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INTERNATIONAL ENVIRONMENTAL LAW AND COMPLIANCE MECHANISMS (A RUSSIAN EXAMPLE)

READER

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Contents

Foreword

International Environmental Law Reader is a collection of materials on the main parts of modern international environmental law. The selection of materials is based on the course curricula from American and European universities, which are recognized leaders in the field of international environmental law (McGill University, Dalhousie University, New York University, Stockholm University). The purpose of this edition is to introduce interested international readers to the continuously expanding and evolving area of international environmental law and to expose opinions and expertise of the leading researchers in this area of law. Considerable emphasis is placed on the critical analysis of the issues and the need to keep ecological, political, economic, and ethical aspects in constant reference, and on the implementation of international environmental rules in sovereign states. A peculiarity of the edition is the description of legal mechanisms for the implementation of international environmental law and examples of their use in the Russian Federation.

Part 1. SUSTAINABLE DEVELOPMENT

Sustainable development is a new way of approaching the environment and its relationship to everything else we care about as a society. Sustainable development has become a central assumption of modern environmentalism and it's the main approach in international relationship towards the environment and that is the reason to understand the scope of sustainable development before studying International Environmental Law.

A common definition of "sustainability" captures the idea of coordinating human behavior in the natural environment and regulate the consumption with the capacity of ecological systems to supply, over a long period of time, such natural resources as air, soil, or water on which the mankind depends. In its Declaration of Principles, the United Nations Conference on Environment and Development recommends that, "to achieve sustainable development and a higher quality of life for all people, states should reduce and eliminate unsustainable patterns of production and consumption . . . ."[1] This notion of sustainability lies at the core of many "commons" problems, where the central issue is to enable "individuals to sustain long-term, productive use of natural resource systems."[2]

Sustainable development requires the adoption of environmental policies which ensure that resources are replenished at rates that match or exceed levels of consumption. The concept has a moral overtone insofar as it implies that intergenerational equity requires future citizens to be left a world with reasonably clean air, water, and land, and a fair share of nonrenewable resources.3 Its economic logic highlights the fact that welfare losses inflicted by emissions into the air, water, and soil must be offset against gains achieved through economic growth.4 A focus on social welfare is especially important in the context of environmental threats that are difficult to detect or have a long time lag before the harm becomes apparent.5 Many environmental problems are global in scope, such as the depletion of the ozone layer or the buildup of greenhouse gases, so they must be approached cooperatively by all nations and on the base of sustainable development.

[1] United Nations Conference on Environment and Development, Declaration of Principles, Principle 8 (1992) (quoted in Robert V. Percival et al., Environmental Regulation, Law, Science, and Policy 1268 (2d ed. 1996))
[2] Elinor Ostrom, Governing the Commons 1, 1 (1990).
[3] Environmental Law Institute, Sustainable Environmental Law: Integrating Natural Resource and Pollution Abatement Law From Resources To Recovery (1993). 158-59
[4] See generally William J. Baumol & Wallace E. Oates, The Theory of Environmental Policy (2d ed. 1988).
[5] Adrienne C. Brooks, NASA Identifies Cause of Ozone Depletion, Science News, Dec. 24, 1994, at 422

SUSTAINABLE DEVELOPMENT: NOW MORE THAN EVER
John C. Dernbach
Environmental Law Reporter, 2002

Imagine a world in which the ordinary effect of human activity--particularly activity that contributes to economic growth and social development--also protects and restores the environment. Imagine, too, a world in which large scale poverty has been eliminated. This may sound like pie in the sky, but it is emphatically not. Indeed, if we do not make a transition toward this world within the next 50 years, the future will be painful and costly for both humans and the environment. Making the transition is possible, but it will not be easy. The means and the end are indicated by a set of concepts called sustainable development.

Sustainable development is a new way of approaching the environment and its relationship to everything else we care about as a society…. It is not about more government or less government, but about better governance. It is not about more economic growth or less economic growth, but about growth in things we value, including jobs, productivity, and profits, and reduction or elimination of things we don't value, such as waste, pollution, and poverty. It is based on a vision of society directed at human quality of life, opportunity, and freedom. It is based on an understanding that the economic, social, environmental, and security goals of society together provide a foundation for realizing that vision. These goals, in turn, can be realized completely and coherently only if they are achieved at the same time.

Sustainable development first began to get significant international attention when it was endorsed in 1987 by the World Commission on Environment and Development (or Brundtland Commission, after is chair, Norwegian Prime Minister Gro Harlem Brundtland). According to the commission's report, Our Common Future: "Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs." This one-sentence explanation has been widely quoted since then as the definitive statement of what sustainable development means, but it is only a start.

The Brundtland Commission's work led to the United Nations (U.N.) Conference on Environment and Development (UNCED), or Earth Summit, in Rio de Janeiro in June 1992. More than 130 heads of state and more than 15,000 members of nongovernmental organizations (NGOs) attended that meeting. Although the UNCED is widely recognized for its emphasis on environment, the nations of the world also endorsed sustainable development for the first time. They did so in two nonbinding texts. The first is the Rio Declaration on Environment and Development, a statement of 27 principles for sustainable development. The

second is Agenda 21, a global plan of action for sustainable development. By agreeing to these texts, countries agreed to foster sustainable development within their own boundaries as well as internationally. Two treaties that are directed at sustainable development were also opened for signature at the UNCED--the U.N. Framework Convention on Climate Change and the Convention on Biological Diversity. These agreements, however, do not lend themselves to ready understanding. Written and negotiated by committees, and often subject to qualifications, they contain few if any statements that can be easily and broadly quoted. While Rio Declaration, Agenda 21, and the other texts contain important ideas, they contain few statements that improve on the Brundtland Commission's definition of sustainable development.

What Is Development?

Because "sustainable" modifies "development" in the term "sustainable development," it is first important to understand what development means. Since the end of World War II, development has included at least four related concepts: peace and security, economic development, social development, and national governance that secures peace and development. Each concept is reflected in major multilateral treaties that provide a common framework for relations among sovereign nations as well as a shared set of national purposes.

International texts referring to development rather consistently include all four concepts. One of the most prominent of these is the 1986 U.N. General Assembly resolution recognizing an "inalienable human right to development." The resolution has been controversial because it claims that there is a right to development, but its understanding of development is in the mainstream. It expressly refers to peace, economic development, social development, and supportive national governance as the basic foundations for development. There is thus a considerable international law foundation for development, which is reflected as well by national laws. Moreover, it is increasingly evident that the economic, social, and security goals of development are interdependent. That is, failure to achieve each of these goals compromises a country's ability to achieve the others. Social and economic development are impossible in the absence of peace. Economic and social development are themselves interrelated. Countries that have emphasized education, health and related aspects of social development tend to have the best economic performance.

