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MEASURING THE ENVIRONMENTAL TRANSITION IN EASTERN EUROPE AND THE NEWLY INDEPENDENT STATES

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**FOREWARD TO
"MEASURING THE ENVIRONMENTAL TRANSITION
IN EASTERN EUROPE AND THE NEW INDEPENDENT STATES"**

The Office of Environment, Energy and Urban Development of USAID's Bureau for Europe and the New Independent States supported the research and drafting of this path-breaking report on the status of environmental protection and management in the ENI region. The report grew out of our perception that innovative analytical tools were needed to measure the region's capacity to manage its substantial environmental problems, and to gauge progress over time in improving that capacity within the context of the larger economic and democratic transition underway in the region. An underlying motivation for undertaking this effort was USAID's need to judge the effectiveness and impact of its environmental assistance programs in the region, to assess the need for adjustments in program direction and priority, and to determine through analytical means when ENI countries are ready to "graduate" from USAID assistance.

The heart of the report is found in Section IV, which proposes a specific methodology for measuring the capacity of four key participant or stakeholder groups in the environmental transition – the private sector, central governments, local governments and the citizenry at large – in terms of three central aspects, or "impact areas," constituting environmental management capacity – the policy, legal and regulatory framework for environmental management, the strength and commitment of key institutions representing each stakeholder group, and the extent of activity in the areas of environmental trade, finance and investment. This section of the report also presents a cross-country ranking based on the results of the measurement exercise.

It should be emphasized that this effort does not seek to assess the state of the physical environment in the ENI region, that is, unlike other such endeavors, this index of environmental performance is not focused on quantitative measures of air and water quality, energy intensity and so forth. Changes in these environmental conditions – both positive and negative – are occurring in the region for reasons more related to economic output levels and government budgetary constraints than to policy and institutional reform. In the longer term, it can be reasonably assumed that the trend in environmental performance will be strongly positive as a benefit of the overall economic transition process. But the rate of improvement will be critically dependent on the capacity of public and private institutions to respond to market signals and on the democratic expression of demand for higher environmental quality. It is in this area of *establishing the enabling conditions for environmental management* that USAID is focusing its assistance efforts, and has endeavored in the present report to establish an analytical methodology for measuring status and improvement.

This is a first effort at a highly inexact science, and should thus be seen as a work in progress. The initial attempt represented by this report has been an extremely valuable learning experience for all involved, and the choice of indicators and the methodology used in scoring and ranking countries are certain to be further refined and developed in future rounds of analysis. Subsequent applications will undoubtedly produce a more fully articulated interpretation of the results and their programmatic implications, on both national and regional bases.

USAID greatly appreciates the work of the report's authors and all others who contributed to its development. We invite readers to contribute their comments and suggestions to us to help inform the refinement of this nascent methodology.

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U S Agency for International Development
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EXECUTIVE SUMMARY

The 26 states of Central and Eastern Europe and the Newly Independent States of the former Soviet Union (the ENI region) have been undergoing profound social, political, and economic transformations since 1989. As the economies and societies of the region have evolved, there have also been noticeable impacts on the environment. The United States Agency for International Development (USAID) has played an active and integral role in the transition of the ENI region. It has supported the market-based transformation of these economies while encouraging the closely related development of democratic institutions. USAID has also provided access to US environmental know-how and technologies and has earned a reputation as one of the leading donors in the environmental field.

The objective of this report is to review the conditions and trends which have contributed to environmental quality improvements in the region, with a particular focus on the two-part question: how far has the region come, and what remains to be done? In order to meet this objective, the report begins by proposing an economic-environmental policy framework for sustainable development in the ENI Region (Section Two). Using this broad policy framework, the major environmental trends and issues in the region are then highlighted and discussed (Section Three). Available data on the environment is marshalled to highlight broad environmental and economic differences among countries in the region, and within single countries over the period of analysis. Special attention is given to developments concerning environmental policy, institutional strength and commitment, and related economic conditions. In addition, an effort was made to review the experience of USAID missions throughout the region with respect to environmental issues and Strategic Objective 3.3, Reduce Environmental Risks to Public Health.

Among the findings of Section Three are the following:

- Trade data show that the CEE countries are becoming integrated with western economies at a more rapid rate than the NIS countries. For the CEE countries, these trade links, together with the prospect of EU accession, are increasingly important factors in promoting better environmental performance at the government and firm level,
- Physical data for measuring environmental performance are scarce, and the data that are available do not allow detailed assessments of relative progress and trends within the ENI region. Existing data suggest improvements in some areas, such as intensity of energy use and level of energy subsidies (a proxy indicator for emissions of air pollutants), however, the absolute figures also show that environmental performance in the region still lags well behind the OECD countries,
- There has been substantial progress in the development of environmental laws and regulations in the region, but enforcement efforts and institutional capacity in oversight agencies are weak,
- Environmental NGOs have been effective in advocacy work at the local level, although they have had less influence with central governments,
- Limited access to capital is the key constraint to improved firm-level environmental performance. Public sector environmental funds remain the most important source of capital. In countries where

firms are making investments in pollution control equipment, managers' access to information about technologies and methods is limited,

- USAID's presence in the region has demonstrated the importance of flexibility in the development of projects at the field level in response to local circumstances, the opportunities for regional and sub-regional cooperation on environmental issues, and the environmental benefits of projects focused primarily on other sectors, such as banking reform and restructuring of electric power generation, transmission, and distribution

Using the elements of this broad economic-environmental framework, an ENI-specific analytical framework and ranking methodology is proposed (Section Four) and used to score the environmental enabling conditions of each of the 26 countries in the region. The framework and methodology are based upon identification of three broad impact areas (policy, legal, and regulatory framework, strength and commitment of environmental institutions, and environmental trade, finance, and investment) and four environmental stakeholders (private enterprise, central government, local government, and citizens). Assuming that each of the three impact areas has a distinct relevance for the four stakeholders, a 3x4 matrix is created. In each of the 12 cells of the matrix, broad criteria of progress are defined. For example, the criteria of progress by which one knows whether local government (the third stakeholder group) is operating in an improved policy, legal, and regulatory environment (first impact area) is that the "framework allows for constructive engagement of local and regional government bodies in environmental management." For each of these twelve criteria, a number of variables are defined by which progress can be measured. In addition, scores from 1 to 5 are defined. Using this framework and ranking methodology, a group of regional experts was asked to provide scores for each of the 26 countries. These draft scores were forwarded to USAID missions in the ENI region for comment and alteration. Final scores and ranking are included in Section Four.

In Section Five, the cross-cutting ranking of ENI countries based on the "environmental enabling conditions" given in Section Four are used to derive implications for the programming of environmental assistance to this region. To organize these findings, we define and examine in this section several country sub-groupings. These sub-groupings can be usefully employed to provide guidance to USAID as it seeks to answer questions regarding the directions of and priorities for environmental programming in the region. The five country groupings are

- ***Environmental First Tier*** The most progressive countries in terms of their environmental transition and also representing a one-to-one relationship with the so-called "Northern Tier" countries of Eastern Europe (Poland, Hungary, Czech Republic, Slovenia, Lithuania, Latvia and Estonia)
- ***Environmental Second Tier*** A group of countries in Eastern Europe and Central Asia with weaker environmental enabling conditions scores. This group corresponds closely to the list of countries that are progressing at only a moderate pace in their economic transition (Slovak Republic, Romania, Bulgaria, Croatia, Macedonia, Moldova, Belarus, and the five Central Asian Republics)
- ***Resource-oriented Countries*** A group of countries whose economic futures are closely tied to natural resources development – especially oil and gas – or which are affected by neighboring resources through pipeline routes and/or barter arrangements (Russia, Armenia, Georgia,

Azerbaijan, Turkmenistan, Kazakstan, Uzbekistan, Tajikistan and the Kyrgyz Republic)

- ***Global Climate Change Focus Countries/Region*** Three countries (Russia, Ukraine and Poland) and one region (Central Asia) of greatest US interest from the standpoint of cooperative efforts to address Global Climate Change
- ***Special Cases*** The environmental and political situation in two countries, Albania and Bosnia, precludes them from being grouped in the preceding categories. Although the Russian Federation and Ukraine are placed in the categories listed above, a number of their characteristics make them deserving of special treatment in this category as well

Section Five further examines the common characteristics of countries within these groupings, identifying the underlying US interests in providing environmental aid to these countries, and drawing implications for the programming of environmental activities within these countries and the ENI region as a whole

SECTION ONE

Introduction

1 0 Context for the Study

The twenty-six states of Central and Eastern Europe and the Newly Independent States of the former Soviet Union (the ENI region) have been undergoing profound social, political and economic transformations since 1989. Fundamental changes in government and governing structures and the legal and business environments – as well as integration with the rest of the world – have affected all facets of life.

As the economies and societies of the region have evolved, there have been noticeable impacts on the environment. In the early years of the transition, economic slowdown brought with it consequent reductions in industrial pollution. As economies have picked up, however, it has proven difficult to determine how these pollution levels, and their impacts on environmental quality, have changed. The social, political, and economic evolution of the region has also had an effect on other dimensions of the environment, including the management of natural resources – water, forests – and both public and private environmental priorities.

The United States Agency for International Development (USAID) has played an active and integral role in the transition of the ENI region. It has supported the market-based transformation of these economies while encouraging the closely related development of democratic institutions. USAID has also provided access to US environmental know-how and technologies and has earned a reputation as one of the leading donors in the environmental field.

1 1 Objectives and Organization of this Report

The objective of this report is to review the environmental conditions and trends in the region with a particular focus on the two-part question: How far has the region come, and what remains to be done? To meet this objective, the report begins by establishing a comprehensive framework for analyzing environmental issues in the region (Section Two). The report then provides a review of broad environmentally related trends in the region between the years 1989/91 and the present, to the extent data are available. A review is also offered of major changes in the areas of policy, legal and regulatory programs, institutional developments, and the finance, trade and investment status in the region (Section Three). Using information from this review of trends, the report proposes and applies an analytical framework for scoring the 26 countries of the region based on environmental performance. To the greatest extent possible, this scoring methodology aspired to use quantitative indicators, although qualitative indicators of change were used extensively due to the lack of time and data (Section Four).

This report is not intended for a general audience. As USAID directed at the outset, it presumes that readers are already familiar with the basic elements of the transition in the ENI countries, with the central environmental issues of concern, and with the priorities for USAID work in the region.

SECTION TWO

An Economic-Environmental Policy Framework for Sustainable Development in the ENI Region

2 0 Introduction

The concept of *sustainable development* was introduced in 1987 in the UNCED report known as the Brundtland Report. Sustainable development implies a path and pattern of growth which ensures that future generations are no worse off than present generations in terms of the economic, social, and environmental assets they possess and the living standards they enjoy. This definition, although slightly different than others in the literature, captures the essence of the concept of sustainability. The implications of sustainable development weigh more heavily on the present generation than on future generations in terms of how the environment and renewable and nonrenewable resources are to be utilized, economic development that results in the destruction of environmental resources and widespread elimination of species of flora and fauna would be deemed unsustainable. However, since some resources are nonrenewable or exhaustible, there is an implied substitution between resources consumed by present generations and the capital stock and body of knowledge and technology that are made available to, or inherited by, future generations. Sustainable development is not easily quantified or measured.

Fortunately, the task before us is focused largely on one dimension of sustainable development – the improvement of the environment. If we take the view that it is sufficient to focus on directional changes (i.e., improvements in the environment), it is easier to develop an analytical framework that can be applied to the ENI region.

The analytical framework is based on the principles of environmental economics theory as it has developed over the past 50 years. The key feature in understanding this theory is the notion that the natural environment is similar to other forms of wealth available to society in that it generates valuable services – services that are valuable because they are in demand. In this respect, an environmental asset such as a water body, a natural forest, or an air shed, is no different from reproducible capital (such as buildings and machines) or human capital.¹ What is different is that most of the services of the natural environment, while valuable, are not bought and sold in markets. Consequently, the private-market price mechanism – which helps assure that the services of conventionally marketed capital are allocated efficiently – cannot function. This market failure creates a special need for governmental policy intervention.

To better understand the need for this intervention, it is important to be familiar with the services provided by the natural environment. These services can be divided into two groups: *output* (or environmental quality) services and *input* services. Environmental quality services include life support services for human, animal, and plant species, recreation services to hikers, swimmers, boaters, hunters, fishers, birders, etc., and the aesthetic services provided to those who simply enjoy the beauty of nature. Input services serve the needs of industrial, agricultural, and household production. They include marketed raw materials such as minerals, timber, and processed water, and nonmarketed raw materials such as the waste disposal services provided by air, water, and land as media for accepting industrial, agricultural, and household wastes.

As societies grow and become more industrialized, the demand for environmental services of both groups increases. An economic problem arises because these services not only begin to compete with

each other but also with the services of other, non-environmental assets. In particular, input services, such as waste disposal and raw materials, compete with environmental quality services since waste disposal and raw material extraction can generate pollutants that degrade the scope, visual appearance, and life support capacity of natural environments. Thus, in most industrialized societies facing environmental problems, the primary role of governmental policy is to increase and satisfy the collective demand for environmental quality and decrease the demand for waste disposal and other input services of the natural environment.

The following is a discussion of enabling factors necessary for a regional sustainable development path, including policy, regulatory, institutional, investment, and others. These are organized according to government enabling factors, private sector enabling factors, and NGO enabling factors.

2.1 Government Enabling Factors

In this section, we will develop a framework for analyzing the range of governmental actions that may be implemented to promote sustainable development generally, and environmental quality more specifically. In examining governmental enabling actions to promote environmental improvements, it is useful to view these actions in the context of the following framework:

- In any economy, there is an initial set of institutions, broadly defined to include property rights, laws and norms, markets, governments, firms, etc.
- Households, firms, and other entities behave in particular ways in producing and consuming goods and services consistent with this set of institutions.
- The outcome of household and firm performance in their participation in markets can be evaluated.
- If the resulting economic performance is deemed to be unacceptable, changes in the set of institutions and institutional rules can be introduced, presumably to improve performance by altering the behavior of households and firms in response to these changes.

This framework can be used to explore the actions government might take to modify the behavior of households and firms, thereby leading to reduced environmental degradation. To illustrate the process of institutional change, suppose that water prices are subsidized and there are no meters in individual apartments and houses. As a result of low prices, an excessive amount of water is consumed, and more water is discharged to the wastewater treatment facility than can be treated. While one possible approach to addressing the problem would be to limit the amount of water supplied to apartment buildings, another approach would be to increase water prices to reflect the opportunity cost of supply. Higher prices encourage more rational utilization of water and would lead to lower levels of consumption and reduced wastewater discharges.

Before examining specific government actions, we should first characterize general ways in which the government can influence the behavior of households and firms to improve environmental quality.

General Ways in Which Governments Can Influence Households and Firms

- Make households and firms accountable for their production of waste, air emissions, and water discharges (*polluter pays principle*) through a system of regulatory requirements and/or pricing of pollution,
- Encourage improved utilization of natural resources in production (e.g., through full cost pricing of energy) Improved utilization might be accomplished through management practices, changes in process technologies, or restructuring of production,
- Promote cleanup of past environmental contamination

Following the approach taken in the Environmental Action Programme for Central and Eastern Europe document endorsed by Ministers of Environment in Lucerne in 1993, we can differentiate three types of enabling actions that can be taken by governments to improve the environment, each of which are discussed in the following subsections. They are (1) policy reform, (2) institutional strengthening, and (3) public investment and private investment stimulation.

2.1.1 Policy Reform

Both economic and environmental policy reforms contribute to environmental improvements. First, we discuss general economic policy reforms that impact environment, followed by a discussion of specific environmental policy reforms.

Economic Policy Reform

The interaction between economic policy and environmental quality is highly complex. For example, general policies designed to increase the national income can also be expected to increase the demand for environmental quality relative to the demand for waste disposal since empirical evidence indicates that the demand for environmental quality increases with increased income. At the same time, the demand for waste disposal often decreases with economic growth as newer, more efficient capital is introduced.

Here, we focus on two major economic policy measures that have great potential to improve the environment in transition economies: privatization and the removal of price subsidies. While other macroeconomic stabilization measures such as trade liberalization and sound monetary policy can also promote environmental improvement, the two reforms discussed here have key significance in the early phase of economic transition.

Privatization

In many countries, privatization occurred via a two-step process. First, while enterprises remained in the public sector prior to privatization, governments introduced hard budget constraints, requiring managers to organize production so that revenues covered costs. This first step in rationalizing production resulted in lower production levels (these declines were also driven by the loss of traditional markets for goods) and typically led to lower levels of pollution. However, during this stage of privatization, state-owned enterprises were unlikely to make investments to reduce pollution. Investments, if made at all, were focused on making the enterprise more attractive for purchase. Once an enterprise was transferred to private ownership in the second stage of the privatization process, the new owners could be expected to restructure production and modernize operations, these economic investments would likely yield environmental benefits as well. Many western observers also saw the privatization process as an opportunity for countries in the region to assess the extent of past contamination and address the need for

cleanup during the transfer of state assets to the private sector. However, in overall terms, the bulk of privatization transactions have not given much consideration to the cleanup problem.

Removal of Price Subsidies

At the beginning of the transition period, prices for goods and services and factors of production in the region were far below market prices. Consequently, one of the first steps in the transition to a market economy involved price adjustments, particularly for energy. As a condition for receiving assistance, the IMF and World Bank have frequently required recipient countries to adjust energy prices and remove or reduce subsidies for certain publicly-provided services. While there have been serious stresses placed on households and businesses because of these price adjustments in the transition period, these measures – and market prices or pricing practices that mimic the market – yield significant environmental benefits and are an essential component of sustainable development.

Environmental Policy Reform

Environmental policy reform has been a central focus of donor assistance in the ENI region. This section first discusses the overarching principles of environmental policy that are most consistent with sustainable development, and then presents a range of specific environmental policy measures. A more detailed discussion of environmental policy options is contained in Annex 2.

Key Principles of Effective Environmental Policy

Prioritization

A key element of policy reform is the establishment and prioritization of environmental goals. The EAP encourages countries to address hot spots and environmental health issues in the short- and medium-term because, in part, the potential benefits are large and resources for reducing pollution are limited. While most countries in the region prepared NEAPs prior to the 1995 Environment for Europe conference in Sofia, these documents failed to set realistic goals *vis a vis* the public and private resources available to undertake investments. Most of these countries lack the capabilities to evaluate benefits and costs and utilize this information in setting priorities.

Polluter Pays Principle

A second guiding principle is that polluters should bear financial responsibility for disposal of their waste, air emissions, and discharges to water. Environmental agencies must have the political support and commitment to this principle from the government and regulated community if effective policy reforms are to be designed, implemented, and enforced.

Flexible Instruments

The third principle is that policy should afford polluters the flexibility to pursue least cost compliance strategies by use of economic instruments that allow flexibility in individual firm decisions. Worldwide, there has been limited use of economic instruments, most countries rely on command-and-control approaches that in theory achieve compliance at significantly greater cost than would economic instruments. Economic instruments can be straight forward (i.e. a set tax per unit of pollution), or market-based (reliant on an active market for buying and selling pollution rights).

Fairness

Finally, environmental policy should be implemented in a way that is not arbitrary, random, or inconsistent. While most countries distinguish requirements for new and existing facilities, foreign investors expect to be treated in the same way as owners of similar facilities. Thus, in permitting, inspection, and enforcement activities, regulations should be applied consistently.

In terms of specific policies, governments have used a broad range of measures to protect environmental quality. The major ones are illustrated below.

Policy	Examples	How it works	Comments
Mandated "clean" emissions technology	US automobile policy	Makes unlimited use of free disposal services prohibitively expensive (If enforced)	Loss of efficiency often justified by easier enforceability
Technology based emission standards	US water pollution regulations	Makes unlimited use of free disposal services prohibitively expensive	More efficient than technology forcing if polluters are free to meet standards as they wish
Effluent fees	Water pollution charges in Holland, France, and Germany, air pollution charges in Northern Europe	Raises "price" of "free" disposal relative to cost of treatment	Preferred approach for economic efficiency. Handling of revenues can be problematic
Input taxes	Fertilizer and pesticide taxes in Norway and Sweden	Indirectly lowers the demand for waste disposal services by reducing need for services	Less efficient than effluent fees but may be far easier to enforce
Tradable permits	US air pollution permit trading	Creates market value for non-use of free disposal services of nature	Very efficient way of reaching pre-determined level of total emissions in an area. Requires efficient trading market system
Waste treatment subsidies	US municipal wastewater treatment program	Lowers cost of treatment relative to disposal but must be combined with mandated controls	Programs have often favored inefficient capital-intensive approaches, often arbitrarily selected
Resource use restrictions	Logging bans in Philippines and Thailand	Limits natural resource service in favor of other environmental quality services	May only lead to shifting resource use elsewhere. Also, may be difficult to enforce
User fees	Park entrance fees	Raises price of certain environmental quality services (e.g., recreation) relative to other services (species protection)	Similar to effluent fees with respect to efficiency

Conventionally, these waste control policies have been classified either as "command-and-control" policies or as "market-based instrument" policies. The distinction is somewhat artificial, since in practice many policies combine the features of command-and-control with the economic features of market-based instruments. Even the most direct command-and-control approach – imposition of a legal requirement to use mandated technology to control pollution – shares the following feature of market-based instruments: the decision to obey the directive is often affected by the economic calculation of the cost of the mandated technology relative to the cost of facing sanctions for not complying with the mandate. Weak versus strong enforcement affects the polluter somewhat like a discharge fee that is set at low versus high levels. However, the "market-based" discharge fee is preferred as it more efficiently permits the polluter to choose a technology that is cheaper than the one that is mandated.

It should be noted that both mandated emission controls and more flexible market-based approaches (such as tradable permits) require institutional preconditions for their effectiveness. Specifically, they both assume an honest, bribe-free legal system and effective enforcement. Furthermore, the use of tradable permits assumes the existence of markets through which the permits can be exchanged. Such preconditions are not likely throughout the CEE/NIS, but may exist in particular countries or local jurisdictions.

More indirect methods to control the demand for waste disposal services may be preferred if enforcement is a severe problem. Specifically, it may be easier to control the demand for waste disposal indirectly by 1) eliminating subsidies on polluting inputs, 2) raising the price of polluting inputs, or 3) raising the price of certain finished products whose production leads to large amounts of pollution. In this way, pollutants from agriculture – a sector that is exceedingly difficult to control directly – may be greatly reduced through the use of taxes on fertilizers and pesticides. Similarly, taxing papers in proportion to their brightness would be an effective way of reducing pollution from the pulping industry.

In conjunction with all of the above policy approaches – command-and-control, market-based instruments, and demand-side management – governments have the option of pursuing various cooperative programs with industry. Governments can negotiate with individual firms to develop specific compliance schedules that are reasonable and agreeable to both parties. In addition, governments can promote voluntary industry compliance by, for example, offering a grace period for compliance after a firm conducts a comprehensive environment audit.

2.1.2 Institutional Strengthening

The second important way that government can support sustainable development is by strengthening the institutions that make and implement environmental policy (financial institutions are addressed in the investment section). Three types of institutional strengthening actions will support environmental management and enhance environmental quality: (1) re-organizing responsibilities for designing and implementing environmental policies, (2) building the capabilities of agency managers and technical staff, and (3) improving the transparency and accountability of the environmental agency.

Organization of Responsibilities

Environmental management can be divided into two basic components: policymaking and implementation. Policymaking involves the setting and prioritization of goals (and associated analysis), the selection of policy instruments, and the elaboration of the policy program. Implementation involves permitting, monitoring and inspection, enforcement, and information management and dissemination. An important first step in organizing environmental management is the division of responsibilities between central, regional, and local authorities. Many observers recommend the devolution of authority and responsibilities for implementation to the local level. However, there is also some scope for local responsibility in prioritizing and selecting instruments (provided there is flexibility in national laws for differential approaches at the local level). Second, for closer coordination between sectoral and environmental authorities to ensure sectoral policies do not exacerbate pollution problems, environmental agency staff should be encouraged to participate in the development of sectoral strategies. Third, environmental agencies need to develop greater capacity to coordinate environmental policy on the regional and international level.

Staff Capacity Building

Environmental agencies and their regional and local counterparts must have adequate staffs with the appropriate backgrounds and skills to carry out their responsibilities. However, in most countries in the ENI region, budgets for environmental agencies have contracted. A related problem is civil service salaries, which have not increased relative to salaries generally and have lagged behind real prices. In addition, civil service salaries have a limited range, making it even more difficult to retain or recruit managers and highly skilled staff. For example, most environmental agencies lack economic analysis expertise. However, these skills are in strong demand in the private sector where salaries are 100 percent or higher than those paid in civil service.

Transparency and Accountability

The third area of institutional strengthening needed to promote sustainable development is improved transparency and accountability. Three types of government actions are needed. First, environmental agencies need to involve stakeholders in decision-making or elicit input on new policies or projects through processes such as environmental impact assessments (EIAs). Second, agencies must increase their capacity to manage monitoring data and information and develop systems for disseminating and analyzing these databases. Third, agencies need to develop, catalyze, and support public awareness and education programs.

2.1.3 Supporting Public and Private Sector Environmental Investment

Perhaps the most important impediment to improved environmental quality in the ENI region is the lack of capital for environmental investment. In general, governmental actions to increase the flow of capital to environmental projects are of two types: direct public investment and policies which improve capital markets.

Public Sector Funds

During the transition period, governments have created environmental funds to finance or co-finance environmental investments. With a few exceptions (Investment Fund in Slovenia and Latvia), most of the financial resources distributed by environmental funds are heavily subsidized. Such subsidies provide a competitive advantage to firms receiving them and are inconsistent with the polluter pays principle. Nevertheless, in the absence of effective environmental management supported by political will, public sector support appears to be necessary to catalyze environmental investments.

Investment Stimulation and Capital Market Formation

The preferred method for financing environmental investments is to fund such investments from a country's own economic resources, while using financial support from international donor organizations to build institutional capacity and to catalyze domestic financing, presumably by co-financing projects and by capitalizing environmental funds. In this way, countries will move towards financial independence (sustainability) and away from primary reliance on international donor organizations for capital. To promote this, national macroeconomic policies (monetary and banking reform, reduced budget deficits, privatization, etc.) should encourage positive economic growth rates, reduced inflation, and improved capital markets. For firms, the costs – especially the capital costs of pollution control – can be far more burdensome than necessary if the mechanisms to allow effective annualization of costs,

such as debt financing, are lacking. Indeed, empirical studies have shown that for most industrial sectors, the actual annualized capital costs and operating costs of environmental controls is less than 2 percent of sales.² However, the required initial investment outlay can greatly exceed a company's usual investment levels, illustrating the need for debt financing. It should be noted that public and private sector entities should analyze all the costs and benefits of various pollution control options, including opportunities for labor and land intensive approaches, before opting for a capital intensive approach.

2.2 Private Sector Enabling Factors

Given prolonged neglect of environmental quality under central planning, it is not surprising that improved performance requires industrial restructuring and massive investments. The costs of environmental remediation and pollution control are enormous. For example, the investments that would be required to meet European Union (EU) waste water treatment standards for the 300 major municipalities in Poland, the Czech Republic, Slovakia, and Bulgaria have been estimated at \$50 billion or more. For Poland, the cost of meeting the sulfur dioxide emissions reduction requirement of the Second Sulfur Protocol have been estimated at 1.45 percent of GDP per year, which exceeds the country's total expenditures on environmental investments.

Unfortunately, little empirical work has been done on the determinants of firm-level environmental performance in either the CEE or the NIS region. Work in Asia, Latin America, and North America, however, suggests that certain firm characteristics are associated with good environmental performance and that industrial plant managers respond to outside pressures including the following:

What Pressures Drive Industrial Environmental Performance?

Government, in its roles as regulator, policy formulator, and enforcer of the rules and norms of the society

Communities, which attempt to influence the environmental behavior of firms in their midst. Their success in doing so depends importantly on their access to information and their political clout, which in turn is related to the income and educational level of their citizens.

Players in the market – i.e. consumers, investors, and financiers. While green consumerism is not yet an important factor in the CEE and NIS countries, it is in the West, and firms in the East are paying attention. Investors, at least those in the West, regard potential liability for past environmental performance as an important consideration in weighing potential projects in the CEE and NIS regions. These firms can play an important role in transferring technology and management approaches, as well as bringing in needed financing. Debt financing is also required, but it is in very short supply, especially for the longer term investments needed to improve environmental performance.

The transition process itself, in particular, the extent to which it results in firms which are insulated from or exposed to market disciplines. Exposure promotes the restructuring necessary for efficiency and improved environmental performance. Indeed, the latter is frequently a subset of the former. But, continued dominance of “insiders” in the post-transition period, coupled with reticence on the part of both potential debt financiers and equity investors, has militated against “deep” restructuring.

Consistent with these driving forces, there are steps that the government can take to establish an economic and policy environment that facilitates good industrial environmental performance

Enabling Factors for Good Industrial Environmental Performance

- Promote adequate external financing for private investment in less-polluting technology and equipment
- Promote strong “outsider” role in management and business decisions of newly privatized industrial firms
- Do not allow budget constraints of industrial firms to be eased by public sector subsidies (explicit or implicit)
- Create policies promoting open access to outside markets, capital, and technology.
- Establish clear and appropriate limits to liability for past environmental performance
- Have a sound strategic planning process in place, especially in communities which are economically dependent on a small number of industrial plants

2.3 Non-Governmental Organizations and Community Enabling Factors

Communities can (and in some instances actually do) play important roles in influencing the environmental behavior of firms in their midst. Effective, well-functioning NGOs can develop relationships with firms, and facilitate community input. Key elements of enhancing public and NGO participation are summarized below

Enabling Factors for NGO and Community Influence to Improve Environment

- Legislation facilitating the organization of NGOs and their unimpeded involvement in research, public awareness, direct pressure, lobbying, advocacy, and service provision activities
- Public access to information
- Open and transparent decision making processes. This, of course, is closely related to the access to information issue. Information continues to be closely held by government officials and parliamentarians who are as yet not fully acculturated to believe that citizens and NGOs have something useful to contribute
- Increased environmental awareness. This is related to, but not identical with, the access to information issue. In the context of immediate, pressing economic problems, it is hardly surprising that many environmental issues are not at the forefront of the public consciousness, or that NGOs which focus on such issues do not find a receptive audience, even among those who would seem to be natural allies
- Improved capacities of the NGOs themselves to engage the population and reach a target audience

¹ Environmental assets are defined very broadly to include the natural environment (air and water sheds, rivers, lakes, oceans), natural resources (e.g., minerals, fish stocks), and lands in public domain (e.g., parks and forests)

² These findings are in the following reference: Fianessi, Leonard P. and Henry M. Peskin. 1976. *The Costs to Industries of Meeting the 1977 Provisions of the Water Pollution Control Act Amendments of 1972* a report to the U.S. Environmental Protection Agency (January) results are consistent with the various EPA reports to Congress (the so-called “Cost of Clean Air and Water Reports”)

SECTION THREE

The Impact of the Economic and Democratic Transitions on the Environment

3 0 Overview of Key Economic and Environmental Trends & Measures Across the ENI Region

As Section Two of this report describes, there is an important link between economic activity and the condition of the environment. The incentive structures provided by a market economy versus a command economy may be different, however, both types of economies use environmental services in delivering products to the ultimate consumer. Describing the impact of the transition upon the environment necessitates relating the activities of the various sectors of the economy to the resulting condition of the environmental asset. This part of the report will present information on economic activity and environmental quality in the ENI countries, and discuss the relationship between the two. It is organized in the following fashion: subsection 3 0 1 covers economic activity, subsection 3 0 2 covers environmental measures, and subsection 3 0 3 describes the data that were available for this analysis.

3 0 1 Economic Activity

There are a large number of variables that are used to measure economic activity at both the macro and micro economic level. For the purposes of this report the most relevant are

- GDP/capita
- Share of GDP by Private Sector
- Share of GDP by Agricultural Sector
- Share of GDP by Industrial Sector
- GDP Growth Rate

These measures are important because of the implications for the use of environmental services. For example, GDP/capita is an important economic measure because of the relationship between the level of wealth and the desire for increased environment services. The other measures listed above are also directly related to environmental quality. For instance, as the private sector expands, the incentives and responsiveness of the firm to address polluting activities changes. No longer is the firm able to rely on a forgiving enforcement agency to overlook excessive emissions as long as production targets are met. Also, the types of pollutants generated by each sector are quite different, therefore, changes in the composition of GDP between the various sectors are important in considering the relationship between economic activity and the environment. Tables 1 through 4 present data on these variables by country for the ENI region.

