A Review of Environmental Assessment Systems
Russian and International Experience

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<tr>
<td>CCME</td>
<td>Canadian Council of Ministers of the Environment</td>
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<td>CEE</td>
<td>Central and Eastern Europe</td>
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<td>CEQ</td>
<td>Council on Environmental Quality</td>
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<td>CNS</td>
<td>Committees of Natural Resources</td>
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<td>EA</td>
<td>Environmental Assessment</td>
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<td>EAM</td>
<td>Environmental Assessment Materials</td>
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<td>EIA</td>
<td>Environmental Impact Assessment</td>
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<td>EIS</td>
<td>Environmental Impact Study</td>
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<td>FIAS</td>
<td>Foreign Investment Advisory Service, IFC, World Bank Group</td>
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<td>FONSI</td>
<td>“Finding of No Significant Impact”</td>
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<td>IA</td>
<td>Impact Assessment</td>
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<td>MAC</td>
<td>Maximum Allowable Concentrations</td>
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<td>MNR</td>
<td>Ministry of Natural Resources</td>
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<td>NEPPS</td>
<td>National Environmental Performance Partnership System</td>
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<td>NPAF</td>
<td>National Pollution Abatement Facility</td>
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<td>PER</td>
<td>Public Environmental Review</td>
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<td>SCEP</td>
<td>State Committee for Environmental Protection</td>
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<td>SE</td>
<td>Specialized State Enterprise</td>
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<td>SER</td>
<td>State Environmental Review</td>
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<td>SEA</td>
<td>Strategic Environmental Assessment</td>
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<tr>
<td>SoW</td>
<td>Statement of Work</td>
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<td>SOF</td>
<td>Subject of Federation</td>
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<td>TOR</td>
<td>Terms of Reference</td>
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<td>USEPA</td>
<td>United States Environmental Protection Agency</td>
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Acknowledgements

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CHAPTER I:  
INTRODUCTION

In May 2000, the Russian Government abolished the former State Committee for Environmental Protection (CSEP) and merged environmental management, including the Environmental Assessment (EA) function, into the Ministry of Natural Resources (MNR). These developments raised questions about whether Russia's EA system was still capable of ensuring the environmental soundness of new investments and programs. Hence it was decided to undertake a study to assess the implementation and effectiveness of Russia’s EA system at the federal level and in three of the 89 oblasts, or “states” comprising the Russian Federation.¹

In Russia, environmental assessment includes three stages: 1) preparation of Environmental Assessment Materials (EAM) by the proponent; 2) review of these materials by the State Environmental Review (SER) authority, or by in-house staff or a panel of independent experts; and 3) approval of the SER conclusions by the SER authority.

The study found that:

• Russia’s legal framework for EA is quite advanced but lacks specific guidelines and differentiation between projects with significant or less significant environmental impact. In particular, the absence of any meaningful “screening” process means that, in principle, all potential investment projects are required to prepare an EA and submit it for review by the SER authority. This puts a disproportionate burden on small- and medium-sized projects with no significant environmental impact, or forces them to apply for an exemption that is arbitrarily granted on a case-by-case basis. This leads to inefficiency, insufficient consultation with concerned parties, opportunities for corruption, and not enough emphasis on those projects that are likely to have significant environmental issues that need to be assessed and for which mitigation measures need to be devised. It also reduces the level of follow-up of significant environmental issues during project implementation.

• A second key finding is the lack of any scoping mechanism or other means of better integrating the EIA preparation and its subsequent review. This means that most EAs are likely to address the most significant environmental issues according to international best practices. In Russia, the initial EIA is to be prepared by the proponent, and the subsequent State Environmental Review is to be conducted only by the authorized federal agency (MNR at the federal level or by staff located in its branch offices in the regions). This hampers the effectiveness of EA implementation. Typical consequences are EIA reports that do not focus on the core environmental issues or do not meet the expectations of the SER since it not required to, and

¹ The analysis of Russia’s EA system in chapter 2 of this report draws only on the executive summary from the full report titled “Russian Federation—How Well is Environmental Assessment Working in Russia?”—A pilot study to assess the capacity of Russian’s EA system: Konrad Von Ritter and Vladimir Tsirkunov, June 2002.
normally does not review, the terms of reference for the EIA. This would not be the case if an effective scoping mechanism were in place. As a consequence, in practice, the EIA process often only has limited impact on actual project decisionmaking, except in selected cases of highly visible and internationally financed projects that are more likely to be prepared according to international best practices.

- A third finding is declining institutional capacity related to the ongoing restructuring of Russia’s overall environmental management system. The many changes, both in personnel and legal status, have resulted in a lack of (or sometimes misleading) guidance from the federal level, and an overall reduction in staff and funds for the environmental management system as a whole, including the SER. The quality of environmental data on which EA relies and the level of follow-up to ensure implementation of SER conclusions, have been weakened. Furthermore, the already mentioned lack of screening and scoping means that staff members’ time is often absorbed by relatively insignificant projects, diverting attention away from reviewing projects with potentially significant environmental impacts.

- A fourth finding is that Russia’s broader reform efforts to decentralize and devolve authority and decisionmaking to “oblast” or “municipal” levels in order to reduce the size of the federal government and enable decisions to be made closer to the people and affected locales, has resulted in some confusion with respect to environmental management. The new Law on Environmental Protection (2002) appears to allow for some delegation of certain SER responsibilities to regional governments, but to date no decentralization measures have been initiated. Some experts believe the potential delegation would weaken further the environmental management system; others believe it could eventually lead to a more effective system. In any case, the final outcome of the proposed changes currently is somewhat ambiguous and there seems to be a lack of vision as to how the government wishes to move forward.

Recommendations from the study focus on three principal weaknesses in the Russian EA system: (1) the lack of differentiation through screening and scoping in the early stage of an EA; (2) the lack of integration of the EIA and SER subsystems while conducting the EA; and (3) the declining institutional capacity and lack of policy direction for the EA and Environmental Management System.

- First, further evolution and fine-tuning of the EA system is needed, building on international and domestic best practice. The highest priority is the establishment of effective screening and scoping mechanisms. These measures can be taken within the existing legal framework and hence could be implemented in a short timeframe of one year. These changes need to be developed in the context of the broader policy agenda of deregulation and simplification of government control over business.

- Second, there is a need for systemic changes in Russia’s EA system. The most significant one is to clearly define the respective roles of federal and regional authorities in line with the broader public sector reform aimed at decentralization and increased accountability. These changes may require revisions to laws to reduce legal uncertainties and to develop new legal instruments, such as agreements between
federal and regional governments, which will take time and require thorough consultations.

- **Third**, there is a need for capacity building to modernize and maintain the EA system, which should become an ongoing process. The pace and depth of these reforms will depend to a large extent on political willingness to lead this process and, in turn, public pressure. In addition to the recommendations to the government, there are also a number of suggestions for follow-up actions by the World Bank to help Russia further develop its EA system.

**International EA Practice – Relevant Experience**

In addition to relevant best practice examples within its own borders, Russia can draw on a rich and diverse international experience with EA implementation in those areas that need strengthening.

When it comes to defining roles of regional and federal authorities, there is no single “correct” model. Other large federal states face challenges similar to Russia’s—and have each chosen quite different approaches, depending on their political and legal tradition and the concentration of power at the federal level. To provide a basis for comparison, environmental management systems in three countries that also have federal and state governments have been reviewed:

- **The United States**, where the federal government has pre-empted both legislative and implementation authority to a large extent, and then selectively delegates powers to the states based on performance agreements and with the right to take these powers back if states fail to perform satisfactorily. Specifically with regard to EA, the federal government has lead responsibility for implementing the federal National Environmental Policy Act (NEPA); some regions (states) have adopted regional NEPAs.

- **Germany**, where the federal government has pre-empted large areas of legislative powers, but the Laender (the “regional governments”) have by default assumed responsibility for implementation, except in a few cases (for example, transboundary issues) that call for a federal role. On top of Germany’s own system, the European Union’s (EU) legislation has created a rigorous legal framework to which member states have to (at times grudgingly) adhere; an example is the case of the EU’s Directives for Environmental Impact Assessment.

- **In Canada**, by comparison, regional authorities wield much larger power. They typically have developed their own environmental legislation, which can differ across regions. Canada established the Canadian Council of Ministers of the Environment (CCME), a mechanism to harmonize legislation through building bottom-up consensus. For the EA system, this group has developed a draft framework that
establishes at least shared principles, including a commitment to notify each party about ongoing EA processes.

While not developed specifically for the EA system, the U.S. Environmental State Performance Partnership Agreement presents an interesting model for how strong federal authorities can devolve responsibility to regional governments in a selective way, while continuing to maintain some control. The key features of this model are its outcome orientation and the element of accountability it introduces in the federal-regional relationship. The federal government and states mutually agree on outcome indicators to measure environmental improvements, increasing the flexibility of states to choose strategies for achieving goals. Federal funding, which previously was provided from a variety of sources for different programs (each with its own rules), can now be combined as a block grant, giving states more flexibility to allocate resources to high-priority environmental issues. Participation in the National Environmental Performance Partnership System (NEPPS) is voluntary.

An evaluation after five years of implementation confirms the soundness of the concept, but also shows the obstacles associated with introducing a new management tool in government. Only a few states had the necessary planning and management capacity to take full advantage of the flexibility provided by the model. These were typically the better performers. The new performance-based system also was superimposed on the traditional activity-based management system, resulting in only a partial replacement. As a result, states were disappointed that the federal government was not providing as much flexibility as expected. In turn, the United States Environmental Protection Agency (USEPA) was caught between conflicting incentives to offer more flexibility to states, but at the same time to respond to tightened accountability requirements under the Government Reporting and Performance Act. The model takes time to implement, but can work well as a tool for selective delegation of powers to high performing regions.

Relevant international experience can also be found in other areas, for example screening for EA. The following examples show that there is not one single “correct” model:

- The World Bank uses a classification system for screening backed by an illustrative list of projects that may be assigned into one of four categories.

- In EU member states, screening procedures are based on projects listed in Annex I and II of the EIA Directive (projects are defined by type and scale). An EIA is mandatory and automatic for Annex I projects, typically large-scale schemes such as power stations. Annex II-listed projects require case-by-case screening to determine if they are likely to have a significant impact on the environment. EU member countries are required to develop criteria, such as size and location, to guide the
screening process, based on minimum requirements established in Annex III of the EIA Directive.²

- The US EA system provides for different levels of assessment, as determined by screening. Certain actions are categorically excluded from EA requirements. Others require an intermediate level of EA, to determine whether a full-blown Environmental Impact Study is needed or whether to issue a "Finding of No Significant Impact" (FONSI).

The following two chapters provide greater details on the conclusions and recommendations above from the study of EA systems in Canada, Germany, Russian and the United States. It is hoped that the best practice findings form the report of the EA processes in these four countries can provide direction for countries in Europe and Central Asia, who are interested in strengthening their environmental management systems.

² See EU 85/337
http://europa.eu.int/smartapi/cgi/sga_doc?smartapi!celexapi!prodCELEXnumdoc&lg=EN&numdoc=31985L0337&model=guichet
and EU 97/11 Amendment
CHAPTER II:  
THE RUSSIAN FEDERATION

Russia’s environmental assessment system became the focus of international attention when in May 2000 the government abolished the former State Committee for Environmental Protection (SCEP) and merged environmental management, including the EA function, into the Ministry of Natural Resources (MNR). These developments caused concerns about whether Russia’s EA system was still capable of ensuring the environmental soundness of new investments and programs.

Given growing concerns, a study was initiated to assess the implementation capacity and effectiveness of Russia’s EA system at the federal level and in three selected oblasts, or regional governments (Russia has a total of 89 oblasts). A second objective was to propose a framework for undertaking such an assessment that could possibly be used for other countries as well. Russian experts and officials at both the federal and regional levels actively collaborated in the preparation of the assessment. The report is expected to serve as a platform for dialogue between the Government of Russia and the Bank about environmental management. During the assessment, a preliminary framework was developed and tested at the federal level and in three selected regions. The framework covered five major aspects of an EA system. (see Table I)

For each of these five aspects, an assessment tool was developed consisting of guidelines for an overall assessment and a checklist with more detailed criteria3 to help in the evaluation. Benchmarks were provided to assist with ranking performance on a scale from 1 (low) to 5 (high). The framework, which is still very much a work in progress, was developed with a view to generic application and cross-country comparison.

In this context, effectiveness is understood to mean that: (a) the primary (substantive) goal of EA is to provide sound information to decisionmakers to reduce the environmental impact of proposed development actions, and ultimately to ensure that development is environmentally sustainable; (b) the immediate (instrumental) goal of EA is to ensure that a proposed activity complies with environmental legal and regulatory requirements; and (c) the effectiveness of the EA system is determined by the extent to which these goals or surrogate measures are met, including the following factors:

Proportionality. The scope of EA should be commensurate with the environmental impact of development actions.

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3 The criteria were developed using as a reference point the following elements and characteristics of internationally accepted EA Systems: a) transparent screening of EA-related activities; b) scoping to focus on the major environmental impacts; c) identification and assessment of alternatives; d) an open, participatory process; e) assessment of impacts and determination of their significance; f) mitigation and management planning; g) preparation of an EA report and distribution to stakeholders; h) review of quality of EA report and outputs; i) incorporation of EA outputs into decisionmaking; and j) provision for monitoring, follow-up, and post-project analysis.
Equity. The process should be transparent and applied equitably, without bias to any party.

Efficiency. The process should be undertaken within the minimum time and resources consistent with the required scope of assessment.

Effectiveness. The process should meet its mandated requirements and objectives, consistent with accepted international principles.

The assessment faced a number of Russia-specific challenges, including a rapid pace of institutional and regulatory change in environmental management, unclear reforms that were initiated but not completed (for example, decentralization), and variations across regions. This is therefore an assessment of a system in transition. The Russian experts in the team played a central role in capturing and analyzing the richness of these different “realities” of EA in Russia. As can be expected, the emerging picture is not one of a coherent blueprint model, but rather one of an evolving system in transition with multiple facets.