For a great many people and governments, this model of development has been synonymous with progress. Development has also been a central feature of the aspirations of the international community since the end of World War II. The treaties on which this model was built, however, did not refer to the environment. Environmental degradation was seen, if at all, as the incidental or necessary price of progress.

Failures of the Development Model: Environmental Degradation and Poverty

The development model has, in many ways, been remarkably successful. The world's economy "has grown with unprecedented speed" since World War II, and most people have experienced a rise in their standard of living. We have not experienced a Third World war or another global depression. Yet the traditional development model has failed in two basic respects--it has not prevented the growing number of people living in poverty, and it has not curtailed continuing and perhaps accelerating deterioration of the global environment. A growing number of people live in hunger and poverty, and the gap between rich and poor continues to widen. More than one-third of the world's population lacks access to a safe water supply. Health risks from the degradation of natural resources and the improper use of chemicals also are increasing. By 2025, about two-thirds of the world's population, or five billion people, will live in urban areas, and mostly without adequate housing and sanitation.

Unfortunately, the condition of the global environment is also deteriorating. Among other things, we face widespread and even accelerating extinction of plant and animal species, growing emissions of greenhouse gases into the atmosphere, the depletion of fish stocks in oceans throughout the world, loss of farmland and grazing land through overuse and poor practices, and growing and improper use of chemicals. In every region in the world, these conditions are deepening. Despite some positive efforts since the UNCED, "the state of the global environment has continued to deteriorate." These are large, even overwhelming, problems, and they are getting worse.

During the 1980s, it became more evident that development was imposing massive economic, human, and environmental costs. The U.N. General Assembly formed the previously mentioned Brundtland Commission to examine the relationship between development and the environment. Although the "satisfaction of human needs and aspirations is the major objective of development," the commission concluded, developmental inequity and environmental degradation are "inexorably linked."

More specifically, the Brundtland Commission found that the four basic components of development--peace and security, economic development, social development, and proper governance--require environmental protection. Subsequent events have confirmed that conclusion. Peace and security are related to the condition of the environment in many ways. Environmental stresses and competition for scarce resources can lead to military conflicts. Weapons of mass destruction, particularly nuclear weapons, can have catastrophic impacts on the environment. Money spent on arms is money that is not used to meet basic human needs such as drinking water and sanitation.

In addition, national economic development objectives frequently lead to the destruction or degradation of natural systems, thus limiting the scope and duration of that development. In sector after sector, the pattern is the same. Unsustainable agricultural practices, for example, contribute to desertification and cause soil erosion, loss of soil fertility, and groundwater pollution. Such practices limit the availability of land for agriculture even though a growing population will require more food. Similarly, the destruction of tropical forests and other habitats for agriculture, logging, and other economic activities could lead to the loss of one-third or more of all existing plant and animal species. Yet genetic material from such species can help make agricultural plants more disease-resistant, and has substantial but largely untapped potential to provide medicines and other products. The use of fossil fuels such as coal and oil for energy adds greenhouse gases to the environment; threatening to raise sea levels and inundate coastal areas; and also threatening to affect agriculture, forests, and ecosystems in significant but unknown ways. Robert Costanza and others have estimated the annual economic value of ecological "services" at an average of $33 trillion, almost twice the current annual global gross domestic product. These services, which are not counted in conventional economic accounting systems, include the regulation of atmospheric chemicals, climate regulation, provision of water supplies, and soil formation. Many of these services are irreplaceable.

Social development suffers when people can no longer earn a living by farming, fishing, or similar activities because of environmental degradation. Poor people tend to be exposed to the worst pollution, and are more likely not to have safe and adequate drinking water. Population growth intensifies pressure on resources such as grasslands and forests, making it difficult for them to grow back before they are used again for grazing or wood cutting. More broadly, environmentally damaging activities tend to hurt humans as well. For example, air pollution from energy use in both developed and developing countries adversely affects both human health and the environment.

These relationships between development and the environment have profound implications for national and international governance. Quite simply, effective governance requires nations and the international community to consider and protect the environment and natural resources on which its current and future development depend. Any other approach is self-defeating. The connections between the environment and development thus provide a powerful rationale for environmental protection: enlightened self-interest.

The Earth Summit:

Agenda 21 and the Rio Declaration as its name suggests, the 1992 U.N. Conference on Environment and Development represented a concerted effort to synthesize and integrate

environment and development issues. Sustainable development changes the prior approach to development, which called for peace and security, economic development, human rights, and supportive national governance, by adding a fifth element, protection of the environment. The Rio Declaration affirms the premise of development that every human being is "entitled to a healthy and productive life," but it adds "in harmony with nature." Thus, environmental protection is to be incorporated into our understanding of what progress requires. Agenda 21 describes sustainable development as "socially responsible economic development" that protects "the resource base and the environment for the benefit of future generations." That statement captures a simple formula that is often used for sustainable development--the three Es, for environment, economy, and equity.

Agenda 21 is the comprehensive international "plan of action" or blueprint for sustainable development adopted at Rio. No matter how it is printed, Agenda 21 is always several hundred pages long. It is a broad and detailed commitment by nations around the world to take actions to further sustainable development. The Agenda 21 commitment is not binding in international law, but it does represent a political commitment. Agenda 21 meant, and continues to mean, that the real work of the UNCED is to occur in each country. The success or failure of the UNCED, in short, ultimately depends on implementation of Agenda 21.

The centrality of Agenda 21 to sustainable development is suggested by the sustainable development review and implementation process established at the Earth Summit. Under that process, the Commission on Sustainable Development (CSD), which is part of the U.N. system, monitors and assesses overall implementation of Agenda 21. The only document that came out of the U.N. General Assembly's Rio + 5 review in 1997 was a Programme for the Further Implementation of Agenda 21. Similarly, the World Summit on Sustainable Development in Johannesburg, marking the 10-year anniversary of the Earth Summit, will assess progress made in implementing Agenda 21. Indeed, the summit is intended to "reinvigorate, at the highest political level, the global commitment to a North/South partnership" for the "accelerated implementation of Agenda 21 and the promotion of sustainable development."

As a plan of action, Agenda 21 is divided into 4 sections and a total of 40 chapters. The first two sections cover social and economic issues and the conservation and management of natural resources. These subjects include, for example, poverty, consumption patterns, deforestation, oceans, and toxic chemicals. The third section describes in detail the role that nine major groups should play in getting to sustainable development (including women, business and industry, and NGOs). Because implementation obviously matters in a plan of

action, the fourth section contains a detailed program for, among other things, providing financial and technical resources to countries that need such resources, for capacity building, and for better information for decisionmaking. Each chapter describes the factual basis for recommended actions, the objective of those actions, the particular activities that governments and others should take, and the entities that need to support and fund these activities.

