i>Knowledge / information base</i>	<i>Institutions</i>	<i>Regulatory framework</i>	<i>Financing of environmental investments</i>	<i>Public awareness / participation</i>
1-2	Old, inconsistent, or nonexistent legislation	Very limited and/or unreliable ambient monitoring	EPA with subministerial status or ministry with little clout, small budget, small staff, etc.	Inconsistent standards, predominantly CAC instruments, little or no compliance monitoring, poor enforcement	Declining government budget, no environmental funds, no tax incentives for own financing of environmental projects	Little public information about environmental issues and risks; no procedures for requesting such information
3-4	Some laws in force, most under discussion; or many laws in force, but unenforceable	Reasonably good ambient monitoring for major urban areas and water bodies. Methodology/equipment not necessarily up-to-date	MoE with reasonable budget and professional staff; mechanisms for coordination with agencies responsible for water, public health, forestry, etc., if separate	Reasonably enforceable standards, pilot or limited use of incentive instruments, compliance monitoring procedures in place but poorly implemented, inconsistent enforcement	Limited fiscal incentives for own financing of environment investment; low cost recovery for environmental services; environment fund (if any) just established; fee schedule for licensing/permitting established, but collection low	Information provided to the press in answer to questions; no procedures for citizens to file complaints or no follow up to such complaints
5-6	Laws covering basic media/ pollutants and sectors in force or close to adoption; amendments under consideration for parts deemed unenforceable	The above, plus reliable equipment, up-to-date methodology, data sharing arrangements between agencies, and data analysis	The above, with less fragmentation of environment-related responsibilities, functioning regional agencies, some staff trained in modern environmental management	Incentive instruments implemented on nationwide basis; all large-point sources monitored for compliance, penalties for violators assessed (not consistently collected)	Govt. budget for environmental investments expanding; environment fund functioning for at least a year but with limited revenue; cost recovery mechanisms in the process of creation; collection of most permitting and licensing fees; limited foreign financing	Clear rules for access (upon request) to both ambient quality and compliance status information. Procedures for handling citizens' complaints established but not followed consistently
7-8	Most laws in place and mostly enforceable—esp. laws addressing priority problems	The above, plus better equipment, good network of monitoring stations, use of results of data analysis for decision-making	The above, plus a good network of local agencies, clear roles and responsibilities at each level of management, MoE with clout and established relations with mainstream ministries, well-trained staff, up-to-date equipment	More widespread use of incentive instruments; expanding coverage of sources to be monitored for compliance and up-to-date methodologies; penalties assessed and carried out against most violators	Well-developed environment funds with significant contribution to total environmental investment; increasing cost recovery for environmental services; limited private sector participation in environmental services; good cooperation with external finance donors	The above, plus opportunity of the public to review and monitor enforcement settlements agreements between the government and violators

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TABLE 2.D. continued

<i>State of environmental management</i>						
<i>Rating</i>	<i>Legal base for environment management</i>	<i>Knowledge / information base</i>	<i>Institutions</i>	<i>Regulatory framework</i>	<i>Financing of environmental investments</i>	<i>Public awareness / participation</i>
9–10	All major media/pollutant-specific and resource/sector-specific laws in force and enforceable	Good, reliable network for ambient monitoring; sophisticated equipment; highly trained analysts with major role in decisionmaking	The above, plus mechanism for interministerial coordination with mainstream ministries in place and functioning; ability to retain qualified staff	A good (optimal) mix of CAC and incentive instruments; extensive compliance monitoring with sophisticated equipment and well-trained staff; consistent, effective enforcement; follow-up activities for violators	Environmental concerns incorporated in govt. investment program; greater willingness to finance environmental investment on the part of the banking system; functioning cost recovery mechanisms; expanding role of the private sector; sizable foreign financing	Environmental performance ratings of establishments with both good and bad performance and with public disclosure of the ratings; access to information through routine public reports or on-line; follow-up to citizens' complaints

ECONOMY-WIDE POLICIES WITH IMPACT ON ENVIRONMENT

<i>Ratings</i>	<i>Macroeconomic stability</i>	<i>Removing price distortions</i>	<i>Restructuring and privatization</i>	<i>Basic issues of governance</i>
1–2	No fiscal and/or monetary discipline, unstable exchange rate, rising inflation	Most relevant prices (e.g., energy, environmental services) state-controlled; natural resource sectors heavily subsidized	Monopolistic state-owned industries	Institutions of the command economy mostly intact; little or no separation of powers
3–4	Country has just implemented a stabilization program	Indicative prices; rigid import/export regime restricting competition	Spontaneous privatization, "small privatization," mass privatization plans under design/ discussion	Modest restructuring of government and public institutions but still ill-defined property rights; widespread corruption; weak law enforcement (general laws); weak financial discipline in SOE
5–6	Situation still not stable but better predictability of the future and improving	Prices more in line with costs but still monitored by the government; removal of many natural resource subsidies and substantial cuts in the amount of the remaining subsidies; improved trade policy but still some controls remaining	Privatization programs under implementation; issues of environmental liability not considered or liability waived to attract foreign investors. Most large polluters remain state property	Effective separation of powers and strong commitment to the rule of law, but still weak and passive government institutions; laws enforced inconsistently; slow and ineffective judicial system; no or unenforced bankruptcy laws
7–8	Stable macroeconomic situation but some uncertainty about long-term stability	Price calculation consistent with cost recovery; clear and credible timetable for phase-out of subsidies, controls, tariff barriers, and other distortion	Environmental considerations figure prominently in restructuring (closing) of polluting industries; some major polluters privatized but framework for addressing liability of past environmental damage still evolving	Reasonably good governance and law enforcement mechanisms in place but society not adjusted yet; financial discipline of the public sector with hard budget constraints on SOEs and enforceable bankruptcy laws
9–10	Low inflation rates, stable exchange rate, prudent and transparent fiscal and monetary policy consistent with environmental sustainability. Relatively low risk of destabilization	Any remaining price controls or subsidies are limited, with clear phase-out periods/conditions, justified on welfare or efficiency grounds	Most large polluters privatized, with appropriate environmental liability provisions or decision to close or restructure before privatization	Efficient public institutions, clear rules of interaction between citizens and government, efficient public sector, speedy and efficient judicial process

Note: A score of 1–2 indicates that four of the elements for sustainable, transparent natural resource management are in place; a score of 9–10 indicates a very good framework for sustainable natural resource management.

Source: World Bank estimates.