Table 1 Economic Variables for the CEE

Countries of the CEE	GDP per Capita ^e		Private Sector Share (1996 %)	Agricultural Share		Industrial Share	
	1990	1995		1990 %	1995 %	1990 %	1995 %
Albania	910	850	75	40	56	37	13
Bulgaria	3080	2460	45	18	13	43	31
Croatia	*	*	50	10.4	12.4	31.3 ^a	23.8 ^a
Czech Rep	3700	3110	75	8.4	5.6	45 ^d	40.1 ^a
Estonia	3680	2390	70	12.5 ^d	7.1	23.6 ^d	16.6
Macedonia	*	*	50	*	*	*	*
Hungary	2460	2280	70	9.6	6 ^b	28.8	27.4 ^b
Latvia	3530	1820	60	21.1	8.5	33.4	16.8
Lithuania	2690	1660	65	27.6	9.5	32.8	23.5
Poland	1560	1700	60	10.3	6.2 ^b	44.9	32.2 ^b
Romania	1450	1310	60	21.8	20.1 ^b	40.6	32.3 ^b
Slovak Rep	3630	3010	70	8.2	6.4	61.6	32.5
Slovenia	*	*	45	4.7	4.5 ^b	38	35.1 ^b

-a includes construction, -b numbers are for 1994, -c values are in real terms (1987 \$) Values are calculated from population data from WRI and GDP values from the World Bank, -d numbers are for 1992, -* data not available

Table 2 Economic Variables of the NIS

Countries of the NIS	GDP per capita ^f		Private Sector Share (1996%)	Agricultural Share		Industrial Share	
	1990	1995		1990 %	1995 %	1990 %	1995 %
Armenia	1870	590	50	17	55 ^{b,c}	45	32 ^b
Azerbaijan	1020	360	25	26	31	22	22
Belarus	2720	1720	15	24.2	11	38.6	26
Georgia	1760	430	50	*	*	*	*
Kazakhstan	1740	920	40	41.8	38.8 ^b	21	40.2 ^b
Kyrgyz Rep	1070	480	50	32	40	26	16
Moldova	*	*	40	33 ^e	49	30 ^e	22
Russia	3200	1970	60	*	*	*	*
Tajikistan	720	250	20	28.6	19 ^b	38.3	34.6 ^b
Turkmenistan	*	*	20	48	17 ^d	16	39 ^d
Ukraine	2080	980	40	24.4	13.2	42.6	43.7 ^a
Uzbekistan	800	590	40	44.3	28.5	23.8	16.4

-a includes construction, -b numbers are for 1994, -c includes forestry, -d numbers are for 1993
-e numbers are for 1991, -f values are in real terms (1987 \$) Values are calculated from population data from WRI and GDP values from the World Bank, -* data not available

As the tables manifest, there is a significant difference between the current economic condition of the CEE and the NIS. Considering the 1995 per capita GDP figures, only one country in the CEE is below \$1000 while only two countries in the NIS are above \$1000. Another interesting conclusion from comparing the income figures between 1990 and 1995 is that Poland is the only country where real income increased over the five year period. The decline in real income in the NIS is quite dramatic with more than half of the countries at less than 50% of real income levels experienced at the time of the disintegration of the former Soviet Union in 1991. Since the demand for environmental quality is highly income elastic, this dramatic decline in real income has serious implications for addressing environmental problems in the region.

An important consideration in relating economic activity to the condition of the environment is the distribution of economic activity. The share of economic activity allocated to agriculture and industry is presented in tables 1 and 2. Although there is not a consistent trend when the 1990 numbers are compared to the 1995 numbers, it is important to realize that the absolute values may not have changed significantly due to the overall decline in economic activity for all of the countries except Poland. The numbers are important, however, in developing a benchmark for determining the relative importance of the various sectors of the economy for future analyses. The other numbers presented in the two tables demonstrate the slower pace of privatization and the heavier reliance on the agricultural sector by the NIS countries compared to the CEE countries.

Table 3 GDP Growth Rates for CEE

Countries of the CEE	Growth in Real GDP					
	1991	1992	1993	1994	1995	1996 ^a
Albania	-27.7	-9.7	11	9.4	8.6	5
Bulgaria	-11.7	-7.3	-2.4	1.8	2.6	-4
Croatia	-20	-10	-3.7	0.8	2	5
Czech Rep	-14.2	-6.4	-0.9	2.6	4.8	5.1
Estonia	-11	-14.2	-8.5	-2.7	3.2	3
FYR Macedonia	-12.1	-21.1	-8.4	-4	-1.5	3
Hungary	-11.9	-3.1	-0.6	2.9	1.5	1.5
Latvia	-8.3	-35	-16	0.6	-1.6	1
Lithuania	-13.4	-37.7	-24.2	1	3.1	1.5
Poland	-7	2.6	3.8	5.2	7	5
Romania	-12.9	-8.8	1.3	3.9	6.9	4.5
Slovak Republic	-14.6	-6.5	-4.1	4.8	7.4	5.5
Slovenia	-8.1	-5.4	1.3	5.3	3.5	3

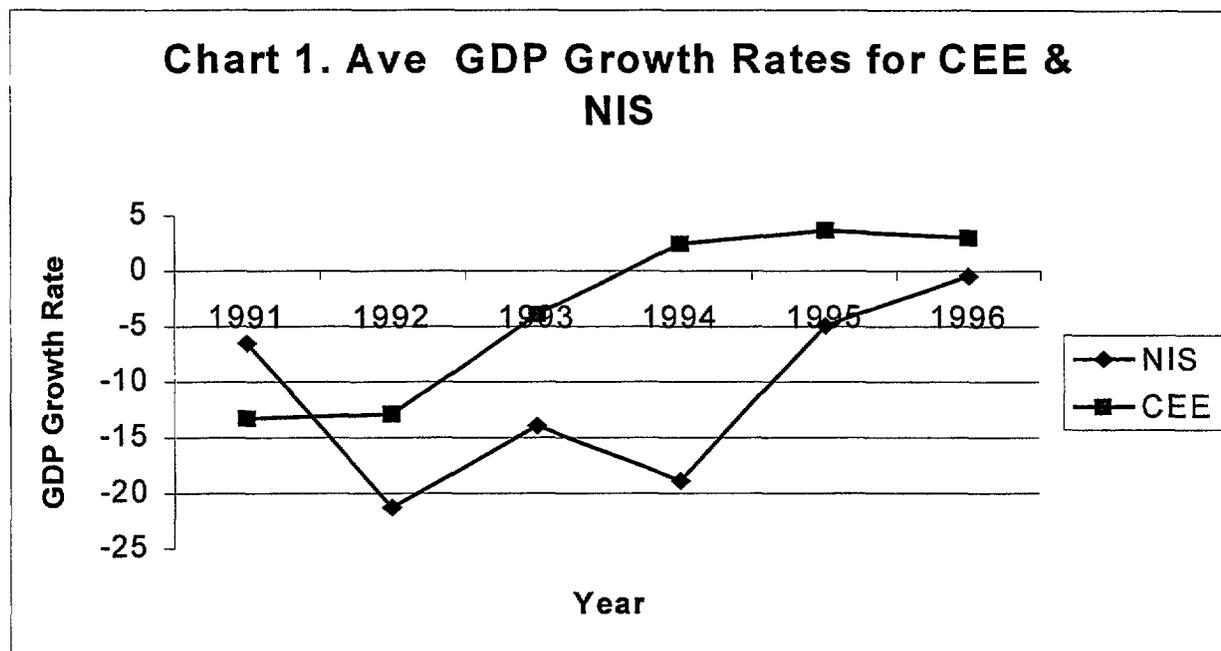
Table 4 GDP Growth Rates for NIS

Countries of the NIS	Growth in Real GDP					
	1991	1992	1993	1994	1995	1996 ^a
Armenia	-10.8	-52.4	-14.8	5.4	6.9	6.5
Azerbaijan	-0.7	-22.6	-23.1	-21.2	-8.3	-3.5
Belarus	-1.2	-9.6	-10.6	-12.2	-10.2	5
Georgia	-13.8	-40.3	-39	-35	2.4	8
Kazakhstan	-13	-13	-12	-25	-8.9	0.5
Kyrgyz Republic	-5	-19	-16	-26.5	1.3	2
Moldova	-17.5	-29	-1	-31	-3	4
Russia	-13	-14.5	-8.7	-12.6	-4	-3
Tajikistan	-7.1	-29	-11.1	-21.5	-12.5	-7
Turkmenistan	-4.7	-5.3	-10	-20	-10	0
Ukraine	9	-10	-14	-23	-11.8	-7
Uzbekistan	-0.5	-11.1	-2.3	-4.2	-1.2	-1

Source for both tables: EBRD Transition Report, 1996, -a EBRD estimates

Tables 3 and 4 present growth rates for real GDP/capita from 1991 through 1996. The trends presented in these tables reveal a number of interesting conclusions. The trend in both the CEE and the NIS has been positive. Very few countries have actually reverted to low growth rates (or larger negative rates) once they began to improve, with Bulgaria being a notable exception in the CEE. Also, the largest negative growth rates occurred in the former Soviet states with many of the countries of the NIS still experiencing negative growth rates for GDP. High negative growth rates were also

experienced by Latvia and Lithuania in 1992 and Estonia's negative rates were at the upper end of the CEE countries. Chart 1 provides a comparison of the average growth rates for the CEE and the NIS over the period 1991-1996.



When considering the significant gap in the average growth rates between the CEE and NIS in 1994, the progress made by the NIS to narrow the gap by 1996 is quite impressive. The CEE seems to have stabilized at a real growth rate of about 3% annually, while the NIS is poised to begin positive growth rates for the first time in nearly a decade.

An important consideration in reviewing the numbers presented above is the relative starting point for each of the countries and when they began the transition to a market economy. Most of the countries of the CEE officially began the transition in 1989, whereas, the countries of the NIS did not begin until 1991. Also, most of the countries of the CEE had a peaceful transition, while several of the countries of the NIS experienced a more violent transition. Such political factors have a significant influence on the ability of the economy to develop and adjust to the new institutions required for a market economy. In addition, some of the study countries in both regions, such as Bosnia in CEE and Tajikistan in NIS, are still coping with civil strife that places severe limits on economic progress.

3 0 2 Environmental Measures

There are a large number of environmental measures that can be used to evaluate the condition of the environmental asset and the impact on human health. To provide a characterization of the condition of the environment in a particular country is difficult at the country level since most pollutants are location specific. For example, particulate matter may be a significant problem in one city but not a country-wide problem. Presenting the data on pollution as a country-wide average may hide problems that are quite

severe at particular sites. Therefore, a number of environmental measures will be presented that cover all the media, plus some human health factors. These measures are

- Air Pollution Variables
- Water Pollution Variables
- Vehicles/km of road
- GDP per unit of energy
- Life Expectancy

The values of the environmental variables represent pollutant concentrations. However, the true measure of interest is exposure, since that is what translates into environmental impacts. Unfortunately, exposure data are not widely available, as they are generally only reported for specific incidents. Also, it is important to realize that life expectancy is not a perfect measure of the effect of environmental conditions on health, however, it is well established that the overall level of health is affected by environmental conditions.

The raw data presented in tables 5 and 6 present a foundation for between country comparisons within the ENI region, however, this does not provide a reference point for comparison to countries that have been actively working to address these environmental problems. As a point of reference, the equivalent values of these variables for the United States and France are provided in table 7.

Table 5 Environmental Variables for the CEE

Countries of the CEE	Access to Sanitation (%)	SO _x kg per capita	NO _x kg per capita	CO kg per capita	CO ₂ per capita (metric tons)	Vehicles per km of road 1994	GDP per unit of Energy		Life Expectancy 1995
		1990	1990	1990	1992		1990	1994	
Albania	100 ^a	*	3	*	1.24	*	1.35	2.45	73.01
Bulgaria	98.6 ^a	110	20	*	6.37	49	1.03	1.05	70.9
Croatia	68.1 ^b	*	*	*	3.39	28	*	*	73.74
Czech Republic	*	150 ^d	70	90	13.14	57.3	0.78	0.78	73.16
Estonia	*	*	*	*	13.53	27	0.58	0.66	10.41
FYR Macedonia	*	20	*	*	1.99	34.8	*	*	73.21
Hungary	93.5 ^a	80 ^d	20	70	5.8	23.2	0.89	0.96	70.1
Latvia	*	*	*	*	5.62	*	1.2 ^c	1.22	68.65
Lithuania	*	*	*	*	5.88	12.4	0.59	0.81	69.22
Poland	100 ^a	70 ^e	30 ^c	60 ^c	8.91	22.1	0.61	0.67	70.2
Romania	49 ^b	80	20	*	5.36	33	0.57	0.73	69.93
Slovak Republic	50.9 ^b	70 ^d	*	80	6.97	65	*	0.88	72.07
Slovenia	89.5 ^b	*	*	*	2.76	47	*	*	73.9

-a 1990 data, b 1993 data, c 1991 data, d 1992 data, * data not available

Table 6 Environmental Variables for the NIS

Countries of the NIS	Access to Sanitation (1993 %)	SO _x	NO _x	CO ₂ per capita	Vehicles per km of road 1994	GDP per unit of Energy		Life Expectancy 1995
		kg per capita 1990	kg per capita 1990	(metric tons) 1992		1990	1994	
Armenia	*	*	*	1 14	*	0 79	1 43	71 07
Azerbaijan	*	*	*	8 71	15	0 31	0 19	70 21
Belarus	100 ^b	60	30	9 89	*	0 65	0 79	69 59
Georgia	*	*	*	2 54	*	0 8 ^a	0 74	73 3
Kazakhstan	*	*	*	17 55	*	0 28	0 31	68 76
Kyrgyz Rep	52 8	*	*	3 42	*	0 62 ^a	0 88	67 59
Moldova	49 7	*	*	3 26	20	*	*	68 6
Russia	*	*	*	14 14	*	0 53	0 52	64 82
Tajikistan	62	*	*	0 71	*	0 66 ^a	0 48	67 38
Turkmenistan	60	*	*	10 48	*	*	*	66 66
Ukraine	48 9	50	20	11 72	29	0 43	0 35	68 64
Uzbekistan	17 5	*	*	5 74	*	0 38	0 33	70 1

-a 1991 data, b 1990 data, * data not available

Table 7 Comparative Environmental Measures

Environmental Measure	United States	France
Access to Sanitation (1993 %)	100	100
GDP/unit of energy (1990/1994)	2 53/2 62	4 49/4 38
CO ₂ per capita (metric tons/capita, 1992)	19 1	6 3
SO _x per capita (kg/capita, 1990)	80	20
NO _x per capita (kg/capita, 1990)	90	30
CO per capita (kg/capita, 1990)	640	190
Vehicles per km of road (1994)	30 8	36 8
Life Expectancy (1995)	77 42	77 82

Trend data on these variables is also important in order to understand the changes that have taken place and are occurring. However, data availability is a problem for many of the countries of the region, and consistent comparisons across time are not yet possible. The data that are available are not even complete on a cross-sectional basis. However, the study team's research indicates that these countries will implement the necessary data collection mechanisms for the set of pollutants discussed here.

Another important environmental measure is energy intensity. The measure of energy intensity used here is GDP per unit of energy used. As less energy is used to produce more goods and services, the environment will be better off, therefore, larger numbers indicate lower pollutant loads. The 1994 figures indicate that only four countries in the region are above 1 0, whereas the US is at 2 6 and France is at 4 4. The one positive aspect of the numbers is that the comparison between 1990 and 1994 shows that a number of countries are improving in their energy efficiency, although not dramatically.

Some cross-sectional data have been collected for specific studies. For example, the data on CO₂ is complete for 1992 due to the role CO₂ is believed to play in the global climate change debate. Another common transboundary issue is SO₂ emissions. Some data have been collected for a subset of the

countries of the ENI region Table 8 provides a comparison of these countries to the EU average This table illustrates the severity of the problems that many countries of the ENI region had to face at the time of the transition in dealing with the installed infrastructure

Table 8 SO₂ Emissions in Selected Countries, 1990

Country	SO ₂ from Power Plants		Power Plants as % of total SO ₂ emissions
	Tons (000s)	Kg/capita	
Bulgaria	1453	173	72
Czech Republic	1163	113	62
Estonia	217	141	79
Hungary	430	42	48
Lithuania	105	28	47
Poland	1589	41	49
Romania	903	40	69
Slovak Republic	243	46	45
Ukraine	1690	33	65
EU	8600	23	50

Source EBRD Transition Report, 1996 (table 3 2, page 41)

Another measure of the relationship between the condition of the environmental asset and economic growth is life expectancy Tables 5 and 6 present life expectancy figures for all of the countries of the ENI region The country with the highest life expectancy, Slovenia, is also one of the best performers economically However, even the best performers are at least 4 years less than the U S and France

Table 9 Fossil Fuel Subsidies for Selected Countries

Country	Fossil Fuel Subsidy Rate (%)		Subsidy as % of GDP 1995-96
	1990-91	1995-96	
Russia	45	31	1 5
Bulgaria	54	29	7 05
Czech Republic	24	22	2 96
Hungary	13	16	1 47
Poland	50	18	1 97
Romania	54	37	7 24
OECD	*	*	0 05

Source *Expanding the Measure of Wealth*, World Bank 1996, Table 4 3

When measuring energy efficiency it is important to make sure the price signals sent by the market reflect the scarcity value of the energy The available evidence suggests that the countries in the CEE and the NIS heavily subsidized energy prices during the 1970s and 1980s Such subsidies encourage overuse of fossil fuels, and thus contribute to increased emissions of various greenhouse gases and SO₂ One of the first items identified as needing reform once the transition began was energy subsidies As table 9 demonstrates, most of the countries for which data are available have made significant strides in reducing the subsidies on fossil fuels, however, the subsidies are still quite high as a percent of GDP based upon OECD standards The one exception in the table is Hungary The increase in the subsidy rate in Hungary is in subsidies that encourage the use of natural gas Overall, the other fossil fuel sectors in Hungary receive very little subsidy Success in eliminating these subsidies will not only enhance economic efficiency of the energy sector but will also improve the environment

3 0 3 Data Availability for Comprehensive Analysis of 26 CEE/NIS Countries

As the political economy of the ENI region has evolved, the role and purpose of information in general, and environmental information in particular, has evolved with it. Once seen as a potential threat to governments trying to steer economies and peoples in a pre-determined direction, environmental information has now gained a greater importance. As some countries in the region move towards accession into the EU, they have taken strides to rapidly improve the kinds of information available. In spite of these recent developments, however, any analysis that purports to provide quantitative data on core environmental indicators of change is crippled by the dearth of environmental information collected in the past.

A review of regional environmental indicators bears this out.¹ Some indication of the dearth of data available is found in assessing how many of the OECD's "Core Set Indicators" can be found for the full ENI region. The core set is organized around the pressure-state-response framework, with twelve general issue areas and at least three indicators for each of the pressure, state, and response categories. Thus for the eight issue areas which are of direct or proximate relevance to USAID's programming², the OECD identifies a set of 24 core indicators. Of these 24, one – CO₂ emissions – is available for most of the countries in the region. Indeed, of the other twenty-three indicators, few are readily available for more than half of the countries in the region. Examples include emissions of SO_x and NO_x as well as traffic density. Of the remaining core set of indicators, information about them is haphazard at best. Even if the resources were available to attempt gathering these data at country level, there is sufficient inconsistency in data collection and reporting methodology that comparisons across the region would be difficult.

An illustration of the still developing nature of information collection in the region can be made by examining the ENI contributions to UN-managed world coverage databases. UNIDO manages a general database with broad coverage on industrial-related issues, including a core set of 13 industry-related indicators. This database can provide an important means of examining pollution production status of the countries. Ninety-six countries of the world supply their data to this database, including such small and relatively undeveloped countries as The Gambia, Madagascar and Mozambique. Yet only 8 of the 26 countries in the ENI region complete and submit these data. Similarly, UNCTAD manages a similar worldwide database on import and export trade values, which could be very useful in assessing the value of imports of environmental equipment. Yet only 12 of the 26 countries of the region provide the data necessary for this database.

Improvements in information collection and management are taking place, particularly as some countries move towards recognition by the EU. Yet for the foreseeable future, region-wide comparisons of environmental development on the basis of quantitative indicators will be difficult without the resources to collect data at the country level.

3 0 4 Summary

Based upon the above summary data, it is evident that not all the countries are progressing at the same rate, nor do they face the same types of problems. The broadest trend, of course, is that the economic development of the NIS countries is lagging behind that of the CEE, although some convergence can be seen. The implications of these developments and trends for environmental policy are complex, and will be addressed in the following three sub-sections of Section Three, which cover policy, legal and regulatory issues, strength and commitment of environmental institutions, and public and private sector environmental investment.

3.1 Policy, Legal and Regulatory Framework

3.1.1 Market Economy Oriented Laws, Policies and Regulatory Approaches

The most common regulatory approach to be implemented in the region is command-and-control. The predominance of this approach throughout the world has made this instrument the first choice, based upon the tendency of countries to copy what has been implemented most frequently. This is particularly true in the ten countries for which EU accession is a near or medium-term prospect, they are faced with a multitude of environmental directives which they need to both transpose (draft into legislation) and fit into a time schedule for compliance with the legislation prior to gaining admission. There is some debate over the extent to which compliance requires the adoption of command-and-control measures, and the various directives take different approaches with respect to this issue. Nonetheless, some countries have interpreted the EU directives as requiring command-and-control approaches.

POLLUTION CHARGE RATE REVISIONS IN LITHUANIA

Lithuania, like many other CEE and NIS countries, already had a system of pollution charges in place at the outset of the transition. However, the charge rates were relatively low, and bore little relation to the costs of the environmental damage associated with each unit of air or water pollution, creating little incentive for the levels of pollution reduction needed for improvements in environmental quality. Working with the Ministry of Environmental Protection, the USAID-funded Central and Eastern Europe Environmental Economics and Policy Project (C4EP) undertook a major overhaul of the system which generated incentives for cost-effective pollution reductions within a largely administrative system. To address business concerns about regulatory stability, increases in the rates are phased in over seven years.

The use of market-based approaches to correct for market failures associated with environmental externalities has received considerable attention in the transition countries. It is believed by many that integrating market incentives to correct for market failures during the economic reforms would result in a cost minimizing solution to the environmental problems that exist in the region. The essence of market-based approaches is to place a "price" on the services provided by an environmental asset that is being used in an inefficient manner. This price would then provide the appropriate incentive for producers or consumers to use such an environmental asset efficiently.

The three most common forms of market approaches³ are 1) charges (or fees, taxes), 2) tradable permits (or allowances), and 3) a deposit/refund system. These approaches have been used to varying degrees in the countries of the ENI region. Pollution charges have been the most popular market approach to be implemented in the region. One possible explanation for the attractiveness of charges is that they provide a revenue source for governments and environmental funds in many countries, therefore, making charges more politically attractive than other instruments. However, experience has shown that there are several problems with charge systems, including

- Charge rates are frequently too low to influence polluter behavior. One study in Moscow found that rates would have to be quadrupled⁴ before they would have an effect.
- Charge rates are generally not based upon benefit-cost analyses.
- Even those charges that are assessed often go unpaid.
- Regulatory systems are underfunded. Since the regulatory agencies lack monitoring and verification capacity, they must rely on information supplied by the polluters themselves to assess charges and penalties.

PRODUCT CHARGE EVALUATION IN HUNGARY

In June of 1995, Hungary passed legislation establishing a set of product charges to be levied on tires, batteries, packaging materials, and ozone depleting substances. The expectation was that the product charges would decrease consumption and raise government revenues. The success of such a program, however, is dependent on both market reactions to the policy and the manner in which charge revenues are used to protect health and environmental quality. Due to the uncertainty associated with this economic instrument, the USAID-funded C4EP Project collaborated with the Ministry of Environment and Regional Protection to conduct a thorough examination of the economic and environmental performance of the product charge system for tires, and the Ministry has decided to use this analysis as a basis for examining other such charges. As a result, future product charge levels will be more closely related to the actual environmental costs associated with the products, increasing the economic efficiency of the product charge system. Since an increasing number of transitional countries are considering product charges, this approach has wide applicability in the region.

Deposit/refund systems and trading schemes have been less attractive in the ENI region. In fact, only one pollution trade, in Kazakstan, has actually taken place. However, several ENI countries will be conducting pilot trading programs in the near future and others have begun to study the possibility of tradable permit programs.

3.1.2 Exogenous and Endogenous Forces Driving Environmental Policy Trends

As mentioned above, the countries of the CEE that are planning for accession to the EU are heavily influenced by the laws and approaches of the EU. Harmonizing their environmental policies is considered a must for accession. However, this does not imply that the countries do not have any flexibility regarding how the environmental standards are to be met, although some countries are interpreting the directives as requiring a command-and-control approach. The strength of the environmental ministries within the government can influence how receptive the country is toward market-based policies versus the traditional command-and-control approach. It is generally the case, however, that the ministries (or their equivalent) are fairly weak and have accepted the approaches of the EU and are adopting them with very little modification. Another important function of the EU approach is to ensure that environmental policies are not used to create non-tariff trade barriers.

Another exogenous influence on environmental policy is the international financial sector. Of particular importance in this area is the impact of environmental liability on the flow of funds for privatization. For example, if investors believe that a particular country is going to pass legislation similar to the Superfund laws in the U.S. then they may move their funds elsewhere. Therefore, the "threat" of losing investment funds can affect the direction of environmental policy. A demonstration of the importance of liability issues can be found in Hungary, where the privatization agency now conducts environmental audits on properties in order to determine the extent of the liability associated with a particular property prior to its privatization. The policy was implemented after a pilot project illustrated that more information led to greater investor interest and higher prices.

A third exogenous factor is compliance with international agreements such as the Basel Convention, and the Montreal Protocol. The desire of most of the countries to participate in the international negotiations and be a recognized member of the world community will influence the direction of domestic environmental policy.

ENVIRONMENTAL AUDIT PROGRAM IN HUNGARY

Reducing the role of the public sector in the ownership and operation of enterprises is widely recognized as a precondition for rapid economic growth in transition economies, however this process of privatization is often inhibited by uncertainty about environmental liability. Environmental audits have been suggested as a way of reducing uncertainty over the nature, extent, and allocation of liability for environmental damage, thus increasing the pace of privatization. The USAID-funded C4EP project in Hungary participated in a pilot program to evaluate the effectiveness of environmental audits which involved placing a specialist at the State Property Agency (SPA) to manage an audit program. More than 36 audits and clean-ups subject to audit were conducted during the pilot period. At the conclusion of the pilot project, the SPA was sufficiently impressed with the outcome of the program that they hired a four-person team to continue the audits.

Endogenous factors that influence the direction of environmental policy also arise from a variety of sources. A dominant internal influence, particularly just prior to and just after the opening of the economy, is the environmental movement. Environmental problems and the lack of political action provided an organizing point for many individuals and groups that helped to generate change in many of the countries of the region. Protest over environmental conditions was often one of few allowable avenues for dissent before the transition. The influence of the environmental movement, however, has declined in many countries since the early years of the transition. For example, the Green Party in Slovenia received almost 10 percent of the vote in the first free elections in 1992. Based upon this showing they held two

ministerial posts in the government. However, their influence has since declined, this experience has parallels in several other ENI countries as well as in western Europe where the onset of "green fatigue" has received considerable attention.

TAKING ADVANTAGE OF OPPORTUNITIES FOR RAPID POLICY REFORM ROMANIA

The elections of December, 1996 brought a new government with an ambitious agenda of reform to power in Romania. The new administration moved quickly in a wide range of areas, liberalizing prices, cutting subsidies, and embarking on a vigorous program of privatization. The C4EP Senior Environmental Policy Advisor to Romania, Dr. Clifford Zinnes, as well as local experts serving as C4EP consultants, were called upon by government counterparts to support their efforts in several areas of environmental policy reform. In the first several months of the new government's term, work was completed or initiated in the following areas:

- Overhauled the country's privatization program, with inclusion of environmental procedures that help reduce investor uncertainty and increase the pace of transactions while protecting the government from the accumulation of unfunded liabilities,
- Passed an Emergency Ordinance to place all beneficiary-specific services provided by regional environmental authorities (such as environmental audits or permit reviews) on a fee-for-service basis
- Established a national commission to reorganize the national water authority, and a separate inter-ministerial committee to promote sustainable financing of all water sector services, including the incorporation of full-cost water pricing and economic instruments for water pollution control

The privatization process has influenced the direction of environmental policy in many of the countries of the region. As mentioned above, the laws and regulations related to environmental liability are directly influenced by the desire to attract foreign capital. A related issue is the certainty associated with environmental regulation. Many of the concerns expressed by the private sector relate to the perceived arbitrary and uncertain regulations in the environmental area, particularly related to compliance schedules and remediation requirements.

An endogenous factor that has had a negative influence on environmental policy is the severe budget constraints faced by most of the countries of the region. The budget constraint results in significant delays in preparing the regulations necessary to implement the legislation that is passed by parliament (or the equivalent). Developing environmental regulations is a timely and costly process. Related to the budget constraint is the problem of developing the institutional expertise to write and implement the regulations. The low pay associated with analyst positions in the ministries makes it difficult to retain skilled individuals who provide the necessary continuity in developing environmental regulations. The lack of expertise⁵ is particularly acute in the area of benefit-cost analysis.

3.2 Institutional Development

3.2.1 Government Institutions

Establishing an efficient and effective institutional structure capable of addressing the market failures associated with environmental issues as the economy becomes more and more privatized is a critical feature of the transition from a centrally planned economy to a market based economy. The role of governmental institutions in correcting the market inefficiencies from the use of the environment is associated with the following chain of actions:

Legislation → regulation → implementation

Any institutional structure devised needs to address these three aspects of correcting the market failures that exist in the economy/environment interface. A detailed description of the governmental institutions for each of the countries is beyond the scope of this report, however, several relevant trends can be identified.

The institutional structures that are evolving throughout the ENI region countries are quite diverse. Some of the countries are very decentralized in their institutional structure while others operate in a very centralized fashion. Generally, legislative and regulatory actions are concentrated at the state level, and implementation (including monitoring and enforcement) is decentralized to the local level.

A natural starting place for evaluating governmental institutions is the constitution and the environmental laws of the country. A study of ten countries of the CEE by the REC (1996) analyzed the "constitutional character" as related to environmental regulations or rights. The definition of "constitutional character" used by the REC is based upon concepts contained in the Single European Act and the Maastricht Treaty. Throughout the region, all of the countries with the exception of Estonia identify the environment as both a "priority state objective" and "a human right." Translating these statements into enforceable legal rights, however, requires an extensive structure of legal institutions.

The report also evaluated the countries of the region on several other dimensions. Table 10 identifies several of the criteria, including the constitutional character discussed above, and whether or not each of the countries meet these criteria. The criteria used to evaluate the environmental institutions for these

countries are based upon 33 environmental laws and the implementation of these in the EU. As the information in table 10 highlights, the enabling institutional structure in most of the countries of the CEE is in place. The real dilemma in evaluating the institutions of the region regards the effectiveness and efficiency of writing, implementing and enforcing regulations.

One parameter that can be used to evaluate the effectiveness of the various environmental ministries is presented in table 10, the third criterion. The point of this criterion is to determine the degree to which an integrated program for addressing environmental concerns had been adopted. Although most of the countries in the CEE have adopted a general environmental policy program, only one (Bulgaria) was judged to have adopted a "relatively" detailed environmental program.⁶

Such detailed information is not available for all of the countries of the NIS. However, some information is available for Russia and a few of the Central Asian Republics. According to a study by the World Bank, a 1991 Russian law on environmental protection states that "every citizen has the right to a healthy and safe environment." The structure of the environmental laws is such that they conform to the above chain of actions where the federal level sets the standards and the local level is charged with monitoring and enforcement. The law also provides for individual and NGO participation in monitoring and enforcement by guaranteeing "their right to association, their right to information, and their right to seek legal redress for environmental degradation." Russia is even more decentralized in its environmental policy due to the fact that the federal government lacks funds to impose its will and the local governments are much more removed physically from the central government due to the size of the country.

The Central Asian Republics are still in the process of developing and defining the role of the institutions that are and will be responsible for environmental protection and resource management. A study by HIID for the Asian Development Bank describes the situation in Kazakhstan, which is arguably the most progressive of the republics regarding environmental protection activities. This report concludes that while the government has established a Ministry of Ecology and Bioresources charged with protection of the environment, this Ministry is still trying to establish its role as the central authority over the environmental assets of the country. Since 1991, a number of environmental laws have been passed, beginning with an initial framework law, a new version of which has been submitted to Parliament by the Cabinet of Ministers.