Agenda 21 provides context-specific meaning for sustainable development. By identifying what sustainable development means for specific economic sectors, e.g., agriculture, natural resources, e.g., forestry, and problems, e.g., solid waste, production, and consumption patterns, Agenda 21 provides a better point of departure than abstract formulas. At the same time, Agenda 21 is perhaps best understood as providing a starting point toward sustainable development. It does not describe the final destination because the exact nature of a sustainable society is unknown and because sustainability will depend to a great extent on each country's culture, history, economy, and environment.

Agenda 21 is based to a great extent on the 27 principles stated in the Rio Declaration. Agenda 21 and the Rio Declaration should thus be read together. To some degree, the Rio Declaration restates principles that are accepted as, or are becoming as accepted as, principles of international law or customary international law. Prominent among these are the sovereign authority of nations to use their own natural resources and the responsibility of countries to "ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction." Other principles would require integration of the environment into all decisionmaking, a precautionary approach to serious environmental risks, internalization of environmental costs by polluters (polluter-pays principle), citizen participation in government decisionmaking, reduction and elimination of unsustainable patterns of production and consumption, and common but differentiated responsibilities of developed and developing countries in sustainable development. These principles are restated and elaborated throughout Agenda 21, and provide much of the intellectual foundation for sustainable development.

Agenda 21 and the Rio Declaration, taken together, provide a direct response to the failures of the development model. They do so by addressing the connections between traditional development goals and the environment. For peace and security, the Rio Declaration states that "[w]arfare is inherently destructive of sustainable development." The declaration therefore calls on countries to solve environmental disputes peacefully and in accordance with the U.N. Charter, and to respect international law concerning environmental protection during armed conflicts.

The Rio Declaration is also supportive of economic development, calling on nations "to promote a supportive and open international economic system that would lead to economic growth and sustainable development in all countries." Among other things, Agenda 21 calls on countries to use trade liberalization to support sustainable development, to make "trade and environment mutually supportive," and to adopt macroeconomic policies that support environment and development. Although Agenda 21 is supportive of economic development in these and other ways, it is based on recognition of a profound constraint--the ability of the world's natural systems to support existing production and consumption patterns. Agenda 21 reflects that constraint with its detailed program for making a variety of economic activities, including fishing, agriculture, forestry, and energy production, compatible with the environment on which they depend.

Agenda 21 would also incorporate environmental protection into social development, thus fostering greater human well-being. Because social development can be hindered by environmental degradation, social development necessarily requires protection of the environment. Human health goals thus include not only meeting primary health care needs but also controlling communicable diseases and reducing health risks from pollutants and related hazards. For human settlements, the overall objective is to improve "social, economic, and environmental quality," including water supplies, air quality, sanitation, drainage, and waste management.

Agenda 21 and the Rio Declaration would also have governments protect the entire range of natural resources and ecosystems from every significant threat. A basic objective is to ensure that their use does not degrade or diminish resources. Environmental and natural resource goals are thus linked, on a resource-by-resource basis, with the use of resources to serve human needs. Some of these resources are covered under multilateral treaties, including the Framework Convention on Climate Change and the Biodiversity Convention, but most are not.

Ultimately, sustainable development forces us to see the environment as a source of wealth and well-being, or natural capital, that must be protected for present and future generations. Natural capital includes renewable and nonrenewable resources, living organisms, and ecological systems. Natural capital supplements two other forms of capital, human capital and human-made capital. Human capital is based on education and technology as well as the governmental, social, and economic systems that support it. Human-made capital includes factories, farms, equipment, and industrial infrastructure such as bridges and power plants. Sustainable development is premised on the need to protect natural resources but recognizes that many, if not most, of these resources will also be used by humans. The

challenge is to limit the conversion of natural capital to human-made capital in a way that will allow for the regeneration of renewable resources and the reuse or replacement of nonrenewable resources. Nations should thus preserve and enhance natural capital as well as human and human-made capital.

Finally, as explained more fully below, Agenda 21 and the Rio Declaration explicitly call for better national and international governance. As part of that effort, Agenda 21 recommends that governments develop necessary information and technology. If sustainable development were simply descriptive of economic and social development over the past few centuries, the term would be internally inconsistent because development has not been environmentally sustainable. The framework is normative, however; it is premised on the view that development should be--and can be--made sustainable. From the standpoint of the problems it is directed at, sustainable development would protect and restore the environment and would help eliminate large-scale poverty. It is quite possible that development cannot be made generally sustainable, at least development as we now understand it. Indeed, sustainable development is likely to profoundly change the character of economic and social development.

Consequences for National Governance

The primary responsibility for implementing Agenda 21 and related agreements rests with national governments. National governments are not supposed to do everything, however, their essential jobs are to lead and facilitate sustainable development activities by others.

Agenda 21 recommends that national governments "ensure socially responsible economic development while protecting the resource base and the environment for the benefit of future generations." In virtually every chapter of Agenda 21, national governments' responsibilities for sustainable development are prominently addressed. To accomplish environmental goals, countries are urged to "enact effective environmental legislation," including environmental standards. The Programme for the Further Implementation of Agenda 21 calls on each national government to have a strategy for sustainable development in place by 2002. A strategy of this nature could also be called a national policy because it would necessarily be reflected in the world view and day-to-day actions of political decisionmakers as well as in the law.

The national government as a whole needs to direct this effort because sustainable development is not within the province of any single agency or branch of government. A nation's environmental agency cannot be the only government agency that is responsible, for example, because sustainable development embraces broader goals. Because the work of each

agency has environmental and social aspects, and because many agencies affect individual economic sectors, integrated decisionmaking is impossible without an overall national effort to ensure better coordination among agencies for sustainable development.

This attention to the national government is qualified in three important ways. First, as already explained, governments need to allow meaningful public participation in their decisions. In addition, they need to delegate decisions to the lowest effective level of government and develop partnerships with other nations. Agenda 21 calls on national governments to delegate sustainable development responsibilities "to the lowest level of public authority consistent with effective action." In the United States, for example, national governments would allow states to take responsibility for sustainable development activities that are most effectively carried out at the state level. This approach raises two related questions that are not fully answered in Agenda 21 and that each nation needs to answer: what level of government is consistent with effective action, and which particular responsibilities should be delegated? Without a doubt, many problems are best addressed at the local level. In many ways, sustainable development is most understandable in the specific places where people live, work, and play. Some problems addressed by sustainable development, however, require concerted national action as well as local action. It is difficult to imagine an effective water pollution control plan or greenhouse gas emission control strategy, for example, that did not involve some national standards or goals.