Russia’s EA System and its Two Subsystems

Environmental Assessment (EA) is being used in this report as the generic term to describe the entire process of systematic analysis and evaluation of the environmental consequences of a proposed activity. Although the Russian EA process includes many elements found in other EA systems, it has distinctive features, notably its two subsystems—the Environmental Impact Assessment (EIA) and the State Environmental Review (SER). Environmental impact assessment (EIA) is the process by which the proponent identifies adverse environmental impacts, provides for public participation, assesses consequences, and proposes mitigation measures. This is also referred to as OVOS, the Russian acronym of the relevant regulation. The EIA is subsequently submitted to the State Environmental Review (SER), which is a process whereby a specially authorized entity, the Ministry of Natural Resources (MNR), determines whether the proposed activity and documentation (including the EIA) comply with environmental and legal requirements.

The key actors in the EA process are:

The proponent/developer of the proposed activity, who invites (hires) a project designer and an EIA designer to prepare required project documents, including an EIA.

The federal specially authorized entity responsible for the State Environmental Review of the documents, i.e. MNR and its branch offices at the “territorial or regional” level located in oblasts, krais, or other Subjects of the Federation (SOF). These regional offices report to the federal Ministry of Natural Resources and are

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distinct from the environmental offices of regional and local governments (for example, oblast, municipality, or district), which report to their respective regional or local authority.

The regional government (for example, of an oblast), which will identify and agree to technical conditions for the project operation, enter into a land site selection agreement with the proponent, and eventually issue a project implementation permit. It occasionally also organizes public hearings.

The public/community (non-legal entities), which may participate in certain aspects of the environmental review.

The three stages of environmental assessment are: (1) preparation of the Environmental Assessment Materials (EAM) by the proponent; (2) review of the EAM by the SER authority, either by in-house staff (for simple cases) or by a panel of independent experts (varying in number from 3 to over 20), who can come from academia, the private, or the public sector for more complex cases (the EAM may also be reviewed through a parallel Public Environmental Review, if requested by the public); and (3) finally, approval of the SER conclusions by the SER authority. The authorized body has to approve the conclusions of the panel before they become binding for the proponent.

Summary Assessment of Russia’s EA System

The following table summarizes the scores for the five elements of Russia’s EA system assessed in this review, based on averages of the expert views.

<table>
<thead>
<tr>
<th>Key Aspects of EA System</th>
<th>Score</th>
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<td>Context</td>
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<tr>
<td>Legal and Regulatory Framework</td>
<td>4</td>
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<tr>
<td>Implementation</td>
<td>3</td>
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<td>Impact</td>
<td>3</td>
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<tr>
<td>Institutional Capacity</td>
<td>3-2</td>
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Note: Scale from 1 (low, unsatisfactory) to 5 (high, excellent).

Russia’s legal framework for EA is quite advanced but lacks specific guidelines and differentiation between projects with significant or less significant environmental impact. This leads to inefficiency, insufficient consultation with concerned parties, opportunities for corruption, and not enough emphasis on follow-up of significant environmental issues during project implementation. For example, the absence of a meaningful screening process means that, in principle, all proposed investment projects are required to undergo a State Environmental Review and prepare an EIA. This puts a disproportionate burden on small- and medium-size projects with no significant environmental impact. The sheer volume could overwhelm SER authorities. In practice, this does not happen because proponents can apply for exemptions. However, the dependence on arbitrary case-by-case exemptions then becomes a source for delays and possible corruption. The lack of
specific guidelines also leaves implementation of formal provisions for public participation highly variable and creates a gap between regulatory requirements and implementation practice.

A second key finding is the lack of integration of Russia’s two EA subsystems, the upfront EIA to be prepared by the proponent, and the subsequent State Environmental Review (SER) to be conducted only by the authorized federal agency (MNR and its federal offices in the regions). These two separate stages hamper the effectiveness of EA implementation because typically the EIA reports do not focus on the core environmental issues or meet the requirements of the SER’s subsequent review. This situation arises frequently because the SER experts are not required to, and normally do not review, the Terms of Reference (TOR) for the EIA. Thus, in practice the EIA review may be relatively useless and may have only limited impact on actual project decisionmaking, except in selected cases of highly visible and internationally financed projects where EAs adhere to international practices.

A third finding is declining institutional capacity related to the ongoing restructuring of Russia’s overall environmental management system. The many changes, both in personnel and legal status, have resulted in a lack of (or sometimes misleading) guidance from the center, and an overall reduction in staff and funds for the environmental management system as a whole, including the SER. The quality of environmental data on which EA relies and the level of follow-up to ensure implementation of SER conclusions, has been weakened. Furthermore, the already mentioned lack of screening and scoping means that staff time is often absorbed by relatively insignificant projects rather than the review of projects with potentially significant environmental impacts. Some SER Environmental Protection Committees welcome the large volume of relatively simple reviews for the additional fee income, to help finance underfunded overhead costs. Some regional governments have tried to compensate for the declining staff levels within federal environmental bodies by strengthening their local environmental units, but to date these local units have been prevented by law from engaging in SER. A new 2002 Law on Environmental Protection allows for the selective delegation of SER functions, but the legal situation is still uncertain, and no concrete case has as yet materialized.

Context

Constitutionally, environmental management in Russia is a shared responsibility of the federal and the 89 Subjects of Federation (subsequently called regions). However, the SER has been the exclusive responsibility of the federal government and its branch offices in the regions, that is the State Environmental Review Department at the Ministry of Natural Resources (MNR’s) federal headquarters, the Departments of Natural Resources in seven Okrug centers (the recently created seven administrative regions covering multiple subjects of federation), and Natural Resources Committees at the regional (Subject of Federation) level.

The roots of Russia’s EA system can be traced back to the decisionmaking process for “economic” projects in the Soviet Union, which was largely characterized by an
engineering approach that relied heavily on technical norms and construction standards, with subsequent review by independent experts ("expertise") to check the quality of the proposal and the project documentation.

The EA system evolved from these origins, influenced by three broader developments: (1) the transition toward a market economy and democracy and the related public sector reforms; (2) increased public awareness of environmental risks and pressure on the government to safeguard public health; and (3) the international development of the EA system and Russia's commitment to international environmental conventions, such as Espoo (an international convention governing the EA process that calls for including transboundary implications into environmental assessments and promoting greater public participation), which has led to increased international scrutiny of Russia's environmental management.

The transition to a market economy and the emergence of private sector project proponents required a change in the EA system to reflect the separate roles of the private sector proponent and the public sector regulator. New environmental requirements, calling for the project proponent to prepare the EA and the state regulator to subsequently review it, were codified in guidelines (OVOS) in the early 1990s. The guidelines also required a more transparent process to promote public participation. At the same time, the new laws and regulations clarified and strengthened the public sector role: the state's review was to be administered by a specially authorized federal body, the State Environmental Review (SER), initially within the Ministry of Environment, which was subsequently downgraded to a State Committee for Environmental Protection (SCEP) in 1996.

This system functioned as described above until May 2000, when the government decided to abolish the SCEP and move its functions, including SER, into the MNR. In doing so, the government explained that SCEP's abolition was part of a broader government effort to reduce the number of ministries and independent authorities, but some skeptics believe that SCEP was eliminated because its policies were perceived as an obstacle to economic growth. In any case, the change created uncertainty about the future and political support for environmental management. Some critics also pointed to a potential conflict of interest, since the MNR also has the responsibility for awarding licenses for the exploitation of natural resources. Other changes came with the creation of seven Okrugs, a new supra-regional administrative structure, each covering several oblasts, and leading the MNR to reduce the number of staff at its oblast-level offices and to close many of its district and municipal offices.

In another restructuring, MNR management attempted to delegate SER's functions to a specially created federal state-owned enterprise named "Gosecoexpertiza." In doing so, the government emphasized the independence this organization would have from other MNR functions, such as licensing of natural resource use. Funding was to come from fee revenues. In 2001 this idea was eventually abandoned since it did not conform to the 1995 Environmental Review Law and its funding was not secured. Yet similar enterprises
continue to exist in some regions. They are not formally authorized to conduct SER, but provide support to the authorized SER office.

Public interest in environmental matters was greatest in the late period of the Soviet Union and early stages of transition, spurred by information that began to be more widely available concerning past environmental disasters. Indeed, environmental citizen groups were in the forefront of political reform. This public interest, and hence the government’s support for environmental issues, appeared to decline in the second part of the 1990s, with greater attention attached to economic growth and measures needed to complete the transformation to a market economy. For example, the first draft of the government’s Economic and Social Development Plan in 2000 did not even mention environmental goals, although an environmental section was added later.

There was a brief resurgence of public and international protest when the SCEP was abolished in 2000. In response, MNR created a working group that comprised academics, experts, and the public (Order dated September 6, 2000, #326) to elaborate a new EA concept. The group failed to arrive at a consensus with respect to the SER; one group supported restoring the SER system with only minor changes, and the other proposed more drastic changes, including changes to legislation. The MNR discontinued the Working Group. In the meantime, the number of SER cases had dropped nationwide by about 20 percent (or about 15,000 applications). Since the nomination of a new Minister of Natural Resource in 2001, SER staff at headquarters has shrunk to 15 from 33 before the reorganization.

Unless further changes are made to reduce the overall number of environmental reviews subject to SER, and possibly to delegate SER responsibility for projects likely to have a minimum impact on the environment to regional authorities, the system will remain weak. Current staff levels are not sufficient to implement the system effectively under existing guidelines.

Overall, the political and social context has been supportive for the emergence of an environmental management system. Recently, however, the restructuring and weakening of the environmental management system has had an adverse effect on the functioning of the EA system.

The Legal and Regulatory Framework

Russia’s EA system has clear legal foundations, including the Federal Environment Review Law of 1995, Regulations for Environmental Impact Assessment OVOS of 2000, and the more recent Law on Environmental Protection (2002). While efforts have been made under the recent Environmental Protection Law to integrate preparation of the EIA with its subsequent SER, they remain separate processes that are not well coordinated. For instance, MNR and its territorial offices do not review or provide guidance on the EIA terms of reference (TOR), a critical interface between the EIA preparer and reviewer that exists in most countries.
At the same time, most key elements of internationally accepted EA systems are, at least in embryonic form, present in Russia’s EA legislation and regulation. Over the last 10 years, new elements have been added, including enabling language that allows regions to develop screening guidelines (to distinguish complex, medium, and simple projects). Similarly, the regulation provides opportunities for scoping, the process of focusing the EIA and the SER on the highest environmental priorities. As mentioned, stronger rules on public participation, information disclosure, and consideration of transboundary impacts were added.

The true weakness of the legal framework is the lack of coherent implementation guidelines. Legislation leaves it to federal SER offices and their regional branches to develop such guidelines, but only a few have done so. For example, Moscow City has an elaborate draft regulation for SER screening, but this has not yet been officially adopted. Altai Krai has adopted a somewhat simpler model of SER screening. The Arkhangel'sk Committee of Natural Resources has introduced a case-by-case screening mechanism for SER. OVOS regulations introducing a screening mechanism were drafted by Tomsk Oblast Administration, Vologda CNR, and Arkhangel'sk CNR. Many other regions have not developed such guidelines. In the absence of such guidelines, proponents depend on case-by-case decisions by officials, which can add to preparation cost and time, create uncertainty, and invite corruption. The lack of clear implementation guidelines can be seen most strongly in the areas of screening and scoping, public disclosure and access to information, and strategic environmental assessment.

In one important area, the EA legislation is not consistent: the new Law on Environmental Protection of 2002 (Article 9) allows for the delegation, under special agreement with the federal government, of certain SER responsibilities to regional governments, such as Oblast Administrations, in contrast to the regional branch office of the federal government. By contrast, the 1995 ER Law clearly stipulates that only the federal government can exercise the SER function. The new Law on Environmental Protection also explicitly refers to this ER Law as the relevant law to govern the SER process. This situation can be interpreted as the new law superseding the older ER Law, offering for the first time an opportunity for regional government participation in SER. So far, there has been no case of delegation of SER functions to the regions. Profound concern has been expressed by a number of Russian experts that Article 9 is introducing further legal uncertainty in an already weakened system because it does not provide a clearly defined direct legal mandate for the regions; that regions are not ready to assume such additional ER responsibilities; and that tension will increase between Oblast and Federal authorities at the regional level.

Despite these deficiencies, Russia's legal and regulatory framework is assessed as satisfactory (rating of 4) since it provides a generally supportive framework for EA, although it needs more refined guidelines and some more specificity to fill regulatory gaps.
Implementation of EA in Russia

Compliance with EA regulations varies. While there are indications that fewer cases are being submitted for SER review, those that are submitted typically comply with formal SER requirements. Compliance with EIA requirements, which are less scrutinized by SER, is lower, particularly with regard to public participation and TOR preparation. Only a few of the cases submitted for SER approval had an EIA prepared in line with OVOS 2000 regulations. Proponents indicated that they were not familiar with these regulations, and SER regional authorities are reluctant to enforce their implementation due to lack of clear guidance. It also should be noted that these requirements are unreasonably complex for small activities with no environmentally significant impact.

The number of SERs conducted declined, on average, by 30 percent between 1999 and 2001. While a decline in the number of SERs does not necessarily point to a deterioration of the operational effectiveness of the system, and could even be desirable if it were the result of a well-thought-through and implemented screening policy, the conclusion of this assessment is that the decline reflects a worrisome combination of two negative trends: declining capacity within the SER, and increased focus on cases with low environmental impact at the expense of coverage of cases with significant environmental impact. The trends clearly reflect the absence of effective procedures for screening and scoping.