Information on the progress of the other countries in the region is even less complete at this time. However, one positive result of the environmental activities and the development of the governmental institutions in the region is the agreements on transboundary issues such as the pollutants that are affecting the health of the Aral Sea. Developing institutions to deal with such external problems may assist with developing strong institutions to address internal problems.

Table 10 Environmental Regulation & Constitutional Reference in CEE

Criteria	Bulgaria	Czech Republic	Estonia	Hungary	Latvia	Lithuania	Poland	Romania	Slovak Republic	Slovenia
Direct reference to environmental protection in Constitution										
as a priority state objective?	yes	yes	no	yes	yes	yes	no	yes	yes	yes
as a human right?	yes	yes	no	yes	yes	yes	yes	yes	yes	yes
Environmental regulation based on framework law?	yes	yes	somewhat	yes	somewhat	yes	somewhat	yes	yes	yes
Environmental regulation based upon a general environmental policy adopted by gov	yes	yes	no	yes	yes	yes	yes	yes	no	no
a relatively detailed env pgm adopted by gov	yes	no	no	no	no	no	no	no	no	no
a general env concept not really adopted by gov	no	no	no	no	no	no	no	no	no	no
Is there a central gov organ specializing in env Protection										
a ministry?	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
a central authority (inspectorate)?	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Is there an advisory body to the gov on env Matters?	no	no	no	no	no	no	yes	no	no	yes
Are there any specific provisions concerning env Liability										
In the Civil Code?	yes	yes	no	yes	*	yes	no	yes	yes	*
In the Criminal Code?	yes	yes	yes	yes	*	yes	no	yes	yes	*
In the general administrative law?	*	yes	yes	yes	*	yes	yes	yes	yes	*
In privatization laws?	yes	yes	*	no	*	yes	*	no	no	*

source REC 1996, various pages

“Somewhat” - this implies that “in principle” the laws exist but there are some problems with using them as a framework

* this implies that it cannot be determined if the environmental liability provisions exist

3 2 2 Non-Governmental and Civil Society

The important role which communities can (and in some instances actually do) play in influencing the environmental behavior of firms in their midst, and the easy access which well-functioning NGOs can develop at the community level, makes partnerships between U S and local NGOs especially appealing. In this context, it is important to keep two things in mind. First, NGOs which already have close collaborative relationships with counterpart organizations in the West are the most active and sophisticated. Those in Poland are perhaps the best examples (Regional Environmental Center 1995). That said, generally Central and Eastern European NGOs have not been very effective in making themselves heard in either the legislative process or in decision making at the central government level, while they have been effective at the local level. Second, where communities (generally the relatively poor ones) have not been able to effect changes in firm level environmental performance, there is some evidence that the problem is more one of lack of political clout than lack of concern for the environment (Pargal and Wheeler).

What is needed to enhance public participation generally, and the role of environmental NGOs specifically? For the study countries, the most important problem areas requiring attention appear to be (Regional Environmental Center, 1995, Section IV)

- Inadequate public access to information. For instance, in Poland, while access to information about environmental conditions is adequate, public authorities tend to treat data on the performance of individual industrial establishments as confidential. Information flows are also impeded by inadequate organization and staff within the Ministry for Environmental Protection, Natural Resources and Forestry to provide timely information, and an inadequate data base on environmental NGOs. More generally, in Poland and elsewhere in the ENI region, part (perhaps a large part) of the information access problem is that the secretive habits and attitudes of a bygone era are only dying slowly.
- Lack of environmental awareness. This is related to, but not identical with, the access to information issue. In the context of immediate, pressing economic problems, it is hardly surprising that many environmental issues are not at the forefront of the public consciousness, or that NGOs that focus on such issues do not find a receptive audience, even among those who would seem to be natural allies. But economic pressures are beginning to ease, at least in some of the CEE countries.
- Deficiencies in the capacities of the NGOs themselves. Many need both financial help and help in making effective use of the range of tools at their disposal, e.g. education and training, coalition building, both to strengthen the positions they take and to enlist needed expertise.

3 2 3 Public Participation, Transparency and Accountability

A well-defined role for the public in achieving a healthy environment is critical to an effective and transparent system of rulemaking and decision making regarding the use of the services of environment assets. A common method used to incorporate the public in the process is through commenting on Environmental Impact Analyses (EIA). However, commenting on an EIA is only one aspect of a much more complex system for an effective role for public participation. The public must also have access to the necessary information on which to base comments and legal "standing" in order to appeal or challenge decisions when necessary.

An effective role for the public in decision making is based upon at least three rights: access to information, ability to participate, and the right to appeal. When considering these rights as related to environmental law, it is necessary to differentiate between the *de jure* right and the *de facto* right. As mentioned above, it is quite common that the public has a legal right to obtain information but the reality of the situation is that the information is closely held and obtaining the information in a timely manner is problematic. The following table presents the rights as they relate to the environmental framework law, EIA and land use laws by country for the CEE. As the table demonstrates, the rights are in place in most of the countries but the procedures for obtaining the information are lagging behind.

BUILDING DEMOCRATIC INSTITUTIONS FOR RESOURCE MANAGEMENT

Experience in the US and western Europe has shown that managing water resources at the level of the watershed offers important opportunities to ensure efficient resource allocation, democratize resource management use decisions, and ensure that environmental quality goals are met at a reasonable cost. The C4EP Project helped draft the sections of the new Romania Water Law that establish a system of 11 river basin commissions. Following the passage of the law, C4EP helped write the detailed implementing regulations that specify each commission's rights and responsibilities, and supported the development of three pilot river basin commissions. In another USAID-funded project, the Newly Independent States Environmental Economics and Policy Project, has been working with the Committee on Water Resources in Kazakstan to develop a framework for transferring responsibility for irrigation infrastructure to agricultural water users. HIID provided the technical and financial assistance needed to establish the first two water users associations (WUAs) in Kazakstan and conducted a national seminar on the issues involved with establishing and operating WUAs.

Table 11 Public Participation in Decision-making in CEE

Country	Rights	Environmental Framework Law		EIA with Public Participation		Land Use Law with Public Participation	
		Rules	Procedures	Rules	Procedures	Rules	Procedures
Albania	Information	yes	no	yes	no	no	n/a
	Participation	no	n/a	yes	no	no	n/a
	Appeal	yes	no	no	n/a	yes	n/a
Bulgaria	Information	yes	no	yes	yes	no	n/a
	Participation	yes	yes	yes	yes	no	n/a
	Appeal	yes	yes	yes	yes	no	n/a
Croatia	Information	n/a	n/a	yes	yes	yes	yes
	Participation	n/a	n/a	yes	yes	yes	yes
	Appeal	n/a	n/a	yes	yes	yes	yes
Czech Republic	Information	yes	yes	yes	yes	yes	yes
	Participation	yes	yes	yes	yes	yes	yes
	Appeal	yes	yes	no	no	yes	yes
Estonia	Information	yes	no	no	n/a	yes	no
	Participation	no	n/a	yes	yes	yes	no
	Appeal	yes	no	no	n/a	yes	no
Hungary	Information	yes	yes	yes	yes	no	n/a
	Participation	yes	yes	yes	yes	no	n/a
	Appeal	yes	yes	yes	yes	no	n/a
Latvia	Information	yes	yes	yes	yes	yes	yes
	Participation	yes	yes	yes	yes	yes	yes
	Appeal	no	n/a	no	n/s	yes	yes
Lithuania	Information	yes	no	yes	no	yes	yes
	Participation	yes	no	yes	no	yes	yes
	Appeal	yes	yes	no	n/s	yes	yes
FYR Macedonia	Information	n/a	n/a	yes	yes	yes	yes
	Participation	n/a	n/a	yes	yes	yes	yes
	Appeal	n/a	n/a	yes	yes	yes	yes
Poland	Information	yes	yes	yes	yes	yes	yes
	Participation	yes	yes	yes	yes	yes	yes
	Appeal	yes	yes	yes	yes	yes	yes
Romania	Information	*	*	no	n/a	yes	yes
	Participation	*	*	no	n/a	yes	yes
	Appeal	*	*	no	n/a	no	n/a
Slovak Republic	Information	yes	yes	yes	no	yes	yes
	Participation	yes	yes	yes	no	yes	yes
	Appeal	yes	yes	yes	no	yes	yes
Slovenia	Information	yes	no	yes	no	yes	yes
	Participation	yes	no	yes	no	yes	yes
	Appeal	yes	no	yes	yes	yes	yes

source REC 1995 * uncertain

3 3 Finance, Trade and Investment Trends and the Impact on the Environment

3 3 1 Development of Capital Markets for Environmental Investment

Private Sector

As noted in Section Two, probably the most important impediment to improved environmental quality in the ENI region is the lack of capital for environmental investment. It is useful to enumerate the most important constraints to expanding the supply of environmental investment resources. First, the economic recession that accompanied the beginning of the transition to market economies eroded enterprises' internal funds balances. The recession affected the resources available not only for environmental investments, but also for replacement of capital and restructuring of production. Without pressure from environmental agencies to comply with regulations, internal funds were used to meet the most pressing economic needs of the enterprise. In addition, there are numerous problems that limited the use of commercial credit across the ENI countries. First, enterprises lack access to capital markets for financing projects, such as environmental investments, that involve net cost. Most lenders look for evidence that the proposed investment has a positive rate of return. Second, capital may be unaffordable (high interest rate) or require a payback period that would be too short to recover costs and service the debt. Third, environmental investments (equity) are not attractive to foreign investors because of low (or negative) rates of return.

Public Sector

The primary source of public sector funding has been environmental funds. Although they serve to fill the gaps resulting from the lack of private capital, they were not created for that purpose. Instead, they were meant to foster environmental investment by firms in the absence of either the political will or the

SUBSIDIZED FINANCING: AN ANALYSIS OF ENVIRONMENTAL FUND PERFORMANCE IN POLAND

C4EP sponsored an analysis of environmental fund performance in Poland. Based on a survey of proponents whose applications to the Polish Environmental Funds were rejected, the study concluded that (i) the majority of applicants rejected by the State Funds eventually proceeded with their projects, (ii) even though most investors were under no direct pressure to undertake investments to correct a non-compliance situation, they nevertheless continued projects even if that meant using their own rescues, and (iii) due to the relatively low demand for environmental investment, increased Fund spending would only marginally increase the number of projects undertaken. The results of this analysis suggest that a socially optimal level of environmental investment might be more readily achieved through improved enforcement and other demand-enhancing activities rather than by channeling more public money to investments (via Funds) under existing policies. These results and HIID's recommendations will be useful as environmental funds attempt to adapt to changing economic conditions.

institutional capacity needed to enforce environmental laws. While the environmental funds do indeed play an important role, they present a number of problems. The criticisms of the funds are well known: for example, the quality of the project cycle (transparency of procedures, use of reasonable objective selection criteria, accountability of supervisory boards for their allocation decisions, minimal amount of political interference in decision making) varies widely.

From a long-range perspective, the most important problem presented by the funds relates to the explicit and implicit

subsidies used by most funds. A significant proportion of the financial resources distributed by environmental funds is heavily subsidized, as grants or "soft" loans. Such subsidies provide a competitive advantage to firms receiving them and are inconsistent with the polluter pays principle. In

addition, if the subsidy component of financing approaches 100% (i.e. pure grant), the fund may actually serve as a deterrent to the formation of a viable capital market or to financial discipline on the part of polluters. This issue must be considered in the context of enforcement efforts by agencies: if firms are under no pressure to make investments because of lax enforcement, their optimal financing strategy may be to shop for the best deal. In the HIID work in Poland on rejected applications to the National Fund and Eco-Fund (the Polish debt-for-environment swap), it appears there are elements of this behavior. Some argue that virtually no environmental investment activity takes place in Poland (where there is lots of subsidized financing) unless there is a subsidy component. As economic conditions and capital markets improve during the transition period, environmental funds need to forge closer links to commercial credit markets, require increasingly larger matching financing, and reduce the subsidy element of public disbursements. By reducing the subsidy element, the incentive for a more capital intensive approach to environmental problem solving will change with the change in relative prices of the various alternatives.

The Impact of Restructuring

The nature and extent of restructuring at the firm level and national level is an important factor in the firm's being able to fund environmental improvements with its own resources, or to attract outside debt or equity capital. In addition, national policies that determine the level of exposure of firms to market disciplines are important. Exposure promotes restructuring necessary both for efficiency and for improved environmental performance. Indeed, the latter is frequently a subset of the former. But, continued dominance of "insiders" in the post-transition period, coupled with reticence on the part of both potential debt financiers and equity investors has militated against "deep" restructuring.

The European Bank for Reconstruction and Development (EBRD) has done careful analyses of the way in which transition affected industrial restructuring. The researchers found that the view (widely held in the initial stages of the transition) that transfers of industrial property rights – from the public sector to private parties – would lead almost automatically to efficient restructuring, was too simple. Rather, the depth of restructuring depends importantly both on the specifics of the transition program and the economic backdrop in which it proceeds, as described below.

- The extent to which management authority in privatized firms devolves to "insiders", i.e. previous managers and/or employees, or to "outsiders". Where insiders retain effective control, and that has been the case more often than not, restructuring has generally been limited.
- The presence or absence of foreign investment. Generally, foreign investment has been associated with major investment programs.⁷
- The availability of external finance for needed investments. While financiers do not normally participate actively in managing the enterprises to which they loan money, they do have definite claims on borrowers, and are often able to exercise leverage to assure that the latter's behavior recognizes market realities. However, bank finance has been in short supply in the ENI region, and available capital has generally been used to fund domestic budget deficits and service external debt.
- The power of employees in the firm. Other things equal, employees distrust and use what leverage they have to resist restructuring. The uncertainty associated with the restructuring added to the existing problems faced by many employees from adjusting to changing incentive structures throughout society. Their apprehension in part is related to the high cost of unemployment in the context of the deep recession that accompanied the transition throughout the CEE and NIS regions.

- The macroeconomic and policy context in which the transition takes place. This can cut both ways. On the one hand, states which cut the umbilical cord of state subsidies force enterprises to rely on their own resources and, at least in competitive situations, to be attentive to market signals. Poland is a case in point. Even enterprises in Poland that were not privatized restructured. The other side of the coin is the deep recession already alluded to. That raised the cost of job loss and enterprise failure, hardening resistance to restructuring among risk averse managers and workers alike.

3.3.2 Regional and World Trade Forces

As noted earlier, exposure to world markets has had a very large impact on firms in those countries where firms face both hard budget constraints and foreign competition, these factors quickly dispatch inefficient enterprises. Since many of the most inefficient enterprises are those which pollute most intensively, due to the age of their capital stock, their closures can have beneficial environmental impacts. The transition has been marked by major changes in regional trade flows, however, the nature and extent of those changes has varied widely across the ENI region. As has been widely observed, the CEE countries have, to varying degrees, expanded their trade with the West, and reduced it with the former Soviet Union countries. Even in Bulgaria, where economic restructuring has not been as robust, the percentage of exports bound for the developed nations of the West rose from 22.7% in 1988 to 57.9% in 1994. Within the study countries, those with the largest total exports are those which have followed a consistent path to a market economy and exhibited the strongest economic growth, namely, the Czech Republic, Hungary and Poland. There is also evidence that this reorientation is not simply the result of the dissolution of the Council for Mutual Economic Assistance, which collapsed in 1991. It seems to result from market openness and the relative comparative advantage currently existing in these countries in comparison to world markets (Salvatore and Sgarbi, 1997).

Within the NIS countries, the situation is quite different. The three Baltic countries have been much more like the CEE countries with respect to restructuring and changes in trade flows, and all three have begun the process of joining the EU in the first or second group. The situation in the other NIS countries, including Russia, has diverged. As the pace of restructuring has lagged behind that of the CEE countries and the Baltics, so too has the reorientation of trade. Although trade volumes among these countries have declined dramatically with the drop in output, the relative shares of trade among them have remained high, reducing the exposure of firms in these countries to the competitive pressures of world markets. For example, in 1994, approximately one-half of Russia's total trade was with Ukraine. Across the region (again excluding the Baltics), the total share of intra-NIS trade as a portion of total foreign trade was approximately 70 percent. However, some data collected since 1994 indicates that reorientation is proceeding, albeit at a slower rate than in CEE. In addition, several academic studies that compare the experience of the non-Baltic NIS countries to developing economies suggest that, over time, further economic development will be correlated with far higher trade with the West (Langhammer and Lucke, 1997).

The most important driver for current environmental investments in many of the CEE countries is the desire of country governments to join the European Union and the attendant need to harmonize domestic environmental regulations and performance with EU legislation and standards. As candidate countries harmonize their regulations and performance, firms in those countries will be under increasing pressure to comply. The countries which have been accepted for early admission negotiations – Poland, Hungary, Czech Republic, Estonia, and Slovenia – have been actively bringing their legislation into conformance with the EU norms. Firms in the second group of countries that will be considered for membership in future years – Slovakia, Lithuania, Latvia, Bulgaria, and Romania – will also face similar pressures. The need to harmonize environmental policies with the EU is beginning to have an impact on the

composition of environmental spending in the candidate countries. The most significant effect has been in focusing much greater attention on solid and hazardous waste management, which to-date has generally received much lower priority than air and water pollution control.

In addition to the specific requirements for harmonization with EU environmental standards, the increase in trade with the rest of the world is causing a number of the export-oriented firms to seek ISO 14000 certification, or to take other measures aimed at demonstrating the environmental soundness of their operations. The trend was started with ISO 9000 certification, which became a prerequisite for many firms to compete in Western European markets. It is now spreading to ISO 14000, and international firms and associations are now offering ISO training services in the ENI region. However, as yet there is no evidence that a significant number of firms in the ENI region has either sought or attained certification under ISO 14000.

3 3 3 Environmental Business Trends

A key indicator of environmental progress is the emergence of a strong environmental industry capable of providing goods and services to meet local needs for pollution abatement and prevention. Under central planning, with the partial exception of water and wastewater treatment firms, there was little in the way of a functioning environmental industry. However, since the transition began, some countries have seen the rapid growth of environmental businesses, while other countries are still quite limited in terms of their ability to provide required environmental goods and services.

The countries which have aggressively attacked their environmental problems, especially Poland and the Czech Republic, have seen a dramatic increase in the number of local firms which are capable of providing most traditional environmental products and services. Many of these new firms were formed by employees of units of large state-owned companies that previously provided in-house environmental services. These environmental units were often "spun out" of the parent companies as part of corporate rationalization and privatization initiatives. Most of these new environmental firms are still relatively small and lack the resources and international connections to provide sophisticated technologies or large scale project management capabilities. However, competition among these firms is often intense, with substantial pressure on prices, with the result that prices for conventional pollution control systems from local vendors are usually quite low.

The countries that have been less aggressive in tackling their environmental problems have tended to lag in terms of the growth of environmental businesses. As a result, these countries often find it more difficult to meet environmental objectives, not just because it is more difficult to find the right products and services, but also because a well-developed environmental industry tends to become an effective business advocate for more aggressive environmental protection activities.

The Regional Environmental Center conducted a survey of environmental firms which provides preliminary cross-sectional data on the local environmental industry in the Visegrad countries (Poland, Hungary, Czech Republic, and Slovakia). The ability to source conventional environmental goods and services in these countries does not appear to be a significant problem because of the wide range of options that are available from local suppliers. In fact, in the opinion of many respondents to the REC survey, the market appears to be saturated. Despite this perception of intense competition among local firms, there are gaps in the availability of more advanced technologies which are typically supplied by foreign firms, such as low-cost, innovative, natural wastewater treatment and remediation systems, and pollution prevention and waste minimization technologies.

Western firms are well represented in the Visegrad countries and offer a wide range of environmental goods and services to supplement those available from local vendors. These foreign companies usually specialize in more sophisticated technologies and reinforce a common perception that high quality products come from abroad. German firms are especially prominent in the region, but there is also a large number of Austrian, Swiss, Scandinavian, French firms, and a smaller number of Dutch and Italian firms. U.S. environmental companies are not very active in the region, although American environmental technologies are generally held in high regard and viewed as cost competitive with other foreign environmental technologies. Unfortunately, good data are not available on the number of foreign-owned environmental firms, the amount of business they conduct, or the extent of their interaction with local firms through technology licensing agreements, joint ventures, or outright acquisitions.

One of the major practical problems in the Central European environmental market is the difficulty in getting good information on environmental technologies and vendors. The lack of readily available information on vendors is a special problem for American suppliers, since potential local buyers frequently express concerns about the applicability of specific U.S. technologies to local conditions and the willingness and ability of U.S. suppliers to provide the required after sales support. Many observers attribute the difficulty in getting adequate information on technological options to holdover attitudes from the prior communist system in which much information on the environment and industry was considered classified or to the more recent trend of officials who try to sell data rather than to give them away. As a result, it is difficult to track environmental business trends in the region. Anecdotes about specific aspects of the environmental industry abound, but there is no adequate measure of the rate and directions in which the industry is growing in individual countries or across the region.

Data on the NIS countries is more sparse, and less encouraging. Since the NIS countries have, for the most part, lagged the CEE countries in the development and enforcement of regulations, one would not expect comparable levels of development. In Russia, a comprehensive study of the environmental technology market by Arthur D. Little Inc. in 1996 (Arthur D. Little, Inc., 1996) found that demand for U.S. environmental goods and services would come primarily from projects funded by international organizations and foreign investors. Demand from Russian government agencies and firms was described as "very weak." One of the important factors depressing demand is the lack of enforcement of environmental regulations.

3.4 The Experience of USAID Projects in the ENI Region

In preparing the final draft of this report, the study team reviewed several Results Framework and Mission Strategy documents for the ENI countries provided by USAID. The purpose of this review was to broaden the perspective of the study team to include the experience of individual USAID projects. That review reached two major conclusions. First, USAID has been very active in the area of the environment, and specifically Strategic Objective 3.3 (Reduced Environmental Risks to Public Health). The types of activities have been wide ranging, and the contract vehicles chosen appear to have been flexible enough to permit effective field-level response to local circumstances and demand. This flexibility is likely to be a source of comparative advantage with respect to other donors. Second, USAID initiatives in other areas have had major impacts on environmental quality, even if environmental improvement was not an original design element. Third, there are numerous regional initiatives that have already been undertaken, under several Strategic Objectives, leading to the conclusion that the challenges of using regional or sub-regional approaches to addressing environmental challenges can be successfully met.

As noted earlier, the range of USAID projects is quite broad. The following examples of project activity demonstrate the scope of USAID environmental projects in the ENI region.

- Support to environmental NGOs has resulted in increased participation. As a result of USAID assistance to ISAR in Ukraine, the number of environmental NGOs increased from 150 to 562 in Ukraine, Moldova, and Belarus.
- USAID has been able to mobilize resources from other donors and recipient countries to address numerous highly polluted "hot spots" through technical assistance and grant programs.
- Environmental "framework" laws setting overall policies and priorities at the national level were drafted and passed with substantial involvement from USAID, and numerous National Environmental Action Plans and one National Environmental Finance Strategy (for Lithuania) were prepared with USAID support. These have been accompanied by numerous implementing laws and regulations.
- USAID has been able to initiate and lead regional cooperation efforts on complex environmental issues, such as the use of water resources in the Central Asian Republics and reduction of releases of toxic water pollutants into transboundary rivers in Slovakia, Hungary and Romania.

In the second area noted above, USAID projects under other Strategic Objectives have contributed to improved environmental quality. Two illustrative examples are:

- Privatization, restructuring and deregulation in the power sector. In many countries, USAID has taken a major role in facilitating change in the generation, transmission and distribution of electric power. Although the physical measurement data (as noted before) are far from complete, the experience in other parts of the world strongly suggests that successes in this area have major positive environmental impacts, particularly when industrial users become more energy efficient in response to rising electricity prices. Some data already bear this out: in Hungary air pollution country-wide has been reduced 20 to 30 percent due to increasing energy prices and the closure of inefficient heavy industry.
- Banking reform and capital market development. USAID has recognized the importance of an effective, transparent, and safe banking system as central to the development of a functioning market economy. As noted in Section Three, the lack of access to capital is a major constraint to enhanced environmental performance by firms. Although quantitative data are very difficult to identify with respect to firm-level spending on pollution control and abatement, success in USAID initiatives in this area have certainly increased the capacity of firms to make pollution control investments, although their willingness to do so is conditioned by other factors such as enforcement of environmental laws and regulations.

¹ The search for environmental data and indicators for this study included a number of minor sources and the following major data diffusion sources: the World Bank's World Development Indicators on CD-ROM, World Resources Institute's Database Diskette, the United Nations Industrial Development Organization, UNCTAD's Trade databases, Environment Business International's Market and Needs Assessment Database, the OECD, and the IMF. Minor sources varied from a wide range of web sites to individual specialized studies.

² Climate change, ozone layer depletion, eutrophication, acidification, toxic contamination, urban environmental quality, waste, and water resources.

³ It can be argued that the use of standards places a price on the environmental services, however, it is generally accepted that such prices are inefficient

⁴ This is a lower bound estimate and for many pollutants it would be many times more than this figure

⁵ This observation comes from the mid-term evaluation of the C4EP project and is based upon extensive interviews with representatives of the various environmental agencies in the CEE

⁶ Whether or not the Bulgarian system is truly as detailed as the REC report indicates requires verification to determine if the system is working as it is supposed to

⁷ This can be seen as a special case of the insider/outsider issue. Foreign investors are, of course, outsiders. But the EBRD studies appear to be saying that foreign investment adds a special impetus to restructuring and investment

SECTION FOUR

Ranking ENI Countries

4 0 Introduction Ranking and Indices

The objective of Section Four is to enable cross-country comparisons in CEE/NIS concerning the conditions for environmental improvement elaborated in the preceding sections. Comparisons will be made on the basis of indices explained below. It is important to note at the outset that the index development and ranking exercise called for by the ENI Bureau is distinct from many of the more commonly known environmental ranking exercises. The primary distinguishing feature of this ranking exercise is that it examines progress with respect to enabling conditions rather than observable changes in environmental quality. Examples of the second type of index include the Index of Intensity of Environmental Exploitation (Pfliegner, 1995, based on the UN's Human Development Index method), the Green Index for US states (Hall and Kerr, 1991) and environmental diamonds (Rogers et al, 1997). For each of these indices, measurable and observable data on environmental quality is combined in a variety of weighting formats to produce aggregate indicators.

USAID's unique challenge is to rank countries on the basis of progress towards establishing the enabling conditions for future environmental change – a significantly different endeavor from ranking on the basis of environmental quality. This focus on enabling conditions implies an effort to assess conditions which are often not quantifiable. Even where they are quantifiable in theory, there may exist no data other than qualitative assessments with which to evaluate progress. One point of reference for such a qualitative approach to creating an index can be found in the Index of Economic and Political Freedom developed by Freedom House. Of the ten weighting factors in that index, six are based on qualitative ranking categories, where rank values between 1 and 5 are generated on the basis of whether the country meets a set of one or more descriptive conditions. The ranking approach presented in this section takes this qualitative ranking approach as a point of departure.

4 1 Uses of the Ranking Framework

In using this index, USAID has a special need to make program resource allocation decisions across three dimensions. First, they need to make global *country-level allocation decisions* among the countries in CEE/NIS. Because of this particular focus, the methodology begins with the assumed need to rank countries on the basis of their "ability to facilitate improvements in environmental management." Assessing this "ability" implies making informed judgements about the potential of different countries to improve quickly for the same dollar spent.

Global country level allocation decisions should be complemented by decisions about allocating resources *among impact areas*, where these are defined as the possible results of programs. The ranking should help to make decisions, for example, about how to rank countries' efforts to improve the policy, legal and regulatory environment. Such decisions might be especially important when regional policy projects are (or might be) operating in multiple countries. While USAID cannot single-handedly increase the impact in any area, it is within its "manageable interest" to influence activities within each area. Indeed, under a variety of regional and country-based programs, USAID has already been active and influential in each of these areas.

Programs are designed around impact areas and implemented in association with counterparts. Counterparts can be categorized along the lines of "economic agents", "stakeholders" (to use more

common USAID and World Bank language), or any of a number of other groupings. Within an impact area, the nature of a specific activity can vary considerably depending on which group of stakeholders is targeted. Institutional strengthening activities with private industry are likely to be considerably different from institutional strengthening activities with citizen groups. In ranking its opportunities across the ENI region, USAID may also want to compare the progress with respect to each of these stakeholders. This stakeholder cross-section should assist USAID in answering questions such as "In which countries are our environmental investments to private industry investments having the greatest impact?"

4.2 Programmatic Impact Areas

The enabling framework elaborated in Section Two includes an underlying assumption that certain conditions must be met for environmental management to improve. Demand for environmental goods and services, for example, requires that the public be informed about the environment. Without appropriate legal, regulatory, and policy conditions, neither industries nor local and central government will adopt improved environmental management. Following the framework presented in Section Two and the analysis in Section Three above, three major programmatic impact areas are identified.

- ***Policy, legal and regulatory framework*** Policy, legal and regulatory frameworks involve the rules in which decisions are made which affect the environment. Regulations should be well-designed and should reflect the political will of the populace, as expressed through their political representatives. Those regulations should be both enforceable and enforced. Judicial due process should be firmly established and respected for dispute resolution and enforcement, and processes should be in place for addressing environmental liability.
- ***Strength and commitment of environmental institutions*** This impact area is concerned with the extent to which the environmental institutions of a given country have the strength in personnel, organization and influence to alter the actions of agents concerning the environment. This impact area includes not only the commitment of government management institutions such as regulatory bodies but also industries, households (and their formation into NGOs) and other institutions.
- ***Environmental trade, finance and investment*** Domestic policy and institutional conditions may be right for environmental improvements, but if trade and investment in the environment is not occurring, environmental change will develop only slowly. The trade, finance and investment included here covers not only pollution abatement expenditures, but also investment in entirely new plant processes and environmental infrastructure such as water and energy.

One impact area was excluded from the ranking approach – the extent to which a given country's environmental activities are integrated with and build upon international knowledge and lessons learned. This impact area would focus on such issues as whether environmental citizen groups in one country learn from and link with citizen groups in other countries, or whether one country's regulatory framework builds upon successful frameworks established elsewhere. In the end, it was decided not to include this international integration dimension in the ranking framework on the grounds that the impact areas included here are implicitly included in the three impact areas delineated above.

4.3 Environmental Stakeholders

The environmental stakeholders to be included in the ranking methodology are those which are assumed to have a significant impact on environmental quality. The list of key stakeholders is shown below.

- **Private Enterprise** This category of stakeholders includes private industry, finance and agricultural. While private industry generally produces a smaller amount (in total weight) of pollutants than do households and agriculture, the environmental risk of pollutants produced by private industry typically are higher than those produced in other sectors. In addition, the impact of private industry on the environment in select regions may be significant, especially when geographically concentrated as is common in the CEE/NIS region. In most countries in the CEE/NIS, agriculture is among the primary contributors to eutrophication of rivers and lakes and is also an important contributor of toxic chemicals through the application of pesticides. Finally, recent experience with environmental change in CEE/NIS has shown that financial constraints have proven an important obstacle to increased investments in environmental infrastructure, new plants and other improvements.
- **Central Government** National policies are critical determinants of environmental quality, and central governments can have influence not only through setting environmental policy and regulatory conditions, but also via control of state-owned industries and impact on the “supply” of environmental goods such as parks, biodiversity and forests.
- **Local Government** Through its responsibilities for land use and environmental decisions at the local level, municipal governments are often in a position to have significant impact on environmental quality. Their management of water supply and water treatment or the enforcement of environmental regulations are all means by which they can influence the environment.
- **Citizens** Private citizens are important determinants of environmental quality through their supply of pollutants or consumption of resources and through their demand for improvements in environmental quality. In demanding improvements to environmental quality, citizens can form into a variety of community or non-governmental organizations (NGOs).

4.4 Scoring and Ranking Methodology

Public sector investment, like that of the private sector, is designed to capitalize on opportunity. Private investors try to discern not only how a company is doing today, but how profitable they will be tomorrow. To make their decisions, private investors have access to trend indicators which give an idea of whether a company exhibits dynamism and opportunity.

In the public sector, where investment must be allocated across a broad range of stakeholders and project areas, information to use in making allocation decisions is not as readily accessible. Business investors can compare rates of increase in sales, or profits or stock prices over time as they make their decisions. But it is much more difficult to assess whether enabling conditions for environmental improvement are being met. Are multi-disciplinary environmental authorities effective? Is the climate for environmental trade and investment good? Data are often lacking when such questions need to be answered.