Finally, nations should also act in partnership with other nations by, among other things, cooperating with each other to address international concerns and sharing information. Eleven of the Rio Declaration's 27 principles directly or indirectly refer to partnership or cooperation among states.

Consequences for International Law and Governance

At the international level, another issue needs to be addressed. The international law norms that provide the basis for development--treaties involving peace and security, economic development (including trade), and human rights--tend to be broader, more precise, and much older than many environmental norms, and generally have stronger political constituencies supporting them. A great many environmental goals in Agenda 21, by contrast, have little or no support in treaties. They simply represent declarations at an international conference, "soft law," in international parlance, and do not have the status of treaties or other "hard" international law. Even where environmental objectives are based on a treaty, e.g., climate change, biodiversity, they are often stated only vaguely, are relatively new, and are supported by weaker political constituencies.

It seems unlikely that the environment can be made equal in real-world stature to traditional development norms if it does not have equivalent legal stature. A number of treaties and protocols adopted since the 1992 Earth Summit, including the Desertification Convention, the Straddling Fish Stocks Agreement, the Kyoto Protocol to the Climate Change Convention, the Cartagena Protocol to the Biodiversity Convention, and the Stockholm Convention on Persistent Organic Pollutants, may suggest a path to resolution of this issue. Each of these agreements builds on, and draws from, the action items and principles stated in Agenda 21 and the Rio Declaration. It is likely that new and more detailed treaties will need to grow out of these instruments, or that existing instruments will need to be modified, if the environment is to attain legal status equivalent to development norms that are already established in other treaties.

SUSTAINABILITY
Report of the World Commission on Environment and Development: Our Common Future. United Nations General Assembly, 1987

The word sustainability is derived from the Latin *sustinere* (*tenere, to hold; sus, up*). Dictionaries provide more than ten meanings for sustain, the main ones being to “maintain", "support", or "endure”. However, since the 1980s sustainability has been used more in the sense of human sustainability on planet Earth and this has resulted in the most widely quoted definition of sustainability and sustainable development, that of the Brundtland Commission of the United Nations on March 20, 1987: “sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”

At the 2005 World Summit it was noted that this requires the reconciliation of environmental, social and economic demands - the "three pillars" of sustainability. This view has been expressed as an illustration using three overlapping ellipses indicating that the three pillars of sustainability are not mutually exclusive and can be mutually reinforcing. The three pillars - or the 'triple bottom line' - have served as a common ground for numerous sustainability standards and certification systems in recent years, in particular in the food industry. Standards which today explicitly refer to the triple bottom line include Rainforest Alliance, Fairtrade, Utz Certified, and The Common Code for the Coffee Community. The triple bottom line is also recognized by the ISEAL Alliance - the global association for social and environmental standards.

The triple bottom line as defined by the UN is not universally accepted and has undergone various interpretations. What sustainability is, what its goals should be, and how these goals are to be achieved are all open to interpretation. For many environmentalists the idea of sustainable development is an oxymoron as development seems to entail environmental degradation. Ecological economist Herman Daly has asked, "what use is a sawmill without a forest?" From this perspective, the economy is a subsystem of human society, which is itself a subsystem of the biosphere, and a gain in one sector is a loss from another. This can be illustrated as three concentric circles.

A universally accepted definition of sustainability remains elusive because it is expected to achieve many things. On the one hand it needs to be factual and scientific, a clear statement of a specific “destination”. The simple definition "sustainability is improving the quality of human life while living within the carrying capacity of supporting eco-systems", though vague, conveys the idea of sustainability having quantifiable limits. But sustainability is also a call to action, a task in progress or “journey” and therefore a political process, so some definitions set out common goals and values. The Earth Charter speaks of “a sustainable global society founded on respect for nature, universal human rights, economic justice, and a culture of peace.”

To add complication the word sustainability is applied not only to human sustainability on Earth, but to many situations and contexts over many scales of space and time, from small local ones to the global balance of production and consumption. It can also refer to a future intention: "sustainable agriculture" is not necessarily a current situation but a goal for the future, a prediction. For all these reasons sustainability is perceived, at one extreme, as nothing more than a feel-good buzzword with little meaning or substance but, at the other, as an important but unfocused concept like "liberty" or "justice". It has also been described as a "dialogue of values that defies consensual definition".

Some researchers and institutions have pointed out that these three dimensions are not enough to reflect the complexity of contemporary society and suggest that culture could be included in this development model.

GUIDE TO INTERNATIONAL ENVIRONMENTAL LAW

Alexandre Kiss and Dinah Shelton

Since the end of the 1980s, the principle of sustainable development dominates international activities in the field of environmental protection. It was defined in the 1987 Report of the World Commission on Environment and Development as “development that

meets the needs of the present without compromising the ability of future generations to meet their own needs." The Report identified the critical objectives of sustainable development:

- reviving growth but changing its quality;
- meeting essential needs for jobs, food, energy, water, and sanitation;
- ensuring a sustainable level of population;
- conserving and enhancing the resource base;
- reorienting technology and managing risk; and
- merging environment and economics in decisionmaking.

Principle 4 of the Rio Declaration states that "in order to achieve sustainable development, environmental protection shall constitute an integral part of the development process and cannot be considered in isolation from it." Approaches that take into account long-term strategies and that include the use of environmental and social impact assessment, risk analysis, cost-benefit analysis, and natural resources accounting are necessary.

The integration of environmental, social, and economic policies also requires transparency and broad public participation in governmental decisionmaking. As its title shows, the Johannesburg World Summit on Sustainable Development focused on this concept with particular emphasis on eradicating poverty. During the same year, the first attempt to define sustainable development in a binding text appeared in Art. 3(1)(a) of the Convention for Cooperation in the Protection and Sustainable Development of the Marine and Coastal Environment of the Northeast Pacific (Antigua, Feb. 18, 2002). For the purpose of this Convention sustainable development means the process of progressive change in the quality of life of human beings, which places it as the center and primordial subject of development, by means of economic growth with social equity and the transformation of methods of production and consumption patterns, and which is sustained in the ecological balance and vital support of the region. This process implies respect for regional, national and local ethnic and cultural diversity, and full participation of people in peaceful coexistence and in harmony with nature, without prejudice to and ensuring the quality of life of future generations.

In the same treaty, the concept of maintaining "environmental services" is seen as essential to sustainable development. According to the convention, it means the services provided by the functions of nature itself, such as the protection of soil by trees, the natural filtration and purification of water, and the protection of habitat for biodiversity. Art. 3(1)(c).