Regions have given different reasons for not introducing an effective system of differentiation. First, they contend, screening doesn't make much sense because the law does not provide the flexibility to simplify procedures, at least not for SER. For example, there is no provision to exempt small projects below certain thresholds from SER. So, if screening is done, it is mostly for administrative purposes (determining the fee and number of experts). Second, SER authorities feel pressure from courts and public prosecutors to strictly implement the law with a narrow interpretation, meaning no exemptions from SER. Third, some regions welcome the large volume of relatively simple SER reviews because they generate fee income, do not cost much, and therefore can cross-subsidize general overhead costs, which are not adequately covered by the federal budget.

Another deficiency of the screening system is some ambiguity in the division of responsibilities between federal and regional-level SER offices. The ER law provides a long list of criteria (Articles 11 and 12), but in practice the decision is not always clear. As such, some developers are forced to incur the extra cost of presenting cases both at the federal and at the regional level. Some proponents seem to prefer dealing with regional-level offices, which are known to take less time than the federal-level office, because they typically involve fewer experts and hence do not raise as many questions.

Scoping practice is not well developed. The scope of the EIA is driven by the desire to pass the SER review, rather than by a conscious prioritization of environmental impacts. Since the SER does not provide guidance on the TOR and scope of the EIA, proponents must try to interpret SER expectations. This provides a rich market niche for those EIA consultants with strong connections to the SER authority a rich market niche: proponents depend on their judgment as to what needs to be included in the EIA. Since the cost of
the EIA is a function of its volume, consultants find themselves interested in increasing the scope without necessarily adding value to the analysis. In fact, a review of sample EIAs found large data collections of "interesting but irrelevant" data, often based on unreliable secondary data, which do not add but rather detract from the analysis of major environmental impacts.

Limited access to information is one of the key obstacles preventing effective public participation in the SER. The federal regulatory framework does not provide for the format and scope of the SER output information to be issued to the public. Hence, much depends on the attitude of the competent authority toward openness and transparency. Good practice includes notification of the public not only about the outcomes of SER, but also about significant upcoming and ongoing SERs. For instance, the Kemerovo Oblast gives the public access to a summary of SER applications. Whenever the application is of particular public interest, SER conclusions are published in the media.

Fortunately, the diversity of Russia’s 89 regions provides a fertile ground for pilot testing new approaches. Though isolated, there are best practice examples in regions with proactive and dedicated government officials who have designed creative solutions to these problems (such as screening models for Moscow and Altai) that can serve as test cases to develop and implement country-wide reforms.

Overall, EA implementation is rated lower (at 3, see Table 1) than legislation, given that requirements are often not followed and opportunities provided by the law to enhance the effectiveness of the EA system are not being used. Finally, there are perverse incentives to load the system with environmentally insignificant cases to make up for budget shortfalls.

Impact of the EA System

The EA system is designed to influence: (a) project preparation through EIA’s close linkage to the project development cycle, and (b) project decision making through the veto role of the SER conclusion (no project can be financed or implemented without a positive SER conclusion).

In practice, the EIA process has only limited impact on actual project decision making, except in selected cases of highly visible and internationally financed projects. The primary motivation of developers when undertaking an EIA is to obtain SER approval. The EIA is rarely perceived or used by the developer to improve the project, program, or plan, although there are such cases. Factors that hamper the impact of the EIA are (a) limited quality of data, analysis, and recommended activities; (b) limited capacity, particularly by the regions, to implement complicated EIA requirements; (c) delayed timing of EIA preparation, often after fundamental project decisions have been made; and (d) negative attitudes from proponents, who see EIA as an extra burden.

The SER process continues to command a high level of at least formal compliance, and is widely used as a “seal of approval.” Conclusions from the SER are typically reflected in
the project design. The concern of Russian EA experts, which was confirmed by the sample review of SER cases, is the declining substantive quality of SER conclusions. They are becoming shorter, often focusing on procedural issues (for example, incomplete documentation), and less on substantive recommendations. Two factors may contribute to this trend: (1) the less than satisfactory quality of EA materials submitted to the SER (weak data, lack of focus on environment priorities, etc), and (2) declining capacity and number of SER professionals and experts to undertake in-depth reviews. Here too, screening and scoping would leave more room for taking the time for good comments and follow-up.

The impact of EA conclusions on project and program implementation also seems to be declining. It is here where the drastic shrinking, some would say collapse, of the environmental management system is most evident. The Environmental Inspectorate’s capacity to monitor and enforce EA conclusions has been seriously eroded as a result of the still ongoing reorganization at the MNR and reductions in staff. This means fewer inspections of projects during construction and after completion to verify whether agreed mitigation measures are being implemented. It also means less incentive for the proponent to incur the additional costs that may be associated with mitigation measures. According to SER officials, the number of activities being implemented without SER approval has increased. For example, in Tomsk Oblast this is currently the most frequent form of violation (80 percent of all violations related to EA, up from 20 percent five years ago).

In assessing the impact of the EA system, we have so far looked at the potential environmental benefits that can be reaped if carefully considered EA conclusions and mitigation measures are actually implemented. For a balanced assessment, it is also necessary to assess the potential cost of the EA system. Our assessment focuses on the cost proponents incur in terms of time and money to comply with the EA process. We did not consider the incremental cost of mitigation measures, which require a different analysis (environmental expenditure review).

The impact on proponents, in terms of time and cost, is overall low to moderate, but varies greatly between different types of proponents:

- **Small- and medium-size projects** with no significant environmental risks are disproportionately burdened. The cost of the EIA and SER requirements are not commensurate with the potential benefits from avoided environmental damage. Again, this points to the lack of appropriate screening and scoping procedures. Evasion of EIA requirements, or de facto exemption based on case-by-case decisions, add to the uncertainty and transaction costs that small enterprises face. If strictly enforced, EA requirements pose a barrier to entry and operation for this group of enterprises.

- **Larger national enterprises** can afford to hire experienced consulting firms with good connections to the concerned authorities to manage the EA process on their behalf. Compliance with EA requirements becomes a manageable cost of doing
business. But evasion seem to be increasing, mostly to avoid time delays and possible scrutiny during public consultations.

Large projects involving international financing undertake the EA process (including local requirements) primarily to satisfy requirements of the international lender or parent company. The concern is less with the regular costs for EIA preparation and processing, which are comparable to international standards, but the "hidden" costs that result from ambiguous regulations, dependency on arbitrary case-by-case exemptions, and processing delays due to insufficient capacity of SER authorities. Typically, the international company, even if it has its own environment department, limits its involvement in this process by seeking a Russian partner to manage the EA process and to shoulder the hidden costs.

A business survey conducted by FIAS in 2001 confirmed that environmental regulations pose generally a low to moderate obstacle to doing business. Environmental regulations were scored on average 2.5 on a scale of 5 (being a minor obstacle) and ranked 23 out of 30 possible obstacles with considerable regional variations, possibly related to different levels of environmental enforcement in those regions. Overall assessment of EA impact is moderate (3, see Table 1). While regulatory powers to impact decisionmaking and implementation are considerable, the system is undermined by weak enforcement capacity and at times impractical requirements, which can impose a disproportionate burden, particularly on small projects with no significant environmental impacts.

Institutional Capacity to Implement the EA System

Institutional capacity, in particular with respect to technical staff, which traditionally has been a strong point, has now become a weak link in Russia's EA system. There are clear and objective indications that Russia's institutional capacity to conduct ERs has declined. The total number of SER officials in Russia decreased from about 700 in early 2000 to 400 in 2002. In certain offices, staff levels have been reduced by over 50 percent, while others have kept reductions as small as 20 percent.

The caseload per SER employee has increased by 20 percent or more, in some regions even up to 300 percent. Reportedly, there are also longer delays in processing time, but evidence for this is sparse. The increase in caseloads needs to be interpreted carefully; it could be driven by an "inflation" in the number of SER cases with no significant environmental impact as a result of the lack of differentiation. This may actually not pose a serious constraint on the processing capacity of the office, other than distracting from important EA cases. The increased workload could also be caused by a decline in staff numbers. In this case, one can find overburdened staff that will have to limit the scope of their review to a manageable level, more likely concentrating on easily verifiable formal requirements. Working conditions characterized by job insecurity and low payment for experts also pose a problem and undercut the ability of the SER system to attract and retain quality technical staff needed to sustain the system.

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5 Foreign Investment Advisory Service of IFC, World Bank Group.
Institutional problems facing the SER system are also affecting Russia's environmental management capacity in general. The "follow-up part" of the EA system, particularly with regard to environmental control at the regional and district level, has become weaker as a result of overburdened staff. Capacity building has suffered from large-scale reductions or transfers of technical staff. There are highlights, however: some regions, such as Altai Krai, offer successful models for continuous staff training and development and bring together professionals from several regions to share practical experience.

Overall, institutional EA capacity is rated marginally satisfactory (2 to 3, see Table 1), considering the lack of policy direction, the decline in staff, reduced motivation, and limited training opportunities. Without effective measures to attract and retain qualified staff and experts, and make more effective use of existing capacities in regional offices through a re-defined division of labor between different levels of government, the EA system is at risk of deteriorating into a purely perfunctory bureaucratic process and becoming irrelevant for decision making.

Federal and Regional Responsibilities—A Need to Re-define

A particular challenge for Russia is to redefine the roles of federal and regional governments in environmental management in general, and in EA specifically, to effectively reverse the decline of environmental management capacity. This issue cannot be seen narrowly within the environment sector, but has to be understood in the broader context of the government's decentralization policies.

In the Russian Constitution, environmental management is a shared responsibility between the federal government and the "Subjects of the Russian Federation." In several areas, such as environmental control (inspection), the new Law on Environmental Protection 2002 (Art 6) envisages delegating specific powers to the environmental authorities of the Subject of Federation (SOF), that is the Oblasts. Delegation of inspectorate functions has to be regulated by agreement or other document between MNR and regional authorities. So far only Moscow has such an agreement.

Historically, however, by contrast SER has been the exclusive responsibility of the federal government. The federal government has set up regional offices at the territorial level in addition to the federal headquarters at MNR. Before the restructuring in 2000, such federal branch offices existed at the Oblast and district levels. It is important to keep in mind the distinction between the federal branch offices and those environmental offices at the regional level. The former reports to the federal MNR while the latter reports to the regional government.

In principle, such highly centralized and vertically integrated systems have several advantages. They provide for a uniform process throughout the country with comparable standards, giving proponents certainty about what to expect. They also tend to equalize the uneven implementation capacity of SOFs. Its clear legal codification has allowed the SER system to remain formally intact despite large-scale restructuring.
Russia’s environmental management system is now in transition, and one of the marked results of the restructuring effort is a greatly reduced federal presence at the SOF (territorial) level. Federal offices at the municipal and district levels have been completely eliminated. Federal offices at the territorial (Oblast, etc.) level have reduced staff, or have been absorbed into newly established federal offices at the Okrug level with broader geographic coverage of several SOFs. This is in line with the government’s overall policy to downsize the federal government through the reduction of the number of supervisory and controlling functions.6

This transition has created an administrative vacuum at the regional and local levels. Some SOF governments have stepped in to fill this vacuum by creating or expanding their SOF environmental authorities at the oblast and municipal levels. But SOFs to date are prevented by law from undertaking SERs. The new Law on Environmental Protection now offers an opening to transfer some SER responsibilities to SOF governments on the basis of agreements between federal and SOF governmental bodies.

Views among Russian experts on this matter differ sharply. One group argues that the SER is the backbone of the environmental management system and that it derives its strength from its tight vertical integration. They further argue that this vertical integration (i.e. reporting to MNR rather than to local and regional governments) gives the SER necessary independence from local and regional interests and interference. A rushed delegation of SER authority to SOFs carries a great risk of lowering quality standards and undermining the integrity of the system, since the capacity to implement SER is unclear and definitely uneven across regions. The reduced presence of the federal government at the regional and local levels makes effective implementation impossible and undermines the integrity of the system.

The opposing view is that delegation of SER functions to the SOF is in line with delegation of similar responsibilities in other areas of environmental management such as enforcement. A number of regions possess the capacity and motivation to implement SER as part of their mandate to protect the environment within their territory. Given that the federal government is expected to further downsize, regional governments will need to take on more responsibility.

All factions seem to agree that such redefinition needs to be undertaken on the basis of a well-thought-through strategy and clear legal foundations, developed in a consultative process between public and private stakeholders at the regional and federal level. At the moment, both are lacking.

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6 Deputy Minister, Ministry of Economic Development and Trade, Arkady Dvorkovich, was quoted in Russia Today on June 25, 2002, as saying that the number of federal functionaries will decrease from 400,000 to 150,000-200,000 in 2-3 years.
Recommendations to Strengthen Russia’s EA System

Recommendations focus on the three principal weaknesses in the Russian EA system identified in this assessment: (1) the lack of differentiation through screening and scoping in the early stage of an EA; (2) the lack of integration of the EIA and SER subsystems while conducting the EA; and (3) the declining institutional capacity and lack of policy direction for the EA and environmental management systems.

Measures to improve the EA system need to be in sync with the broader development agenda and tap into the dynamics generated by the three principal drivers behind EA evolution: 1) the transition and related public sector reforms; 2) increased public environmental awareness; and 3) international development of the EA system combined with a keen international interest in Russia’s environment.

Four guiding principles, distilled from many discussions with Russian experts, describe the future direction of Russia’s EA system: (1) assured basic implementation capacity; (2) efficiency and business friendliness; (3) effectiveness, by focusing limited institutional, analytical, and financial resources on the most significant environmental impacts; and (4) long-term impact by moving the EA system beyond a “do-no-harm” tool to an instrument supporting sustainable development decision making.

Broad Recommendations

First, further evolution and fine-tuning of the EA system is needed, building on international and domestic best practice. The highest priority is the establishment of effective screening and scoping mechanisms. These measures can be taken within the existing legal framework and hence could be implemented in 1 year. These changes need to be developed in the context of the broader policy agenda of deregulation and simplification of government control over business.

Second, there is a need for systemic changes in Russia’s EA system. The most significant one is to clearly define the respective roles of federal and regional authorities in line with broader public sector reforms aimed at decentralization and increased accountability. These changes may require revisions to laws to reduce legal uncertainties and the development of new legal instruments, such as the agreements between federal and regional governments, which will take time (1 to 3 years) and require thorough consultations.