If it is difficult to formally assess the current status of stakeholders or project areas, then it is next to impossible to assess their potential for change in the future – the public sector equivalent of how

“profitable they will be tomorrow” Assessing future potential and dynamism, whether of a project or a stakeholder, demands considerable reliance on subjective assessment. Recognizing this difficulty of assessing potential for change – their “dynamism” – this ranking approach intends instead to capture only the current status of development. USAID will need to combine the results of this ranking exercise with an assessment of this dynamism making final allocation decisions.

The methodology is designed to generate regional comparisons of countries’ progress towards meeting a set of key enabling conditions for improved environmental management. Enabling conditions are defined along the axes of stakeholder and impact areas defined above. For each stakeholder and impact area in table 1, a criterion of environmental status is described in capital letters in the matrix. Progress towards meeting this criterion is assessed through review of a set of variables shown after the bullets in each cell. With few exceptions, these variables relate to policy or programmatic conditions verifiable with expert opinion but not with quantifiable data. For each of the 12 cells in the matrix, each country is given a score ranging from 1 to 5, where 5 indicates that the criterion is fully met and one indicates that little or no progress has been made in meeting the criterion.

By comparison with other index applications, this one relies on expert assessment because of the dearth of data describing enabling conditions. If environmental data in general is in its infancy, then information describing the status of these enabling conditions is only embryonic. Expert opinion is the only option for generating rank values. Descriptive justifications of select scores are included below.

Although the value (1-5) in each cell of the matrix is given on the basis of progress toward meeting the criterion and variables for that cell, a general set of characterizations can be made about the scoring values. In general, a score value of “5” indicates that a country has already satisfactorily achieved the criterion described. Because this scoring exercise is designed for CEE/NIS, the scores are scaled so that a five indicates a level just beyond this region. As a rough approximation, any country in the lowest levels of environmental management in the OECD would receive a five on this scale. It is assumed that any such country is fully capable of managing its environmental problems on its own, without the benefit of direct foreign assistance. Thus if any country is to pass a score of “4” on average, it would suggest that they are at or nearing a sustainable level of environmental management.

A score of “1” suggests that a country has made little or no progress in establishing the conditions for improved environmental management. Institutions are weak or non-existent, policy and regulatory frameworks are primitive in their environmental outlook, and investment is minimal. The remaining scores fall between these two limits of one and five.

Scores sufficient for graduation from an environmental assistance program would need to be three or higher, three being the first level at which enabling conditions are sufficiently developed for change to continue sustainably.

Actual country scores for stakeholder and impact area have been generated through consultation with the EPIQ/IRG and HIID authors of this report, with additional input from a small number of experts in the CEE and NIS. Within the network of HIID experts, special attention was paid to drawing from experts in the field staff of the USAID-funded C4EP Project and the NIS Environmental Economics and Policy Project. Countries and ranking criteria were circulated to concerned parties. Experts were asked to score countries with which they were familiar and, where appropriate, include qualitative assessments of why a given score was chosen. When multiple scores were received for the same country and the level of expertise was approximately the same, scores were averaged. In other cases, scores of the most highly qualified expert were used. Country scores are shown in tables 2, 3 and 4.

Table 1 CEE/NIS Countries – General Country Ranking Criteria¹

Environmental Economic Stakeholders	Impact Areas		
	(1) Policy, legal and regulatory framework	(2) Institutional strength and commitment	(3) Environmental trade, finance and investment
Private Enterprise	<u>1</u> FRAMEWORK CONDUCIVE TO IMPROVED ENVIRONMENTAL MANAGEMENT	<u>2</u> INDUSTRY INVESTS SUFFICIENTLY IN INSTITUTIONAL CAPACITY TO REDUCE EMISSIONS PER UNIT OF PRODUCTION OR IMPROVE RESOURCE USE EFFICIENCY	<u>3</u> INCREASED TRADE INVESTMENT IN AND FINANCING OF ENVIRONMENTAL GOODS AND SERVICES
Central Government	<u>4</u> GOVERNMENT ESTABLISHES AND MAINTAINS BROAD POLICY SUPPORT FOR ENVIRONMENTAL IMPROVEMENTS	<u>5</u> GOVERNMENT COMMITTED TO INSTITUTIONAL STRENGTHENING OF ENVIRONMENTAL MANAGEMENT CAPACITY	<u>6</u> GOVERNMENT CONTRIBUTES DIRECTLY TO OR FACILITATES INCREASED ENVIRONMENTAL INVESTMENT
Local Government ²	<u>7</u> FRAMEWORK ALLOWS FOR CONSTRUCTIVE ENGAGEMENT OF LOCAL AND REGIONAL GOVERNMENTS BODIES IN ENVIRONMENTAL MANAGEMENT	<u>8</u> LOCAL GOVERNMENT HAS THE INSTITUTIONAL CAPACITY TO SET AND IMPLEMENT REGULATORY STANDARDS	<u>9</u> ENVIRONMENTAL INFRASTRUCTURE INVESTMENT MEETS NEEDS OF THE POPULACE
Citizens ³	<u>10</u> CONDITIONS ESTABLISHED FOR CITIZENS TO PARTICIPATE IN ENVIRONMENTAL DECISION-MAKING AND PUBLIC OPINION FORMATION	<u>11</u> CITIZENS DEMONSTRATE THE CAPACITY TO INFLUENCE DECISIONS CONCERNING THE ENVIRONMENT	<u>12</u> CITIZENS GROUPS GENERATE SUFFICIENT DOMESTIC FINANCIAL RESOURCES TO SUSTAIN THEMSELVES

4.5 Rationale for Scoring of Individual Framework Criteria

1 FRAMEWORK CONDUCTIVE TO IMPROVED ENVIRONMENTAL MANAGEMENT

Stakeholder Private Enterprise
Impact Area Policy, Legal and Regulatory Framework

Variables

- Extent to which emission standards and other major environmental regulations are clearly established and enforced by regulatory institutions
- Proportion of firms in compliance with established standards
- Extent to which judicial due process is established and respect for dispute resolution and enforcement is maintained
- Extent to which processes in place for addressing environmental liability

Scores

- 1 = Standards, regulations and pollution charges are *not clearly defined*, much less enforced. Judicial processes for dispute resolution and liability cases may exist, but they are vague and difficult to enforce.
- 2 = A weak and underfunded set of regulatory institutions has defined regulations and is *attempting to enforce* them, *but these efforts are minimal* by comparison with the scale of the industrial environmental challenge. The preponderance of local firms (greater than 80 percent) do not comply with some or all of the regulations, and do not pay pollution charges assessed by regulatory authorities.
- 3 = Environmental regulatory institutions, while not yet widely recognized and respected amongst the private enterprise community, have *set clear standards* on a subset of environmental enforcement issues, and have *been able to enforce* their regulations in those areas.
- 4 = The confidence of the private enterprise community is rapidly increasing that a policy, legal and *regulatory framework for environmental issues is becoming transparent, even if not equitable*. An estimated 50% to 70% of medium to large firms are in compliance with environmental regulations.
- 5 = Environmental regulations are *predictable and enforced*. Environmental regulations are enforced, with greater than 70% of medium- to large firms in compliance. Evidence exists of multiple cases of dispute resolution on environmental matters. Countries receiving this score resemble the bottom rung of the OECD.

2 **INDUSTRY INVESTS SUFFICIENTLY IN INSTITUTIONAL CAPACITY TO REDUCE EMISSIONS PER UNIT OF PRODUCTION OR IMPROVE RESOURCE USE EFFICIENCY**

Stakeholder Private Enterprise
Impact Area Institutional Strength and Commitment

Variables

- Number and quality of environment-related professional associations
- Degree of establishment of professional certification standards
- Proportion of facilities certified for or pursuing ISO 14000 or other EMSs

Scores

- 1= **Rare** is the firm that shows interest in improving environmental performance Local environmental process experts are few
- 2= Firms express formal interest in adopting improved environmental technologies and processes, but they do not invest in process improvements Local environmental process experts are **few**
- 3= A moderate number of professional associations are established, but their **clout is limited** because there is little acceptance (or development) of certification standards
- 4= A significant minority of industrial firms invest in either process or end-of-pipe technology improvements Professional certification standards have been established, although they are not complete and comprehensive Professional associations for key technical areas have been **established and are active**
- 5= Improving environmental performance has become a **core objective** of the majority of firms in the industrial sector Professional certification standards are well-established for treatment and processing of pollution at the firm level

3 *INCREASED TRADE, INVESTMENT IN AND FINANCING OF ENVIRONMENTAL GOODS AND SERVICES*

Stakeholder Private Enterprise
Impact Area Environmental trade, finance and investment

Variables

- Value of the market for environmental goods and services, by comparison with GDP (includes domestic production plus imports) ⁴
- Proportion of commercial banks incorporating environmental due diligence and mitigation financing into business credit programs
- Of major new plant development or retrofitting, proportion completed with improved environmental standards and financed by international sources

Scores

- 1= The market for environmental goods and services is *virtually non-existent*
- 2= The market for environmental goods and services is *just becoming established* The construction of new plants with international financing is rare
- 3= The environmental goods and services market is *small but growing rapidly* Standard environmental goods and services in such areas as water and air pollution end-of-pipe technologies are easily accessible from domestic sources, although more advanced technologies and equipment are difficult to find
- 4= The environmental goods and services market has *become well established* Technical expertise from domestic sources is readily available, even if at high prices, for resolution of environmental analysis A significant number of new plants are being installed to international environmental specifications
- 5= *Virtually all* new plants meet or exceed national environmental guidelines The domestic environmental goods and services market exceeds 1 00 percent of GDP Environmental due diligence has become a standard feature of private sector business

4 **GOVERNMENT ESTABLISHES AND MAINTAINS BROAD POLICY SUPPORT FOR ENVIRONMENTAL IMPROVEMENTS⁵**

Stakeholder Central Government
Impact Area Policy, Legal and Regulatory Framework

Variables

- Appropriateness of emission standards required by government They may range from those that are so low as to have little or no impact to those which are so high as to be an unreasonable constraint to growth
- Extent of enforcement of existing standards and regulations
- Degree to which investment regulations and grievance procedures enable identification and addressing of major environmental issues and encouraging of substantive public participation
- Evidence of attempts to incorporate “polluter pays principle” in environmental policy, in particular through reduction in fossil fuel subsidies ⁶
- Extent to which country is complying with international treaties and conventions ⁷

Scores

- 1 = Emission standards, policy and legal framework *do not exist* in any meaningful form
- 2 = Emissions standards *have been set but are not based on country conditions* and enforcement capabilities
- 3 = Procedures and institutional capability for continuous improvement of emission standards and regulations *have been established and are operating*
- 4 = Although challenged by firms or the public, emission standards are *generally accepted to be technically and economically feasible* Firms and the public regard the procedures for addressing public and private environmental issues as clear and achievable
- 5 = Emission standards are *generally believed to fall within an acceptable range* An assortment of policy tools are employed to ensure compliance and improved environmental performance Enforcement of standards is widespread

5 GOVERNMENT COMMITTED TO INSTITUTIONAL STRENGTHENING OF ENVIRONMENTAL MANAGEMENT CAPACITY

Stakeholder Central Government
Impact Area Institutional Strength and Commitment

Variable

- Level of the government at which the primary national environmental agency operates, authorities it legally holds and budgetary support it receives
- Number and quality of trained technicians and analysts carrying out environmental policies within implementing environmental agencies, especially the national environmental agency

Scores

- 1 = The *position* of key environmental agency or agencies *is low* in the governmental structure and is insufficiently staffed to manage environmental issues
- 2 = The government has invested in improving the national environment agency's (or other key environmental agencies') institutional capacity, but the *level of funding* for improving institutional capacity is *still considerably below* what is required to meet environmental challenges
- 3 = The national environment agency *has been significantly strengthened*, but still does not command a position in the government hierarchy commensurate with environmental requirements. High quality technical experts in environmental areas can now be found within the environmental agencies, but there is a pressing need for adding further to the environmental cadres
- 4 = While the national environmental agency may not yet operate at cabinet level, it has *sufficient seniority within the government structure* to press its case for environmental issues with occasional success. The role of the agency is rising in the government structure. The environmental cadres within environmental institutions are sufficient to meet major environmental challenges without outside technical assistance
- 5 = The national environmental agency *operates at cabinet level, holds key authorities, is adequately budgeted and enjoys regular access* to government leadership. In addition, major implementers of environmental actions, including especially the national environmental agency, are peopled by highly qualified technical personnel and a sufficient number of trained technicians and analysts to carry out environmental policies

6 **GOVERNMENT CONTRIBUTES DIRECTLY TO OR FACILITATES INCREASED ENVIRONMENTAL INVESTMENT**

Stakeholder Central Government
Impact Area Environmental trade, finance and investment

Variables

- Extent to which the government leverages private finance for environmental investments

Scores

- 1 = Government has *virtually no involvement* in the leveraging of private finance for environmental investments, and may seek to prevent it
- 2 = Government *has begun developing strategies* for increasing private finance of environmental investments, but has made *limited headway*
- 3 = Evidence exists that the government has actively enabled and facilitated private finance, although the application of that *support has been spotty and haphazard* Limited access exists to private domestic capital markets for environmental investments
- 4 = Government is making *concerted and comprehensive effort* to leverage private finance for environmental investments, and recognizes the issue of increasing environmental investment as a high priority
- 5 = Private financial markets provide *sufficiently clear incentives* that government engagement in leveraging private finance is limited or non-existent

7 **FRAMEWORK ALLOWS FOR CONSTRUCTIVE ENGAGEMENT OF LOCAL GOVERNMENT BODIES IN ENVIRONMENTAL MANAGEMENT**

Stakeholder Local Government
Impact Area Policy, Legal and Regulatory Framework

Variables

- Level of local government capability to set regional and local standards for water and air quality
- Level of local government capability to join regional compacts for environmental management (e.g., river commissions)
- Degree to which local government environmental decision-making process allows substantive public participation

Scores

- 1 = Local government has *limited de jure role* in setting environmental standards. Public has virtually no involvement in environmental decision-making concerning local government.
- 2 = Central governments are *moving towards expanding the role* of local government in environmental management through such activities as establishing commissions for the study of opportunities, but little real progress has been achieved. The public has no concrete substantive involvement in working with local government for environmental decision-making.
- 3 = Central governments are *experimenting with allowing local governments* to set air and water quality standards. Public involvement in environmental decision-making occurs, but the processes are not yet formalized.
- 4 = Local government has the *clear legal authority to set* select air and water quality standards and, in some cases, to join in regional environmental compacts.
- 5 = Local government *enjoys central government policy encouragement* to set regional and local standards for water and air quality in some or all regions. Local government environmental decision-making process shows evidence of substantive public participation.

8 **LOCAL GOVERNMENT HAS THE INSTITUTIONAL CAPACITY TO SET AND IMPLEMENT REGULATORY STANDARDS**

Stakeholder Local Government
Impact Area Institutional Strength and Commitment

Variables

- Level of substantive involvement by local government in setting of standards relevant to it
- Level of strong environmental units at the local government level, including the presence of technicians trained and practicing in critical environmental areas

Scores

- 1 = Local government has *neither the institutional capacity nor the legislative mandate* to set or enforce regulatory standards
- 2 = Local government has been granted *limited autonomy* for setting regulatory standards. It does not have sufficient trained personnel to establish or implement sound criteria
- 3 = Only a *small proportion* of local governments has the institutional capacity to implement and revise regulatory standards. Although evidence of substantive involvement in setting of standards is scant, it can be identified
- 4 = A *significant minority* (between 1/4 and 1/2) of local government units have qualified and trained environmental experts. These experts are active in setting and adjusting environmental standards
- 5 = Local government units *maintain their own professional cadres* capable of meeting the environmental planning needs at that level

9 ENVIRONMENTAL INFRASTRUCTURE INVESTMENT MEETS NEEDS OF THE POPULACE

Stakeholder Local Government
Impact Area Environmental trade, finance and investment

Variables

- Proportion of municipalities issuing bonds or obtaining bank financing for environmental infrastructure
- Proportion of urban population with access to sanitation and safe water ⁸

Scores

- 1 = Investment in environmental infrastructure has been *grossly inadequate* given the needs of the rural and urban population, with less than ½ of the urban population receiving sanitation and safe water
- 2 = There are *virtually no cases* of municipalities issuing bonds to finance environmental infrastructure Access to sanitation and safe water is at or near 50 percent
- 3 = *Isolated cases can be identified* of municipalities issuing bonds to finance environmental infrastructure Proportion of the urban population with access to sanitation and safe water falls between 70 and 90 percent
- 4 = *Evidence is available* that environmental infrastructure is increasingly being financed through private capital markets rather than government environmental funds Some cases can be identified of municipalities issuing bonds to finance environmental infrastructure investments
- 5 = Local government *regularly issues* bonds to finance environmental infrastructure More than 90 percent of the urban population has access to safe water and sanitation

10 *CONDITIONS ESTABLISHED FOR CITIZENS TO PARTICIPATE IN ENVIRONMENTAL DECISION-MAKING AND PUBLIC OPINION FORMATION*

Stakeholder Citizens
Impact Area Policy, Legal and Regulatory Framework

Variables

- Extent to which laws allow free association, public advocacy and tax exemption of non-governmental organizations
- Extent to which environmental assessment regulations and practice facilitate public participation
- Degree to which the citizenry participates in environmental assessments

Scores

- 1 = The citizenry *does not benefit from a legal structure* which allows it to advocate environmental causes
- 2 = There are *few if any laws which enable* free association, public advocacy and tax exemption of non-governmental organizations. Public participation in environmental assessments may be allowed, but the public has not yet organized sufficiently to take advantage of the assessment process
- 3 = *Laws* concerning free association, public advocacy and tax exemption of non-governmental organizations are being *considered or drafted* by the government, *but have not yet been made official*. Public participation in environmental assessments may occur, but is not embodied in law
- 4 = A satisfactory *legal framework exists* for the pursuit of free association, public advocacy and tax exemption of NGOs concerning environmental issues, although environmentalists are only just beginning to take full advantage of this legal structure
- 5 = The citizenry is *legally and actively engaged* in environmental decision making. Interested environmentalists have full rights to associate and advocate on environmental issues. Public access to environmental information and public participation is established in law

11 *CITIZENS DEMONSTRATE THE CAPACITY TO INFLUENCE DECISIONS CONCERNING THE ENVIRONMENT*

Stakeholder Citizens
Impact Area Institutional Strength and Commitment

Variables

- Strength of public advocacy and policy-oriented NGOs
- Extent and quality of citizen contributions to environmental decision-making⁹
- Number of environmental NGOs per thousand population¹⁰
- Extent to which citizens and NGOs apply information technologies and resources as evidenced in establishment of web sites and use of information accessed from international sources

Scores

- 1 = No more than a *very small number* of real and functioning environmental NGOs can be identified
- 2 = While a *small number* of environmental NGOs and community groups can be identified, they are *considered out of the mainstream by government* and the general population and receive little or no recognition or support from the government
- 3 = While environmental NGOs and citizens groups may have been successful in gaining popular support for some environmental issues, they have been *markedly unsuccessful in translating this into a clear policy agenda* and moving it forward with government or in the media
- 4 = Environmental NGOs and citizens groups have *been able to galvanize a broad cross-section* of the population around at least one environmental issue and advance a well-defined policy agenda on this issue
- 5 = Citizens and NGOs *take full advantage of information technologies and resources* as evidenced in establishment of web sites and use of information accessed from international sources

12 **CITIZENS' GROUPS GENERATE SUFFICIENT FINANCIAL RESOURCES TO SUSTAIN THEMSELVES**

Stakeholder Citizens
Impact Area Environmental trade, finance and investment

Variable

- Proportion of medium-to-large environmental NGOs which are financially self-sustaining without donations or grants from foreign governments

Scores

- 1 = The proportion of environmental NGOs which are financially self-sustaining is *nearly zero*
- 2 = Of the well-funded, active and large environmental NGOs, *few or none* are funded by the contributions of the general public or other domestic sources
- 3 = Evidence exists of *more than 3* important environmental NGOs that have developed a domestic funding base drawing from a broad range of individuals
- 4 = *Half or more of medium-to-large* environmental NGOs are financially self-sustaining without grants or donations from foreign governments
- 5 = *Nearly 100 percent* of environmental NGOs operate without funding from foreign countries

Table 2 Expert Scores for Policy, Legal and Regulatory Framework

	Private Enterprise	Central Government	Local Government	Citizens	Average
Czech Rep	4	4	2	3	3.25
Slovak Rep	3	3	2	3	2.75
Slovenia	3	3	3	3	3
Croatia	3	2	2	2	2.25
Estonia	3	3	2	3	2.75
Turkmenistan	1	2	2	1	1.5
Macedonia	3	3	3	2	2.75
Romania	3	3	3	2	2.75
Belarus	1	2	2	2	1.75
Poland	4	4	3	3	3.5
Latvia	3	3	2	3	2.75
Lithuania	3	3	2	3	2.75
Kazakistan	2	2	2	2	2
Uzbekistan	1	2	2	1	1.5
Georgia	1	1	1	1	1
Bulgaria	3	3	3	3	3
Hungary	4	4	3	3	3.5
Moldova	3	2	2	2	2.25
Ukraine	2	2	2	2	2
Russia	2	2	3	2	2.25
Azerbaijan	1	1	1	1	1
Kyrgyz Rep	2	2	2	2	2
Tajikistan	1	1	1	1	1
Armenia	2	1	2	2	1.75
Albania	1	1	1	1	1
Bosnia	2	1	1	1	1.25

Table 3 Expert Scores for Institutional Strength and Commitment

	Private Enterprise	Central Government	Local Government	Citizens	Average
Czech Rep	4	4	4	4	4
Slovak Rep	3	3	3	3	3
Slovenia	3	3	4	3	3.25
Croatia	3	2	3	2	2.5
Estonia	3	3	3	3	3
Turkmenistan	1	2	2	1	1.5
Macedonia	2	2	3	2	2.25
Romania	2	2	3	2	2.25
Belarus	2	1	3	2	2
Poland	4	4	4	3	3.75
Latvia	3	3	3	3	3
Lithuania	3	3	4	3	3.25
Kazakhstan	2	3	2	2	2.25
Uzbekistan	2	3	2	1	2
Georgia	1	1	2	2	1.5
Bulgaria	2	3	3	3	2.75
Hungary	4	3	4	4	3.75
Moldova	2	2	3	2	2.25
Ukraine	2	3	3	2	2.5
Russia	2	2	3	2	2.25
Azerbaijan	1	1	1	1	1
Kyrgyz Rep	2	3	2	2	2.25
Tajikistan	1	2	1	1	1.25
Armenia	2	2	2	3	2.25
Albania	1	1	2	1	1.25
Bosnia	2	1	1	1	1.25

Table 4 Expert Scores for Environmental Trade, Finance and Investment

	Private Enterprise	Central Government	Local Government	Citizens	Average
Czech Rep	4	3	3	3	3.25
Slovak Rep	3	3	2	2	2.5
Slovenia	4	3	3	2	3
Croatia	2	3	3	2	2.5
Estonia	3	3	3	3	3
Turkmenistan	1	2	1	1	1.25
Macedonia	2	2	2	2	2
Romania	3	2	2	2	2.25
Belarus	1	1	2	1	1.25
Poland	4	3	3	3	3.25
Latvia	3	3	3	2	2.75
Lithuania	3	3	3	3	3
Kazakhstan	2	2	1	2	1.75
Uzbekistan	1	2	1	1	1.25
Georgia	1	1	1	2	1.25
Bulgaria	2	2	3	2	2.25
Hungary	3	3	3	4	3.25
Moldova	2	3	2	1	2
Ukraine	2	3	2	2	2.25
Russia	2	4	2	2	2.5
Azerbaijan	1	1	1	1	1
Kyrgyz Rep	2	2	1	2	1.75
Tajikistan	1	2	1	1	1.25
Armenia	2	2	2	2	2
Albania	1	2	1	1	1.25
Bosnia	2	2	1	1	1.5

4.6 Weighting

An argument might be made for varying weights across different stakeholders or impact areas. If, for example, one were assessing the institutional strength in a country for environmental management, it might be compelling to argue that that country's environmental protection organization (the "central government" stakeholder) exerts a greater influence on the environment than citizen groups. Similarly, if one is assessing the impact of environmental trade, finance and investment on the environment, it might be argued that the private commercial group exerts greater influence than local/municipal government. In spite of the apparent logic of such an approach, allowing for subjective weighting has the disadvantage of adding another level of non-scientific complexity to the ranking methodology. In light of the value of simplicity and transparency in any index development process, equal weights are given to each of the row and column elements in this approach. Thus Hungary's score for environmental "Trade, Finance and Investment" is a simple average of its scores in meeting enabling conditions for each of the four stakeholders. Similarly, Poland's overall score for working with Citizens is a simple average of its scores for providing those citizens with appropriate enabling conditions in the three impact areas of policy environment, institutional strength and trade/investment/finance.

The impact of alternative weighting schemes is likely to be minimal, in light of the following high correlations between the three weights for the countries: the correlation between Policy and Institutions is 0.94, the correlation between Policy and Trade is 0.90, and the correlation between Institutions and Trade is 0.94.

4.7 Replicability of Ranking Exercise

The matrix cells scores used in this ranking are generated with a degree of subjective, although informed, assessment. If subjective assessments are to be used in this ranking exercise of 1997, it begs the question of how a comparable ranking can be carried out in the future. Ultimately, will it be necessary that the same people carry out the ranking exercise each time it is done? In principle, the answer to this question is yes. The more constancy in the team that generates the rankings, the greater the likelihood that the unspoken and unarticulated assumptions will remain constant over time. What is proposed in this report is a *provisional ranking* completed on the basis of expert opinion. To ensure replicability of the exercise over time, USAID might assign a team of experts to review the rankings included here and adjust them as deemed necessary. This internal team should be characterized by two things: they should be experts in the region and they should remain available to the ENI Bureau for ranking efforts in future years.

4.8 Results of Ranking Exercise and Comparison with Other Indices

Results from the ranking exercise are presented in tables 5 and 6 below. A number of observations can be made on the country rankings shown there.

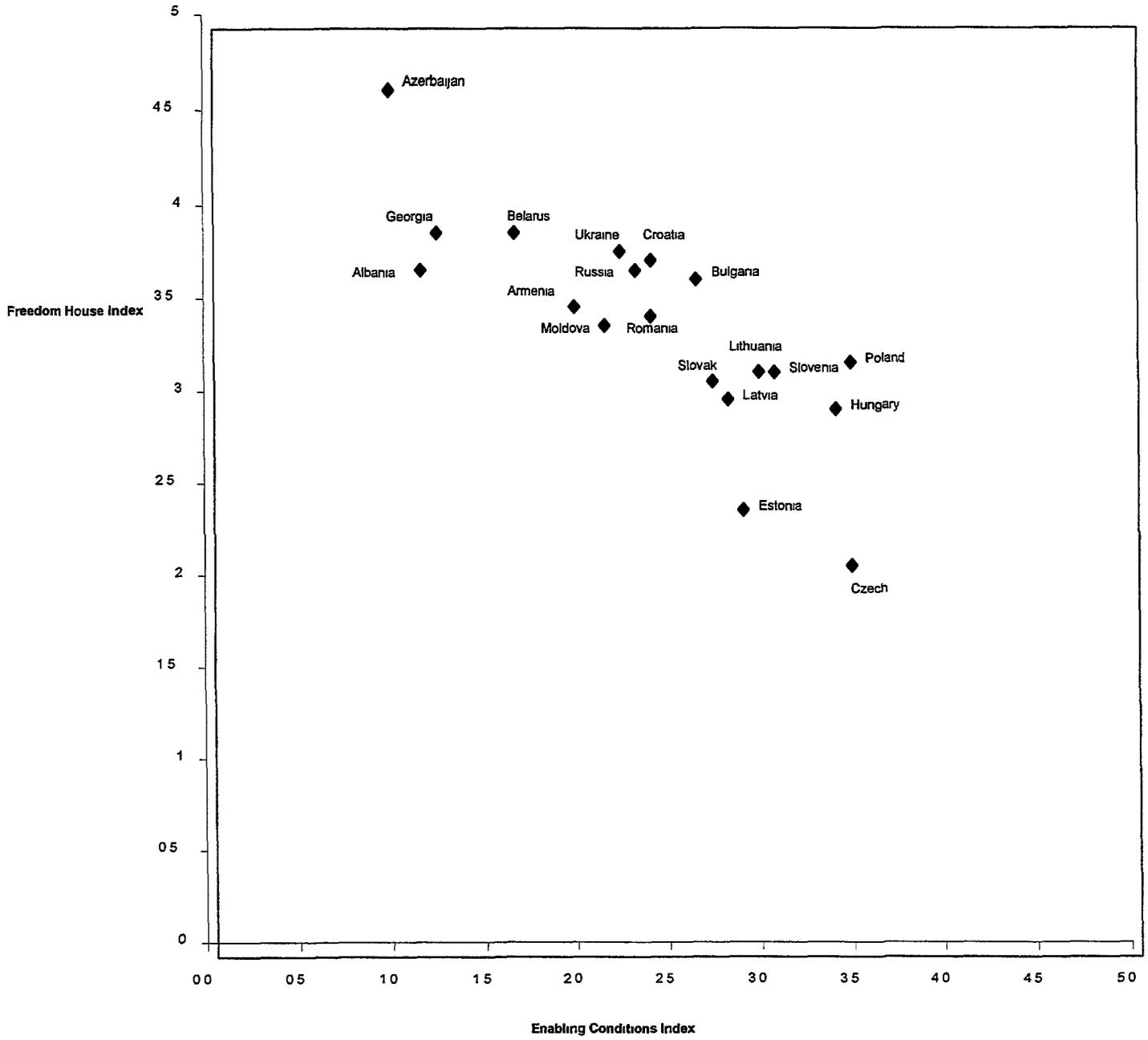
Table 5 Summary Scores and Rank by Impact Area

	Policy, Legal and Regulatory Framework	Institutional Strength and Commitment	Environmental Trade, Finance and Investment	Average	Rank
Poland	3.50	3.75	3.25	3.50	1
Czech Rep	3.25	4.00	3.25	3.50	2
Hungary	3.50	3.75	3.25	3.50	3
Slovenia	3.00	3.25	3.00	3.08	4
Lithuania	2.75	3.25	3.00	3.00	5
Estonia	2.75	3.00	3.00	2.92	6
Latvia	2.75	3.00	2.75	2.83	7
Slovak Rep	2.75	3.00	2.50	2.75	8
Bulgaria	3.00	2.75	2.25	2.67	9
Croatia	2.25	2.50	2.50	2.42	10
Romania	2.75	2.25	2.25	2.42	11
Russia	2.25	2.25	2.50	2.33	12
Macedonia	2.75	2.25	2.00	2.33	13
Ukraine	2.00	2.50	2.25	2.25	14
Moldova	2.25	2.25	2.00	2.17	15
Kyrgyz Rep	2.00	2.25	1.75	2.00	16
Armenia	1.75	2.25	2.00	2.00	17
Kazakstan	2.00	2.25	1.75	2.00	18
Belarus	1.75	2.00	1.25	1.67	19
Uzbekistan	1.50	2.00	1.25	1.58	20
Turkmenistan	1.50	1.50	1.25	1.41	21
Bosnia	1.25	1.25	1.50	1.33	22
Georgia	1.00	1.50	1.25	1.25	23
Tajikistan	1.00	1.25	1.25	1.17	24
Albania	1.00	1.25	1.25	1.17	25
Azerbaijan	1.00	1.00	1.00	1.00	26

The rankings on the basis of impact area and stakeholder are virtually the same. Indeed, the order of rankings between the two lists only changes for Russia and Macedonia. This is not surprising given that equal weightings were used across all impact areas and stakeholders. Were the weighting criteria assumptions used above to be changed, the difference between values for the impact and stakeholder lists would become more marked.

The enabling conditions index shown above and the Freedom House index have a correlation coefficient with a positive value of 0.804¹¹. Since the Freedom House scores are the reverse of the index used here (where 1 indicates more political and economic freedom and 5 indicates less), their scores have been subtracted from 5 and the difference was used to calculate the correlation coefficient. A scatter plot of the Enabling Conditions Index values and the Freedom House Index values is shown in the scatter plot below. The scatter plot makes evident the high degree of correlation between the two indices.

Table 6 Comparison of Country Ranking for CEE/NIS



While comparison to the Freedom House index indicates a high level of association, comparison to a common environmental quality indicator suggests that there is little or no association. The enabling framework ranking results were compared to the Index of Intensity of Environmental Exploitation, developed using the UN's Human Development Index approach (Pfliegner, 1995). This index attempts to capture environmental quality (not underlying conditions) and does so by using a cardinal index built up from the following three indicators: water withdrawal as a percentage of the annual internal renewable water resources of a country, greenhouse gas emissions per capita, and, energy consumption per constant \$ of GDP. Ranking by cardinal index calls for a ranking within each variable category, and then an averaging of rank values for each of the three variables. Raw data for this ranking are shown in table 7 below. The full set of data was only available for 13 of the 26 CEE/NIS countries.