On 24th December 2009 the UN General Assembly agreed to host a UN Conference on Sustainable Development (UNCSD) in Rio De Janeiro in 2012. The Conference is also commonly referred to as 'Rio+20' or 'Earth Summit 2012', after the UN Conference on Environment and Development, or 'Rio Earth Summit' that took place in 1992. The Conference will address three objectives and two themes. One of those themes is the 'institutional framework for sustainable development'. The 'institutional framework' refers to the governance of sustainable development globally, regionally, nationally and locally - the role of institutions, processes, structures, guiding principles, integration, coordination and communication in providing an enabling framework for implementing commitments to sustainable development. Governance has always been recognized to be a critical tool for advancing sustainable development at all levels, though the role of global institutions particularly, and the relationships between them, has been hotly debated since the World Summit on Sustainable Development (WSSD), held in Johannesburg in 2002.

It is widely recognized that the rapid advance of globalization since the first Earth Summit in 1992 has far exceeded the ability of the global system to respond to the sustainability challenges that this has caused. Despite the many positive contributions by global institutions to advancing sustainable development objectives and promoting increased consideration of environmental issues, global governance for sustainable development is no longer 'fit for purpose'. Establishing and developing institutional arrangements at the global level that effectively reflect our global interdependence is no easy task, and it is hoped that the UNCSD in 2012 might advance some solutions in this area.

SUSTAINABLE DEVELOPMENT GOVERNANCE TIMELINE KEY MILESTONES SINCE 1992

1992 UN Conference on Environment and Development (Rio Earth Summit)

- Establishes three legally binding Conventions
- Establishes the Commission on Sustainable Development
- Prescribes a series of recommendations on the institutional framework for sustainable development in Chapters 38 and 39

1997/98 Task Force on Environment and Human Settlements

- Set up in response to Secretary General's broader report - Renewing the United Nations: a Program for Reform
- Report outlines 24 recommendations across seven thematic areas

2002 Cartagena Package

- Adoption of a series of recommendations from the Open-ended intergovernmental group of Ministers and High Level Representatives, established in 2001

2002 World Summit on Sustainable Development

- Agrees procedural changes to the Commission on Sustainable Development
- Represents a shift from legally-binding global Conventions to implementation orientated partnerships

2003 - 2008 Helsinki Process

- Initiative of Finland and Tanzania in search of novel and empowering solutions to the dilemmas of global governance
- Specific track in the process dedicated to New Approaches to Global Problem Solving

2005 Bali Strategic Plan for Technology Support and Capacity-building

- Agreed by the 23rd session of the UNEP Governing Council
- Outlines a comprehensive plan to enhance UNEP's capacity building element in the context of broader proposed reforms

2005 World Summit and Swiss and Mexican Ambassadors Process

- General Assembly process on IEG reform established under the General Assembly in response to para 169 of the World Summit outcome document Process continues through to 2008/9

2005/6 Secretary General's High Level Panel on System-Wide Coherence

- Set up in response to 2005 World Summit to make recommendations across the UN system
- Specific recommendations made in the area of environment and sustainable development

2008 Joint Inspection Unit Management Review of Environmental

- Governance within the UN System
- Report making series of recommendations on IEG in an effort to contribute to stalled negotiations on IEG reform
- Reiterates and reinforces many existing observations and recommendations on coherence, integration, coordination and funding.

2009 UNEP Consultative Group of Ministers and High Level

- Representatives on International Environmental Governance
- Convened to address the impasse in IEG reform

- Addresses functional and institutional reform options

2010 Climate Justice Tribunal

- Civil society-led people's tribunal established as a mechanism for holding States to account for environmental commitments
- Represents a governance initiative outside official UN process, but endorsed by a number of member States, notably Bolivia.

2010 Global Sustainability Panel

- High level panel established to provide recommendations to the preparatory process for UNCSD2012, along the themes identified for the Conference, including the institutional framework for sustainable development

2009 - 2012 UN Conference on Sustainable Development (UNCSD 2012), 'Rio+20'

- UN General Assembly identifies 'institutional framework for sustainable development' as one of the two major themes for the Conference in December 2009
- Discussions continue on options for reform through the designated preparatory process

The Dawn of Sustainable Development

Since the UN Conference on the Human Environment in Stockholm in 1972, the reach of sustainable development governance has expanded considerably at local, national, regional and international levels. The Stockholm Conference led to the establishment of the United Nations Environment Programme (UNEP), as well as the creation of a plethora of Multilateral Environmental Agreements (MEAs). A further and significant milestone in the conceptualisation of sustainable development was the 1987 Brundtland Report (Our Common Future) which was published by Gro Harlem Brundtland, the then Prime Minister of Norway. This gave the most definitive and well used explanation of sustainable development, as:

"..development that meets the needs of the present without compromising the ability of future generations to meet their own needs"

The report was unique in addressing the need for economic development, without depleting natural resources or harming the environment and was central in framing discussions at the United Nations Conference on Environment and Development (UNCED), or 'Earth Summit'. Convened in June 1992 in Rio de Janeiro, UNCED was attended by over a hundred Heads of State and government (more than had ever attended an international conference before) and was unique in its size and participation.

The outcomes of UNCED were significant. They consisted of a political declaration of principles on environment and development (the Rio Declaration), a 40-chapter `blueprint' for implementing sustainable development (Agenda 21 - so called as it forms an agenda for the 21st Century), a declaration of Forest Principles, and two new multilateral environmental conventions on climate change (UN Framework Convention on Climate Change) and on biodiversity (the Convention on Biological Diversity).

The Summit also led to new approaches to the inclusion of different groups of society in policy debate and action and it established a new mechanism within the United Nations (the UN Commission on Sustainable Development) to monitor and promote implementation of the outcomes from Rio.

The conceptualisation of sustainable development that has emerged is one of development that integrates three pillars: economic development; social development; and environmental protection. Progress across all three pillars in a consolidated manner is seen as critical the achievement of truly sustainable development.

The Challenge of Achieving Sustainable Development

Since 1992, the number of MEAs has grown significantly, and there are now many hundreds of binding and non-binding global agreements on environmental issues, as well as a wide range of other agreements that address social and economic aspects of development. Despite the growing number of institutions and processes addressing sustainable development, environmental problems have intensified globally.

The findings of the Millennium Ecosystem Assessment in 2005 showed that 'over the past 50 years, humans have changed ecosystems more rapidly and extensively than in any comparable period of time in human history', and that this has resulted in 'a substantial and largely irreversible loss in the diversity of life on Earth'3. The Intergovernmental Panel on Climate Change has found that global CO2 emissions grew by 70% between 1970 and 20044. This is despite the overwhelming scientific consensus that increasing levels of CO2 in the atmosphere caused by human activity pose a serious threat to human well-being. This time-frame also corresponds with the period during which the global community has come to understand human impact on the environment better than ever before, and has developed an ever-expanding system of global governance designed to address these problems.