Third, there is a need for capacity building to modernize and subsequently maintain the EA system. The pace and depth of these reforms will depend to a large extent on political willingness to lead this process and, in turn, public pressure. Financial technical assistance from international donors could help to develop the EA system.
Specific Recommendations

**Recommendation 1: Evolution and Fine Tuning of The EA System (Short Term)**

Establish a country-wide process of **screening**. Develop an optimal screening mechanism building on the rich in-country experience, as well as international experience, through a process of active stakeholder involvement. Key steps could include an inventory of domestic best practice, an international workshop, development of federal framework guidelines, pilot implementation, strategies to remove perverse incentives, and an ex-post evaluation of the pilots. Screening for EIA and SER needs to be harmonized as part of the process.

Establish a country-wide process of **scoping** and strengthen the link between the EIA and SER systems. Develop an optimal scoping mechanism through a participative process, which would consider options such as review of EIA TORs by the SER for projects with significant environmental effects, or the right of proponents to obtain advice on the EIA scope from the SER authorities, both aimed at better integrating the SER and EIA processes.

**Recommendation 2: Systemic changes (short to medium term)**

**Promote dialogue between stakeholders.** Initiate a dialogue between concerned stakeholders in the public and private sector at the federal and regional levels to develop a strategy for redefining the roles of federal and regional governments in environmental management, including EA implementation, with the ultimate aim to strengthen implementation capacity.

**Develop a vision of the future relationship between federal and regional level environmental governance** that is in line with overall public sector reforms and decentralization. In this context, consider not only the SER, but also EIA functions to ensure that reforms lead to further harmonization, not discrepancies between the two subsystems.

**Hold an international workshop.** The workshop would be organized following initial internal discussions, to review international experience with environmental management in federal systems and implementation of EA functions by regional bodies, on the basis of agreements between federal and regional governments.

**Identify a few pilot regions.** The regions would be used to test implementation of Article 9 of the Law on Environmental Protection.

**Recommendation 3: Strengthen Capacity to Modernize and Maintain the EA System**

**Develop a strategy to maintain and increase technical capacity.** The capacity of existing EA staff and experts needs to be maintained to ensure a sustainable supply of highly trained experts. This could involve an international workshop with
organizations involved in EA capacity building (UNEP, WBI, others) to identify available resources, development of programs for tertiary education, and professional on-the-job training. Following international experience, this could also involve twinning between regions to benefit from Russian best practice.

Cultivate Russia's capacity to assess, evaluate, and modernize its EA system. Create a senior-level working group of policymakers and recognized experts, who would develop recommendations on future EA development. This group should have access to training in the latest EA techniques and to international exchange on best practices. Important topics for such a group would include the practical implementation of Strategic Environmental Assessments, stronger integration of social impacts in the EA process, and clearer rules on disclosure of information.
CHAPTER III:
ENVIRONMENTAL MANAGEMENT IN FEDERAL SYSTEMS:
CANADA, GERMANY AND THE UNITED STATES

As part of a larger effort to analyze the effectiveness of Russia’s Environmental Assessment systems and in anticipation of a possible future dialogue with the government and Ministry of Natural Resources on strengthening Russia’s environmental management system, this Chapter assesses the structure of environmental management in other large federal states to provide Russian decisionmakers with a range of options to chose from when designing a system for decentralizing environmental management for Russia.

Three countries were selected for case studies: Canada, Germany, and the United States. The countries were selected based on the following criteria: (a) the countries should be organized as federal states; (b) there should be some mixture of large land-rich countries (Canada, U.S.) and densely populated countries (Germany), reflecting a range of federal traditions; and (c) information on the environmental management system should be readily available. Although Central and Eastern European (CEE) countries’ experience may also be relevant for this purpose, none were included in this study because Russian decisionmakers are already familiar with these experiences, and had the opportunity to study Poland’s environmental management system during a study tour in 2001.

This Chapter focuses on the federal-regional relationship in environmental management. It provides a brief overview of the evolution of environmental management in the three selected countries and the constitutional context within which environmental management developed. It then looks at the driving forces behind the allocation of responsibilities and division of powers between federal and regional governments. Finally, it provides three examples that illustrate how countries have attempted to improve the overall efficiency of their environmental management system by enhancing collaboration between different levels of government while maintaining healthy systemic tensions that provide checks and balances.

This Chapter was prepared as a desk study. Its purpose is to provide a brief overview and is not intended to be an exhaustive study. The review relies on published documents and analysis, on a few interviews, and on meetings with EA experts from the U.S. and Canada.

The term for sub-national political units varies from country to country. In the United States, they are called states; in Canada, provinces or territories; in Germany, Laender; and in Russia, oblast or subject of federation. In this paper, we use the term region or regional when referring generically to these sub-national units, and the specific terms when referring to them in a country specific context.

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Overview

This Chapter provides a brief overview of environmental management systems in the United States, Canada, and Germany. It describes the constitutional foundations for each country, since environmental management systems are part of the public sector administration that has developed in the context of the constitutional and legal traditions of each country. A synopsis of the evolution of each country's environmental management system, as it is reflected in the development of environmental legislation and in the creation of environmental institutions, which sometimes arose in response to external events, such as the creation of the Ministry of Environment in Germany after the Chernobyl disaster, is also given.

Environmental Management in the United States

The United States Constitution establishes and demarcates the powers of the three branches of the federal government: the legislature (Congress), the executive branch (the president and the federal agencies), and the judiciary. It also provides the foundation for the relationship between federal and state governments. The separation of powers among the three federal branches, and the relationship between the federal government and the states, provides the framework through which the federal and state governments enact, implement, and enforce legislation in all economic areas, including environmental protection. A number of constitutional provisions safeguard rights to participatory democracy and offer many opportunities for public participation in the formulation of legislation and regulation. Judicial review of proposed rules and their enforcement provide further checks and balances. The Constitution disables state laws, including pollution-control laws, that would discriminate against out-of-state sources or impede interstate commerce. According to the constitution, all of the 50 states have equal rights.

Federal authority in the field of the environment is premised primarily on the Commerce Clause in Section 8 of the Constitution, which provides the United States Congress with authority to regulate interstate and foreign commerce, and has been broadly interpreted by the federal courts to empower Congress to enact environmental statutes applicable within states and municipalities, and to private enterprises. Before joining together under the Constitution, the states had general sovereign powers, which included broad authority to regulate all economic activities, including the environment and management of natural resources. Amendment X of the Constitution reserves these powers for the states, unless delegated to the United States or prohibited to the states. The U.S. federal government cannot command a state legislature to pass a particular environmental law, or to regulate polluters in the state in any particular way. But most national pollution control laws specifically encourage and provide incentives for state governments to adjust their laws so that they parallel minimum national requirements, and most states have done so.

8 The description of practice in the U.S. is based on “Environmental Enforcement and Compliance in the United States,” an unpublished speech presented to officials of the Peoples’ Republic of China in 1997 by Richard W. Emory of the EPA, which has been used as a reference throughout this section.
Evolution of Environmental Management

From the 1950s to the 1970s, U.S. industrial development and production continued at very high levels with few or no environmental controls. During this period, as was the case throughout the world, there were very few environmental laws and less enforcement. By 1970, it had become clear that a purely voluntary, uncoordinated approach would result in unacceptable levels of pollution and harm to public health. In 1970, the Congress started to enact laws to “nationalize” pollution control authority and to provide for the delegation of national authority to states that agree to implement standards no less than the national ones. A new agency, the Environmental Protection Agency (EPA), was created and was given nationwide powers to regulate polluting sources. First, EPA addressed air and water quality, setting national standards limiting emissions and discharges.

Later in the 1970s, EPA also started to address hazardous wastes. The rationale for federal intervention was to prevent states with weak hazardous waste laws from being exposed to hazardous waste shipped in from states with stronger laws. Since waste is considered a tradable commodity, and the Constitution mandates free trade in interstate commerce, one state could not exclude such waste coming from another state. Federal laws regulated the shipment, treatment, storage, and disposal of hazardous waste uniformly across states and thereby restored a fair and level interstate playing field.

Until 1976, enforcement of air and water pollution laws focused on business facilities or plants that did not hide or move and could be punished effectively by monetary civil penalties. Hazardous waste was more difficult to regulate because it was carried on trucks, often at night, and then dumped illegally. Criminal laws were needed to make available the skills of police investigators to find the perpetrators and authorize imprisonment as a deterrent. Starting in about 1980, EPA began to develop a criminal enforcement program capability, and Congress regularly increased the punishments available. From combating hazardous waste dumping, EPA expanded its use of criminal enforcement to serious cases of intentional air and water pollution from business facilities.

During the 1990s, EPA developed new approaches to environmental management and collaboration between federal and state governments. These included efforts to increase public participation in the formulation of new regulations; an enhanced role for the private sector through public-private partnerships for pollution prevention; a multi-media and ecosystem approach for natural resources management; and the introduction of the National Performance Partnership system to provide more flexibility and accountability to states in achieving environmental improvements. The national government also provided to the regulated entities much more compliance assistance in the form of educational information and economic incentives to encourage compliance.

Environmental Legislation

The U.S. enacted numerous federal laws to protect the environment. Some were general environmental assessment laws. Others were specific statutes to protect natural resources
(such as coastal resources, fisheries, marine mammals and endangered species), environmental media (such as air, surface water, and groundwater), or control of specific types of pollution (such as hazardous waste and toxic substances). The new statutes provided mechanisms for administrative, civil, and criminal enforcement. In a 1978 Executive Order of the President, federal facilities were required to comply with applicable environmental standards.

Important US federal laws include:

- The **Clean Water Act**, which imposes technology-based and water-quality-based effluent standards.
- The **Clean Air Act**, which stipulates air quality standards.
- The **Comprehensive Environmental Response, Compensation and Liability Act** (the "Superfund Law"), which mandates cleanup of abandoned hazardous waste sites. A related statute, the **Emergency Planning and Community-Right-To-Know Act (EPCRA)**, gives the public access to information on the magnitude of toxic emissions.
- The **Endangered Species Act**, which prohibits the taking of and trading of species identified by CITES as endangered.
- The **National Environmental Policy Act (NEPA)**, which requires federal agencies to consider in advance the environmental impacts of planned major federal actions, and to disclose these impacts to decisionmakers and the public.

The states share with the national government concurrent jurisdiction over the environment. While occasionally the federal government has pre-empted state legislation in some environmental matters, usually the national law does not void or nullify state law but provides incentives for it to come up to the national level. For matters regulated by national law where states want to implement pollution control requirements directly and in lieu of the national government, state laws must be consistent with, or the equivalent to, the national laws, and not less restrictive or protective. State laws also may regulate areas that the federal government does not, such as the management of nonhazardous solid (municipal) waste. Several states have environmental laws that are more stringent than, or different from, federal laws, such as California’s clean air standards, or have developed innovative environmental programs that serve as models for other states and for the federal government as well. Conversely, other states have adopted legal provisions prescribing that state requirements may not exceed national standards.

Examples of some state laws follow:

- **Groundwater Permit Act** (Nebraska) and **Ground Water Exploration and Protection Act** (Kansas). Although the federal government has not yet adopted comprehensive groundwater protection legislation, many, if not most states, have detailed permit programs.
- **Massachusetts Toxics Use Reduction Act** imposes mandatory waste reduction targets on companies that use or generate toxic or hazardous wastes.
• California Safe Drinking Water and Toxic Enforcement Act (adopted as Proposition 65 in 1986) requires extraordinary efforts to make the public aware of health risks associated with products or environments to which they are exposed.

• Environmental Cleanup Responsibility Act (New Jersey) requires extensive investigation and cleanup of contaminated sites before they are sold or transferred.

• Kentucky, New Mexico, and North Carolina prohibit state clean air rules from exceeding the minimum national requirements.

Environmental Institutions

The most important federal environmental institutions include the following:

• The Council on Environmental Quality (CEQ) was established to advise the President regarding environmental programs and activities (National Environmental Policy Act, 1969).

• At the same time, the Environmental Protection Agency (EPA) was created as a regulatory agency in the Executive Branch of the United States Government, subordinated directly to the president. The President appoints its principal executives, subject to Congressional confirmation. In addition to its headquarters in Washington, D.C., the EPA has 10 regional offices located in major cities around the nation.

• The Fish and Wildlife Service of the Department of Interior is responsible for wildlife, freshwater fisheries, and plants protected by national laws and international treaties. The DOI also manages national or federal lands.

• The National Oceanic and Atmospheric Administration reports to the Department of Commerce and manages programs relating to coastal and marine fisheries and atmospheric sciences and forecasting.

• The Department of Justice is responsible for conducting civil and criminal environmental litigation in the federal courts.

State Environmental Institutions

The 50 states have established their own environmental institutions, which can differ from state to state, but on the whole, are similar to institutions existing at the federal level. Some states have reorganized to consolidate environmental programs under one agency. For example, in the state of New York, the Department of Environmental Conservation combines conservation, wildlife management and forest, marine and mineral resource programs with responsibilities for water and air pollution control and solid and hazardous waste management. In California, a state EPA oversees and coordinates the activities of the Air Resources Board, the Water Resources Control Board, and the Waste Management Board, while the separate Resources Agency, contains the Departments of Conservation, Fish and Game, and Parks and Recreation, among other units. When state judicial enforcement is needed, a state environmental regulatory agency usually must coordinate with other state or local authorities, such as the state or local police and the state attorney general or local district attorney.
Interregional Cooperation

Because many environmental violators are mobile, state and local agencies, in cooperation with EPA, have formed four regional associations that cooperate in sharing information, coordinating joint enforcement efforts, and providing training (the Northeast Environmental Enforcement Project, the Southern Environmental Enforcement Network, the Midwest Environmental Enforcement Association, and the Western States Hazardous Waste Project). In addition, there are environmental law units within the National Association of Attorneys General (NAAG) and the National District Attorneys Association (NDAA) that also share information and develop policy. An even greater role in intergovernmental cooperation is played by the Environmental Council of States (ECOS), which represents the state environmental commissioners, and the three media-specific associations for top governmental officials with responsibility for air, water, and waste management.