Table 7 Comparison of Ranking Using Index of Environmental Intensity and Enabling Conditions Index

	Water withdrawal as % of renewable water resources	Greenhouse gas emissions per capita ^a	Energy consumption per constant \$ GDP ^b	Rank using Index of Environmental Intensity	Rank using Enabling Conditions Index
Latvia	2	5.53	30	1	6
Hungary	6	5.72	47	2	3
Bulgaria	7	6.08	45	3	8
Slovak Rep	6	7	53	4	7
Belarus	5	9.89	58	5	13
Moldova	29	3.26	59	6	12
Romania	13	5.24	70	7	9
Czech Rep	5	13.04	54	8	2
Estonia	21	13.19	1	9	5
Lithuania	19	5.86	83	10	4
Russia	3	14.11	102	11	10
Poland	22	8.9	69	12	1
Ukraine	40	11.72	105	13	11

Note: Source: *World Resources: A Guide to the Global Environment 1996-97*, WRI 1997. a = per capita carbon dioxide emissions in metric tons, b = measured in megajoules.

As the comparative rankings show, a number of the countries which are ranked highly in terms of enabling conditions (Poland, Lithuania, Czech Republic) receive low rankings on the Environmental Intensity Index ranking. Indeed, the statistical correlation between this Intensity Index and the enabling condition index values generated in this report is -0.132, nearly zero. A number of explanations can be found for the low level of correlation between the two indices. Low levels of resource intensity can be explained as much by low levels of economic activity as by good stewardship of resources. A country's resource use intensity may rise during a period in its economic development, after which intensity drops as consumer preferences change and resource limits are approached. The simple ranking of the Intensity Index will not capture this bell-shaped curve process. Other environmental quality indices, such as the environmental diamonds index,¹² could be expected to show similarly low levels of correlation with the enabling conditions indicator presented in this paper, principally because of the common air and water indicators included in both of them.

¹ Text written in capital letters are the criterion for a given impact area and environmental economic agent

² Local government is defined here to include any government bodies below the level of the central government. It might thus include regional governing authorities within countries

³ "Citizens" here is defined to include citizens acting independently or in any non-governmental and non-private enterprise institution

⁴ Definition of environmental markets is as in Environmental Business International (1996). As defined there, environmental markets include a predetermined subset of industries. For the ENI region, data are only available for the ENI countries of Poland, the Former USSR, the Czech Republic, Hungary and Romania. The size of environmental markets by comparison with GDP for these countries is as follows: Poland (0.60%), Former USSR (0.84%), Czech Republic (0.40%), Hungary, (0.54%), and, Romania (0.47%). Although data on the domestic environmental industry is only available for a small subset of the CEE/NIS countries (see Section III of the report), such coverage could be rapidly expanded through targeted and standardized data collection efforts by an experienced industry data collection organization.

⁵ The policy, legal and regulatory variables for private enterprise emphasize whether a country is meeting its own rules. In ranking central government with respect to the same policy, legal and regulatory impact area, the emphasis is instead on whether the rules themselves are well-conceived and designed.

⁶ Fossil fuel subsidy rates for petroleum products, natural gas and coal have been reviewed and measured for 19 countries in Rajkumar (1996). Total subsidy rates for ENI countries in 1995 include: Russia (31%), Bulgaria (29%), Czech (22%), Hungary (16%), Poland (18%), and, Romania (37%). Publication of subsidy rates for fossil fuels are to become an increasingly regular part of the annual World Development Indicators report.

⁷ For detailed information on whether or not countries are signatories to international conventions and treaties, see Environmental Treaties and Resource Indicators (ENTRI) web-site at <http://sedac.ciesin.org/p1db/p1db-home.html>. This database does not include an assessment of whether the countries are complying with the treaties or not, only whether they have signed them.

⁸ Both of these indicators are used as a proxy for urban environmental infrastructure investment. Urban access to sanitation is defined by the World Bank as "the share of the population served by connections to public sewers or household systems", while access to safe water is defined as "the share of population with reasonable access to an adequate amount of safe water". For ENI countries, this information exists for only a few countries (see Section III).

⁹ This variable should assess whether citizens have contributed substantively and in a well-organized fashion to environmental decision-making on such issues as public and private investment and government delivery of environmental services.

¹⁰ Although the number of environmental-oriented NGOs for the 26 countries of the region is not currently available, it should become a focus of any further improvements to the ranking framework. The NGOs included in this listing should only be those whose goals and objectives explicitly include environmental improvement. For the sake of consistency and a clearer measure, social welfare NGOs should thus be excluded from this count.

¹¹ Only 19 of the 26 CEE/NIS countries are included in the Freedom House rankings.

¹² In fact, when converting the environmental diamonds into single indices, root-mean-squares are used of the environmental diamond components.

SECTION FIVE

The Unfinished Agenda

5 0 Introduction

The previous sections of this report have analyzed the experience of the countries of the ENI region with respect to environmental quality and performance from the perspective of three key groups: government, NGOs, and the private sector. The first three sections reported on regional and sub-regional trends, while the fourth presented detailed information at the country level in each of the three key areas.

This final section is intended to synthesize the previous material into a set of recommendations for use by USAID as it considers its future activity in the region. It is organized into two sub-sections. The first identifies the most critical policies and practices for all three sectors under consideration with respect to future environmental performance, with the specific goal of sustainable development. The second organizes those policies and practices according to the most appropriate needs of the ENI region countries, as identified in Section Four.

5 1 Elements of the Policy Agenda

One useful framework for analyzing critical policies and practices in a manner that encompasses the needs and capacities of all three sectors is derived from environmental economics, and is based on the concept of "willingness to pay." Under central planning, decisions about the allocation of resources were made without reference to individual preferences, which are customarily expressed through participation in various markets. As the transition has proceeded, and markets have developed, individual preferences are playing an increasingly large role in the allocation of all resources, including environmental resources, such as air, water, land, timber, minerals, and fossil fuels, and financial resources for government environmental programs and private investment in pollution abatement and control.

In a market system, a society and its members receive the level of environmental quality that they are willing to pay for. Obviously, various inefficiencies and market failures affect the nature and quantity of the environmental quality received, but the link between willingness to pay and environmental quality in market economies is clear. Therefore, policies and practices that increase "willingness to pay" will increase environmental quality.

The team identified four tested means of altering the willingness to pay of a population: increase incomes, increase public awareness of environmental issues and public access to environmental information, empower citizens to

WILLINGNESS TO PAY: A DEFINITION

The first subsection of Section Five uses the term "willingness to pay" as the organizing principle for the discussion. This term is frequently used by economists, who define it as the amount of money that an individual, a firm, or a group of individuals or firms are prepared to pay for a given type of product or service. In that respect, it is similar to the more familiar economic concept of demand.

Economists often use statistical studies to develop estimates of "willingness to pay" on the part of a given group of people in order to establish the feasibility of making capital investments whose cost will be borne by that group. For example, studies can be conducted in a community to establish peoples' willingness to pay for a new water supply system. The results of such studies allow comparison of the projected cost of the system with the community's willingness to pay for the system.

participate in making key decisions related to the environmental quality enjoyed by their communities, and, enact and enforce environmental laws and regulations. The remainder of section 5.1 presents examples of donor programs that address each of these goals and suggests opportunities for USAID to build on these initiatives. It has been the experience of the organizations making up the study team (and borne out by this analysis) that pursuing policies in the four areas articulated above can also contribute to fostering democratization, deepening market reforms, accelerating economic growth and privatization, and strengthening the development of civil society.

5.1.1 Increasing Incomes

When incomes rise, the willingness of citizens to pay for environmental quality obviously increases, and as a consequence, indicators of improved environmental quality are closely correlated with rising incomes. Conversely, if they are stable or fall, then people are less willing to pay and environmental quality deteriorates. In countries where incomes are rising, which encompasses most of the CEE countries, increasing willingness to pay is likely to manifest itself in a higher demand for environmental goods and services, such as pollution abatement and control equipment, by the private sector, and by the public sector in its role as provider of environmental services such as waste disposal and wastewater projects. As a result, foreign assistance programs operating in these countries can be targeted to facilitating the development of markets for environmental technologies, and the appropriateness of a given country for such a program can be evaluated, in large part, by examining the trend in income levels. Where incomes remain low, and income growth is flat or negative, as it remains in many NIS countries and some CEE countries, such assistance is not likely to be successful.

Increasing incomes are generally correlated with improved access to capital for firms, and development of domestic capital markets, which can help reduce the major constraint to environmental investment described in Section Three – access to capital. As this occurs, private financing for environmental investment can gradually replace public sector environmental funds, which have been a major focus of USAID and other donor activity. Accordingly, assistance in this area can be phased out as private capital markets develop.

5.1.2 Public Access to Information

Increased public awareness of environmental impacts is generally linked to higher willingness to pay for environmental quality, especially at the local and firm level. This finding is especially important in the ENI countries,

where enforcement of environmental laws by governments is relatively weak, as described in Section Three. Where the role of government is limited, pressure from NGOs and citizens can help generate better firm-level environmental performance. Although the NGO sector faces numerous challenges, and information can still

PUBLIC AWARENESS APPROACHES. INFORMATION DISCLOSURE

In cases where government enforcement of environmental laws and regulations is relatively weak, due to limited legal authority or funding, the use of enhanced public access to information and awareness of the environmental impacts of firm-level activities has been an effective strategy for environmental quality. As the study has noted, enforcement in the entire ENI region is weak, for the various reasons articulated in Section Three.

Information disclosure is the central element of increasing public awareness. This includes a number of strategies, such as eco-labeling systems (which disclose information about the environmental impact of a product's production or use, thus allowing consumers to factor these impacts into their purchasing decisions) or pollutant disclosure systems (which allow communities access to data on releases of pollutants into their environments by firms). Such systems have been widely and successfully applied. In Indonesia, for example, the PROKASIH and PROPER programs succeeded in dramatically reducing water pollution loads to river systems through public awareness and disclosure rather than enforcement.

be difficult to obtain, the previous sections of this report did find that the capacity of NGOs is increasing, that there are foreign assistance strategies (such as partnerships with western NGOs) that can increase NGO capacity, and that legal rights of access to information are increasing. These trends can help raise the demand for pollution control and abatement services by firms, and the types of programs listed in the previous subsection can assist in addressing the supply side by increasing the ability of firms to identify and purchase such equipment. As Section Four described, there is a great deal of variance in the capacity of NGOs, and in legal rights of access to information, that can be used to determine appropriate assistance strategies.

5.1.3 Democratization and Decentralization

Another powerful trend that is apparent across the ENI region is decentralization. In many cases, this creates opportunities to increase local control over resource management decisions. This democratization process has been found to increase willingness to pay, so supporting this process can, in the long run, encourage sustainable development. This trend can be seen even in countries which have not seen rising incomes, or strong government environmental agencies, although they may require enabling legislation at the national level. In Romania, this process has led to the development of river basin commissions for water management, while water users' associations have developed in Kazakhstan. Clearly, substantial opportunities for partnerships exist between these nascent institutions in the ENI region and their western counterparts.

5.1.4 Enactment and Enforcement of Environmental Laws

Passing and enforcing environmental laws is a crucial component of fostering willingness to pay for environmental improvements, especially on the part of firms. As described in Section Three, there is a large body of environmental law on the books, across the region. Enforcement, however, is for the most part weak, and especially so in the NIS. In considering this question, the finding in Section Three that most enforcement activities are functions of local or regional governments is important, since it points to these agencies (and less so central governments) as targets of assistance. In addition, assistance to local and regional government can complement the strengthening of local resource decisionmaking bodies, as described above, as well as be supported by community and NGO pressure. In this manner, support to local and regional institutions in all three sectors can offer substantial opportunities for leveraging non-USAID resources.

THE ROLE OF THE PRIVATE SECTOR

During this study, and companion work undertaken by the USAID-funded EPIQ consortium, it became apparent that significant opportunities exist for expanding the role of the private sector in environmental management in both the US and the ENI region. As the transition continues, the role of firms increases in importance, as does their ability to contribute to solutions. However, the EPIQ team's study identified several constraints that should be considered by USAID:

- Firms lack of information about appropriate environmental technologies and environmental management practices, and such information as exists is not widely shared,
- There is limited competition among suppliers,
- US firms are under-represented in the environmental technology markets, and they face significant challenges in entering the ENI market,
- Firms have doubts about appropriateness of foreign technologies for local conditions,
- Environmental business networks are not well developed, and
- The linkages between technology transfer and related public policies are weak

5.2 Implications for ENI Country and Regional Environmental Programming

The cross-cutting ranking of ENI countries based on their “environmental enabling conditions” given in Section Four can be used to derive implications for the programming of environmental assistance to this region. To organize these findings, we define and examine in this section several country sub-groupings. These sub-groupings can be usefully employed to provide guidance to USAID as it seeks to answer questions regarding the directions of and priorities for environmental programming in the region. It seems helpful to examine at least four country groupings, two directly based on the rankings developed in Section Four and another two which are based on other common country characteristics of high importance to environmental programming (see table 1 for a summary of the groupings and associated programming insights)

- **Environmental First Tier** The most progressive countries in terms of their environmental transition and also representing a one-to-one relationship with the so-called “Northern Tier” countries of Eastern Europe (Poland, Hungary, Czech Republic, Slovenia and the Baltic states)
- **Environmental Second Tier** A group of countries in Eastern Europe and Central Asia with weaker environmental enabling conditions scores. This group corresponds closely to the list of countries that are progressing at only a moderate pace in their economic transition (Slovak Republic, Romania, Bulgaria, Croatia, Macedonia, Moldova, Belarus, and the five Central Asian Republics)
- **Resource-oriented Countries** A group of countries whose economic futures are closely tied to natural resources development – especially oil and gas – or which are affected by neighboring resources through pipeline routes and/or barter arrangements (Russia, Armenia, Georgia, Azerbaijan, Turkmenistan, Kazakhstan, Uzbekistan, Tajikistan and the Kyrgyz Republic)
- **Global Climate Change Focus Countries/Region** Three countries (Russia, Ukraine and Poland) and one region (Central Asia) of greatest US interest from the standpoint of cooperative efforts to address global climate change

In the remainder of this report, we further examine the common characteristics of countries within these groupings, identify underlying US interests in providing environmental aid to these countries, and develop implications drawn from this study’s findings for the programming of environmental activities within these countries and the ENI region as a whole

5.2.1 ENI Environmental First Tier Countries

The Environmental First Tier group is comprised of those seven countries which had the highest scores in the ranking exercise (see table 5 in Section Four). There is an unmistakable correlation between the level of environmental enabling conditions and the stage of progress in the economic transition, and this relationship vindicates somewhat current plans to “graduate” these countries from US foreign aid. This group includes all of the so-called Northern Tier countries from which USAID is currently disengaging, including the nations which have been invited to enter negotiations for European Union (EU) accession. These countries are poised to become important trading partners with the US over the next decade, establishing a strong US interest in furthering their sustainable development. Their environmental institutions, whether public or private, are clearly more advanced than those of the other nineteen ENI countries examined by this study. Though their transition paths have differed, they also are viewed as important models by the other ENI countries, and they should be expected to exert increasing leadership in both economic and environmental fields as regional and global economic integration progresses.

Figure 1 Country Groupings and Associated Environmental Programming Opportunities

Country Group	Countries Included	Average Enabling Conditions Score	Current Conditions and Suggested Emphasis for Environmental Programming Suggested Emphasis Areas and Activities
First Tier	Poland, Hungary, Czech Republic, Slovenia, Latvia, Lithuania and Estonia	3.14	Conditions Strong economic transition underway with reasonably capable environmental institutions. Environmental improvements occurring fairly rapidly in these countries, with some looking to joining the EU and others not far behind. Environmental Programming Regional not bilateral assistance warranted in "non-presence" mode. Support environmentally sound private sector investment through strengthening both US-CEE and intra-ENI linkages for environmental information exchange and expanded trade in environmental goods and services.
Second Tier	Slovak Republic, Romania, Bulgaria, Croatia, Macedonia, Moldova, Belarus and the CAR countries	1.98 (2.28 w/o CAR)	Conditions Moderate economic transition underway without strong environmental enabling conditions in place. Environmental Programming Both regional and bilateral programs warranted. country-level support to regional private sector efforts such as for First Tier, support for devolution of environmental management authority to regional and local levels, NGO strengthening for public advocacy and community action. Select countries where non-environmental enabling conditions are strong enough to support establishment of environmental policies and programs.
Resource Oriented	Russia, Central Asian Republics, Armenia, Georgia and Azerbaijan	1.66	Conditions Economies crucially dependent on natural resource sectors, including water, mining, oil and gas, and forestry, capacity to manage foreign investment, inter-state relations and environmental issues in these sectors is limited. Environmental Programming Build country and regional capacity to deal with environmental challenges, inter-state resource conflicts, and foreign investment in these sectors.
Global Climate Change Focus	Resource-oriented countries plus Poland and Ukraine	1.86	Conditions Significant current or potential contributors to greenhouse gas emissions, present opportunities for cooperation through "joint implementation" projects and emissions trading, generally weak environmental institutions to deal with these issues. Environmental Programming Brokering of well-conceived GCC-related projects between the US and these countries while supporting development of viable local institutions to manage such activities in the future. Pilot and rollout models of specific approaches to net reductions of carbon emissions using both grant funding and credit mechanisms.
Special Cases	Albania and Bosnia (see text for additional discussion of Russia and Ukraine)	1.25	Conditions The environmental and political situation in each of these countries precludes them from being grouped in broader categories. Environmental Programming Albania – focus on renewable resources management activities through institution building of NGOs, Bosnia – not yet ready for broader environmental programming.

Within this more advanced group of nations, constraints to future environmental improvements lie not so much in the lack of technical capacity as in limits on the free flow of information about new and established environmental practices from elsewhere in the world. Despite these countries' impending "graduation" from US bilateral development assistance, they should – for at least two very good reasons – continue to be involved in some level of regional engagement to support their environmental transition. They clearly will serve as examples for other ENI states, and they offer an increasingly important market for the US – including commercial trade in environmental goods and services. As their integration with the rest of the ENI region progresses, they may also increasingly serve as windows to other Central and Eastern European nations for US environmental businesses – providing corporate bases and market linkages for regional trade.

USAID's programmatic opportunities lie, therefore, in brokering and facilitating the flow of official and commercial information on environmental management approaches, trade and technologies. Most of this should be led by market forces and driven by direct US-CEE private sector engagement. There is also a potential role for helping government entities, such as municipalities, form communication links with US counterparts to learn more about the organization of private financing for environmental infrastructure and other public-private partnership. Models of assistance developed through the US-Asia Environmental Partnership program (mentioned earlier in this section) – particularly those built on substantial cost-sharing amongst private sector participants – could be usefully adapted to the ENI setting. Results can be measured both in terms of further improvements in select environmental quality indicators and of the volume of environmental trade generated between the US and the countries of this region.

The goal of being able to draw lessons from the ENI Environmental First Tier for application elsewhere in the region further argues for some form of regional partnerships program to include these leading states. If this is to be most productive, however, USAID will need to improve its capacity for cross-regional cooperation and lessons sharing. Specific activities might include intra-ENI exchange programs to take advantage of the demonstration effect offered by the First Tier countries. Given the anticipated lack of USAID presence in these countries, relationships should be established with local host institutions – such as chambers of commerce or trade associations – to help carry out these programs. These arrangements – and related introductions to US counterparts – can initially be supported by cost-shared contracts and grants, but they should evolve over time into self-supporting relationships. Links with the Economics Section and Foreign Commercial Service in the respective US embassies, the US-supported Regional Environmental Center in Budapest and/or the US State Department's regional environmental hub should also be explored and developed where appropriate to facilitate and monitor activities.

5.2.2 ENI Environmental Second Tier Countries

A Second Tier of countries which were given lower scores for their current environmental institutions and other enabling conditions can also be identified. This group coincides fairly closely with the list of countries currently targeted for bilateral environmental assistance by USAID. It includes most of the Eastern European nations not grouped in the First Tier (Slovak Republic, Romania, Bulgaria, Croatia, Macedonia, Moldova, Belarus) as well as the Central Asian nations (Kazakhstan, Kyrgyz Republic, Tajikistan, Turkmenistan and Uzbekistan). Note that we have chosen to deal with Central Asia as a whole. If each republic had been considered separately, Turkmenistan almost certainly would not have been included in this group due to its decidedly weak environmental institutions, and Tajikistan would have been excluded for similar reasons and because of current security constraints. On the other hand, the Russian Federation might well have been added to the list, but we have chosen to deal with this largest and most populous ENI country in a variety of other manners (see below).

The Environmental Second Tier countries are characterized by a slow pace of economic and political reform – and of associated environmental enabling conditions – lagging well behind the First Tier, and in many cases the magnitude of environmental problems they face is greater. There is a clear US interest in supporting their environmentally sound development, because the manner in which they choose to address environmental quality in economic development could well affect the ultimate success of their economic and democratic transitions.

There would appear to be both bilateral and regional environmental assistance opportunities for USAID in most of these countries. Bilateral investments should be centered primarily in those countries in this group which have demonstrated sufficient progress in establishing economic and legal enabling conditions (capital market development, privatization, democratization, price and trade liberalization, and legal system development) to support the further development of sound environmental policies and practices. In some countries (e.g., Belarus or Turkmenistan), the enabling conditions may be so weak as to question the viability of potential environmental assistance investments other than those aimed at establishing a fundamental legal, regulatory and institutional framework.

There are strong arguments for including many of the individual countries within the Second Tier group in broader *regional* programs which would involve the First Tier and are designed to help broker and facilitate the flow of official and commercial information on environmental technologies and management approaches – especially relating to urban and industrial pollution control (see above). Although the Second Tier countries are not as well equipped to take full advantage of commercially-driven exchanges and partnerships, such capacity can be expected to grow rapidly over the next few years. More importantly, these countries can learn valuable lessons from an improved understanding of the recent experience in the First Tier. Access to this knowledge through participation in regional programs which include both groups would be highly beneficial to the Second Tier countries. Other comments made above regarding the anticipated results of regional initiatives and the measurement of their results would also hold for these countries, except that the presence of bilateral USAID offices in Second Tier countries would allow for more direct involvement of the Agency in local programs.

Based on the conditions apparent from this study's ranking exercise – as well as USAID's and other donors' previous experience with environmental assistance in these countries – there appear to be at least three promising avenues for future *bilateral* programming:

- ***Country-level efforts linked to regional programs supporting local and US private sectors in developing new approaches for urban and industrial pollution management*** Though unnecessary in First Tier countries, country nodes for the regional program in Second Tier nations could help establish needed underlying conditions, such as strong Chambers of Commerce and other local institutions to further private sector and market-driven solutions to environmental problems, mini-regions, comprising 2-3 geographically proximate countries with similar needs or shared trans-boundary problems, might also be developed.
- ***Support for the devolution of government environmental management authority to lower levels through the encouragement of integrated federal-local initiatives addressing specific environmental problems*** Examples would include environmental management improvements in a high priority industrial sector or a region of particular importance to the country's economy and/or concerted efforts to reduce the pollution of key rivers or airsheds, counterparts would largely be government entities at the national and sub-national levels.

- **Strengthening non-governmental organizations (NGOs) which carry out public advocacy efforts or assist in the public disclosure of environmental information.** Dissemination of facts concerning the environmental management behavior of firms – whether private or state-owned – has been proven in many countries to have a powerful effect on corporate policies and practices when coupled with even moderate government enforcement of environmental standards and community action, NGO strengthening and public engagement in environmental quality improvements also can make important contributions to the development of democratic institutions in these countries

5 2 3 ENI Resource-Oriented Countries

A significant finding of the study is that many of those countries that are most heavily dependent on natural resources development (or on development of infrastructure related to natural resources of neighboring countries) for their economic growth are also among those with the weakest environmental institutions. It is therefore useful to define and examine a grouping of countries whose economies are crucially dependent on the development of key natural resource sectors, including mining, forestry and especially oil and gas. The countries included in this group are Russia (oil/gas, minerals, forestry), Armenia (oil/gas pipelines, minerals), Georgia (oil/gas pipelines), Azerbaijan (oil/gas), Kazakstan (oil/gas, minerals), Turkmenistan (oil/gas), Uzbekistan (oil/gas, minerals), Kyrgyz Republic (minerals, water/hydropower) and Tajikistan (minerals, water/hydropower).

It would appear that these countries are neither individually nor collectively equipped to wisely handle the rapid development of these natural resource sectors. Nevertheless, they are attracting significant foreign investment – including from the United States – and are counting on the income and foreign exchange earnings from this development to pull their economies out of transition-induced doldrums. US interests relating to environmental assistance in these fields derive from increasing commercial ties and the desire to see the Resource-oriented Countries establish stable and prosperous economies. There also are environmental risks of global significance associated with the development of these natural resources – from depletion of irreplaceable Siberian tiger habitat to the possibility of a catastrophic oil spill on the Caspian Sea. Moreover, inter-state conflicts over some of these natural resources also constitute serious threats to regional security, adding impetus to US aid and diplomacy.

As noted, the current ability of these countries to manage this development in an environmentally sound manner is limited. With this in mind a set of *both bilateral and regional* assistance opportunities can be identified.

- ***Bilateral, well-targeted and location-specific aid for key government agencies – and related private sector entities—responsible for the development of vital natural resource sectors (which can also serve devolution interests)*** Examples would include support to forestry authorities in the Russian Far East, assistance to Russian oil and gas authorities overseeing Siberian development, help for oil and gas authorities in eastern Kazakstan or Turkmenistan (and, if legislation permits, Azerbaijan) struggling with environmental issues along their Caspian Sea shorelines, and assistance to appropriate entities in countries affected by pipeline routes
- ***Regional assistance to sub-groups of these countries (which may link with bilateral efforts) should be based on jointly addressing shared natural resource management issues*** Examples would include support for a common oil spill contingency in the Caspian Sea and/or other efforts to encourage environmentally sound regional approaches to oil and gas development in the trans-Caucasus region, and further efforts to secure a peaceful and mutually beneficial settlement to conflicts over the waters which flow to the Aral Sea through the five Central Asian Republics

A key to the successful programming of both bilateral and regional assistance for this group of countries (as well as the others, for that matter) will lie in the artful integration of activities involving three key parties: governments, the private sector and local communities or NGOs. Guidance may be drawn from past experience with environmental aid in the ENI region as documented by this study.

- **Government.** Support should center on the line ministries responsible for oversight of natural resource sectors, though parallel contacts with and assistance to environmental authorities may also be warranted. Since many of these organizations will be very weak, assistance must be carefully targeted, developing environmental management cells within key ministries that later can serve as models for other departments. Government-based assistance will also serve as the point of contact for coordination with other donors providing related assistance, such as the Global Environmental Facility or the European Union.
- **Private Sector.** The local private sector comprises a mix of state enterprises and newly privatized entities (sometimes organized as joint ventures), and government authorities are no longer the best channel for approaching many of these natural resource companies. Since these firms are grappling with tricky liability questions associated with past pollution related to oil, gas and other mineral extraction, offers to help address these particular concerns may provide openings to some key private sector partners. Many newly privatized companies are now reaching out for advice on how to comply with international norms of environmental and other types of behavior, and they may be approached directly, through emerging trade associations, or through a widening range of foreign – sometimes American – joint venture partners.
- **Community Participation.** It will also be important to obtain community participation in plans for environmentally sound natural resources development. At present, however, there are only a limited number of NGOs with the technical and managerial skills to represent community views and fully participate in technical discussions about alternative natural resource development paths. Further assistance to selected NGOs or other community organizations with such nascent capabilities may produce strong environmental as well as democratic results.

5.2.4 ENI Global Climate Change Focus Countries

USAID has designated Russia, Ukraine, Poland and the region of the five Central Asian Republics as geographic foci in the ENI region for reducing greenhouse gas emissions and mitigating the effects of global climate change (along with six countries and sub-regions in Africa, Asia and Latin America). Seeking cost-effective measures to reduce the underlying causes of this shared global problem defines the US interest in providing such assistance.

However, the findings of this report indicate that the global climate change (GCC) focus countries—with the exception of Poland—still need to make considerable progress in developing the policy framework, institutional strengths and financial flows requisite to managing their environments effectively. As in the case of the Resource-Oriented countries, this raises the question of how to achieve progress in meeting climate change goals in light of fundamental institutional constraints. Once again, assistance to weak organizations must be carefully targeted and should preferably be programmed so that strengthened units can support the GCC work while also serving as models for the development of other similar organizations elsewhere in government, the private sector or the community.

The international framework for addressing the threat of climate change now embodied in the Kyoto Protocol provides an opportunity for the ENI countries to participate in “joint implementation” projects

between local entities and US electrical utilities and other firms seeking greenhouse gas offsets. Based in large part on gross inefficiencies remaining from the Soviet period, it should be significantly cheaper to achieve net reductions in greenhouse gases in the ENI countries compared to costs in the West. This creates a strong incentive for mutually beneficial financial transactions. Russia and Ukraine were the first ENI region countries to join the emissions trading umbrella group at the Kyoto conference, which places them on the list of nations eligible to trade greenhouse gas emissions permits. With USAID help to responsible government entities and cooperating local firms and communities, the ENI GCC Focus Countries and region may well set the example for the rest of the developing world in such transactions. The types of investments envisioned – from improved factory-level or municipal energy efficiency (for reduced carbon emissions) to forest conservation programs (for carbon sequestration) – will have many positive side benefits for these countries: opening new trade relationships, strengthening local environmental financing and management institutions, and directly contributing to improved economic, and natural resources management and environmental efficiency.

5.2.5 ENI Countries of Special Note

The four country groupings delineated above appear to inadequately address programming questions for several ENI countries of special foreign policy significance. While the *Russian Federation* is included in the discussion of both the Resource-Oriented countries and as a focus country for GCC activities, there is no explicit treatment in this study of efforts to more broadly support its environmental transition (such as the USAID ROLL Project). *Ukraine* is included as a GCC focus country, but opportunities for ongoing activities and broader environmental assistance are likewise omitted. Moreover, *Albania* and *Bosnia* entirely slip between the cracks of this four-group framework, since their enabling conditions are too weak to place them even in the Second Tier group and neither is included among the resource-based or GCC focus countries. In the interest of covering the ENI waterfront in search of environmental programming implications, additional comments on these four countries are offered below.

Russian Federation The magnitude of Russia's environmental challenges and the extent to which its environmental, economic and democratic transitions are intertwined may argue for continued bilateral and/or regional support beyond that centered on natural resources or GCC issues. Russia is potentially as large a US trading partner as all of the First Tier countries combined, and it would be prudent to include it in regional private sector partnerships aimed at enhancing US-ENI cooperation in environmental trade and financing. Because of its size and geopolitical importance, it is also recommended that the current bilateral environmental assistance effort be maintained with the dual goals of helping establish the underlying policy and institutional foundations for environmental management while also achieving synergy among three program initiatives: environmentally sound natural resources development (oil/gas and forests), global climate change activities, and enhanced US-Russian trade and investment in environmental goods and services.

Ukraine Like Russia, Ukraine is a country of great geopolitical significance. Under the framework presented above, however, the highest priority for environmental assistance which emerges relates to the country's role in efforts to address global climate change issues. Though its environmental institutions remain weak, it would seem that the potential for mutually beneficial work on environmental trade and investment should at least be explored. Some of these activities could be pursued in the context of GCC work, but Ukraine's participation in broader private sector-oriented regional partnership efforts also should be considered, particularly if there are opportunities for partnerships with more advanced ENI countries such as Poland.

Albania With extremely weak environmental institutions and an economy based largely on agriculture and forestry, Albania more closely resembles many parts of the developing world than the rest of Eastern Europe. Threats to regional stability resulting from recent political turmoil suggest a strong US interest in helping place Albania's economy on a sustainable path. Priorities lie in helping to shape the country's environmentally sound development based on renewable resources management. The currently fragile state of government institutions would seem to dictate a strategy based on work primarily through NGOs and other private interests.

Bosnia Though it is a recipient of enormous levels of international aid meant to stabilize political and social systems, Bosnia does not yet appear ready for inclusion in the types of ENI environmental programming described in this final section of the report. While there are clearly large environmental challenges to address as a consequence of the war, the only related programming that should be considered relates to the provision of basic services such as water supply, sanitation, and energy. As the situation improves, opportunities may arise for work with NGOs on some of the outstanding environmental problems associated with uncontrolled natural resources depletion, pollution and dislocations tied to this nation's recent history of civil strife.