It is important to recognize that coincidence does not imply causality. The continued degradation of the global environment has not been caused solely by governance weaknesses, but rather by a multitude of drivers, including prevailing economic models and patterns of consumption and production.

However, there are governance arrangements that have exacerbated the problem, including institutional arrangements that preclude the prioritization of sustainable development objectives; which stall rather than enhance the effective integration of the three pillars of sustainable development; and which do not meet the challenge of governing global public goods. Some of the specific challenges in this regard are outlined below:

The Governance of the Global Commons

Most environmental problems are global in nature - whilst they may be the result of actions taken and endorsed at a national level, they have global ramifications. Many ecosystems that are managed under national jurisdictions have immeasurable global benefits – such as forests through carbon sequestration and climate regulation - and their destruction and degradation can lead to negative impacts in regions far removed from the source. It is therefore crucial that any system of global governance can effectively manage the 'global commons'.

The current governance of the global commons through the prism of national sovereignty remains one of the most fundamental obstacles to progress. Whilst global public goods that lie within national boundaries continue to fall under the jurisdiction of the nation state, it is likely that decisions will be made on the basis of national interests rather than global concerns. Nation states continue to often be ideologically opposed to governance arrangements that would involve ceding sovereign authority over natural resources to a supra-national institution making decisions in the global interest, especially when there is little short-term incentive to do so. This explains the absence of effective compliance mechanisms and enforcement regimes for most global environmental agreements. In the absence of an overall decision making framework that takes into account global interests, and has the power to override national interests, mechanisms have emerged that attempt to incentivise the right decisions on a national level.

An approach such as REDD+6 represents an effort to develop a mechanism that redistributes benefits, through providing a monetary 'compensation' to developing countries with forests, from developed countries who benefit from global forest cover though they currently do not contribute to the costs of its preservation. Yet despite the opportunities afforded by REDD+, there has also been widespread criticism due to the market-based approach which arguably has its limitations. The role of global institutions and an appropriate international regulatory framework therefore remains a challenge.

Coherence and Co-ordination

There are many different international organisations, programmes and bodies that govern sustainable development and environmental issues at the global level. This includes a

multitude of Multi-lateral Environmental Agreements (MEAs), legally-binding treaties and conventions including the UN Framework Convention on Climate Change, the Convention on Biological Diversity (CBD) and the Convention to Combat Desertification (UNCCD), to name but a few. There are also a range of 'soft law' commissions, including the Commission on Sustainable Development and the Commission on Social Development. This is in addition to a range of political review mechanisms including the review of the Millennium Development Goals (MDGs) and the UN Conference on Sustainable Development in 2012 (also referred to as Rio+20).

Each of these bodies has its own objectives and mandates, and as such can act somewhat autonomously, which often results in fragmented and fractured processes and agreements that govern international environmental issues. Such a multiplicity of bodies and processes can also affect the efficient implementation of international environmental agreements, as the resulting monitoring and reporting burden for adhering countries puts a strain on resources that can act as a barrier to implementation, especially in developing countries. Furthermore, the fragmentation of environmental portfolios across a plethora of UN agencies, with limited opportunities for co-ordination, undermines a strategic approach to environmental priorities and objectives at a global level.

There are a number of proposals to strengthen the co-ordination and coherence of environmental activities at the global level, many of which are outlined in this publication. Though the solutions outlined by these proposals may differ, the diagnosis remains the same. Achieving environmental objectives at the global level cannot be reduced to enhancing coherence and co-ordination alone, but this is clearly one of the pre-requisites, however this might be achieved.

Integration of social, economic and environmental approaches

A significant obstacle to achieving sustainable development globally is the lack of a coherent approach that fully integrates all three pillars of sustainable development in pursuit of an over-arching goal. On the contrary, a number of different processes have emerged that seemingly address each pillar in isolation, and even sustainable development itself has arguably become yet another pillar, with its own associated architecture and processes which do not necessarily represent a 'coming-together' of all three pillars.

In 2000, the Millennium Summit brought the international community together to agree to a common set of development targets enshrined in the Millennium Development Goals (MDGs). The MDGs focus primarily on the social pillar of sustainable development, advancing progress in key areas such as education, maternal health and access to basic services. Goal 7 commits to 'ensuring environmental sustainability', but the MDGs clearly

prioritise social outcomes above environmental outcomes, and have become the main policy focus for the international development community. As the MDGs have also succeeded in communicating basic demands in a way that the rather cumbersome outcomes of Sustainable Development Summits have not, they have arguably somewhat subsumed the global sustainable development agenda. Indeed, the level of attention given by governments to global reviews of the MDGs far exceeds that given to the Commission on Sustainable Development. The overwhelming success of the Millennium Summit in 2000 ended up exceeding the somewhat disappointing outcome from the World Summit on Sustainable Development two years later in 2002. As such, the global sustainable development process has arguably become the domain of environmental advocates, which can present challenges to it taking a holistic approach.

As regards the economic pillar for sustainable development, it has long been recognized that the global sustainable development process has little if no jurisdiction over this area, which is the preserve of less open but much more powerful intergovernmental constellations, such as the G8 and G20, the Major Economies Forum (MEF) and the World Trade Organization (WTO). Despite the commendable aspirations articulated in outcome documents from global.

Summits on sustainable development, many of the commitments are hard to achieve without reform in other areas of the system, for example a number of legally-binding environmental obligations sometimes come into conflict with WTO rules and regulations. Equally, many of the Rio Principles from 1992 are not compatible with a global financial system that, even post-global financial crisis, is largely unregulated.

For sustainable development to be achieved globally then environmental, economic and social pillars must be complementary rather than contradictory, and global governance systems must be designed for the effective integration of all three.

INTEGENERATIONAL EQUITY

The 1987 Brundtland Report defined sustainable development as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs". This broad definition raises interesting questions about how societies can deliver an equal range of development choices to both present and future generations, and what form or direction such development should take if it is to be sustainable. The Report also emphasised that many environmental problems result from disparities in economic and political power. Another influential study, the 1991 Report `Caring for the Earth'37, emphasised the importance of maintaining development within the Earth's carrying capacity, that is, within the limits of the biosphere's renewal and recycling processes which enable it to

provide renewable resources, assimilate wastes, and provide other environmental services. This concept remains central to the current understanding of sustainable development.

Sustainable development broadly requires that the well being of the present generation should not be increased at the expense of welfare of future generations, and society's well being should not decline over time. The next generation can only produce as much well being as the present one if it has the same stock of capital available to it. To put it in simple terms, sustainability implies 'living off the interest', rather than 'living off the capital'. The capital stock can be thought of as comprising three kinds of capital:

- natural capital such as forests, air, water, soils and biodiversity (normally referred to as environmental resources) and other resources like minerals
- human capital such as human resources, skills, and knowledge
- human-made capital such as manufactured capital and goods, machinery, infrastructure, buildings, etc.