Local Government

Local governments have responsibility for managing environmental matters with impacts limited to the local jurisdiction, such as municipal waste management, urban planning, and traffic management. In addition, local governments operate or regulate utilities, such as water and wastewater works. They play a limited role in environmental permitting and environmental assessment, including coordinating and providing information for emergencies, such as accidental releases of hazardous substances.

Shared Federal and State Responsibilities

Most of the federal EPA regulations set country-wide minimum standards that states may or may not choose to implement. These standards set allowable limits for discharges, releases, and emissions of pollutants from facilities to the environment. National enterprises often prefer the uniformity and simplicity of one set of EPA national standards to the confusion of 50 different state standards. For this reason, for about 80 percent of EPA programs, states have chosen voluntarily and agreed to operate at the national level, and state programs have received national approval or delegated authority. Where this happens, the national government regards the state as its partner in a collaborative effort to control pollution. In cooperating states that demonstrate improved performance, the national government greatly reduces its oversight and direct intervention. The Environmental Performance Partnership system, under which relationship between federal government and cooperating states is organized, is discussed in more detail later.

Environmental Pollution Permitting

According to U.S. legislation, each stationary source of pollution should have a special permit for the discharge of wastewater, for air emissions, and for waste disposal. States may be authorized or delegated to issue permits and take enforcement actions under national programs if their programs are approved by the national EPA. Many states have developed their own departments of environmental protection and like institutions. States
with nationally approved programs issue the majority of all permits granted pursuant to national laws, conduct the largest number of facility inspections, and initiate most enforcement actions against violators.

Over the past several years, the EPA started issuing integrated permits for environmental pollution. This represents an attempt to ensure that all releases from a manufacturing process or facility are considered together. Such a permitting system has only been introduced by some of the more innovative states. In Minnesota, for example, the Environmental Coordination Procedures Act allows industries to submit one master application for permit, and multi-media inspections have been introduced.

**Environment Impact Assessment**

The U.S. National Environmental Policy Act (NEPA) provides for environmental assessment (EA) and/or environmental impact statement (EIS) at the federal level. In addition to NEPA, there are parallel state-level laws for 15 states. When federal and state agencies (or multiple federal agencies) are jointly acting as the lead agencies, they negotiate the responsibility between them on a case-by-case basis. NEPA is simultaneously broad and narrow. It is broad, in that it requires the federal government, in conducting activities on its own or where it plays a financing or permitting role, to determine whether those activities significantly impact human health or the environment, and if there is a significant impact, to conduct a comprehensive EIS. However, NEPA is narrow in that these laws do not apply to independent activities by private parties. But to the extent that private projects require a federal permit, such as for air emissions or water discharges, the federal government can still invoke the NEPA process.  

**The U.S. EA/EIS Process**

The purpose of NEPA is to ensure that when federal agencies make decisions on activities they will fund or control, they give environmental considerations equal weight with other considerations. This is generally done by conducting an Environmental Assessment (EA) or an Environmental Impact Statement (EIS). NEPA is overseen by the federal Council on Environmental Quality (CEQ). CEQ develops overall EA/EIS guidance, and acts in the case of disputes between agencies, but does not handle routine operations, such as EA/EIS administration or review. When more than one federal agency is involved in an action, the regulations provide for the responsibilities of a "lead agency" and "cooperating agencies," and for referral to CEQ of disagreements among federal agencies on how to proceed with certain decisions. The federal Environmental Protection Agency conducts a review of an EA/EIS, independently of whether a state agency or a federal agency takes the lead in preparing it. Depending on the case, the regional U.S. EPA offices participate with EPA headquarters in the EA/EIS review process.

Federal and state agencies generally work out their respective EA/EIS roles on a case-by-case basis. The responsibility for preparing a (federal) EIS rests with the lead federal

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agency. The state-level agencies have exclusive responsibility for an EA/EIS that is implemented under the State's own counterpart law, where such laws exist entirely as a matter of state option.

**Enforcement of Environmental Legislation**

Generally in the United States, state and local authorities handle the majority of enforcement cases, and most cases are handled administratively, outside of the traditional system of courts. Judicial enforcement is used when enforcement authorities determine that administrative enforcement mechanisms are likely to be inappropriate or ineffective. Most cases are resolved by state and federal agencies using warning letters and notices of violation that result in administrative settlements ("consent orders") or, if necessary, in administrative hearings. Most state agencies and the national EPA can order measures to achieve compliance, permit revocation, permit the assessment of monetary penalties, and sometimes allow other corrective action to be taken. The national EPA retains a strong, parallel enforcement presence, including its own Administrative Law Judges and a force of environmental law-enforcement (police) officers. It will bring to national courts enforcement cases that are often larger and more complex than the typical state case.

**Environmental Management in Germany**

Germany is a federal state with three levels of government: the federal, the 15 Laender, and the cities and districts ("Kommunen"). As a principle, the Laender are responsible for legislation and its implementation, unless the federal government explicitly preempts authority over a specific area that it deems to have federal significance and where harmonization of laws across Laender is considered of overriding importance. The federal government has made extensive use of this right in the field of environmental legislation, claiming legislative authority in most areas. Exceptions include nature protection, landscape protection, and water resource protection ("Wasserschutz"), for which the federal government only provides a framework law and then leaves it up to the Laender to elaborate detailed legislation. By contrast, when it comes to implementation, the Laender have retained their leading role in all aspects of environmental management, except for a few specialized areas such as nuclear safety. Laender, in turn, have delegated some implementation functions to cities and districts, such as urban planning, traffic management, and municipal waste management.

Over time, environmental sustainability has risen from a matter of legislation to a constitutional objective of German society. The Unification Treaty of 1990 explicitly mentioned the importance of environmental protection, stating as an objective the raising of environmental quality in the New Laender of former East Germany to a high level, at least equal to that of the rest of Germany. In 1994, Germany’s Basis Law (constitution) was amended to include environmental protection as a constitutional right and obligation for the whole country.

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Evolution of Environmental Management

Environmental management in Germany has developed in a piecemeal fashion based on need, internal political pressure, and external pressure. Long before the federal government got involved, the Laender had developed environmental management and regulations to manage scarce resources amidst a rapidly growing population and rising population density, reaching about 220 persons per square kilometer in the 1990s (compared to 31 p/skm in the U.S. and 3 p/skm in Canada). Regional water resource management authorities already existed in the 19th century, regulating the use of water for drinking, industrial, and later hydropower purposes. Similarly, forest and wildlife management was regulated at the regional or local level. Cities such as Berlin started to build wastewater collection and treatment systems as early as 1900.

As early as the 1950s, the federal government started to get actively involved in shaping environmental management through federal legislation, initially for water quality and later for air quality management. In the 1970s, environmental concerns moved to the political forefront in response to the energy crisis and increasing protest against nuclear power, which gave rise to the emergence of the green movement, the precursor to today’s Green Party. The Chernobyl accident in 1986 drastically increased awareness and public support for environmental issues and led to the creation of a Ministry of Environment and Nuclear Safety. The Green Party played a vital role in pushing the environmental agenda beyond its traditional end-of-pipe and reactionary approach towards precautionary, preventive, and source-reduction approach. Today, these have become mainstream concepts supported by most political parties.

Environmental Legislation

All federal laws have to pass the Bundestag, the federal legislative body. But in most cases, they also have to pass the Bundesrat, which represents the Laender, because the Laender typically have to later implement these federal laws. This mechanism provides the Laender an opportunity to make sure that the proposed laws are implementable and that their implementation is affordable.

Key federal environmental laws include:

- Water Management Act of 1957.
- Federal (Air) Emissions Control Act of 1974\(^\text{11}\).
- Waste Water Charge Act of 1976, which included for the first time explicitly the polluter-pays-principle and environmental charges.
- Energy Savings Act of 1976, which incorporated demand-side management aspects in response to the energy crisis of the early 1970s, in addition to the traditional end-of-pipe approach.

\(^{11}\) Emission control is the technical term used for ambient air quality control (as opposed to emission control, which refers to the control of emissions from stationary and mobile sources).
• Precautionary Radiological Protection Act of 1986, which embodied the precautionary principle, one of the conceptual pillars of Germany’s environmental management system.

• Waste Avoidance and Management Act of 1986, which introduced the concept of waste minimization into waste management. This was further strengthened through the Packaging Waste Ordinance Law of 1991, which made the generator of packaging waste financially responsible for its recycling, and therefore provided a powerful economic incentive for the reduction of packaging at the source.

Environmental Institutions

In 1986, in response to the Chernobyl disaster, Germany created a Federal Ministry of Environment, Nature Protection, and Nuclear Safety. Prior to this, responsibility for environmental management had been spread across several ministries; for example, pollution control was handled by the Ministry of the Interior. The new ministry brought together several existing federal services and departments, together with their respective staff. Quite importantly, the Ministry brought together the “Green” (Nature Protection) and the “Brown” (Pollution, Environmental Protection) aspects of environmental management. This allowed, over time, the development of a more coherent and cross-media approach to environmental management (for example, environmental impact assessment, eco-audits) than would have been possible with fragmented responsibility for air, water, and land.

The creation of a separate Federal Ministry of Environment with representation at cabinet level certainly provided a strong signal to the public and was seen as an indication that the German government would in the future attach higher importance to environmental matters. On the other hand, the Ministry of Environment is typically a weak member in the cabinet and environmental priorities generally take a second seat if they compete with economic, finance, or security interests. Hence, some observers point out that under the previous arrangement, when environmental management was part of a traditionally strong ministry (the Ministry of Interior), certain environmental objectives could be more forcefully promoted, even against strong opposition by economic sectors. For instance, the Ministry of Interior pushed through tough new vehicle emission standards and the catalytic converter against massive opposition from the car industry, which argued that these standards were unachievable and way above requirements in other European countries. It is questionable whether an environment ministry would have been able to muster sufficient support to go ahead with such a controversial policy.

In addition to the federal ministry, Germany has created federal technical bodies to advise the federal ministry, and in selected cases, even assume responsibility for implementation and enforcement. Typically, these technical bodies address issues that require a high degree of technical knowledge, are of national and international significance, or require uniformity across Länder. The principal federal technical bodies are:

• The Federal Environmental Agency (Bundes Umweltamt), which is responsible for drawing up legal and administrative provisions and regulations in the fields of
air pollution control, noise abatement, waste, and water management. The agency is also responsible for collecting environmental data and information dissemination. For selected areas, the agency also has implementation and enforcement responsibility, i.e. for the Chemicals Act, the Pesticides Act, and the Gene Technology Act.

- The Federal Research Centre for Nature Conservation and Landscape Ecology, which is responsible for research and concepts for the management of protected areas.
- The Federal Office for Nuclear Safety (Bundesamt fuer Strahlenschutz), which is responsible for implementing and enforcing provisions in the Atomic Energy Act and the Precautionary Radiological Protection Act.

Other federal ministries share some responsibility for environmental management, among them the Ministry for Economic Affairs; Ministry for Nutrition, Agriculture, and Forests; Ministry of Health; Ministry for Regional Planning, Building, and Urban Development; and the Ministry for Transport.

Each Laender has set up its own environmental management system, including a ministry and attached technical bodies for specialized tasks. Typically, the system is structured according to media: waste, water, air, and nature conservation, and has three sub-levels: the regional ministry, the district (Kreis) level, and the local government.

Municipalities are the third level of environmental administration with responsibility for urban traffic planning, municipal waste management, noise protection, and cleanup of contaminated sites.

**Shared Federal and State Responsibilities**

The Conference of Environment Ministers is an important institution to coordinate environmental policies among the Laender, and between the Laender and the federal government. This body allows the Laender to actively participate in shaping federal environmental policies and improve the effectiveness of their own environmental management. First, this body promotes the harmonization of environmental rules among Laender, building on best practice and lessons learned from Laender-level experiments. Second, Laender pool their technical and scientific resources in developing new regulations and implementation guidelines. Third, Laender use the Conference of Ministers to develop a unified position on proposed federal laws and create a counterweight to the federal government. However, political considerations along party lines often prevail over Laender versus federal government considerations.

**Environmental Management in Canada**12

Canada is a federal parliamentary state. Under the constitution, executive power lies with the governor-general (head of state, formally appointed by the British monarch), and a

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12 Much of the information in this section is based on: OECD: Canada Environmental Performance Review, Paris 1995.
cabinet headed by a prime minister. Canada is composed of 10 provinces, each with its own lieutenant general, a premier, and legislature. In addition to 10 provinces, Canada also has three territories—the Northwest Territories, Nunavut, and the Yukon—all of which have elected legislatures.

The Constitution of 1867 is silent on environment. Therefore, environmental management is a shared responsibility between the federal and provincial legislatures. Responsibilities are determined based on jurisdiction over resources, most importantly land, since resources generally belong to the owner of the land. For example, provincial environmental responsibilities derive from jurisdiction over provincial Crown land, which is 50 percent of all land. Federal environmental responsibilities are derived from jurisdiction over federal Crown land—40 percent of all land, mostly in the two northern Territories—fisheries, and inter-provincial trade.

Evolution of Environmental Management

Much of Canada’s environmental management concerns sustainable management of its natural resources. Canada is rich in natural resources, accounting for 9 percent of the world’s renewable freshwater resources; 10 percent of its forests; and has significant oil and gas reserves. Only about 1 percent of the land area is urban and industrial land. Canada relies heavily on the use of natural resources for its economy and exports. For example, it accounts for half of the world’s soft wood lumber and newsprint and is a major exporter of fish. The collapse of several fish stocks and its negative impact on Canada’s Atlantic fisheries demonstrated to the public the risks of unsustainable natural resource management.

Provinces wield large power over both environmental legislation and implementation. Long before the federal government took the initiative in the early 1970s, provinces had started to develop provincial environmental legislation. This legislation typically concentrated on specific matters of concern to the local population.