5.3 Concluding Remark Regarding the Role of the Private Sector

Perhaps the most significant cross-cutting implication of the study's findings relates to the need for further attention throughout the ENI region to issues of environmental trade, financing and investment. Although there will remain many circumstances where government-to-government assistance is appropriate, USAID should increasingly look for opportunities to balance public policy and institutional strengthening work with activities tied primarily to strengthening the role of the private sector in improving ENI environmental management. As indicated earlier in this section, such assistance should engage private sector organizations in the ENI region and the US who have a long-term stake in commercially-driven partnerships that will also address environmental problems in the region. A related set of assistance to governments will also be needed to help establish the conditions under which such private sector relationships can develop and flourish.

ANNEX ONE

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ANNEX TWO

Potential Focus Areas for Environmental Policy

Introduction

While the design of environmental policy could legitimately be based on principles of law, equity, ethics, or even religious and political philosophy, given USAID's principal concern with economic development, it would be natural to use policy that draws on the principles of economics. Such policy would be especially useful in the CEE/NIS region where much of the currently poor environmental conditions can be traced to equally poor economic conditions.

Understanding just how these policies can affect or be affected by environmental and economic conditions is an important first step in identifying potentially useful partnership arrangements. Of course, not all policy can be or should be grounded in principles of economics. Governments and international lending agencies have legitimately broader political and social agendas. However, by starting with the economic framework, those making policy decisions will get a clearer picture of the limits of the economic model, just where it may need to be modified, and potential inconsistencies between non-economic environmental objectives and traditional economic objectives.

Policy approaches

Environmental quality can suffer because environmental services often have the characteristic of a "public good." One person's consumption of environmental quality is freely consumed by his or her neighbor. This "free rider" characteristic, shared by other public goods like police and military protection, inevitably means that the good will be under-supplied without the collective action of government. Thus, in most industrialized societies facing environmental problems, the primary role of governmental policy is to increase and satisfy the collective demand for environmental quality and decrease the demand for waste disposal and other input services of the natural environment. Often the increase in environmental quality demand will also be at the expense of the demand for marketed goods and services, a situation that accounts for the contention in much environmental policy. This contention, however, can be greatly mitigated if the government can find an efficient balance between all competing demands since efficiency assures that the overall economic and environmental benefits to society will be at a maximum. Following are some possible policy approaches to achieve this:

(1) Focus on environmental asset services

The traditional method of handling environmental problems, followed in most industrialized countries including the CEE/NIS, is to focus directly on the use and users of the various services of the environment. Thus, one way to increase environmental quality relative to the demand for other environmental and non-environmental services is to decrease the demand for waste disposal through pollution-abatement regulation. As discussed in Section II, pollution-abatement regulation is usually "command and control", "market-based", or a combination of the two.

An indirect method for controlling waste disposal demand is through efforts at technology transfer and education. In certain cases, making polluters aware of newer waste disposal technologies, opportunities for recycling, and changes in production processes can be quite effective.

Policy	Examples	How it works	Comments
Technical assistance programs	Various AID and "partnership" projects	Identification of cheaper abatement technologies eases demand for waste-disposal services	Less effective if sophisticated knowledge and know-how already exists
Environmental education programs	Federal and State programs in the US	Increases demand for environmental quality services	Results are unpredictable but education may be a necessary precondition for any government action

While regulation of the demand for waste disposal services has been the traditional focus of environmental policy, more recently there has been attention directed towards regulating the demand for other services of the natural environment. Some environmental quality services, such as the demand for recreation, conflict with the demand for other environmental quality services, such as life support for endangered species. The demand for recreational services can be weakened through the imposition of user fees - an approach that is gaining popularity even in very poor developing countries. Other environmental services can be regulated as well, such as the demand for raw materials, either through pricing or through outright bans on their use (e.g., logging bans to preserve forests).

Again, like many of the direct controls on waste disposal, direct controls on environmental quality and raw material services assumes honest and effective governmental institutions. Therefore, it may be desirable to initially consider more indirect methods to affect the demand for environmental quality services. Specifically, such efforts as educational programs or programs to strengthen NGOs can be effective ways to increase overall demand for environmental quality services. While the final outcome of such indirect efforts may be highly uncertain, the result may be to improve the climate for more direct policy methods.

(2) Focus on the economy

Because of the interdependence of economic activity, more indirect approaches may be just as powerful a way of dealing with environmental problems as the above, more direct approaches. For example, general policies designed to increase the national income can be expected to also increase the demand for environmental quality relative to the demand for waste disposal since empirical evidence indicates that environmental quality is a "normal" good - a good for which demand increases with increased income. At the same time, the demand for waste disposal often decreases with economic growth as newer, more efficient capital is introduced. It is thus important to consider the full spectrum of policy interventions when approaching environmental problems, not only those that are the conventional concern of environmental agencies, but also those that deal with other policy areas as well.

Often, for example, trade and subsidization policies have more effect on the environment than does environmental policy itself. In the CEE, large amounts of air pollution can be traced to old foundries using inefficient fuels, such as peat. It is unlikely that such technology could survive a completely open market. In the same vein, many countries support an inefficient agriculture through various forms of subsidization. Often these farms are of insufficient scale for optimum efficiency but make up for their size through intensified production that relies on heavy fertilizer and pesticide use.

A more subtle form of subsidization is through the encouragement of infrastructure such as roads. Indeed, road building and fuel subsidies can account for the major share of air pollution problems in urban areas through their effect on vehicle traffic. While this is generally the case in industrialized countries, apparently the pattern is being repeated even in poorer, less developed countries.

While it may be more effective to address environmental problems by focusing on the economy rather than on the environment, per se, it may be more difficult to do so for both analytical and bureaucratic reasons. Analytically, a more general and holistic policy focus requires a way of predicting how changes in the level and mix of economic activity will affect the environment. Such predictions usually must rely on some sort of inter-industry or economy-wide modeling. Building such models requires both data and analytical skills that may be scarce in the CEE/NIS. Bureaucratically, such holistic policy approaches are in conflict with the usual bureaucratic structure that tends to compartmentalize most problems. Cross-cutting solutions that would require changes in, say, transportation policy in order to improve the environment have no bureaucratic advocates.

Economic Policies that Impact Environment

Policy	Examples	How it works	Comments
General economic development	Asian "tigers"	Can increase waste disposal and pollution in the short run but may increase demand for environmental quality in longer run as incomes rise	Historically, economic changes exerts more influence over the environment than does explicit environmental regulation
Zoning	"Greenbelt" buffer around City of London, Paris height restrictions	Limits commercial and industrial activity and their use of waste disposal services	Can increase non-industrial use of waste disposal agriculture and household use through increased use of cars
Joint venture policy	Examples worldwide	Promotes newer and often "cleaner" plants and equipment	Re-engineering costs often make it attractive to implement existing "clean" Western technology in developing country
Opening markets, elimination of employment subsidies	Many examples world wide	Helps eliminate inefficient operations that are often dirty	If open markets are larger, policy could also lead to lower cost pollution abatement equipment
Privatization	CEE/NIS countries	Promotes more efficient and, often, cleaner operations	Efficiency gains may be limited if competitive markets do not exist

(3) Focus on institutions

It should be noted that societal institutions can also be the focus of effective environmental policy. As mentioned above, many of the more direct approaches designed to affect the demand for environmental asset services, whether command and control or more market based, assume honest and well-functioning governmental institutions. Thus, policy efforts that would strengthen these institutions (such as decreasing the number of government officials but greatly increasing their pay) might be very effective.

Indeed, in many circumstances, it might be possible to eliminate the need for regulations if legal and governmental institutions could be strengthened. Specifically, the above discussion assumes that the demand for environmental quality is a public good needing, therefore, governmental response in order to attain an efficient balance between environmental quality services and other environmental asset services. However, this governmental response may not require regulation if it is possible to create a two-party bargaining situation between a polluter and the affected party (such as a local community). In such a situation, the problem could be efficiently resolved through negotiation or, if necessary, the courts. Policies directed towards strengthening the courts and improving the ability of the government to bargain effectively would be warranted.

Institutional Strengthening Policies that Impact Environment

Policy	Examples	How it works	Comments
In-country assistance to environmental management agencies	Various USAID management assistance projects	Transfer of managerial skills from countries with successful environmental programs	Assumes that ex-pat project leaders do, in fact, have environmental management experience
Exchange programs	USEPA, BEA, Census, etc foreign visitor programs	Opportunity for learning-by-doing	Can be successful if programs permit fairly lengthy (e.g., one-year) visits
Assistance to courts	USAID	Creates more opportunities for environmental disputes to be settled without regulation	Effective for those problems where polluter and damaging parties are clearly identified and organized
Assistance to banks or other lending institutions	Various development banks Also, government subsidized pollution bonds in the US	Helps with amortization of investment costs Can effectively lower the capital costs of environmental improvements	Can also lower the capital costs of projects that harm the environment
Enforcement assistance	USAID, USEPA	Provides hardware, monitoring skills, and policing techniques to help achieve effective enforcement	Somewhat analogous to military assistance

Finally, policies that strengthen banking and financial institutions should not be forgotten. The costs, especially the capital costs of regulatory policy can be far more burdensome than necessary if there are poor mechanisms to allow effective annualization of costs. Indeed, empirical studies have shown that for most industrial sectors, the actual annualized capital costs and operating costs of environmental controls is less than 2 percent of sales.¹ However, the required initial investment outlay could greatly exceed the company's usual investment levels. While pollution-capital investment subsidies are, in principle, inefficient, they may be warranted if capital markets are otherwise weak.

¹ These findings are in the following reference: Fianessi, Leonard P and Henry M Peskin 1976 *The Costs to Industries of Meeting the 1977 Provisions of the Water Pollution Control Act Amendments of 1972* a report to the U S Environmental Protection Agency (January) results are consistent with the various EPA reports to Congress (the so-called "Cost of Clean Air and Water Reports ") However, EPA does not ratio their data to production or sales. They did ratio the aggregate total cost numbers to GDP and found the ratio to be between 1 and 2 percent of GDP. Since aggregate production or sales exceeds GDP, the ratios would be even smaller had they used a sales base.

(4) Focus on the environment as pollution recipient

A fourth approach to environmental management is to address environmental problems by taking certain engineering approaches that effectively increase the capacity of the environment to absorb wastes (and therefore provide waste disposal services) or accept other environmental insults without diminishing the capacity to provide other environmental quality services. Thus, rather than taking action against the dumping of sediment into a stream, the government could choose to filter out the sediment through the construction of filtering dams.

While such engineering solutions do nothing to encourage polluters to alter their actions, they can be highly economically inefficient. However, these steps can be justified economically if (a) the engineering "solution" is simply less costly due to economies of scale, or (b) it is impossible to identify and take action against the polluters.

The latter condition is usually obtained when pollution is "imported." Thus, the common practice of liming lakes in Northern Europe can make good sense if there is no other practical way of dealing with the transboundary problem of acid rain.

Policies to Conserve Environmental Assets

Policy	Examples	How it works	Comments
Liming of lakes	Finland (?), Canada (?)	Offsets acidity effects of acid rain	Effectiveness is controversial
In-stream filtering	Hungary(?)	Screens catch suspended sediments and algae	Experimental

ANNEX THREE

Background Documentation on Country Scores

Scores were generated by the EPIQ/IRG and HIID team of experts on the basis of general familiarity with the countries and reference to supporting material. The following paragraphs provide justification of select country scores on the basis of available documents.

UKRAINE

Private Enterprise

Policy Legal and Regulatory Framework

- Fees and fines for the use of natural resources and environmental pollution are among the recent environmental reforms in Ukraine, however, the absence of an adequate mechanism to collect payments and penalties has inhibited effectiveness (freenet kiev ua Ukraine Environment and Economic Reforms)
- Since 1991, industrial production has fallen by 2/3, but despite this decrease overall levels of many pollutants still remains unacceptably high (un kiev ua Habitat and the Human Environment 1996)
- There is no system in place, as of yet, to address environmental liability. Legislation is just now being drafted to allow law suits relating to violation of "environmental rights"

Environmental Trade Finance and Investment

- In Ukraine, environmental problems were intensified by the fact that the re-tooling and re-equipping of enterprises were neglected (BISNIS Environmental Technologies Exports to Ukraine)
- Huge need and potential market for environmental goods and services, however, the Ukraine is considerably behind in terms of pollution control systems installation due to lack of official attention to environmental problems (BISNIS Environmental Technologies Exports to Ukraine)

Central Government

Policy Legal and Regulatory Framework

- Fees and fines for the use of natural resources and environmental pollution are among the recent environmental reforms in Ukraine, however, the *absence of an adequate mechanism to collect payments and penalties has inhibited effectiveness* (freenet kiev ua Ukraine Environment and Economic Reforms)
- Ukraine is a signatory to both the Montreal Protocol and the Climate Change Treaty (freenet kiev ua Ukraine International Programs). Coal industry is heavily reliant on high government subsidies (eia doe gov/emeu/cabs/ukraine.html)

Institutional Strength and Commitment

- Environmental agency at ministry level, environmental protection included in state budget since 1994, and total spending for environmental protection increasing (freenet kiev ua Ukraine Environment and Economic Reforms)

Environmental Trade Finance and Investment

- Favorable tax regime for foreign companies in relation to Russia and Kazakstan (Russian Petroleum Investor, 11/96, p 1)
 - Ministry mulling over draft law on Preferential Treatment of Investment and Other Economic Activities for Implementation of Individual Projects During 1st five years of project work, foreign investors will pay ½ profit tax rate (Russian Petroleum Investor, 11/96, p 1)
- Leadership is creating an investment friendly environment 1996 Foreign Investment Law guarantees equal treatment with local companies (Annual Report on Prospects for Economy)

Local Government

Policy Legal and Regulatory Framework

- Scores for local government in the area of policy, legal and regulatory framework are given the value 2 in light of the following (1) Because standards at central level have only been instituted since 1994, local government activity has probably been minimal, especially in light of the general economic crisis in Ukraine, (2) Ukraine is only just beginning to consider an ecosystem approach to urban development with environmental emphasis This will require eventual coordination of national, local and regional authorities on environmental issues, but there is no evidence that this has occurred (Habitat & Human Env 1996 Physical Environment, p 1)

Environmental Trade Finance and Investment

- There are serious water quality problems in the regions along the Dnipro basin, which supplies more than 2/3 of the country's needs (un kiev ua Habitat and the Human Environment 1996) In Lviv, the distribution system has loss rates of at least 30% due to leaks, and most families receive water for only six hours a day (un kiev ua Habitat and the Human Environment 1996)

Citizens

Policy Legal and Regulatory Framework

According to Nations in Transit, citizens enjoy a relatively high level of freedom Yet, evidence suggests that very few people participate in environmental decision-making It seems that this is greatly influenced by economic factors The environment is simply not a priority for most citizens

Institutional Strength and Commitment

Only 6 Ukrainian NGOs have web sites This suggests that NGOs are beginning to form and do not represent a strong unit (NIS Environmental Organizations, p 3)

Very few people participate in environmental decision-making (Nations in Transit)

RUSSIA

Private Enterprise

Policy Legal and Regulatory Framework

Maximum allowable concentration standards for air, water and soil pollutants as well as solid waste Maximum permissible levels of emissions for enterprises Standards for emissions from mobile sources (EDP #21)

- Although Russia has relatively stringent environmental standards and project requirements, these were effectively enforced only during a brief period in 1990-1991 This led to closing of many plants, and compounded the economic decline The plants were quickly reopened and

- finances/payments suspended (ADL, p 7)
- There is a general lack of environmental regulatory enforcement (Arthur D Little document, p 6)
Monitoring and enforcement considered “not comprehensive” (2K + survey)
Firms report that emissions are based on calculations rather than actual measurement Even in Moscow, where monitoring is the most comprehensive, companies are inspected 2-3 times a year at most (EDP#21)
- Industrial collapse has compelled domestic enterprises to assign environmental expenditures and investments a low priority (ADL, p 6)
- Few enterprises can afford the capital investments required to reduce pollution, even though there may be potential tax and operating cost savings (ADL, p 6)
- Many companies are not in compliance with MPLs Most, however, are in compliance with temporary pollution levels due to decreases in production and the arbitrary manner in which TPLs are established (EDP#15)
- Companies have no incentive to reduce emissions below MPLs (EDP#15)
- Individuals/firms who have been adversely affected by pollution are generally not able or successful in seeking damages through tort actions (2K + survey)
- Independence of judiciary if threatened by chronic under-funding, and its subordinate position in relation to the executive and the legislature (Nations in Transit, p 321)
- Financial and legislative constraints upon the judiciary mean that it is not fully independent of other branches of government (Nations, p 321)
- Non-existent or limited inventory of past environmental damages, limited use of environmental audits for state enterprises that are being privatized, no known policy requiring state to assume liability for past pollution after an enterprise is privatized (2K + survey)
- Law on Environmental Protection calls for *noncompulsory* insurance against environmental accidents, however this provision is considered ineffectual due to economic difficulties, etc (Env Tech Article p 10)

Institutional Strength and Commitment

There are currently 89 regional certification bodies and 600 local certification centers in Russia (ADF, p 109)

Law on Environmental Protection requires that all new projects need to go through an environmental certification procedure, among issues to be assessed are items such as expected industrial activity impact on the environment

HIID personnel are not aware of any enterprises currently pursuing ISO 14000 or other EMS programs

Environmental Trade Finance and Investment

- Demand for environmental equipment in Russia is low (ADL, p 24)
Local capacity to produce some pollution abatement equipment exists Anecdotal data suggests again that due to lack of demand, trade is minimal
- Environmental issues are generally not included as a criteria for determining loans (2K + survey)

Central Government

Policy Legal and Regulatory Framework

- There is general lack of environmental regulatory enforcement (Arthur D Little document, p 6)
- Development of new, more effective, environmental regulation has so far proved unachievable (ADL, p 7)
- Monitoring and enforcement considered “not comprehensive” (2K + survey)

Firms report that emissions are based on calculations rather than actual measurement. Even in Moscow, where monitoring is the most comprehensive, companies are inspected at most 2-3 times/year (EDP#21)

Institutional Strength and Commitment

- Ministry of Environment downgraded to "committee"
- Budgets for environmental agencies cut significantly in 1992 (ADL)
- Limited interaction between environmental agencies and other branches of government (OECD)

Environmental Trade Finance and Investment

- Funding for environmental investment comes primarily from the Russian Federal Budget, Regional Budgets, *private companies*, and Environmental Funds
- EBRD foreign investment rating = 4 out of 5

Local Government

Policy Legal and Regulatory Framework

- Local government is permitted to take measures to improve environmental quality, however they are limited by a number of factors including small budgets, inadequate staffing, and constraints on their jurisdiction (OECD)
 - Public opinion has not generated pressure on the government to improve environmental quality
 - No strong tradition of environmental awareness or public participation in environmental issues due to past practices of screening environmental reports and difficulty in getting data which is now open for public review. However, HIID resident advisor Bruce Larson's rating of the influence of local environmental agencies was a 5 out of 7
- Some examples of regional compacts, including inter-oblast environmental councils (OECD)

Institutional Strength and Commitment

- In the impact area of institutional strength and commitment, Russia's local government is given the score 3 because of the limited effectiveness of local environmental authorities due to inadequate budgeting and staff. In addition, the OECD cites the relationship between federal and regional level authorities as in need of improvement. Their recommendations suggest that sub-national units do not have adequate autonomy in developing/implementing policy and environmental management

Environmental Trade Finance and Investment

The most pressing public health issue in Russia is need for clean drinking water (ADL)
Over 1/2 of the Russian population currently drinks poor quality water (ADL)

Citizens

Policy Legal and Regulatory Framework

Nations in Transit report gives Russia 4 out of 5 for civil liberties (public advocacy, etc)

- There are tax exemption policies for organizations providing environmental services (EDP#15)
- Public participation in developing environmental regulations approaches ZERO (2K + survey)
- NGOs are not involved in monitoring or enforcement of environmental regulations (2K+ survey)

Institutional Strength and Commitment

- About 10 Russian environmental NGOs are accessible on the world wide web

- NIS-EEP encouraging activity in NGO capacity building

BULGARIA

Private Enterprise

Policy Legal and Regulatory Framework

- EMISSIONS standards exist, and in many cases are more rigorous and taxing than those in the EU and other western countries, however enforcement is incomprehensive and ineffective

Due to the problem of enforcement, firms are generally not in compliance with environmental standards

Judicial due process is not well established To Paul's knowledge there have been no environmental law suits (either class action or tort cases) in Bulgaria Suggests that even if there is a process for pursuing such suits, there are major obstacles that obviate it

- State assumes liability for all privatized enterprises
- Environmental audits are conducted at some sites undergoing privatization

Institutional Strength and Commitment

In general, technologies and processes have not changed over the course of economic transition Thus, the overall decrease in industrial activity has corresponded to an improvement in BOD as well as other water quality parameters Paul is aware of a few companies that have implemented pollution control measures to address water pollution and cited gradual improvements in municipal waste water treatment

Environmental Trade Finance and Investment

This variable was changed from a 3 to a 2 based on information from Paul Dax May want to reconsider based on new scoring definitions and information below

Demand for environmental services and equipment is increasing US exports of these goods and services expected to exceed \$3.5 million in 1995 (BISNIS Environmental Products and Services)

Central Government

Policy Legal and Regulatory Framework

Revenues from pollution fines are minimal (BISNIS Environmental Products and Services)

Enforcement is incomprehensive and ineffective (2K + survey)

Environmental Protection Act based on polluters pay principle, pollution prevention and access to information (EU approximation)

Institutional Strength and Commitment

- Agency is at the ministry level
- Domestic environmental consulting firms exist, however they are few and far between (2K + survey)
- The budget for the Ministry of Environment has remained relatively constant since 1994

Environmental Trade Finance and Investment

- Bulgaria does not levy import duties on pollution control equipment (BISNIS Environmental Products and Services)
- International funding for environmental projects is providing much needed funds for environmental

imports and investments (BISNIS Environmental Products and Services)

Local Government

Institutional Strength and Commitment

- Local environmental agencies are not at all influential (2K+ survey)
- Control, monitoring and protection mainly performed by the 16 regional environmental inspection offices (EU approximation report)

At the local level, public participation can be substantial. In some towns, local ecological inspectors have the right to discover, explore, and document violation of environmental regulations and report to the mayor, who can sanction the violators (REC NGO Report)

Environmental Trade Finance and Investment

- Only ¼ of sewage plants in Bulgaria have effective purification systems (BISNIS environmental conditions in Central Europe)

Citizens

Policy Legal and Regulatory Framework

Environmental Protection Act is based on the polluters pay principle, pollution prevention and access to information (EU approximation)

- Citizens, as individuals or as a group, have the right of free association, right to a healthy environment, right of information, right of peaceful and unarmed assembly, and the right to lodge petitions and complaints (REC NGO Report)

Institutional Strength and Commitment

- Different generations of NGOs have developed, with some more active politically, while others are engaged in more traditional NGO activities such as nature conservation and education work. There are a few nationally and internationally active NGOs as well as many small NGO groups specializing in local environmental problems who work closely with municipal governments and local communities
- Relations among different NGOs are not very structured
- There are no regular forums to exchange opinions or to organize common actions
- The overall importance of NGO contribution is not generally recognized

Environmental Trade Finance and Investment

- Funding for public participation activities and NGO Projects mainly comes from the national and local ecofunds and foreign NGOs, institutions, foundations such as the REC, the Institute for Sustainable Communities and the USAID

TURKMENISTAN**Comments from HIID resident advisor in CAR**

There has been little noticeable environmental improvement, especially in such key areas as water management. Maintaining irrigated agriculture in a desert requires a keen appreciation of the environmental cost of choices, very little of which is evident. The environmental Ministry remains relatively weak compared to other institutions (e.g., for water management and oil and gas development). As noted above, the new Law on Hydrocarbons has opened opportunities which are being tentatively pursued and further support of these activities should be a priority for developing environmental policy and investment in future.

The generally low level of scores (revised at averages of 1.5/1.5/1.25) reflects the relatively underdeveloped state of environmental policy and infrastructure. Very strong and highly centralized government has made some key basic strides of late (notably working on the environmental provisions of the Law on Hydrocarbons), which will affect private enterprises (notably foreign investors) ability and willingness to pursue environmental improvements in that key sector. Weak local government and low levels of (open and voluntary) public participation are general characteristics of the country, not unique to environment as a sector. The ~1.5 overall average reflects weak institutional opportunities for developing environmental policies and actions, rather than lack of recognition of the problems and the need for reforms.

Private Enterprise***Policy Legal and Regulatory Framework***

- There are currently no measures being taken to reduce gas or oxides emitted into the air (BISNIS Environmental Technology Exports)

Environmental Trade Finance and Investment

- Market for environmental goods and services is small by international measures (BISNIS Environmental Technology Exports)

Central Government***Policy Legal and Regulatory Framework***

- There are currently no measures being taken to reduce gas or oxides emitted into the air (BISNIS Environmental Technology Exports)

Institutional Strength and Commitment

- Agency is at the ministry level

Environmental Trade Finance and Investment

- Currency is non-convertible

Local Government***Environmental Trade Finance and Investment***

- Less than 50% of the population has access to potable water in urban areas, and in rural areas that figure falls to less than 20%

UZBEKISTAN

Comments from HIID resident advisor in CAR

With an overall average of ~1.6 (1.5/2/1.25), Uzbekistan lies below Kazakhstan and above Turkmenistan. Again, the pattern of scores is revealing of the actual pattern of progress and barriers, with the highest levels for institutional strength and commitment and the lowest for trade, finance and investment. The policy, legal and regulatory framework in Uzbekistan has improved in the last few years, but there is significant basic work that remains to be done to ensure an adequate framework. Institutional strength and commitment is relatively higher than other areas, although the extent of centralization of decision-making represents a potential problem in realizing the decentralized forms of commitment (e.g., in firms and NGOs). The low value for trade/finance/investment reflects both overarching trade and investment problems not specific to environment (e.g., the current difficulties with currency controls) and a generally low level of budgetary commitment to environmental projects.

- As in the other countries of the region, significant positive steps have been taken over the last few years on environmental improvement, but the situation is still just beginning to improve and could slip back. New legislation and regulations (e.g., Clean Air Law, regulations on pollution charges, EIA procedures) are now or soon will be in place. Capacity for implementation (including finance and investment in projects) needs to be strengthened. This is beginning, both at the central and regional levels, through the Uzbekistan NEAP and NEH (Health) AP processes, but ultimate success will depend on the ability of these mechanisms to identify and realize specific projects, including those designed to ensure incentives for private investors to include emissions reductions in their activities. The issues for finance/trade/investment are clouded at present by the general problems for realizing investments posed by the current currency regime. This is reflective of a still-high degree of government regulation and control over economic activity. As pressure increases for change in this regime, opportunities will be created for using (and improving) the existing level of capacity and commitment to speed up the environmental policy reform process.
- Water management issues (especially decentralizing irrigation management and introducing more effective pricing) are very important at the national level and only changes in high-level commitment (in this top-down system) will offer real opportunities. But these, too, may be forthcoming.

Central Government

Institutional Strength and Commitment

State Committee for Nature Protection (www.soros.org/uzbkstan/uzbkgoive.html) The State Committee for Nature Protection of the Republic of Uzbekistan is the special authority and coordinating body responsible for the implementation of state control and management of environment, use and reproduction of natural resources, and development of environmental policy.

Environmental Trade Finance and Investment

Investment Barriers Uzbekistan has a very liberal investment code which allows for, among other things, free and full repatriation of profits and tax holidays of from two to five years, depending upon the type of investment. However, in practice, negotiating and registering a joint venture is a cumbersome process that requires the approval of numerous government agencies and (usually) approval at the highest levels of the government. The registration process alone can take 3-6 months, but hundreds of foreign companies have completed it. Repatriation of funds is complicated by the lack of foreign exchange in the country.

Citizens

Institutional Strength and Commitment

Uzbekistan's score for citizens in the impact area of institutional strength and commitment is 1 for the following reasons (1) Development of NGOs has just begun at the community and local level and there are no NGOs with a national presence and focus (Central Asia Environments in Transition, p 27), (2) There is a historical disregard for environmental concerns, (3) Information about environmental problems is inaccessible and poorly organized (Central Asia Environments in Transition, p 27,28), (4) Regional economies are weak, unstable and poorly organized while the present process is a weak and unstable transition to democracy (Central Asia Environments in Transition, p 27,28)

TAJKISTAN

Comments from HHD resident advisor in CAR

- The lowest overall average ~1.2 (1/1.25/1.25) for countries in the region is simply a reflection of the serious difficulties of conducting any policy in a country ravaged by civil war and general political upheaval. It is a clear indication that the environment suffers significantly in conditions of political and social disorder. There is little scope for the array of policy instruments under consideration here in such circumstances. However, once there is a greater degree of political stability, it will be possible to support and promote initial activities in the environment, over the same range of issues (water management, pollution reduction, health impacts, land/habitat degradation) as in all the other countries of the region. Even with almost no effective policy apparatus available (see remarks on question 1 above), the country has tried to address some of its key environmental problems. It has been taking part in regional negotiations on water management on the Amu and Syr Darya and in regional environmental meetings (e.g., of the Sustainable Development Committee). In terms of internal environmental policy changes, there is little information, as well as little involvement.

Private Enterprise

Policy Legal and Regulatory Framework

- While industrial production has decreased, the generally poor quality of pollution control devices and equipment has steadily deteriorated due to neglect. Air pollution has also been aggravated by the open burning of leaves and domestic garbage (UNDP Human Development Report 1996). It was difficult to establish the current status of air pollution as monitoring stations were not in operation in 1995 due to lack of trained staff, supplies and materials (UNDP Human Development Report 1996).

Central Government

Environmental Trade Finance and Investment

- **Foreign Investment and Trade Environment** The Tajik Government welcomes foreign investment, and Tajikistan offers genuine opportunities for those willing to consider innovative forms of financing for trade and investment which usually involve significant risk. Numerous barriers to U S exports and trade are more a result of geography and the general economic crisis than any deliberate targeting of U S goods and services that are highly regarded and desired in the country. Tajikistan's geographical isolation, devastated economy and, most importantly, lack of currency, largely crimp its ability to trade effectively, even with neighboring NIS states. Great interest in U S products is hindered by the lack of banking transfers or cash payments with which to purchase them. Yet another contributing factor is a business culture like that throughout the NIS, which emphasizes personal contacts over competitive bidding, a concept that American companies are frequently slow to acknowledge. In general, legislation encourages foreign investment, but contradictory decrees and a newly expanded tax burden make doing business in Tajikistan a labyrinthine process (BISNIS)

Investment Barriers - There are difficulties with repatriation of profits and capital, due to a lack of legislation protecting foreign profits, currency convertibility problems, and prohibition on land ownership (only leases are allowed). Foreign investors have equal access to government contracts, although the Bilateral Investment Treaty between Tajikistan and the U S is still in the process of negotiation (BISNIS)

Local Government

Policy Legal and Regulatory Framework

While industrial production has decreased, the generally poor quality of pollution control devices and equipment has steadily deteriorated due to neglect. Air pollution has also been aggravated by the open burning of leaves and domestic garbage.

- It has been difficult to establish the current status of air pollution as monitoring stations were not in operation in 1995 due to lack of trained staff, supplies and materials (UNDP Human Development Report 1996)

Environmental Trade Finance and Investment

Only 60% of the total population in 1992 had access to purified tap water. Even then, the quality of tap water often failed to meet acceptable standards.

KYRGYZ REPUBLIC

Comments from HIID resident advisor in CAR

Kyrgyzstan shows an identical level and pattern of values as Kazakstan, with an overall average of 2 (2 / 2 25 / 1 75). Commitment and institutional strength has been significantly strengthened over the last few years, notably with the establishment of a Ministry of Environment as an initial step in NEAP implementation. Still, as in Kazakstan, the changes need specific and careful further support to ensure that their real potential is realized and self-sustaining. The policy and regulatory framework has improved on paper, with similar areas for continued change needed (such as Environmental Funds, pollution charges, etc.). Implementation remains a key block as capacity is weak, budget support remains low, and there are still substantial needs for training and skills transfer.

The realization of projects under the priority areas proposed in the (World Bank financed, IDA condition) NEAP in November 1995 has been slow and not widespread. Nevertheless, the existence of the priorities is a major plus. Also, Kyrgyzstan has been a leader in moving for regional water (and energy) management agreements, given its major existing and potential hydro power capacity. Again, developments in these areas will offer more opportunities over the coming years to strengthen the weaker areas of environmental policy.