At a minimum, a country should maintain a constant stock of aggregate capital over time. One of the key purposes of sustainable development governance frameworks is to consider choices about the composition of the constant capital stock to be maintained will determine whether it is on a path towards:

- weak sustainability, where it substitutes natural capital with human, or human-made capital (e.g. it depletes half of its primary forests to build factories, tourist resorts and schools); or
- strong sustainability, where it does not substitute natural capital with other forms (e.g. it conserves a permanent estate of primary forest).

For renewable resources (e.g. fish, forests, water) and sinks for wastes (e.g. the atmosphere) to be used at sustainable levels, the rate of harvesting them (or discharge of emissions) must not exceed their rate of regeneration (or assimilative capacity). Non-renewable natural resources such as minerals do not regenerate and in their case, sustainability becomes a question of maintaining utility over time, either by expanding reserves (through recycling, efficiency gains, exploration), or by investing income surpluses in alternative resources that will be available for future generations.

For the wellbeing of future generations to be reflected in institutional arrangements, a number of governmental and non-governmental actors promote the establishment of a national Commissioner, Ombudsman or 'Guardian' for Future Generations. The role of such a position is to monitor and review the actions of all government departments so as to evaluate the extent to which decisions are being made in the long-term interest, and thereby to assess

the impact on future generations. Both Israel and Hungary have appointed Commissioners for Future Generations.

Part 2. SOURCES OF INTERNATIONAL ENVIRONMENTAL LAW

Environmental law can be defined as the universe of legal measures that are primarily designed to protect natural resources from degradation, to minimize or eliminate pollution, and to conserve components of nature. International Environmental Law consists of international law dealing with the environment that can be found in "sources" of international law, together with the national and international mechanisms for implementing them; and in international customary law (the common law of the international community). In other words International Environmental Law is located in international agreements or custom, rather than located in the statute books and case law created by national legislatures and courts around the world.[6]

International law is created on law-making "sources" or documents which are set forth in Article 38(1) of the Statute of the International Court of Justice (ICJ).[7] *The Article represents the authoritative listing of processes that states have identified and accepted as capable of creating rules binding on them; it remains, to date, the only such listing. It sets out, in order:*

- general or specialized international conventions (treaties),

- international custom as evidence of a general practice accepted as law,

- and general principles of law recognized by civilized nations.

Judicial decisions and doctrine are cited in Article 38 as "subsidiary means to identify" or find international law, but neither constitutes a means by which law is directly created. The article does not explicitly set a hierarchy among the three law-making sources, and the relationships can be complex.

International environmental *law had little basis in custom. For international law to be based on custom, some central elements must be present. For example, a common practice by a number of states within the domain of international relations, a continuation or repetition of the practice over a considerable period of time, a conception that the practice is required by, or consistent with, prevailing international law and a general acquiescence by*

[6] Lakshman Guruswamy International Environmental Law: Boundaries, Landmarks, and Realities Natural Resources & Environment, 1995. 43

[7] Statute of the International Court of Justice. Concluded at San Francisco, June 1945. 1976 Y.B.U.N. 1052, 59 Stat. 1031, T.S.. No. 993.

states toward the practice.[8] *It is argued that because many environmental problems were unknown until recent years, environmental law is a relatively new field. As a result, little has been established concerning these elements. Some scholars, however, have stated that "it is possible to speak of a body of customary international environmental law composed of fundamental principles underlying the entire system and applicable to all environmental subjects."*[9]

Current international practice also relies on the diverse activities of international organizations, which can contribute to the development of a new rule of law, in particular, by adopting non-binding texts, in which member states may express approval for the emergence of new norms. Such texts play a big role in the formation of International Environmental Law. These nonbinding normative instruments are discussed below under the heading by which they are commonly known: "soft law."

GUIDE TO INTERNATIONAL ENVIRONMENTAL LAW
Alexandre Kiss and Dinah Shelton

1. Treaties

Most legal obligations today derive from treaties. The Vienna Convention on the Law of Treaties (VCLT) defines a "treaty" as "an international agreement concluded between States in written form and governed by international law, whether embodied in a single instrument or in two or more related instruments and whatever its particular designation." VCLT, Art. 2.1(a). This definition omits all international agreements to which intergovernmental or non-governmental organizations are parties as well as agreements concluded by internal agencies not entitled to bind the state, for example port authorities or customs offices. Yet, all these entities enter into agreements intending to cooperate and apply agreed norms for environmental protection. In fact, a separate Vienna Convention, concluded in 1985, concerns treaties entered into by international organizations. It also should be noted that while the VCLT definition of treaties refers to agreements in writing, the Permanent Court of International Justice held that oral agreements may be legally binding. Most importantly, the definition indicates that the question of whether or not a given text is a treaty is determined by whether or not it is governed by international law, i.e., is legally binding.

[8] Maarten Bos, A Methodology of International Law 58 (1984).
[9] Alexandre Kiss and Dinah Shelton, International Environmental Law 107 (1991).

This is a matter of the intent of the states concluding the agreement and concededly produces the somewhat circular notion that an instrument is a treaty if it is legally binding, and it is legally binding if it is a treaty.

From state practice, however, it is clear that many international agreements are not intended to be legally binding, but to express political commitments. Failure to abide by such non-binding agreements may be considered unfriendly or a political affront, but the failure does not constitute a breach of international law.

Until the 20th century, treaties were nearly all bilateral and mostly concerned boundaries, diplomatic relations, the high seas, shared freshwaters, trade, and extradition. The governing principle was reciprocity of obligations. The principle of reciprocity established a legal equilibrium between the obligations accepted by one state and the advantages it obtained from the other contracting party.

Exceptions to reciprocal treaties have long existed and include bilateral and multilateral treaties to combat slavery and the slave trade, abolition of child labor and other humanitarian topics. Typically, these agreements confer benefits on individuals and not on other states parties; for this reason they are often referred to as creating unilateral obligations. Following World War II, non-reciprocal obligations enlarged still further to include the general international protection of human rights, regulations on the use of Antarctica and its surrounding seas, codes governing activities in outer space, and reaffirmation of freedom of the high seas with an obligation to safeguard the marine environment. Rules of international environmental law may be considered among the non-reciprocal obligations, as generally they do not bring immediate reciprocal advantages to contracting states when their objective is to protect species of wild plant and animal life, the oceans, the air, the soil, and the countryside. Sovereign equality is also implicated, because, e.g., states upstream on an international river are not in the same situation as those downstream. For coastal states, similarly, the general direction of winds and ocean currents may cut against the equality of the parties and diminish reciprocity in legal benefits and burdens.