The federal government stepped into the environmental arena in the 1970s after complaints about water and air pollution became more frequent and dissatisfaction with provincial environmental management grew. The energy crisis of the 1970s heightened public awareness about environmental concerns and strengthened public support for federal intervention to achieve higher energy efficiency in the economy. The federal government further increased its presence in environmental management through its Green Plan (1990), an effort to create a policy framework and action plan for sustainable development that would bring together disconnected provincial activities.

Environmental Legislation

The core elements of Canada’s environmental legislation were passed in the early 1970s. These were consolidated in the 1980s and further complemented in the 1990s. The most important pieces of legislation include:

• The Canadian Environmental Protection Act of 1988, which consolidates previously disparate responsibilities, including protection from environmental risks related to toxic substances. It requires the setting of environmental quality objectives and regular reporting on Canada’s state of the environment. Its implementation is a joint responsibility of the Department of Environment and the Department of Health.

• The Canadian Environmental Assessment Act of 1992 requires environmental assessment of all new projects wherever the federal government is involved as project proponent or regulator. It builds on a non-legislated environmental review process, established in 1974, and the 1984 Environmental Review Process Guidelines. It is now complemented by EA legislation in each province.

Given the far-reaching powers of provinces in environmental management, each province and territory has developed its own version of an environmental protection act for air, water, and land quality management, which provides much of the basis for environmental regulation in Canada. Only in selected areas does federal environmental legislation preempt provincial law, such as in the case of the handling of toxic hazardous substances.

Environmental Institutions

The Federal Department of Environment (DoE) was created in 1971 by law. It has five regional offices (covering several provinces or Territories each) and five services, including Policy and Communications, Corporate Services, Environmental Protection, Atmospheric Environment, and Environmental Conservation. It shares responsibility with other federal departments, including the Department of Natural Resources, which is responsible for pollution from natural resources, energy activities, and forestry, and the Health Department, which is responsible for human health and safety. By the middle of the 1990s, it had a staff of 5,400.

Every province has its own ministry of environment with power over pollution control and nature conservation, and in some provinces over certain natural resources such as wildlife. These provincial ministries can be sizable; for example, Quebec’s Ministry of Environment and Wildlife had a staff of 3,800 in the mid-1990s.

Shared Federal and State Responsibilities

Given the widely distributed responsibilities for environmental management, and the inevitable conflicts that emerge between different levels of government over shared responsibility for environmental management, Canada has developed several consensus-building mechanisms. The most important one is the Canadian Council of Ministers of Environment (CCME). The CCME is discussed later in this chapter.

EIAs are carried out at the federal, provincial, and municipal level. About 20,000 projects a year are screened by the federal administration under the authority of the Canadian Environmental Assessment Act. Very few, typically those with potentially
significant environmental impact, are further subjected to a public review by an independent assessment panel. Between 1984 and 1993, only 48 public reviews were completed.

EIA processes were not always consistent across provinces and caused uncertainties for the regulated community. The CCME started a process of harmonization of EIA procedures in the early 1990s, which led to the development of a draft framework for EIA and signing of bilateral agreements between the provinces and the federal government.

Summary of Country Background

In summary, while all three countries are organized as federal states, they differ substantially in the distribution of power between federal and regional authorities. This difference can be expressed by the degree to which the federal government has pre-empted regional authority over environmental legislation and management. The differences can be characterized as follows:

- In the United States, the federal government has pre-empted both legislative and implementation powers to the largest extent, in response to public pressure to address urgent pollution issues and a lack of initiative before the 1970s by states to create the necessary legislative and implementation capacity.

- In Germany, the federal government has pre-empted large areas of legislative powers, but has only as an exception taken away implementation responsibility from the Laenders.

- In Canada, federal authorities have pre-empted the legislative powers of the provinces to a much more limited extent, and often the primary purpose of federal legislation is to enable and facilitate legislation and implementation at the provincial level.

Despite these quite different starting positions in terms of federal and regional distribution of powers, and different driving forces behind the evolution of environmental management systems, each of the countries has felt the need to develop more effective consensus-building mechanisms between federal and regional authorities to harmonize environmental management legislation and implementation. The following section develops a framework for rational choices about the allocation of responsibilities between different levels of government, and examines three approaches toward improved collaboration between federal and regional authorities.

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13 As used here, preemption means that national laws will be implemented in states directly by the national government in states without equivalent law or with less stringent laws. But there is no preemption of any sort in states that chose to upgrade and implement state laws to become equivalent to national laws, and where the national government approves the state program. "Preemption" is used here in a different way than a U.S. lawyer would use it; that is, to mean that national laws have literally voided state laws and rendered them inoperative.
Approaches To Effective Federal and Regional Collaboration

The Subsidiarity Principle

The principle of subsidiarity provides a useful guiding principle for the allocation of power between federal and regional authorities, as well as between regions and local governments at the municipal and commune level.

Box 1: Definition of the Subsidiarity Principle

Definition of Subsidiarity. “Actions to be taken as close as possible to the citizen.” The federal level government shall take action only "if and insofar as the objectives of the proposed action cannot be sufficiently achieved by a lower level government and can therefore, by reason of the scale or effect of the proposed action, be better achieved by the higher level (federal) government.” (Theodore Shilling)

From the subsidiarity principle, it follows that, whenever appropriate, environmental problems should be handled at an “as local as possible” level of government. A number of arguments have been made to support such an approach.

- **Democracy**: regions, communities have a right to self-determine their development path, including setting their priorities for environmental management
- **Effectiveness**: solutions based on local know-how are more effective in addressing local environmental problems
- **Flexibility**: flexible local regulation responds better to varying local needs
- **Efficiency**: local authorities can resolve local problems at lower cost and with less effort than a distant, centralized administration.

However, there can be conditions that call for the active intervention of higher levels of authority; for example, when reliance on local and lower level authorities would only lead to government failure or inefficient solutions. In the field of environmental management, these conditions often arise in the presence of (a) strong externalities, such as transboundary environmental damages; (b) trade barriers related to environmental regulation; and (c) a lack of capacity at lower levels of government. Typical examples include:

- An environmental problem in one region has a transboundary impact on another region, such as upstream river pollution affecting downstream regions
- High mobility of pollution sources, such as toxic and hazardous waste, requires enforcement capability across regional boundaries
- International and global environmental threats require collaboration with other nations

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• Local authorities are protecting local industry “at any environmental cost” in order to save jobs, and the environmental impact poses serious health risks to the local population (and possibly to other regions, too)
• Local authorities are competing among themselves by lowering environmental requirements, creating a “race to the bottom”
• Differences between regions in their regulations, for example specifications for vehicles, create a barrier to free trade between regions, limit competition, and are ultimately likely to increase the cost of goods
• Local authorities lack the capacity to implement complex and specialized environmental management tasks, such as the assessment of risks from toxic substances.

Such examples have provided arguments for strong intervention on the part of federal authorities to oversee environmental management. The key arguments for greater federal control are:

• **Democracy:** country-wide policies provide equal treatment of individuals and communities by assuring protection of minimum rights and standards, for example human health, throughout the country
• **Effectiveness:** federal authorities are better positioned to build specialized technical know-how and facilitate cross-border learning (economies of scale), leading to more effective solutions
• **Uniformity** (vs. Flexibility): uniformity of federal standards reduces trade barriers, prevents a race to the bottom, and provides equal minimum protection
• **Efficiency:** federal authorities have the means to internalize (transboundary) externalities, leading to overall more efficient solutions at a lower cost to the country
• **Foreign Policy:** federal authorities are responsible for foreign policy and hence should be in charge of international negotiations to find solutions to international environmental problems.

The following table summarizes the typical arguments for more federal or more local/regional intervention in environmental management.
Table 2: Arguments for More Federal or More Regional/Local Role in Environmental Management

<table>
<thead>
<tr>
<th>Demography</th>
<th>Pro Federal Role</th>
<th>Pro Regional/Local Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>Democracy</td>
<td>Equal protection of individual rights</td>
<td>Local self-determination</td>
</tr>
<tr>
<td>Effectiveness</td>
<td>Economies of scale (technical know-how; research, specialists)</td>
<td>Local know-how for local solutions</td>
</tr>
<tr>
<td>Uniformity vs. flexibility</td>
<td>Uniformity—equal treatment, predictable</td>
<td>Flexibility—respond to varying local needs</td>
</tr>
<tr>
<td>Commerce</td>
<td>Minimizes trade barriers</td>
<td>Protects local environment</td>
</tr>
<tr>
<td>Competition</td>
<td>Prevents &quot;race to the bottom&quot;</td>
<td>Uses local competitive advantage</td>
</tr>
<tr>
<td>Efficiency</td>
<td>Internalize externalities (of trans-boundary)</td>
<td>Local administration more efficient</td>
</tr>
<tr>
<td>Specific responsibility</td>
<td>Foreign policy</td>
<td></td>
</tr>
</tbody>
</table>

In some areas, the subsidiarity principle provides clear guidance as to the allocation of responsibilities between federal and regional level government. For example:

- **Municipal waste** is, in all three countries, predominantly the responsibility of local governments. Municipal waste has strong local, rather than transboundary, environmental impacts. Concerns for local health and convenience of neighbors are paramount. However, even for municipal waste, there exist areas that warrant the intervention of higher levels of government. Regional authorities are getting more involved now because of the need to find efficient intermunicipal solutions, for example for the siting of landfills. Federal governments set minimum standards for the design of landfills. In Germany, where land is scarce, the federal government is involved with setting targets for overall volumes of land filling versus waste incineration.

- **Environmental standards for motor vehicles** typically call for uniform regulation at the federal level, and increasingly at the international level. Different standards across regions or localities would create serious trade barriers, ultimately increasing the cost of vehicles. Establishing appropriate standards is a complex technical and political task, which would be inefficient to repeat within each jurisdiction. Accordingly, the federal government preempts local jurisdictions by setting national vehicle emission standards and insists that these standards are neither exceeded nor undermined by state and local regulations. However, there are exceptions, such as the State of California, which persistently has set tougher emissions standards on the grounds of worsening local air quality.

- **Management of toxic and hazardous substances** also calls for uniform regulation at the federal level. Toxic and hazardous substances can have large transboundary impacts, for example upstream water pollution with toxic agricultural runoff (pesticides). Regions could be tempted to attract business by offering "polluter havens" and allowing unsafe use and disposal of substances prohibited in neighboring jurisdictions. This is also an area where federal
authorities enjoy economies of scale in terms of technical skills to develop and implement regulations.

- **Radioactive substances** are almost exclusively the responsibility of federal authorities in all three countries because of the extremely large “externality” of potential transboundary environmental impacts, the highly specialized skill required, and national security concerns. But even in this area, local and federal interests clash. The U.S. is searching for one safe national disposal site for radioactive waste from nuclear power plants. A site has been identified in Nevada by the federal government, but the state government and the population of Nevada are vehemently opposed to the site and are planning to pass state legislation to make it impossible to build such a facility.

In other areas, allocation of responsibility between federal and regional authorities is more contentious. While the principle of subsidiarity still provides a good guideline, its interpretation and actual management arrangements vary widely between countries, and even within countries:

- **Water management** is a clear example. There are both strong local and translocal environmental impacts to consider. Responsibility is normally shared. In the U.S., the federal government has taken a lead in setting nationwide drinking water standards to protect the health of its population. By contrast, water quality targets for water bodies are being set and enforced by regions. In Canada, the role of the federal authorities in water management is more restricted. For example, drinking water standards are set by each region, although efforts are under way to harmonize standards across the country.

- Local and federal authorities compete for authority over **wetland management**. A recent U.S. government decision reduced federal government control over wetlands by increasing the minimum size of wetlands at which federal regulations for protection apply, thereby returning more control over land development to local government and private sector developers.

Federal states are in a constant search for ways to optimize the allocation of federal, regional, and local resources. This process does not take place in a political vacuum, but in a competitive arena of conflicting legal, economic, and institutional interests, and is deeply steeped in the constitutional traditions of each country. The following three examples provide an illustration of how countries have attempted to improve the overall efficiency of their environmental management system by enhancing collaboration between different levels of government while maintaining healthy systemic tensions that provide checks and balances.

- The first example is Canada’s Council of Ministers of the Environment, which serves as an instrument to build bottom-up consensus on environmental policies in a country where the provinces wield large powers.

- The second example is the National Performance Partnership System (NPPS) in the U.S., which—within a framework for controlled delegation of environmental management to states in a country where most environmental management
authority lies with the federal government—provides joint (federal-state) environmental program implementation planning and priority sharing.

- The final example is the joint federal and Laender effort to develop in the shortest possible time adequate environmental management capacity in the New Laender of the former East Germany, in a country where implementation of environmental policies lies almost exclusively with Laenders, while policies are set at the federal or supra-national (EU) level.

Building Uniform Standards Bottom Up: Canada’s Council of Ministers of the Environment

Canada operates according to a parliamentary federal constitution in which the regions (provinces) exercise large regulatory and enforcement powers. Since the Constitution of 1867 does not mention the environment, by default responsibility is shared between the provinces and the federal government. Although not explicitly mentioned, the principle of subsidiarity is embodied in the constitution.

The federal government did not attempt to create a comprehensive, uniform body of legislation to impose on the provinces. Rather, it developed legislation that enabled the provinces to develop or amend their environmental legislation and the federal government to fill gaps not covered by provincial legislation, such as handling of toxic substances and areas that explicitly require federal authority, such as inter-provincial commerce.

Despite the relatively limited scope of federal environmental legislation, conflicts have emerged between federal and regional laws. In a number of areas, there has been a call for more country-wide uniformity in regulation, such as for drinking water quality and ambient air quality standards. In response, Canada has developed over time a consensus-building mechanism in the form of the Canadian Council of Ministers of Environment (CCME).