Most of the main developments in environmental policy in recent years have been linked with the NEAP process and document. As noted above, the Kyrgyz NEAP was a World Bank condition for its IDA status. What this has meant in the end is that while the initial document was produced quickly (by mid-1995) and contained a reasonable set of well-defined priority sectors and projects, realization has been slow. This has been largely because of the relatively weak support institutions and may also simply reflect overly optimistic expectations. The Ministry of the Environment still has substantial training and capacity building needs, and many of the projects identified need to be developed further (in terms of a detailed project analysis) before implementation can follow.

- The regional (Syr Darya, in particular, Toktogul cascade) water management activities are related to key priority NEAP activities and have moved forward. The ability to support further developments in water and energy management policy (e.g. with national level pricing analyses and recommendations and various institutional reforms related to privatization both of agriculture and electricity) will offer key methods to support all areas of environmental policy (including trade and finance) development.

Private Enterprise

Environmental Trade Finance and Investment

- Investment to improve environmental compliance is down.

Central Government

Environmental Trade Finance and Investment

Rapid institutional reforms and a reasonable tax regime favoring foreign investment have been implemented.

The currency has been remarkably stable through recent years and is freely convertible.

Citizens

Policy, Legal and Regulatory Framework

Citizens' role in the policy, legal and regulatory framework in this country is given a score of 1 on the grounds that the ADB Report cites a dire need to increase public awareness and create an environmental consciousness. The score for citizens in the area of institutional strength and commitment is also 1 because of the same report.

LATVIA

Private Enterprise

Policy Legal and Regulatory Framework

Civil code is indirectly applicable to environmental protection through the general rules of liability (EU approximation report).

Penalties for non-compliance can be levied administratively, however if the penalties are

challenged by enterprise they have the right to a judicial review (EDP #23)

Central Government

Policy Legal and Regulatory Framework

- Pollution permits and taxes are a central part of Latvian environmental policy
 - It is not clear that enterprise reported pollution amounts reflect reality There is little on-line monitoring equipment at these enterprises and methods used to estimate pollution levels are out of date Inspection capabilities/resources of environmental agencies are in need of improvement
 - Ambient standards need to be revised
 - Latvia has joined several international conventions, the requirements of which are also included in normative acts
- The enforcement problem faced by REBs is a difficult one For example, in Riga, REB is responsible for monitoring 940 stationary sources with only 27 full-time inspectors There is a similar situation in Daugavpils

Institutional Strength and Commitment

- The Ministry of Environmental Protection and Regional Development has a well-developed system of subordinate institutions

Environmental Trade Finance and Investment

The Latvian government is actively trying to encourage foreign direct investment Under the 1991 Investment Law, the laws of the Republic of Latvia apply equally to domestic and foreign investors Amendments to the Investment Law passed in 1996 and removed virtually all restrictions on foreign investment However, foreigners are still prohibited from controlling basic timber industries Latvia does not restrict the repatriation of profits In January, 1995 the United States and Latvia signed an agreement on mutual protection of investments The agreement was ratified by the U S Senate in summer 1996 and went into effect on December 26, 1996

Local Government

Policy Legal and Regulatory Framework

- Law on environmental protection says environmental quality standards are to be determined and monitored by REBs (10 in Latvia)

Institutional Strength and Commitment

- Law on environmental protection says environmental quality standards are to be determined and monitored by REBs (10 in Latvia)

Environmental Trade Finance and Investment

- Approximately 65% of municipal wastewater is treated Construction of more treatment plants in urban centers is planned (EDP#23)
Program 800+ in place to improve water quality in more rural Latvian towns (Ready report)

Citizens

Policy Legal and Regulatory Framework

Presently, there is neither a law nor institution that could perform EIAs However, there is an act related to state ecological expertise, in which society has the right to express its point of view (EU

Accession report)

In practice, however, it is difficult to access information

- There is an act on access to environmental information giving citizens and public organizations the right to receive full and true information on environmental parameters
- Citizens have the right to free association in organizations and the right to free assembly

Institutional Strength and Commitment

- As far back as the 1960's, citizens were active in protesting against building which would harm the environment In 1987, The Environmental Protection Club was formed There are several other professional environmental NGOs, as well as groups and clubs, involved in international cooperation
- There is cooperation among NGOs, GOs, local governments, local communities, business organizations, and academic experts in organizing workshops and seminars
- However, in general, cooperation between NGOs is not very regular
- Cooperation between the government, NGOs and citizens is based on personal contacts The MoE, the state minister in particular is willing to listen to many NGO problems

Environmental Trade Finance and Investment

- Funding for public participation and NGO activities mainly comes from foreign NGOs, institutions and foundations, rather than from national and local funds

ALBANIA

Private Enterprise

Policy Legal and Regulatory Framework

- The CEP is responsible for environmental law enforcement in the whole country and has the right to fine companies that do not meet their duties In practice, however, hardly any measures have been taken against companies or individuals that have broken the law (REC Strategic Environmental Issues, p 5)

Institutional Strength and Commitment

- Due to non-existing cleaning facilities in most of the industrial enterprises, all kinds of toxic gases are emitted But, due to the economic recession and consequent closing down of factories, industrial air pollution has decreased and is not such an important issue as it used to be (REC Report on a Visit to Albania, p 1)
- According to World Bank data, the five main industrial factories in Albania lack or do not use the most elementary precaution to minimize water pollution and to avoid damages to the environment and human health (REC Report on a Visit to Albania, p 1)

Environmental Trade Finance and Investment

- Large enterprises that have not been closed down are mostly still state property These enterprises are facing financial difficulties and are not able (or sometimes not willing) to invest in the environment (Albania Strategic Environmental Issues, p 1)
- It seems that new enterprises are not interested in environmental investments as well The motivations for foreign companies to start in Albania may be related to the lax environmental requirements (Albania Strategic Environmental Issues, p 1)
- There are no financial solutions for the management of past pollution in Albania Newly

established industries cannot be charged for past pollution. Albania is dependent on foreign assistance and investments for major environmental protection projects, but western assistance has mainly gone towards carrying out studies (Albania Strategic Environmental Issues, p 7)

Central Government

Policy Legal and Regulatory Framework

- With the help of the World Bank, a national Environmental Strategy was developed, but it has not yet been adopted by the government. A framework law on environmental protection was recently passed by the government. A law on hazardous waste has been drafted and a law on environmental impact assessment is in preparation (REC Report on a Visit to Albania, p 3)
- The CEP wants to develop policy according to the "polluter pays" principle and will focus on the management of past pollution, prevention of new pollution and raising of public awareness. However, because of the very limited financial resources of the CEP, the formation of environmental policy is dependent on external funding and can be characterized as ad-hoc policy (Albania Strategic Environmental Issues, p 4)

Institutional Strength and Commitment

In Albania, the Committee for Environmental Protection and Preservation is responsible for environmental issues. It is an independent committee within the Ministry of Health and Environment. The committee has seven professional members and a budget (in 1992) of 10,000 USD (REC A Report on a Visit to Albania, p 3)

- In order for the Committee to have much impact, it would need to be expanded and given more authority. It is reported that this would only be possible if it were to be made independent of the Ministry of Health (Albania Strategic Environmental Issues, p 4)

Environmental Trade Finance and Investment

The climate for foreign investment is just now becoming favorable. Foreign investors are attracted by the Albanian government's plan to build up the country's tourism industry. The development of tourism includes a potential risk for damaging valuable nature areas in the future (REC Strategic Environmental Issues, vol 2, Albania, p 2)

Local Government

Policy Legal and Regulatory Framework

- The development of regional and local structures is needed. It is reported that regional and local authorities do not currently have any responsibility with respect to the environment. In relation to this, the parliament will probably approve the employment of 35 more experts that will act as Environmental Inspectors at the district level (Albania Strategic Environmental Issues, p 4)

Institutional Strength and Commitment

Waste is an everyday problem, particularly in larger cities. Public services are not able to deal with the increased amount of wastes, so that waste is just dumped on the street. In rural areas there is no waste collection system at all (REC Report on a Visit to Albania, p 2)

- Deforestation is a priority environmental issue. Estimates are made that 80 to 90% of Albanian households rely on wood as fuel. Wide-scale woodcutting is resulting in deforestation (Albania Strategic Environmental Issues, p 4)

Environmental Trade Finance and Investment

- Bacteriological pollution, partly caused by a leaking water distribution system, is a problem in major cities. Also, sewage treatment facilities are non-existent in Albania. Solid waste and waste water is discharged untreated into rivers, lakes or the sea (REC Report on a Visit to Albania, p 1)

Citizens

Policy Legal and Regulatory Framework

- Although in theory people can freely participate in NGO activities, in practice, this is sometimes difficult due to intervention by police and authorities. Also, there is still considerable fear of reprisal to even a mild protest such as a letter to a member of Parliament (REC Status of Public Participation, p 1)
- The constitutional laws do not provide any specific rights for public participation in national government decision making, and the legal framework establishes virtually no formal opportunities for public participation (REC Status of Public Participation, p 2)

Institutional Strength and Commitment

As many people in Albania are homeless, unemployed, and live in poverty conditions, it is understandable that the environment is not a priority issue among the population. The environmental awareness of the public can be described as very low (REC Strategic Environmental Issues, vol 2, Albania, p 2)

- The role of NGOs in the environmental decision-making process is very limited, although some groups contribute advice and expertise to the CEP

Environmental Trade Finance and Investment

The primary source for Albanian environmental NGOs comes from international organizations through REC projects, and there are few domestic financial resources for promoting public participation in the environmental field. The CEP does provide some financial support despite a severely limited budget and also provides in-kind support to NGO activity (REC Status of Public Participation Albania, p 12)

- The business community is not yet a significant source of support for environmental NGOs. The entire concept of "green business" has not yet been developed (REC Status of Public Participation Albania, p 12)

ARMENIA

Private Enterprise

Environmental Trade Finance and Investment

Obstacles facing Armenian economic development include the collapse of former markets in the FSU, blockades imposed by neighboring countries due to the conflict in Nagorno-Karabakh, lingering effects of the 1988 earthquake, and an inadequate legislative environment for fostering private business (Armenia Economic and Trade Overview, BISNIS Website, p 1)

Central Government

Institutional Strength and Commitment

- Environmental protection is at the ministerial level and is governed by the Ministry of Environment and Natural Resources (Country Profile Armenia, p 21)

Environmental Trade Finance and Investment

- Environmental expenditures are financed by the extremely limited State budget, payments for the use of land, investment by international funds, public organizations and sponsors (Country Profile Armenia, p 22)
- Newly formed companies with foreign investment are entitled to the general two year tax-free period. Additionally, joint ventures and foreign owned companies enjoy substantial tax benefits in years 3 to 10 (Armenia Economic and Trade Overview, p 4)
The Armenia of today is the most stable Caucasus country and the most market oriented, with some of the most liberal trade legislation in the CIS (Armenia Country Commercial Guide 1996, p 1)

Local Government

Policy Legal and Regulatory Framework

The Ministry of the Environment and Underground Resources maintains national monitoring networks, and municipalities take care, by large, of the water supply and wastewater treatment of communities (Country Profile, Armenia, p 34)

Environmental Trade Finance and Investment

- Municipal wastewater and water supply investment costs are financed mainly by municipalities themselves, while operation and maintenance costs including capital costs are covered by users (Country Profile, Armenia, p 34)
- Only 75% of the population was served by public waterworks and sewer systems in 1991. The water supply facilities are not available to the majority of the Armenian population and are well below basic level

AZERBAIJAN

Private Enterprise

Institutional Strength and Commitment

The Sumgait-Baku industrial complex in Azerbaijan is ranked among the world's ten worst sites for air quality. The problem has been partially alleviated over the past years due to an overall decline in industrial output (Azerbaijani Environmental Technologies Sector, BISNIS website, p 2)

Environmental Trade Finance and Investment

The environmental technologies/pollution control market in Azerbaijan is in the early formative stage. Thus, useful information on market size cannot be determined at this time (Azerbaijani Environmental Technologies Sector, BISNIS website, p 1)
Foreign investors, to date, have shown little interest in the environmental sector (Azerbaijani Environmental Technologies Sector, BISNIS website, p 3)

Central Government

Environmental Trade Finance and Investment

The UNDP has funded a USD 300,000 study that will develop an environmental management plan for the Azerbaijani government (Azerbaijani Environmental Technologies Sector, BISNIS website, p 1)

Steps have been taken by the government to produce an environment conducive to foreign investment. Laws allow for tax incentives and for foreign participation in the privatization process. The combination, however, of an inadequate legal system, highly bureaucratic regulatory structures, and uncertain political situation makes investing in the economy precarious (Azerbaijan Economic and Trade Overview, p 9)

Local Government

Institutional Strength and Commitment

It is estimated that approximately 90% of all water supplies are contaminated to some degree. Chronic water shortages exist as water is piped through a deteriorating system with losses of 50-60%. Waste water treatment is almost non-existent. Baku's sewage treatment plants currently meet 10% of municipal demand, and the remainder flows untreated into the Caspian Sea (Azerbaijani Environmental Technologies Sector, BISNIS website, p 1)

BELARUS

Private Enterprise

Environmental Trade Finance and Investment

- Belarus' scores for environmental trade, finance and investment for private enterprise are 1 for the following reasons: (1) Although there exists a Law on Foreign Investments in the Territory of Belarus, advances in attracting foreign investment are still modest (The Republic of Belarus, p 14), (2) Belarus has failed to adhere to its commitments to international financial organizations. There has also been a weakening of democracy following the referendum in November 1996. The IMF has suspended programs in Belarus in response to the government's failure to permit privatization and other structural reforms (Belarus New US Policy, p 1), (3) The US now advises US investors to seek trade and investment opportunities in other NIS countries due to the risks of doing business in Belarus (Economic and Trade Overview of Belarus, p 1)
- The majority of enterprises in the industrial sector are still state-owned and are experiencing major shocks in supply, demand, and prices because of the country's dependence on Russia and the NIS (Web info Economic and Trade Overview of Belarus, p 7)

Central Government

Environmental Trade Finance and Investment

- Belarus' central government is given a score of 1 on environmental trade and investment in great measure because, according to the EBRD Transition Report, laws are limited in scope and impose substantial constraints on creating investment vehicles, security over assets and repatriation of profits. Legal rules are generally unclear and contradictory. Administration and judicial support of the law is rudimentary. The EBRD transition report rates the legal situation regarding foreign investment is rated as a 1 on a scale of 4 (EBRD Trans Report, p 14)

BOSNIA

Central Government

Institutional Strength and Commitment

- Bosnia's central government receives a score of 1 for the following reasons (1) the Federal Ministry of Environment works on laws but has limited possibility of implementing them (personal communication with Alexander Juras, the REC's Local Office and Outreach team leader), (2) A substantial brain drain coupled with government restructuring, has left ministries on a Federal and Cantonal level poorly equipped to tackle the problems at hand or generate the income required, (3) Many officials cannot speak English and do not know how to write project proposals for the international funds that are readily available for the country at present

Local Government

Institutional Strength and Commitment

- Local government is given a score of 1 in light of the lack of expertise in environmental areas in Bosnia. A substantial brain drain coupled with government restructuring has left ministries on a Federal and Cantonal level poorly equipped to tackle environmental problems

Citizens

Institutional Strength and Commitment

There is a much-depleted NGO network of about four operational organizations

CZECH REPUBLIC

Private Enterprise

Policy Legal and Regulatory Framework

There is a complex system of pollution charges to encourage polluters to decrease pollution emissions

Institutional Strength and Commitment

Emission limits for existing pollution sources are determined by the CEI individually for each polluter and are based on estimates of the minimum attainable emission possible from properly operated existing technologies

- If by 1998 a polluter does not comply with its emission limit, the CEI will have the power to forbid operation of the pollution source
 - However, since 1992 charges for the majority of polluters represented less than 1% of production costs, so their stimulating effect is relatively small
- Monitoring is a problem. The CEI has no way to track and check that sources have fulfilled CEI directives. It is therefore unable to intervene early and effectively in cases where sources are not complying with directives
- Unfortunately, the old industrial structures, which pollute the most, benefit the most from the imperfectly constructed system

Environmental Trade Finance and Investment

- A one-off ecological audit is currently required under the law to identify old prevailing environmental loads in connection with the transfer of property in the privatization process. Industrial enterprises are showing increasing interest in periodical environmental audits of their products and in the introduction of ISO 14000
- However, the insufficiency of cost-effective long-term credit represents a significant barrier to the realization of costly measures to reduce emissions

Central Government

Policy Legal and Regulatory Framework

The state environmental policy is not a law. Instead, it serves as an action plan and guideline for work at the ministerial level.

"Polluter Pays" principle is used.

The current system of environmental charges includes air pollution charges, water pollution charges, solid-waste disposal charges, charges for the off-take of water from waterways, charges for the withdrawal of underground water, levies for the sequestration of agricultural land from the agricultural domain, and charges for the mining of mineral. (Controlling Pollution in Transition Economies, p. 144)

Institutional Strength and Commitment

The Ministry of Environment is the supreme body of state administration in the field of the environment and its jurisdiction is ruled by law (EU Approximation Document).

The Ministry has special units, territorial divisions, departments for the environment at district authorities and specialist, scientific and research institutes (EU Approximation Document).

Local Government

Policy Legal and Regulatory Framework

- The Czech Parliament has a committee, which is responsible for regional policy. Local district authorities have the right to assess and collect pollution charges from medium-size pollution sources, while local municipal authorities can make decisions regarding charges and collection for small pollution sources.

Institutional Strength and Commitment

- Local authorities have units or authorized personnel dealing with local environmental protection. This is not guided by higher-level bodies of state administration (EU Approximation Document).
- There is a visible effort at the local level to efficiently resolve those environmental problems which can be addressed locally (EU Approximation Document).

Citizens

Policy Legal and Regulatory Framework

- Citizens have the right to live in a favorable living environment, the freedom of expression and the right to information, the right to peaceful assembly and association and the right to petition.

Institutional Strength and Commitment

Presently, there are several hundreds of registered NGOs in the Czech Republic, but not all work continuously. Membership is estimated at seven to ten thousand people, of which there are several hundred active members.

- Relations among the NGOs are quite open and very flexible in structure. There are umbrella associations, formal forms of contact and cooperation, and an electronic network. Part of the NGO movement has a strong root in local communities.
- The relationship between the government and environmental NGOs has worsened spectacularly since 1992. There is no regular dialogue on essential environmental issues and conflict, rather than dialogue, is the norm.

Environmental Trade Finance and Investment

Funding for public participation activities and NGO projects is mostly provided by foreign governmental assistance programs, private and other international foundations such as Environmental Partnership, PHARE Program, REC, etc.

- Parliamentary support is non-existent and support from local government is not strong, though they sometimes offer in-kind support. Private sector support is limited. Although the MoE provided funding in the past, there have been sharp cuts recently.

ESTONIA**Private Enterprise*****Policy Legal and Regulatory Framework***

- Major changes to Estonian pollution control policy took place in December 1993, 1994 and 1995. The current system is best described as a mixed system, based on a combination of pollution permits, threshold levels, differential charge rates, self-reporting, some ambient and effluent standards and penalties for non-compliance (Controlling Pollution in Transition Economies, p. 47).

Institutional Strength and Commitment

A complex system of charges and permits is in place and is implemented and enforced by the Country Environmental Departments (Controlling Pollution in Transition Economies, p. 49).

- Since base charges are relatively low and the threshold levels relatively lenient, it is likely that actually paying charges will start enterprises thinking about their pollution levels and also start them exploring cost-efficient pollution-control strategies (Controlling Pollution in Transition Economies, p. 57).
- It is well recognized in Estonia, however, that implementation of pollution-control policy is not as effective as it could be (Controlling Pollution in Transition Economies, p. 70).

Central Government***Policy Legal and Regulatory Framework***

- Estonian environmental policy is generally in accordance with EU Policy. However, there is a need for an integrated approach to environmental codification because environmental legislation is split into numerous pieces which cause conflicting regulations, overlaps and loopholes (Approximation of EU Environmental Legislation, Country Reports, Estonia). Legislation for the development of an environmental audit system is still missing (Approximation of EU Environmental Legislation, Country Reports, Estonia).
- Pollution charges are the main revenue source for the off-budget Estonian Environmental Fund.

Revenues are split between the central fund and respective county funds (Controlling Pollution in Transition Economies, p 50)

Institutional Strength and Commitment

- The Ministry of Environment is responsible for environmental regulations

Environmental Trade Finance and Investment

Lack of financial means is a major obstacle to approximating EU environmental legislation (Approximation of EU Environmental Legislation, Country Reports, Estonia)

Local Government

Policy Legal and Regulatory Framework

- Local authorities are gaining more power, which is positive for solving environmental problems, but it also takes some time before they can be trained to follow national environmental policy (REC Status of Public Participation Estonia, p 2)
- There are 17 local district environmental protection departments which serve as the ministry's administrative units. Local departments are further divided into sub-departments (REC Status of Public Participation Estonia, p 6)

Institutional Strength and Commitment

- Air pollution permits are generally issued by County Environmental Departments (Controlling Pollution in Transition Economies, p 58)

Environmental Trade Finance and Investment

- There is a general lack of financial means to finance the implementation and control of environmental activities
- Industrial waste seldom receives any water treatment before being passed into the municipal waste water system. Waste water treatment plans in some cities have reached capacity, while some cities do not have any form of treatment facility at all (Environmental Product and Services, BISINS, p 10)

Citizens

Policy Legal and Regulatory Framework

Based on the REC Overview on the Status of Public Participation in Estonia, the public has the right by law to freely form groups, the right to petition and the right to judicial review. In practice, it is difficult to obtain any information.

Institutional Strength and Commitment

Roughly one third of NGOs are involved in public participation. At present, the network among NGOs is being founded and cooperation between the different environmental NGOs is good.

- Estonian NGOs do not have a special computer network (REC Status of Public Participation Estonia, p 8)

Environmental Trade Finance and Investment

- The Estonian government and parliament do not give financial support to environmental citizens groups other than to invite their representatives to the training courses organized by them. Participation fees must normally be paid by the NGOs themselves.

- Estonian environmental NGOs are mostly supported by foreign foundations and environmental centers including PHARE programs, Swedish Society for Nature Conservation, Swedish "Acid Rain", WWF-Sweden, and REC Budapest. Estonian government and local authorities have supported NGO activities in some rare cases, but Parliament has never done so (REC Status of Public Participation Estonia, p 10)

GEORGIA

Private Enterprise

Policy Legal and Regulatory Framework

The country needs renovation of all environmental technology as well as creation of new environmental management and monitoring systems (Georgia – Environmental Technologies Exports, p 1)

The regulatory system is antiquated (Georgia – Environmental Technologies Exports, p 1)

- There is a pressing need to update old legal regulation on pollution and other environmental standards and requirements (Georgia – Environmental Technologies Exports, p 1)

Institutional Strength and Commitment

Georgia's nine largest industrial facilities were responsible for 80% of total emissions of harmful substances into the air in 1992 (SoE, Air, p 1)

- Although most industrial enterprises are at a standstill or operating in a limited regime the economic recovery will inevitably lead to increased production of industrial waste (State of Environment/Toxic Cont , p 1)

Environmental Trade Finance and Investment

Key issues in regard to import, purchasing and operating environmental technology are shortage of financial resources, limited expertise on existing environmental conditions, and lack of trained managers (Georgia Env Technologies Exports, p 1)

- There is no source of accurate data on market size (Georgia – Environmental Technologies Exports, p 1)
- No foreign or local private environmental related firms operate in Georgia. There is no third country or US companies currently operating in Georgia in the environmental sectors (Georgia – Environmental Technologies Exports, p 3,5)

Central Government

Policy Legal and Regulatory Framework

Currently there is no official system in operation in Georgia to classify industrial wastes or regulate how to deal with them (UNDP Human Dev Report 1996, p 3)

Starting in January 1, 1993, penalties for environmental pollution were introduced and payments for use of natural resources have been collected since 1994. Actual monetary amounts collected are small and polluters continue to pollute which suggests inadequate charges and collection mechanisms (UNDP Human Dev Report 1996, p 4)

- Georgia has joined many international conventions including the Rio Convention of Biological Diversity and the Montreal Protocol on substances that deplete the ozone layer (http://www.grida.no/pro_lish/intcoop/conven.htm)

About 18 legal acts dealing with environmental protection have been approved by the Parliament of Georgia (http://www.grida.no/prog/cee/enrin_eorgia/soegeor/english/low/low.htm)

Institutional Strength and Commitment

The Ministry of Environmental Protection is in charge of environmental issues (SoE, Env Inst p 1)

- The current socio-economic crisis affected the ability of environmental institutions to monitor and register the state of resources and environment in Georgia. Many monitoring stations have ceased activities altogether (UNDP Human Dev Report 1996, p 4)

Environmental Trade Finance and Investment

- Legal rules are limited in scope and pose significant constraints on creating investment vehicles, adequate security over assets or repatriation of profits. Legal rules are generally unclear and sometimes contradictory (EBRD Transition Report, p 14)

Local Government

Policy Legal and Regulatory Framework

- There are a number of regional committees and departments related to the Ministry of Environment which function at a local level (SoE, Env Inst, p 1)

Institutional Strength and Commitment

Currently, local leaders are not elected and local civil servants are frequently corrupt. Those in regions enjoying greater autonomy from the central government are able to wield considerable authority (Nations in Transit, p 171)

Environmental Trade Finance and Investment

- Citizens are exposed to extremely high levels of water pollution. Most water treatment plants are not operating or work at a very low level of efficiency (SoE, Water, p 1). Cities suffer from aging municipal infrastructure and inadequate waste management facilities and practices. Sewage systems operate in only 45% of populated areas (SoE, Water, p 1)

Citizens

Policy Legal and Regulatory Framework

- Citizens can freely participate in NGOs. The number of NGOs is small, however, and information is difficult to obtain from the Ministry. Economic crisis probably also lessens the interest of the general public in environmental issues

Institutional Strength and Commitment

Although, the public is generally uninformed by the Ministry, Georgians seem to be ecologically aware (UNDP Human Dev Report 1996, p 4)

- There are over 30 operating NGOs in Georgia which influence environmental policy by providing expertise to the government, by coordinating public input and by leading education of the public. Many examples of NGO cooperation with the government are available (SoE, Env Inst, p 1)

Environmental Trade Finance and Investment

- In the area of environmental trade, finance and investment, citizen groups are given the score 2 for the following reasons (1) NGOs are receiving grants from the international community and in some cases financial support from the state (Nations in Transit, p 165), (2) There are over 30 operating NGO's in Georgia which influence environmental policy by providing expertise to government, by coordinating public input, and by leading education of the public. Many examples of NGO cooperation with the government are available (State of Environment, Env Inst, p 1). Most NGOs are dependent on grants from the international community or financial support from the state. In addition, all previous tax exemptions for some foreign foundations and local NGOs were abolished in 1996, bills on restoration of tax privileges are currently under consideration in Parliament. Nevertheless, NGOs play a significant role in shaping legislation (Nations in Transit, p 165)

HUNGARY**Private Enterprise*****Policy Legal and Regulatory Framework***

- Emissions standards were established before 1989, bounteous standards, all media, ambient, local, facility, and point-of-emission, based on both individual and classes of individual pollutants
- Standards are enforced but, because of legal and social considerations (appeals, due process, employment) a lot of latitude is usually granted by the environmental inspectorates. The standards, especially those that are both really expensive and poorly justified, are many times not met. Because of the bounteous rules and regulations, the judicial process is usually a vehicle for protecting the rights of the regulated and this works pretty well. The private use of the legal system to force compliance is not very well developed but it seems that the mechanisms for this avenue are now under development. Note, however, that no legal institution similar to that of popular action in the US exists in Hungary at present.
 - With respect to environmental liability, it's almost impossible to untangle the web of responsibility, burden of proof, etc. The type of liability regulation for past damages could be labeled as strict liability. However, in the privatization process the affected state agencies (MoE) did not use this strong legal institution to attack suspicious privatization contracts. The privatization process developed ad hoc liability arrangements as part of the contracts with the buyers. What, if any, liability banks (including newly privatized banks) have for the acts of their borrowers is unsettled and while the government is assuming responsibility for clean up of many old military sites, it is always on the lookout for some deep pockets on which to pin responsibility. Is there an environmental audit system or a method of inventorying past pollution problems? There are several environmental audit programs: a state privatization agency run by HIID, an environmental audit of old military sites has been done, and the environmental inspectorates (whose history goes back long before the "change in system") has ongoing responsibilities to audit all media. The first specific investment project combating past pollution was the cleaning up of major Russian military sites (1 billion HUF project). In 1996 the second major project was launched, called the Hungarian Superfund Project. Their primary responsibility is to complete a comprehensive inventory of contaminated sites that fall under the related regulation (i.e., where the government is liable for cleanup), to setup a national priority list for cleanup projects and managing actual, on-site cleanups. Strict budget (1-1 billion HUF in 1996 and 1997), enough for 5-6 middle-scale actions per year.