The CCME is organized as a nonprofit institution and is funded by the federal government (1/3) and the provinces and territories (pro-rated according to population). The Council is comprised of environment ministers from the federal, provincial, and territorial governments. These 14 ministers normally meet twice a year to discuss national environmental priorities and to set the environment policy agenda for matters that are of national, intergovernmental, and international concern.
A Steering Committee, the Environmental Planning and Protection Committee, made up of senior staff of each jurisdiction, provide on-going advice to the Council of Ministers and coordinate specific CCME projects assigned to intergovernmental task groups. Significant cooperation takes place with the Ministers of Energy on air quality issues.

Harmonization of standards across provinces is one of CCME’s principal tasks. In contrast to the U.S., where the federal government has imposed uniform minimum standards in most areas of environmental management, Canada has to reconcile discrepancies between provincial standards through “bottom-up” consensus building. A recent milestone in that process was the Canada-wide Accord on Environmental Harmonization, signed in January 1998 by all CCME members (except for Quebec, which instead committed to implement the agreements under its provincial authority).

A concrete outcome of the Environmental Harmonization Accord was the establishment in June 2000 of Canada-wide standards for air quality. Each standard includes a numeric limit, a timeline for attainment, as well as a schedule for reporting on progress. Standards include ambient air quality standards for particulate matter and ground-level ozone (precursors to urban smog), and standards covering incineration and base metal smelting for emissions of mercury, a potent neurotoxin that bio-concentrates through the aquatic food web.

15 See Website of CCME at: http://www.ccme.ca
The CCME has no compulsory powers, only persuasion. The formula used for expressing consensus is: "Having heard and understood all views expressed, a solution has been proposed, and while I do not hold that this proposal is optimal, I believe it will work and I will support it." Hence CCME depends on the motivation of its members to find solutions. As such, it is vulnerable to having to settle for minimal, common denominator solutions. Nevertheless, CCME has demonstrated creative flexibility to accommodate political dissent. For example, the province of Quebec was unwilling to sign the above-mentioned Environmental Harmonization Accord, as a matter of principle, and this had to be clearly stated in all official documents. However, at the same time, Quebec is an active member of the CCME and is committed to implement and enforce through state legislation the consensus solution reached by the Council.

The CCME has been engaged to a limited extent in sharing its experience at the international level through the Canadian-Russian Cooperative Environmental Decision-Making Project (see Box below).

Box 3: Canada-Russia Cooperative Environmental Decision-Making Project

The Canada-Russia Environmental Decision-Making project is a follow-up to the Cooperative Federalism Project, managed by CCME from 1994-95. At that time, CCME demonstrated various structures to the Russian government for shared, cooperative decision-making on the environment between different levels of government.

The Russian participants of the federalism project requested a follow-up project to actually demonstrate the shared decision-making models in Russia. As a result, a project was proposed, to use real examples within Russia to demonstrate the CCME decision-making model: municipal solid waste management in Moscow and the management of the Angara River Basin, with emphasis on water quality issues.

The project was approved and funded by the Canadian International Development Agency and implementation began in 1998. Money was provided for training the task forces in decision-making processes and techniques, with an emphasis on consensus building and cooperation.

Controlled Devolution of Environmental Management: The United States Environmental Performance Partnership Agreements

The U.S. constitution gives the states broad powers and sets limits for the role of the federal government. However, in the field of environment, the federal government "preempted" state legislation in almost all fields and established a comprehensive national regulatory framework, starting in the early 1970s. In addition, the federal government established implementation capacity, reinforced through 10 regional offices of the federal EPA.

Gradual Transfer of Implementation Responsibility

Over the last 30 years, the federal government has gradually transferred authority to the states to implement most federal programs. Authority is transferred on a case-by-case
basis, after states have demonstrated adequate capacity to implement such programs. The federal government retains the right to withdraw this authority and to step in as implementing entity. This is a clear difference when compared to the systems in Germany and Canada, where as a rule regions have implementation responsibility and federal government implementation capacity is greatly limited to exceptional and specialized areas, such as nuclear safety.

In response, states in the U.S. have built strong state environmental agencies to manage federal programs in addition to the activities that are under the sole jurisdiction of states (for example, land use planning, municipal waste). States agreed to assume such additional responsibility and to incur the investment costs of building environmental management capacity for a number of reasons:

- **Federal funding**: In the 1970s when EPA began, approximately 80 percent of the funding for implementation of environmental programs came through the federal government. Federal funding typically came with "strings attached" requiring states to comply with the specifications of the programs and to build capacity, or otherwise forfeit the grant.
- **Federal support for capacity building**: States willing to take on implementation responsibility could receive federal government-funded capacity building for state environmental authorities. Federal support came in the form of funding for training activities and through the creation of a specialized training academy.
- **Regional "sovereignty"**: State governments prefer to act on their own behalf with minimal interference from federal authorities; in particular, good-performing states are seeking reduced oversight and reporting requirements from federal authorities.
- **Local constituency and votes**: State governments want to be seen as responsive to local environmental concerns and take credit for solutions that are in tune with local priorities and attractive to voters.

In addition, the federal government has its own reasons for wanting to transfer more responsibility to states, including:

- **Tighter Federal Budgets**: The federal budget for environmental management has been growing more slowly than the cost of environmental management. Hence, federal authorities have a vital interest in increased cost sharing with the states to allow the federal government to concentrate its limited budget resources on critical areas not adequately covered by the states or other government authorities.
- **Mainstreaming**: The expectation is that if states take on more responsibility for environmental management, environmental aspects will also be more strongly reflected in other state policies and regulations (transport, urban planning etc.).
- **Cost-effectiveness**: Implementation and enforcement can often be undertaken more effectively and at a lower cost at the state and local levels. For example, the incremental cost for states to administer a federal program in addition to their
state programs is often lower than to maintain a federal implementation capacity through the USEPA at the state level.

As a result, over the last 30 years, federal funding for environmental management has declined. Currently, USEPA grants provide funding averaging about 23 percent of state expenditures for environmental programs, totaling about $6 billion annually between 1995 and 97, with the remaining part covered by fees and other special revenues (60 percent) and state budgets (17 percent). States pay most of the cost to implement their programs, which must be equivalent to federal EPA programs. There is a tendency to further reduce the federal presence at the state level. For example, a recent budget proposal supported by the new Bush administration would reduce implementation capacity of the federal EPA by cutting out 270 federal inspectors, or about 8 percent of the estimated 3,500 federal inspectors, and instead allocate $50 million to states to increase their enforcement staff.

State-level expenditures for environmental management in large states are substantial and can even exceed those of the federal government. For example, in 1999, EPA budgeted $342 million, with 2,620 personnel for water issues nationwide, while the state of California budgeted $517 million and 1,517 personnel in the same year. For clean air objectives (exclusive of enforcement), the state of California spent $141 million with about 992 personnel, while EPA nationwide had a budget of $536 million with 1,762 personnel for similar activities.

Federal Oversight—From Command And Control Towards Partnership

While the direct involvement of the federal government in implementation of environmental policies has decreased, the federal government has endeavored to maintain its efforts to supervise the quality of implementation by states. Federal oversight mechanisms include (a) performance standards; (b) data and reporting requirements; and (c) consequences (sanctions) if state authorities fail to implement federal environmental policies adequately. Federal quality supervision applies to all important aspects of implementation, including the exercise of enforcement authority.

Traditionally, the relationship between federal and state authorities could be described as analogous to the relationship between environmental authorities and a regulated enterprise.17 For an enterprise regulated by an authority, the relationship is based on the following five elements: (1) establishment of legal authority by laws and regulations; (2) application of requirements to particular facilities and pollution sources through the permitting process; (3) promotion of compliance through education and some financial assistance; (4) monitoring of compliance and detection of violations; and (5) correction of violations by adjudication and penalties if necessary. Through this mechanism,

17 This useful analogy was elaborated by Richard W. Emory in “Environmental Federalism and Enforcement in the US,” an unpublished speech for the Newly Independent States Meeting in St. Petersburg, Russian Federation, September 17, 2001.
environmental authorities in the U.S. ensure that any regulated, polluting source is in compliance with pollution control requirements.

In a similar fashion, federal pollution control authorities oversee state authorities that would exercise national authority. The five elements of environmental federalism are comparable to those used in regulating enterprises: (1) establishment of legal authority in laws and regulations of the federal government to regulate implementation of environmental programs; (2) application of requirements to states that opt to implement the national regulatory program; (3) promotion of state implementation capacity and compliance through training and some financial assistance; (4) monitoring of state performance (often based on self-monitoring) to satisfy national oversight; and (5) resolution of intergovernmental disputes and the exercise of “consequences” if needed, including withdrawal of state authority to implement a specific program. As long as a state is in compliance with these requirements, it can operate with some independence to control pollution within its borders. But unlike a regulated enterprise, a state need not act and may choose to defer to the national government to control pollution.

In order to implement this command-and-control approach to guarantee pollution control in the event of a state’s nonperformance, the federal government has to maintain a powerful parallel federal capacity to implement national laws in those rare cases when a state fails to enforce national policies or opts not to do so. For example, the state of Idaho did not want to implement Clean Air Act-related programs itself, but instead asked the federal government to step in and implement them.

With declining federal budgets, it has become more difficult for the EPA to keep up this parallel capacity, and as a consequence, the “threat” by federal authorities to take back implementation authority from the states is losing force and credibility. Increasingly, federal authorities have to resort to persuasion and agreements based on partnership to influence state governments and induce them to fully exercise their environmental management responsibility. Also, states complain about the limited flexibility provided under federally funded programs, which impedes their ability to focus scarce resources on high-priority problems and to apply the most cost-effective solutions to achieve environmental improvements.

Environment State Performance Partnership Agreements

In 1995, the EPA and the Environment Council of States agreed on a new framework for organizing federal-state relations in environmental management: the National Environment Performance Partnership System (NEPPS). The key feature of the NEPPS is its orientation towards outcomes. The federal government and states mutually agree on outcome indicators measuring environmental improvements, leaving states more flexibility in choosing strategies for achieving goals. By the same token, federal funding, which previously was provided from a variety of sources for different programs, each with its own rules, can now be combined like a block grant, giving states more flexibility to allocate resources to high-priority environmental issues. Participation in the NEPPS is voluntary.
Table 3: Federal Oversight—New Concepts Embodied in the NEPPS

<table>
<thead>
<tr>
<th></th>
<th>Before NEPPS</th>
<th>With NEPPS</th>
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<tbody>
<tr>
<td>Accountability</td>
<td>Activity-based</td>
<td>Results-based</td>
</tr>
<tr>
<td></td>
<td>Program outputs, e.g. number of inspections</td>
<td>Program outcomes, e.g. improved environment quality</td>
</tr>
<tr>
<td>Federal funding</td>
<td>Activity/federal program</td>
<td>Combination multi-program and sources</td>
</tr>
<tr>
<td></td>
<td>Specific categorical grants</td>
<td>Block grant, e.g. performance partnership grants</td>
</tr>
<tr>
<td>Scope</td>
<td>Media-specific</td>
<td>Multi-media</td>
</tr>
<tr>
<td></td>
<td>Federally funded programs only</td>
<td>Federal and state programs</td>
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</tbody>
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The centerpiece of the NEPPS is the EPA-State Performance Partnership Agreement (EPPA), which EPA signs with those states that have a satisfactory implementation record. Typical elements of an EPPA include (a) environmental protection goals; (b) media- and program-specific targets and measures, e.g. for air, water, and waste; (c) participation and compliance assurance; and (d) roles and responsibilities of federal and state partners, including reporting by the state and grant funding by the federal government.

The EPPA format is still evolving and differs from state to state. The early EPPAs in the mid-1990s were generally limited to 1 year. This turned out to be inefficient, given the intensive preparation needed to formulate in a participative way goals and objectives for the EPPA. More recent examples, such as the 2000–01 EPPA for Connecticut and 2001–02 EPPA for Colorado,\(^\text{18}\) cover a 2-year time horizon.

**Assessment of NEPPS**

Has the NEPPS achieved its stated objectives of an improved federal-state relationship and improved cost effectiveness through more flexible allocation of scarce resources to priority issues? Two recent evaluations\(^\text{19} 20\) confirm that the principles of the NEPPS are sound. But the system has not developed to its full potential for a number of reasons:

- The new performance-based system was superimposed on the traditional activity-based management system, and did not fully replace it. As a result, states were disappointed that EPA was not providing as much flexibility as expected. In turn,

\(^{18}\) See respective websites for full text: Colorado EPPA: [http://www.cdphe.state.co.us/oe/oepphom.asp](http://www.cdphe.state.co.us/oe/oepphom.asp) and Connecticut EPPA: [http://www.dep.state.ct.us/deo/epa/ppa/ppa.pdf](http://www.dep.state.ct.us/deo/epa/ppa/ppa.pdf)


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EPA was caught between conflicting incentives to offer more flexibility to states, but at the same time to respond to tightened accountability requirements under the Government Performance and Results Act.

- NEPPS enjoyed more support with EPA Regional office managers, who are in more direct contact with states, and less from EPA headquarters management and federal program managers, who possibly felt their influence was reduced;

- Only a few states made significant progress in strategic planning and multi-media goal setting. These were the states that generally are more effective in planning. No definite methodological guidance from the federal government was made available to other states.

- Appropriate measurement of environmental outcomes remains a methodological and practical challenge. EPA and states have started to obtain information on environmental outcomes and health benefits achieved from state program implementation. Core Performance Measures (CPM) were developed by EPA, but are not yet universally accepted.\(^\text{21}\) No full substitute for “second-best” input indicators, such as the number of inspections and enforcement actions taken, have yet been found for measuring performance. (See Attachment for an example of CPMs.)

- States made little use of the flexibility provided by the Performance Partnership Grants, which are similar to “block” grants.

In summary, the lessons learned from the first five years of experience are that there is broad agreement on the soundness of the EPPA concept, but its full implementation is taking more time than originally expected. NEPPS have been most effective where (a) the EPPA was the centerpiece and ruling document for environmental management in the state; (b) the EPPA became integrated with the state planning and budget process; and (c) federal funding from multiple sources had actually been consolidated and was managed as one budget. So far these conditions exist only in a few states. At the level of the federal government, continued high-level support by senior management will be needed to complete the shift from an activity- and media-oriented management and oversight style toward a truly performance-based management style.

**Building Local Capacity to Manage the Environment: Environmental Management in Post-Reunification East Germany**

In 1990, Germany faced the challenge of integrating environmental management into the five new Laender of post-reunification East Germany into the legal and administrative system of the country. The strategic framework\(^\text{22}\) prepared by the Ministry of Environment identified the short- and medium-term environmental priorities and the

\(^{21}\) See ECOS Website [http://www.sso.org/ecos/projects/CPMs/cpm.htm](http://www.sso.org/ecos/projects/CPMs/cpm.htm) for a list of CPMs.

three critical elements for the functioning of the environmental management system: (1) a clear legal framework; (2) a financing mechanism to provide funding for administration and investments; and (3) institutional and technical capacity at the level of Länder and municipalities.

From the beginning, a clear legal framework existed for the new Länder, because to a large extent West Germany's legal and regulatory framework was adopted in its entirety. As mentioned above, in that system the federal government has preempted many areas of environmental legislation, but the Länder have retained most of the implementation responsibility.

The new Länder benefited from massive financial transfers from the West during the initial transition period, while building up their own funding sources provided under the law, including wastewater effluent charges (which accrue 100 percent to the Länder), and user charges for water, wastewater, and waste management. In 1991, the first year after reunification, Germany transferred over DM 5 billion (approximately $2 billion) for environmental activities into the new Länder, or somewhat over 4 percent of total net transfers that year. The bulk of these transfers were invested in water and wastewater infrastructure (75 percent). Waste management and cleanup was the second largest expenditure (about 15 percent), and air quality and others accounted for the rest. On average, between 1994 and 1999, about Euro 1.6 billion, or 5 percent of total annual public transfers, was dedicated to environmental infrastructure. This amount is expected to decline to about 1.1 billion annually for the period from 2000 to 2006. The federal government provided the majority of public transfers (74 percent), followed by the old Länder (6 percent), the EU (4 percent), and the social security system (16 percent, primarily for unemployment assistance and pensions).

While the federal government provided most of the financial assistance, the old Länder provided most of the technical assistance for building the institutional and technical capacity in the new Länder. The new Länder faced a double challenge: to move from a centrally planned to a market economy system, and to move from a centralized national to a federal environmental management system, for which virtually no regional or local implementation capacity existed.

The bulk of technical assistance to build capacity was provided through twinning arrangements between old and new Länder, including temporary secondments of experts from the West. Differences in the administrative style of western Länder were partially transferred to the East. Advice by the Western experts reflected their own Länder-specific experience and was not always consistent from adviser to adviser. On the whole, however, it was more important to tap into the highly relevant "hands-on" expertise that existed at the Länder level, even if that introduced some variations in the new administrative structures.

Initially, local staff for environmental administration in the new Länder were drawn from the existing water resource administration, which was well-developed under the

former East Germany, as well as from scientific bodies. The relationship between the Western experts and local staff was not always easy and at times tense, given that Western experts wrongly assumed that their own management concepts could be smoothly transferred and local experts resented the almost complete dismissal of their own body of experience and knowledge as being "outdated."

Overall, the process of creating environmental management capacity in the new Laender has been successful. After 10 years, the new Laender have now firmly established their own administration and do not depend on Western assistance any more, as a result of the transfer of know-how and the absorption of some West German experts as regular staff.

Conclusions

Russia's challenge to reform the federal-regional relationship in environmental management is not unique. Other federal states have faced similar challenges and responded in a number of different ways. Some of the lessons from those experiences could have some relevance for Russian decisionmakers as they formulate their own approach to environmental federalism.

Countries have developed different models according to their specific history, legal traditions, and public pressure. Differences can be observed at two levels: (1) at the level of legislation, to what extent has the federal government preempted regional legislative powers to create an uniform legal body? and (2) at the level of implementation, to what extent has the federal government also been entrusted with the authority to implement environmental policies? On one end of the spectrum, the U.S. federal government has far-reaching powers for both environmental legislation and implementation. At the other end, Canada's regions wield broad powers in both legislation and implementation of environmental policies. Germany is an intermediate case with legislation largely set at federal (and increasingly European Union level), while implementation belongs by law, with few exceptions, to the regional authority.

There is no "right" model for organizing environmental management in a federal system. In fact, each model is striving, in its own way, to balance the desire for uniformity across regions with the desire for flexibility to respond to the differing needs of regions. We can observe a convergence in the three countries covered by this study: A strong federal government, such as in the U.S., has granted increasingly more power and flexibility to U.S. states, while a highly decentralized country like Canada is making efforts to create greater uniformity across regions through harmonization of rules and regulations. Germany, as part of the EU, is also in a process of harmonization of rules with other EU countries.

The U.S. model of Environmental Performance Partnerships (EPP) devolves environmental management functions to regions (U.S. states) selectively on the basis of bilateral agreements between federal and regional governments. Such a model is appropriate for a strong federal government that wants to grant regional governments more authority in environmental management, but wants to do so with "strings attached" to ensure a minimum level of quality and uniformity. It combines elements of control
and flexibility. It gives the federal government control through bilateral agreements, for which it can hold the regional government accountable, and which the federal government can revoke if the region does not perform according to agreed standards. It gives regions added flexibility because the agreements focus on outcomes, and leave the region some flexibility as to how to achieve them in the most efficient way.

In practice, the model is still evolving and has taken more time than expected to implement. It has been difficult to identify operational outcome indicators (some examples can be found in the attachment), and to find regions with a mature-enough budget and planning system to take full advantage of the flexibility provided by the EPPs. Hence, EPPs can be considered a pioneer model for regions with demonstrated implementation capacity from where it can gradually be transferred to other regions as they become ready to assume additional responsibility.

Each country, independently of its specific federal-region relationship, saw a need to develop consultation and cooperation mechanisms between the two levels of government. There are practical and political reasons for this trend. As regions share increasing responsibility for implementation of environmental policies, their practical experience is invaluable to ensure that new policies, or for that matter existing policies, can be implemented. Furthermore, a political buy-in by the regions prior to establishing a new policy greatly enhances the chances for effective implementation. Countries have set up formal arrangements, such as the Canadian Council of Ministers of Environment and the German equivalent, the Conference of Environmental Ministers and less formal mechanisms, associations like the U.S. Environmental Council of States, and networks like the Southern Environmental Enforcement network.

The federal government invariably has played a significant role in building environmental management capacity at the regional level. Federal funding, in general, has been critical to motivate regions to take more responsibility for implementing federal programs. And capacity building of regional authorities has been a high priority for federal funding, complemented by specialized federal training facilities. At the same time, at least in the U.S., the relative importance of federal funding of regional environmental management has drastically decreased, from an estimated 80 percent in the 1970s to about 23 percent today.

But regional governments can also play a significant role in hands-on training, such as through twinning arrangements between more advanced and less advanced regions. For example, Germany accelerated the creation of a functioning environmental management staff in Eastern Germany through extensive use of twinning arrangements with regional governments in Western Germany.

Relevance for Russia

As described in the first chapter, the federal government had reduced its presence in the region and weakened the system without a plan to restructure environmental management and redistribute responsibility between federal and regional governments. Regional government has already assumed a number of environmental management functions,
such as environmental inspection, enforcement, and monitoring within its jurisdiction. Until recently, regional governments were prevented by law from performing state environmental reviews (SER). However, the new Law on Environmental Protection from January 2002 opens up for the first time the possibility for participation of regional governments in SER.

Views among Russian experts on this matter differ sharply. One group argues that the SER is a backbone of the environmental management system and that it derives its strength from its tight vertical integration. It further argues that this vertical integration, i.e. reporting to MNR, rather than to local and regional governments, gives the SER the necessary independence from local and regional interests and interference. It proposes to first stabilize the overall environmental management system and build implementation capacity at the regional level, and only once such stability has been achieved to reconsider the issue of SER delegation to regional governments. A rushed delegation of SER authority to regions carries a great risk of lowering quality standards and undermining the integrity of the system. Indeed, it might be just a strategy to render the system ineffective.

The opposing view is that delegation of SER functions to the region is in line with delegation of similar responsibilities in other areas of environmental management. Furthermore, the reduced presence of the federal government at the regional and local level makes an effective implementation impossible and undermines the integrity of the system. Regions (at least some) possess the capacity and motivation to implement SER as part of their mandate to protect the environment within their territory.

Looking at the international experience reviewed in this report, Russia has several options to engage regional governments more actively in environmental management:

The traditional approach is through a law that transfers rights and obligations to regions. This law applies uniformly to all regions, independently of their readiness or past performance. The advantage is the uniformity across regions. The disadvantage is that some regions may not be ready or motivated to take on additional responsibility, and the EA system could be undermined and fail.

An alternative approach is to transfer rights and obligations selectively to regions with a proven record and/or committed to operate according to agreed standards (like the U.S. statutory provision of authority to delegate national programs to qualifying states, managed flexibly and agreeably using policy initiatives such as NPPS). The advantage of such an approach is its ability to adjust to the different levels of preparedness of regions and to create measurable outcomes for which the region can be held accountable. The disadvantage is the transaction cost and time needed to establish custom-made bilateral agreements between federal and regional authorities.

The latter approach would fit well with Russia’s decentralization policy in other areas, which links federal funding to improved performance of regions, e.g. in the area of budget management. After an initial pilot phase, the government may be able to develop
standard agreements that require only small adjustments, thereby bringing transaction costs down.

In addition to the Environmental Performance Partnerships, Russia may consider setting up a council of senior environmental managers from the region and the federal government, comparable to the Canadian CCME or the German Conference of Environmental Ministers. Such a Council would be able to tap into the rich implementation know-how of the regions when formulating new policies and foster cross-regional exchange. Given the large number of constituents (89 Subject of Federation), such a body runs the risk of being ineffective. It would therefore make sense to establish smaller taskforces with specific tasks, which would report back to a plenary.

Finally, Russia faces the challenge to scale up capacity building efforts. In addition to traditional means through dedicated institutions, such as public service academies, Russia may wish to consider a mechanism that builds more strongly on the expertise of some advanced regions, by tying them into twinning arrangements with less advanced regions. Based on experience elsewhere, federal funding, albeit on a declining basis, plays a critical role to start and promote such a process.
## EXAMPLE OF CORE PERFORMANCE MEASURES (CPM)

### FY2000 ACCOUNTABILITY MEASURES FOR ENFORCEMENT AND COMPLIANCE ASSURANCE

<table>
<thead>
<tr>
<th>Core Program Outcome Measure</th>
<th>Core Program Output Measure</th>
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<tbody>
<tr>
<td>Environmental and/or public health benefits achieved through concluded enforcement activities, e.g., case settlements, injunctive relief, etc.</td>
<td>Total number of inspections conducted at major facilities, and the percent of total universe of regulated sources inspected in negotiated priority areas (e.g., industry sectors, geographic areas).</td>
</tr>
<tr>
<td>Rates of significant non-compliance for selected regulated populations.</td>
<td>Enforcement actions (e.g., case referrals, orders, notices) taken, by media.</td>
</tr>
<tr>
<td>Percentage of significant non-compliers (SNCs) that have been returned to compliance or otherwise addressed.</td>
<td>Number of facilities/entities reached through each type of compliance assistance activity.</td>
</tr>
<tr>
<td>Results of using State alternative compliance approaches (e.g., audit laws or policies, small business compliance policies, XL projects) and compliance assistance.</td>
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</table>

**Source:** ECOS Website - [http://www.sso.org/ecos/projects/CPMs/cpm.htm](http://www.sso.org/ecos/projects/CPMs/cpm.htm).

**Note:** There are also other CPMs for the media programs, such as air, water, waste, and pesticides/toxics.
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Short Glossary of Environmental Assessment
Terms and Definitions

• **Environmental assessment** (EA) is a process of systematic analysis, evaluation, and management of the potential environmental and social effects of a proposed activity prior to a decision being made. In Russia, it encompasses two sub-systems: Environmental Impact Assessment and State Environmental Review.

• **Environmental impact assessment** (EIA) is a process of identifying, predicting, and evaluating the environmental, social, and other relevant effects of proposed projects and physical activities and mitigating their adverse risks and consequences, taking public opinion into consideration before a decision is made. In Russia, EIA is also known as OVOS, the Russian acronym for EIA Regulation, which was last updated in 2000.

• **Impact assessment** (IA) is the generic process of predicting the consequences of proposed actions and includes all of the category-specific designations listed below.

• **Mitigation** is a process of identifying and implementing measures to avoid, prevent, minimize, reduce, rectify, offset, or compensate for adverse potential environmental and social impacts of a proposed action.

• **Public involvement** is a process of informing the people who are affected by or interested in a proposed action and soliciting their views and inputs in the assessment and decisionmaking processes. There are different levels of engagement of the public:
  - **Consultation** denotes an exchange of information with specific provision made to canvass the views of stakeholders on a proposal and its impacts.
  - **Participation** is a more interactive process of involving the public, in which stakeholders exercise a greater degree of influence and control over decisionmaking by the proponent.
  - **Mediation** is a process of negotiation (or alternative dispute resolution) among stakeholders that is conducted with the assistance of an impartial third party (or mediator).

• **Region(al)**—The term region is used generically to refer to a subnational unit, such as Subjects of Federation in Russia, or states in the United States and provinces in Canada.

• **State Environmental Review** (SER) is a process whereby the competent authority, i.e. the MNR, determines whether a proposed activity and documentation complies with environmental and legal requirements. In Russia, SER is defined and regulated through the Environmental Review Law of 1995. The term is also used to refer to the MNR units responsible for implementation of SER process.

• **Strategic environmental assessment** (SEA) is a process of systematic analysis, evaluation, and management of the potential environmental and social effects of a proposed policy, plan, or program prior to a decision being made.