Institutional Strength and Commitment

- Private companies with foreign interests are a significant minority of industrial firms in Hungary (these companies gave 50-60% of Hungary's foreign trade in 1996) I think this group of firms, and also some major domestic firms (National Oil Corp, for example) have invested a lot both in end-of-pipe and process development in recent years. This activity is quite significant in the Hungarian case and it warrants a score of 4 (Comments from HIID resident advisor in Hungary). Although about half of the provisions in existing Hungarian environmental legislation are in compliance with EU regulations, the lack of control facilities means that even existing legal norms have not been fully implemented (EU DOC)
- Both total emissions and emission-intensity (emission/output) have declined since 1989
- Environment-related professional association and certification standards are established in Hungary

Environmental Trade Finance and Investment

- A major share of advanced abatement technologies and service expenditures are imported. Environmental technology is available domestically, and pollution abatement equipment is being purchased/installed. Foreign companies making investments in Hungary are the leaders in environmental protection. The simple strategy for practical environmental protection is to encourage capital investment by western or Japanese enterprises. This point should not be ignored due to general consensus that, after the closing the old, out of date, state-owned industrial plants, this has had by far the most profound impact on environmental protection in Hungary (and perhaps all the CEE)

Central Government***Policy Legal and Regulatory Framework***

- Use of the "Polluter Pays" principle and "User Pays" principle. There are also environmental load charges, utilization contributions, product charges and deposit fees (EU DOC)
- 75% of Central Environmental Protection Fund revenues are spent on development to promote the protection of the environment, and 2 to 5% were used for eliminating environmental damage in 1994 (EU DOC)
- Hungary has signed and ratified the main international cooperation agreements and protocols concerning environmental protection
- Standards are enforced but, because of legal and social considerations (appeals, due process, employment) a lot of latitude is usually granted by the environmental inspectorates and the standards, especially those that are both really expensive and poorly justified, are many times not met

Institutional Strength and Commitment

- The Ministry for Environment and Regional Policy (MERP) is in charge of the overall strategy of environmental policy (EU Legislation Document) (EU DOC)

Local Government***Policy Legal and Regulatory Framework***

The function of local community governments is to determine the zoning of different protected areas for air quality and noise, implement the authoritative jurisdictions to service companies and entrepreneurs, and issue land-use, construction, occupancy and activity permits

Institutional Strength and Commitment

- A very important body of organizations with operational responsibility covering the environmental aspects of permits and fines are the Regional Environmental Inspectorates (Controlling Pollution in Transition Economies, p 157)

Environmental Trade Finance and Investment

- Local governments can apply for earmarked subsidies from the CEP Fund to support certain water management projects, educational and cultural investment (EU DOC)
- Unfortunately, given the fiscal difficulties occasioned by economic transition, most local governments have chosen to use these funds for purposes other than environmental protection (Controlling Pollution in Transition Economies, p 175)

Citizens

Policy Legal and Regulatory Framework

- Citizens have the right to access information of public interest, to peaceful assembly, to a healthy environment, to submit complaints and the right to initiate legislation at a national level (REC Status of Public Participation, p 14)

Institutional Strength and Commitment

- There are at least 800 environmental NGOs in Hungary that deal with local environmental problems and about 200 national NGOs which have professional staff ECOSERVICE is an NGO that serves as an umbrella organization for 18 similar groups and also offers legal support
 - Relations among different NGOs are well structured and there is a national level forum for discussion organized annually
 - There is an electronic system offering access to more than 200 NGOs
 - Although contact between MoE and NGOs is neither frequent nor regular there are no sharp conflicts and both sides show a willingness to cooperate
- A major problem, however, is lack of interest of citizens in public participation

Environmental Trade Finance and Investment

Unique in the CEE region, citizen groups receive funding from both parliament and the MoE Parliament gives funding to all citizen groups, so environmental NGOs receive only a small portion The MoE provides funding regularly from the National Environmental Fund and from the fuel tax

MOLDOVA

Private Enterprise

Policy Legal and Regulatory Framework

Private enterprise in Moldova is given a rank of three for the following reasons (1) Moldova began a long-term and complex program of environmental protection and natural resource management in 1987, slated for completion in 2005, (2) Another complex territorial scheme of environmental protection was begun in 1991 and is scheduled for completion in 2010 Violators of environmental protection legislation are forced to pay fines and/or provide compensation for environmental damages, (3) Various environmental regulations, restrictions and limitations have

- been put into place and the Department of Environmental Protection was established in 1990 (Country Profile Moldova, p 17), (4) The courts operate under the Ministry of Justice, but are separate from the Ministry of Internal Affairs A powerful and independent Constitutional Court exercises judicial review and has overturned actions of both the Parliament and the president Structures and procedures in place now resemble European models more than the previous Soviet ones (Nations, p 276), (5) An Office of Environmental Prosecutor has been established to address legal issues of environmental significance Inspections of ecological violations occur and violators of environmental legislation are forced to pay fines or provide compensation for damages (Concept of Sustainable Development in Moldova, p 3), (6) The above programs call for the creation of laws, the establishment of an "Environmental Code" and the licensing and/or prohibition of negative environmental activities (Country Profile Moldova, p 16), (7) Along with legislation, charges have been introduced for the use of natural resources like water, soil, flora, and fauna as well as fines for environmental protection (Country Profile Moldova, p 17)
- Moldova has begun a long-term complex program of environmental protection and natural resource management in 1987, slated for completion in 2005 (http://www.un.md/NEW/PTB/2UNDP/3SMC/BOOK3/G1_HTML, p 1)
 - Violators of environmental protection legislation are forced to pay fines and/or provide compensation for environmental damages (http://www.un.md/NEW/PTB/2UNDP/3SMC/BOOK3/G1_HTML, p 3)
 - Various environmental regulations, restrictions and limitations have been put into place (http://www.un.md/NEW/PTB/2UNDP/3SMC/BOOK3/G1_HTML, p 3)
 - In industry, only 30% of all enterprises have air pollution purification systems, and some 20% of them are not functioning (Country Profile Moldova, p 18)
 - Industrial and agro-industrial plants sometimes do not operate their existing wastewater treatment plants, due to high operation costs and due to lack of resources for repairs and maintenance (Country Profile Moldova, p 28)

Environmental Trade Finance and Investment

- Moldova has created the legal framework to encourage foreign investment (Nations in Transit, p 280)
- USAID provided technical assistance amounting to USD 2.5 million for environmental policies and technologies (Country Profile Moldova, p 38)
- EBRD supports a project to reduce energy losses and to increase energy efficiency in the capital The EU TACIS Programme supports activities in this sector (Country Profile Moldova, p 19)

Central Government

Policy Legal and Regulatory Framework

- The government of the Republic has not definitively approved the above environmental schemes (http://www.un.md/NEW/PTB/2UNDP/3SMC/BOOK3/G1_HTML, 1)
- Moldova's national income fell substantially at the beginning of 1991, these poor economic conditions could prevent Moldova from being able to finance activities such as environmental protection, only 1.5% of produced national income is currently spent on the environment (http://www.un.md/NEW/PTB/2UNDP/3SMC/BOOK3/G1_HTML, 1)
- Moldova is a signatory with the UNCED Conventions on Biological Diversity and Climate Change, and has currently submitted documentation regarding a number of other Conventions to Parliament (http://www.un.md/80/NEW/PTB/2UNDP/3SMC/BOOK1/G5_HTML, 4)

Institutional Strength and Commitment

- State Department of Environmental Protection established in 1990 This Department depends directly on the parliament, which allows it to promote an independent environmental policy regardless of the goals of the government (Country Profile Moldova, p 17)
Office of the Ecological Prosecutor specifically created to address ecological violations, violators of environmental protection legislation are forced to pay fines which are used to establish funds for environmental protection and/or provide compensation for damages
([http //www un md/NEW/PTB/2UNDP/3SMC/BOOK3/G1 HTML](http://www.un.md/NEW/PTB/2UNDP/3SMC/BOOK3/G1 HTML), 3)

Environmental Trade Finance and Investment

- Moldova has created the legal framework to encourage foreign investment (Nations in Transit, p 280)
- Moldova also has a favorable system of tax holidays ranging from 2 to 6 years for enterprises with foreign investment There are no restrictions on foreign capital participation and 100% foreign direct ownership is allowed ([http //iepnt1 itaiep doc gov/bisnis/country/molecon.html](http://iepnt1.itaiep.doc.gov/bisnis/country/molecon.html), p 5)

Local Government***Policy Legal and Regulatory Framework***

The monitoring of environmental protection is the responsibility of the State Ecological Inspection, which is the largest Division of the Department, having 170 inspectors and 10 Zonal agencies
([http //www un md/NEW/PTB/2UNDP/3SMC/BOOK3/G1 HTML](http://www.un.md/NEW/PTB/2UNDP/3SMC/BOOK3/G1 HTML), 3)

Citizens***Policy Legal and Regulatory Framework***

There are no government restrictions regarding the formation of environmental NGOs The government adopted regulations for social organizations, including environmental NGOs, that require only that the organization register and have a minimum membership of 10
([http //www un md 80/NEW/PTB/2UNDP/3SMC/BOOK1/G6 HTML](http://www.un.md/80/NEW/PTB/2UNDP/3SMC/BOOK1/G6 HTML), 4)

Institutional Strength and Commitment

The general level of ecological consciousness in Moldova is rather low In spite of this, a number of NGOs have been formed, some of which cooperate with the State Department for Env Protection A political party was also founded in 1992, with the objective of "ecologizing" state policy It has about 1,000 members and is quickly becoming an influential force
([http //www un md 80/NEW/PTB/2UNDP/3SMC/BOOK1/G5 HTML](http://www.un.md/80/NEW/PTB/2UNDP/3SMC/BOOK1/G5 HTML), 4)
The majority of newly formed NGOs are poor and in need of financial support Many of them are unknown at national and even local levels
([http //www un md 80/NEW/PTB/2UNDP/3SMC/BOOK1/G5 HTML](http://www.un.md/80/NEW/PTB/2UNDP/3SMC/BOOK1/G5 HTML), 1)

LITHUANIA**Private Enterprise*****Policy, Legal and Regulatory Framework***

Emission standards are established and relatively well enforced

- Some firms meet established standards and others do not Violating standards is not "illegal" It is a target and if firms exceed them they pay penalties

- Judicial due process and dispute resolution are very difficult in Lithuania
- Processes for addressing environmental liability are not well established

Institutional Strength and Commitment

- Lithuania has seen significant progress in terms of reducing pollution intensity of production
- Are no environment-related professional associations and certification standards established?
- There are a minimum of 12 - 15 good environmental consulting/engineering firms in Lithuania

Environmental Trade, Finance and Investment

- Environmental technology is available domestically and pollution abatement equipment is being purchased/installed
Commercial banks do not incorporate environmental due diligence and mitigation financing into business credit programs unless loans are tied to donor credit lines

Central Government

Policy, Legal and Regulatory Framework

- Lithuania is currently revising pollution charges to more appropriate levels It is also developing a penalty system for accidental pollution emissions
Monitoring and enforcement are moderately comprehensive
Energy prices are only lightly subsidized
- Lithuania is a signatory on major international treaties and environmental conventions

Institutional Strength and Commitment

- The national environmental agency is at ministry level and is very influential
- The national environmental agency budget has decreased moderately in absolute value since 1994

Environmental Trade, Finance and Investment

- Domestic and foreign firms are treated equally with regard to environmental compliance

Local Government

Policy, Legal and Regulatory Framework

- Environmental decision-making is relatively open to public debate (5 out of 7)

Institutional Strength and Commitment

- Local environmental agencies (55) are very influential

Environmental Trade, Finance and Investment

- Lack of wastewater treatment facilities is a major problem (Bluffstone, Larson book) In 1993, only 26% of discharges were treated sufficiently to meet ambient standards
5 new treatment plants are expected to be completed by end of century

Citizens

Policy, Legal and Regulatory Framework

- Citizens have the right to a healthy environment, the right to associate, the right to obtain and associate any available information, the right of initiative and the right of referendum

Institutional Strength and Commitment

- Lithuania's citizens are given the rank of 3 for institutional strength and commitment on the following grounds (1) In practice, it is risky to be involved in and to act against controversial businesses. Often, they are related to Mafia groups, and business representatives may defend their interests illegally through corruption, threats or violence (REC NGO Report, Lithuania Chapter, p 12), (2) Due to the existing economic and social situation, public involvement and participation in environmental protection against business is quite complicated (REC NGO Report, Lithuania Chapter, p 12), (3) Cooperation among NGOs and also between NGOs and citizens is weak and inefficient. Because there are no traditions or official channels, it is difficult to identify priorities and urgent cases for public participation and to implement them (REC NGO Report, Lithuania Chapter, p 11), (4) The public is not informed in due time of proposed, upcoming or pending decisions, plans and procedures, which makes public participation very difficult, even if there exist legal avenues for public participation (REC NGO Report, Lithuania Chapter, p 11). Although local NGOs are relatively active in the debate regarding the direction of environmental policy making (5 out of 7), they are not at all active in the monitoring and enforcement of environmental regulations
- 30-40 active national environmental NGOs
- Cooperation between NGOs is weak. There are no common meetings or forums
- The public and the NGOs are not involved in discussions at the parliamentary and governmental level on environmental strategy (NGO report)

Environmental Trade, Finance and Investment

All national NGOs face difficulties with financing, especially from domestic sources

- NGOs have been successful in obtaining foreign funding and, in some cases, funding from local governments

POLAND

Private Enterprise

Policy, Legal and Regulatory Framework

- Environmental legislation is very comprehensive. Monitoring and enforcement are somewhat comprehensive

Institutional Strength and Commitment

- Individuals or firms adversely affected by a polluting activity are not successful in seeking damages. Transaction costs are prohibitive

Environmental Trade, Finance and Investment

Independent financial institutions are minimally involved in the compliance process for environmental regulations

- Environmental audits are often required for state enterprises that are being privatized

The state almost always assumes liability for past pollution when an enterprise is privatized

Central Government

Policy, Legal and Regulatory Framework

- Under law, Poland has instituted the "Polluter Pays" principle, principle of prevention, integration of environmental policy into other policy development and public participation in environmental matters
- System of environmental charges and fines is an integral component of environmental management in Poland (Bluffstone, Larson book)
- Environmental legislation is very comprehensive, and monitoring and enforcement are somewhat comprehensive
- Public participation is somewhat involved in the environmental policy debate
- Energy prices are still quite highly subsidized
- Poland is a signatory on major international environmental conventions

Institutional Strength and Commitment

- The environmental agency is at the Ministry level
- The MoE is moderately influential
- The budget has remained quite stable over the past few years
- The ability of regional inspectorates to collect is limited by staff resources and compounded by the large number of facilities and pollutants that must be checked

Environmental Trade, Finance and Investment

Institutions for administering environmental funds are sufficiently capitalized to address environmental remediation

Domestic and foreign firms are treated equally with regard to environmental compliance

Environmental funds exist to provide financial assistance to activities related to environmental protection

Local Government

Policy, Legal and Regulatory Framework

- Regional Inspectors supervising the observance of environmental law may enter any establishment. They may require attendance and testimony of witnesses, can take samples and make analyses
- The rights of regional inspectors are broad and discretionary. If they deem that someone is not complying with environmental standards, they may issue an instruction to end the illegal situation, impose a fine or suspect the activity, and start measures to eliminate the activity. This enforcement is supervised by the Central Administrative Court

Institutional Strength and Commitment

- The local environmental agencies are moderately influential with 49 regional administrators

Environmental Trade, Finance and Investment

- Local and regional funds exist to provide financial assistance to environmental protection activities

Citizens

Policy, Legal and Regulatory Framework

- Confidentiality regarding environmental information precludes wide dissemination
Citizens do not have general right of initiative for law or rule making
- Local referendum is used as a means for deciding on local issues
- Public participation is allowed, but gives only limited possibilities
- NGOs can participate in meetings and comment on environmental draft laws
- There is no separate EIA law
- Draft EIA legislation provides broad public participation rights
- Citizens have the right to bring legal action to civil court and there are examples of successful court cases

Institutional Strength and Commitment

Poland's scores for citizens in the impact area of institutional strength and commitment are 3 for the following reasons (1) The public distrusts authority and legal avenues (NGO Report, Poland Chapter, p 13), (2) There is generally low ecological awareness and low level of civic involvement in public affairs (NGO Report, Poland Chapter, p 13), (3) In the governmental field, officers are insufficiently trained and there is a general organizational maze and lack of functional order within administration. The position of NGOs is weakened by their confrontational attitude and inability to reach a compromise (NGO Report, Poland Chapter, p 13)

- NGOs are moderately involved in environmental policy debate and environmental monitoring and enforcement
Citizens often use their right to call a local referendum, but most attempts have failed
The public is directly involved in enforcement of nature conservation laws
- NGO activity is still limited. NGOs are weakened due to lack of financial resources, public support, and expertise

Environmental Trade, Finance and Investment

Scores for citizens in the area of environmental trade, finance and investment are 3 on the grounds that financial problems are always a source of concern (NGO Report, Poland Chapter, p 13) and that ecological NGOs and other public interest groups are weakened due to a lack of financial resources, professional expertise and their inability to build public support (NGO Report, Poland Chapter, p 13)

- The biggest contributors are international foundations and institutions

KAZAKSTAN**Comments from HIID resident advisor in CAR**

The overall score of 2 (2/ 2 25/ 1 75) reflects a country that is in general beginning to make progress, although with many serious problems and barriers remaining. The pattern of the averages (highest for institutional strength and commitment, an even 2 for policy, legal and regulatory framework, and lowest for environmental trade, finance and investment) accurately reflects on-the-ground reality. There is significant commitment and institutional strength has significantly strengthened over the last few years, although the changes need specific and careful further support to ensure they realize their real potential to be self-sustaining. The policy and regulatory framework has improved on paper, with some notable areas for continued change needed (especially the Environmental Funds – see weakness in trade, finance & investment). Implementation remains a key block as capacity is weakened by low budgetary support (e.g., long periods with no salaries for environmental regulatory agencies) and needs for training and skills transfer.

- The role of private investors in environmental activities is especially vexed. Although significant opportunities exist (e.g., in oil & gas, minerals in general, electricity and heating plant conversion, etc.), realizing these needed investments has been hampered by a generally risky investment climate. In Kazakhstan, it is not possible to single out weakening incentives for private investment in environmental activities from general problems hindering investment such as legally weak, often contradictory and bureaucratic, and lately increasing non-transparent investment policies.
- There have been a number of important positive developments over the last five years. However, the environmental problems of the country are so large and diverse (like its geography) that these developments often seem inadequate. While they are inadequate to solving Kazakhstan's environmental problems, that is no reflection of how important they are.

Among the key changes are

- a) Establishment of a "locally-owned", broad-based, decentralized, and participatory National Environmental Action Plan (NEAP) process. The NEAP process is geared to providing a meaningful vehicle for on-going prioritization and implementation of projects to support all the objectives of environmental policy, including an important focus on providing incentives to private enterprises,
 - b) Improvements over the last years in the basic legal structure for environmental protection (a series of new laws), which give the Ministry of Ecology a stronger basis for future action,
 - c) General slow but positive development of policies on key environmental management issues related to water (pricing and cost recovery for irrigation, as well as urban/industrial use and pollution, decentralized management structures), pollution management (increased charges, promotion of pollution reduction, etc.), and sectoral environmental issues (energy sector and greenhouse gas emissions, oil and gas offshore environmental regulations, etc.).
- While these initial steps provide a good foundation for further work, much support will be needed to ensure their sustainability.

Private Enterprise***Policy, Legal and Regulatory Framework***

- There are a number of environmental bills at the stage of drafting and approval. These bills are aimed at assuring legal regulation of environmental activities among juridical and other entities. The environmental legislation can only be enforced by developing a well-balanced and unified system of legislative and other regulatory acts (Kazakhstan Assessment, p. 11).

- “One of the major sources of environmental problems in Kazakhstan lies in the inability of government and firms to implement environmental protection activities ”
The falling off of production did not bring about an adequate decrease in pollution because enterprises had to save their resources and could not make investments in environmental protection. The environmental situation in Kazakhstan continues to deteriorate due to the economic situation (Kazakhstan Assessment, p. 3)
- The evidence suggests that Kazakhstan's courts do not operate free of political control and influence. With the adoption of the new constitution in August 1995, the judiciary has been effectively placed under the control of the president and the executive branch. There is still an absence of strict and explicit legal guarantees and a high rate of corruption among government officials (Nations in Transit, p. 204, 213)
Environmental requirements for operation of newly privatized enterprises, which are supposed to be consistent with existing environmental protection requirements, are included in the contracts with new owners. However, because of potential liabilities associated with past pollution, many of these requirements do not conform to existing requirements, but are instead developed in an ad hoc manner in order to ensure that these concerns do not slow the process of privatization
- Air emission standards are in existence. Soviet methodology based on toxicity coefficients for individual chemical components still forms the basis for establishing standards for atmospheric emissions. The existing (Soviet) legal basis for emission standards is actually quite sophisticated, comprehensive and detailed, although by comparison with “modern western” standards it is increasingly acknowledged that some of its (key) provisions are out of date (Much of this concerns the medical and physical bases for setting 24-hour, annual and one-time emission limits) (2K + survey)
- Enforcement is a very different matter. The fact is that many (most) environmental agencies (monitoring stations, implementing agencies, laboratories, etc.) have experienced very severe budget cuts in the past five years, which has significantly curtailed their ability to perform their functions. This has been exacerbated by the fact that due to economic liberalization, the number and nature of entities which these agencies are charged to oversee and regulate ([industrial] enterprises, motor vehicles, factories, etc.) are rapidly changing and remain in flux (frequent business creations and bankruptcies, sharp increase in the number of private cars, etc.) (2K + survey)
- Some firms meet standards and some do not. Absurd though it may seem, it is frequently cheaper for firms to pay fines for exceeding emission limits than to try to adhere to them (by curbing production or by installing cleaner equipment). This is because in many cases the established level of fines for exceeding emission limits has not been revised in the past years. Unfortunately, even if fines for exceeding emission limits were in all cases revised upwards some firms, which have already been operating in the red for some years, may simply not be able to afford to comply with the new established standards (2K + survey)
- There are ways for firms to protest administrative decisions and measures taken by environmental enforcement agencies, but to what extent they could be called “judicial due process” is not clear (2K + survey)
There is a patchwork of different regulations addressing environmental liability. Only state agencies can get the necessary state certification to conduct officially recognized environmental audits. None of the big western auditing companies working in Kazakhstan are licensed to conduct state-recognized environmental audits (2K + survey)
What western companies do in practice is to conduct an environmental audit according to their own “western” methods and standards, which gives them a semi-official basis for their further decisions. Local courts, lacking other information, will accept the results of an environmental audit or environmental analysis conducted in accordance with foreign (western) standards. It is likely a

patchwork of (partly inadequate) local regulations complemented, in practice, by western methods (2K + survey)

Institutional Strength and Commitment

Investments to improve environmental compliance are down

No known environment-related professional associations or certification standards are established

Some private law firms have recently been created that offer broad legal advice on environmental issues, including emission standards, environmental audits & analysis, etc

Environmental Trade, Finance, and Investment

Investment to improve environmental compliance are down (ADB)

- The deep economic crisis of the early years of transition has produced a sharp decline in investment overall and in projects to improve environmental compliance. A rundown of existing capital, with associated increases in materials waste, has made it difficult to produce and install new, environmentally-friendly technologies and equipment (Env Profile of the Republic of Kaz, p 79)
- Imports of environmental goods and services are very low. Many of the big polluters (which most need to invest in environmental pollution abatement equipment) have been operating on the verge of bankruptcy for some time and have only survived because of continued state subsidies or because they have been propped up by foreign investment. None has made significant investments in pollution abatement (certainly not to the extent that it would show in the country's GNP) (2K + survey)

The situation is perhaps a bit different for those western companies engaged in (provisional) drilling activities off the Kazak Caspian shore and in investing in refinery capacity in Kazakstan. I should think that to the extent possible they would use their own technology, including relevant environmental technology (2K + survey)

There are no known independent environmental consulting or engineering experts of firms in Kazakstan (2K+ survey)

Central Government

Policy, Legal and Regulatory Framework

- Kazakstan is actively engaged in trying to reform the policy, legal, and regulatory framework which it inherited from the former Soviet Union. Given the severity of its environmental problems, the overall economic crisis which Kazakstan went through in the period 1991-1995, and its relative inexperience with many "modern western" concepts and mechanisms of environmental management, this is obviously a difficult task. Some significant progress has, however, been made.
- Kazakstan has recently passed a new framework "Law on the Protection of the Environment", has adopted a new "Law on Especially Protected Territories" and has approved a new "Law on Environmental Expertise [Procedures]". The latter is a law that spells out the bureaucratic process which companies and other legal entities have to undergo to receive state approval for the environmental aspects of any kind of project or activity. It defines and delegates authority to various state bodies and determines, in general terms, when and in what cases environmental impact assessments and environmental audits are required. The "Law on the Protection of the Environment" and its preliminary drafts received a lot of public attention (which in this part of the world, where many laws and decrees are still signed into force without much publicizing or open debate, is a bit of an achievement in itself). As a matter of fact, a variety of rival drafts had been produced, by the executive (Ministry of Ecology and Bio-Resources), the legislative (lower house of the Parliament), as well as by NGOs. These drafts were widely discussed in the media, as were

the run-up versions to the "Law on Environmental Expertise [Procedures]" (2K + survey)

- There is a Ministry of Environmental Management, however many of the responsibilities for natural resource management and environmental protection fall to other Ministries or committees and it is highly fragmented

Environmental Trade, Finance and Investment

- Capital expenditures on environmental protection equipment were up in 1996 10.9 billion Tenge was spent by state and private enterprises and organizations across Kazakhstan

Local Government

Environmental Trade, Finance and Investment

80% of the population has access to running water, but the quality of water from many sources does not meet state standards for potability

There are no budgetary resources to pay for additional water sanitation at distribution pumps and repairs of water distribution infrastructure have practically halted

Citizens

Policy, Legal and Regulatory Framework

Kazakhstan's citizen groups are given the value 2 for policy, legal and regulatory framework on the grounds that there has been a significant development of grass roots environmental NGOs, and these NGOs have participated in public hearings regarding the new draft Law on Environmental Protection (ADB Report)

NGO activities limited by hostility of local officials, lack of human and financial resources, and lack of effective leadership

- One NGO has participated in public hearings regarding the new draft Law on Environmental Protection

Institutional Strength and Commitment

Since independence, there has been a significant development of grass roots environmental NGOs and these continue to play an active role

Environmental Trade, Finance and Investment

A number of donors have been supporting NGOs and helping them develop capacity to play an effective role in setting environmental priorities

ROMANIA

Comments from Gianina Moncea, Project Management Assistant

Pollution in Romania results from industrial, urban, and energy sources. Past practices of treating environment as a free good have resulted in serious environmental degradation. Over the past 5 years there has been some progress in improving the status of the environment.

- The GOR has passed critical pieces of legislation and is in the process of adopting regulations, developing and implementing economic instruments and establishing new institutions. Despite the progress achieved, Romania still needs a more complete legal and regulatory framework to protect the environment.

The GOR has allocated funds from the state budget to decrease pollution from the major polluting

industries. The state owned and private companies must now make changes in manufacturing processes to comply with the environmental laws, and also comply with export oriented ISO 14000 and EU environmental standards. The Romanian companies seem to be interested in improving the operational efficiencies but financing is a serious constraint. The companies need technical assistance to help them comply with regulations and receive permits. At present there is only limited capacity in the private sector for delivering environmental services demanded by companies.

- The framework environmental law provides for public participation in environmental decision making. Although the number of environmental NGOs has grown, most of them are small, informal, and focused on local issues. In order to have a positive impact, environmental NGOs will have to have a national outreach, become sustainable, and serve as partners for industries and government.

Private Enterprise

Policy Legal and Regulatory Framework

C4EP just completed draft legislation, which includes environmental liability provisions in privatization law.

Penalties for air emissions provide no deterrent effect (Bluffstone and Larson book)

- Water charges exist for consumption and discharges
- Upwards of 90% of Romanian polluters are operating without valid permits

Institutional Strength and Commitment

- Commission for Certification of Environmental Experts recently established

Environmental Trade Finance and Investment

- There are 400 environmental consulting and engineering firms and experts
- 100% of new plant development meets environmental standards. 80% are financed from international sources (2K + survey)

Central Government

Policy Legal and Regulatory Framework

"Polluter Pays" principle has not yet been embodied in Romanian Law. Although emission levels have been set, there are no charges set forth.

- Romania's standards are, with few exceptions, stricter than internationally accepted norms. Unrealistic standards are being imposed on industry.

Institutional Strength and Commitment

- There is a lack of clear competence in environmental administration.
- There is also a lack of environmental education and familiarity with EU environmental legislation.
- The Ministry of Environment was set up in 1990.

Environmental Trade Finance and Investment

- Limited resources are an obstacle to approximating EU legislation.

Local Government

Policy Legal and Regulatory Framework

- Responsibilities for implementation and enforcement of environmental laws and regulations are delegated to the 41 EPAs (Bluffstone, Larson book)
EPAs issue permits, monitor and collect charges
- EPAs have the right to suspend or revoke environmental authorizations
- The new water law requires creation of river commissions

Institutional Strength and Commitment

- There are 41 Environmental Protection Agencies subordinate to the Ministry, with one located in each county
- Local EPAs seem to have a great deal of discretion in setting penalties. However, given local EPA's limited staff and larger concerns collecting penalties is simply not done (Bluffstone, Larson book)
- Local EPAs are grossly understaffed, under-equipped and underpaid

Environmental Trade Finance and Investment

- Several waste water treatment plants have been financed by the US and Japan

Citizens

Policy Legal and Regulatory Framework

Although the right to a healthy environment is not explicitly stated in the Constitution, citizens have the right of petition, right to access information, and right to a national referendum

Institutional Strength and Commitment

- The NGO community has quickly developed over the last four years. Their structure, however, is not well developed. Very few have built up professional expert base and most operate only regionally or locally
- Most of the groups prefer to work on their own, although cooperation between NGOs has reached the level of national networking and annual meetings have been organized. Relationship between the government and citizens/NGOs is rather weak. Cooperation is on an ad hoc, personal basis
- Although the NGO sector is quite large, there are no explicit mechanisms for public participation in the permitting and enforcement process (Bluffstone, Larson Book)

Environmental Trade Finance and Investment

Funding for public participation is generally given by foundations (domestic and international) and other institutions

- The government and parliament do not fund projects related to public participation although, in a few cases, state-owned and private companies have financially supported events organized by NGOs

SLOVENIA

Private Enterprise

Policy Legal and Regulatory Framework

Suitable laws about environmental protection, including specific regulations about air, water and soil pollution and wastes, have existed since the 70's. In 1993, the new Environmental Protection Act was passed which emphasized care for the environment more strongly and concretely. The "Polluter Pays" principle was also put in force (REC Economic Instruments, Slovenia, p 1)

Institutional Strength and Commitment

- However, few regulations exist concerning the proper disposal of hazardous waste. In many cases, industrial facilities store their own dangerous materials (Environmental Products and Services, BISNIS, p 25)

Central Government

Policy Legal and Regulatory Framework

- Bodies responsible for environmental protection in Slovenia are Ministry of Environment and Regional Planning, Environmental Protection and Water Regime Agency (design economic instruments), Ministry of Finance (revenue collection), Environment Protection and Water Regime Agency (enforcement) (REC Economic Instruments, Slovenia, p 6)
- Suitable laws about environmental protection, including specific regulations about air, water and soil pollution and wastes, have existed since the 70's. In 1993, the new Environmental Protection Act was passed which emphasized care for the environment more strongly and concretely and the "Polluter Pays" principle was put in force (REC Economic Instruments, Slovenia, p 1). The Environmental Protection Act set up a system for introducing all kinds of known economic instruments for environmental protection (REC Economic Instruments, Slovenia, p 2)

Institutional Strength and Commitment

Bodies responsible for environmental protection in Slovenia are Ministry of Environment and Regional Planning, Environmental Protection and Water Regime Agency (design economic instruments), Ministry of Finance (revenue collection), Environment Protection and Water Regime Agency (enforcement) (REC Economic Instruments, Slovenia, p 6)

Environmental Trade Finance and Investment

- Limited funds are available for environmental projects from the State budget. Industrial user fees do not cover the costs of some improvements. There is also discussion about increasing domestic user fees to provide additional resources. World Bank and EBRD have been active in supplying loans for projects (Environmental Products and Services, BISNIS, p 25)

Citizens

Policy Legal and Regulatory Framework

- Based on the REC Overview on the Status of Public Participation in Slovenia, the public has the right by law to freely form groups, obtain any information concerning environmental damages and participate in public hearings. But public participation in environmental permitting, nature conservation and water protection laws is not legally developed

Institutional Strength and Commitment

- Slovenia's score for citizens in the area of institutional strength and commitment is 3 on the grounds that (1) The realm of NGOs is not yet well structured and the rules of the game within the community are still not stable and transparent (REC NGO Report), (2) There are now 80 environmental, nature protection organizations which could be considered NGOs of various sizes, level and structure, but there is a lot of confusion regarding the character of some NGOs (REC NGO Report), (3) A lack of skills and capabilities doesn't permit efficient practice of public participation and people lack the skills and capacities to communicate and cooperate with one another) (REC NGO Report), (4) NGOs are weak in building coalitions with possible allies (REC NGO Report)
- Public initiative is possible at local, self-government level and provides that citizens can request the issuance or the invalidation of a general act or other decision by the Municipal Council Public and NGO's, however, have little opportunity to make a direct impact on the decision making of parliament and central government with respect to the environment (REC Status of Public Participation, p 5)
The establishment of many new NGO's is rapidly taking place but the realm of the NGO's is not well structured yet and the rules of the game within the NGO community are still not stable and transparent (REC Status of Public Participation, p 10)
- There are about 80 environmental nature protection organizations which could be considered NGO's of various sizes, level and structure (REC Status of Public Participation, p 10)
- There are annual meetings between NGO's and at least some new NGO's are involved in a more or less permanent official exchange of information and distribution (REC Status of Public Participation, p 11)

Environmental Trade Finance and Investment

- In the past two years, the MoE has given funding for NGO activities through grant programs However, from the actual practices the long-term grant policy of MoE to support public participation capacity building is not recognizable The amount of grants for NGO's compared to other budget expenses seems rather miserable (REC Status of Public Participation, p 15)
Most of the funding for public participation activities comes from international foundations and foreign assistance programs including REC, the Open Society Fund, PHARE TACIS and PHARE Democracy Programs (REC Status of Public Participation, p 15)

SLOVAKIA

Private Enterprise

Institutional Strength and Commitment

There is no specific liability law Court actions are uncommon and take a long time

Environmental Trade, Finance and Investment

Financial institutions are not very involved in environmental compliance process

Central Government

Policy, Legal and Regulatory Framework

- There is comprehensive environmental legislation, but relatively poor monitoring and enforcement

- Energy prices are heavily subsidized
- Environmental audits are only sometimes required in the privatization process
- The state does not assume liability for past environmental damages
- Domestic environmental policy is developed to meet international environmental agreements

Institutional Strength and Commitment

The national environmental agency is only moderately influential

Environmental Trade, Finance and Investment

- The environmental agency is at the ministry level but is not funded sufficiently
The budget for the national agency has decreased moderately since 1994

Local Government

Policy, Legal and Regulatory Framework

- Environmental decision making is relatively open to public debate

Institutional Strength and Commitment

- Local environmental agencies are only moderately influential

Environmental Trade, Finance and Investment

There is a lack of waste water treatment in key areas as well as a lack of investment knowledge and capital

Citizens

Policy, Legal and Regulatory Framework

- Local NGOs are active in the environmental policy making debate, but not active in monitoring and enforcement
Slovakia is currently considering an access to environmental information law
- Citizens are guaranteed the right to information, free assembly, association and petition
- Citizens are allowed to comment on EIAs

Institutional Strength and Commitment

- There are a large number of NGOs active in Slovakia
- Some are well coordinated and there is some cooperation between NGOs
- There is very little cooperation between NGOs and government and no channels for dialogue

Environmental Trade, Finance and Investment

The main sources of funding are international foundations There is also limited funding from the ministry of environment Local governments assist NGOs with in-kind contributions There is no assistance from parliament