Today, multilateral regulatory treaties are common, the topics governed by international law have proliferated, and non-state actors are increasingly part of the international legal system. Modern treaties often affect a state's internal laws and practices rather than directly regulating interstate relations, as was the case with earlier bilateral agreements. Describing these developments, some international jurists have posited the existence in international law of "treaty-laws," distinguished from "treaty-contracts." In its Advisory Opinion on Reservations to the Convention on Genocide, 1951 ICJ 15, the International Court of Justice provided support for this idea by distinguishing reciprocal

treaties from conventions like the Genocide Convention in which states do not have any interests of their own; instead, they merely have, one and all, a common interest, namely, the accomplishment of those high purposes which are the raison d'être of the convention." In municipal law, a similar distinction is made between public law legislated in the general interest and contract law that allows parties to create private rights and duties by contract.

Treaties are normally negotiated by authorized representatives of the heads of state during negotiations that are held within an international organization or at a diplomatic conference called for the purpose. A treaty text may be adopted by vote or by consensus and then opened for signature.

Signature can serve several purposes. With bilateral agreements, but only rarely with multilateral agreements, it may express the consent of the state to be legally bound to the treaty. VCLT, Art. 12. More commonly, signature acts as an authentication of the text and a statement of intent to submit the treaty to the appropriate national body for ratification, i.e., formal approval by the highest authorities of the state. Once a state has signed a treaty, pending ratification, the VCLT provides that the state is obliged to refrain from acts that would defeat the object and purpose of the treaty until it makes clear its intention not to become a party. VCLT, Art. 18. Most treaties today are concluded in several "authentic" languages, which are presumed to have the same meaning. VCLT, Art. 33. UN practice makes treaties authentic in the six official languages of the organization (English, French, Spanish, Arabic, Russian and Chinese).

Once the text has been approved by the negotiating body, most agreements specify the means by which states signal their acceptance, and this is usually by ratification of it. If ratification is required, the domestic approval of the treaty must be followed by deposit of an instrument of ratification with the authority designated as the "depository," to inform other parties to the treaty that it has been accepted. A state that has not signed the treaty and wishes to join will usually file an instrument of accession rather than ratification; there is no legal significance to the different terminology.

Multilateral treaties usually specify a minimum number of ratifying states for the treaty to enter into force and become legally binding on the states parties as of that date.

In order to maximize state participation in multilateral agreements, provisions may be included allowing reservations to be entered at the time of signing, ratification, or accession. A reservation is a unilateral statement by a state that excludes or modifies the legal effect of one or more provisions of the treaty as applied by that state. VCLT, Art. 1(b). States sometimes call statements reservations when they are not, because they do not affect the legal obligations, and sometimes states will label as an "understanding" a statement that is in fact a

reservation. The test is whether or not the rights or duties under the treaty are modified in any way. Many modern environmental agreements bar reservations because of the complicated package of bargains made during the negotiations. See UNCLOS, Art. 309 (Dec. 10, 1982); Convention for the Protection of the Ozone Layer, Art. 18 (Vienna, Mar. 22, 1985); Protocol on Substances that Deplete the Ozone Layer, Art. 18 (Montreal, Sept. 16, 1987), CBD, Art. 37 (Rio de Janeiro, June 5, 1992); and Protocol on Biosafety, Art. 38 (Montreal, Jan. 29, 2000). If a treaty does not contain a provision on reservations, general international law permits a state to make reservations so long as they are compatible with the object and purpose of the treaty. VCLT, Art. 19. For treaties in force, the fundamental rule of treaty law is "pacta sunt servanda"—treaties that a state has accepted must be performed in good faith. Neither the rupture of diplomatic relations nor a change of government affects the continuity of treaty obligations. As with contract law, there are nonetheless rules that govern the validity of treaties and provide legitimate excuses for non-performance by a party, including such matters as duress, impossibility of performance, fundamental change of circumstances, or material breach by another party. Armed conflict may affect the continuity of some agreements, but not those aimed at the protection of the human person or the environment. In general, treaties are not retroactive and only apply from the moment they enter into force for a particular state. Some treaties may allow denunciation after a specified notice period, but many others are of indefinite duration. Unless otherwise stated, treaties apply to all persons and territories over which the state has jurisdiction, including aircraft, ships, and space objects. Complex issues of jurisdiction may arise where sovereignty is divided due to occupation or where sovereignty is absent, as in Antarctica.

The interpretation of a treaty is governed primarily by its text. VCLT Art. 31 is accepted as a statement of customary international law on the topic. It provides that words of a treaty are to be interpreted in good faith in accordance with their ordinary meaning in context, in light of the object and purpose of the treaty. VCLT, Art. 31. Other rules of international law and the subsequent practice of the states parties to the agreement are taken into account in establishing the parties' understanding of the meaning of terms and the object and purpose of the treaty. These have proven more important in multilateral treaty interpretation than the original intent of the drafters, which the VCLT relegates to a subsidiary role, to confirm meaning or resolve ambiguities arising through application of the primary rules of interpretation. The emphasis on the text and subsequent practice is particularly useful in giving effect to multilateral agreements, where the original intent of nearly 200 states would be extremely difficult to ascertain independently of the agreed-upon text. The intent of

the parties can be more readily determined for bilateral treaties, where the drafting history found in the minutes and other documentation is less complex and contradictory.

The failure to observe a treaty is an international wrong, giving rise to state responsibility to cease the breach and make reparations for any injuries caused to another state. Domestic law, whether constitutional, statutory or case law, is no defense to failure to perform treaty obligations. Treaty enforcement traditionally was done by the injured party, which could withhold benefits under the treaty, applying the principle of reciprocity. Thus, the failure of one state to comply with the requirements of a bilateral extradition treaty could result in its treaty partner refusing to extradite in response. Trade agreements remain an area where the threat of retaliatory action is a means of deterring violations and enforcing the treaties. Where consequential harm occurs that cannot be cured by reciprocal action, an injured state may assert a claim for reparations under the law of state responsibility, usually through diplomatic channels, but increasingly in international tribunals.

Since the creation of the United Nations, multilateral treaties rely less on retaliatory action in the case of breach and more on the creation of institutions and compliance mechanisms to review state compliance. Such procedures may result in publication of reports that identify failures, adoption of incentives, or other actions aimed at promoting compliance.

2. Customary International Law

The content of customary international law is found in widespread and consistent state practices, followed because the states believe the practices are legally required. State practice must be general, although it need not be universal. State practice is identified through, e.g., official government texts and statements, court decisions, laws, and diplomatic exchanges. Conduct in violation of such official acts is treated as a violation of the law, not as extinguishing the custom. If a significant number of states adopt laws and official policies that lead them to act contrary to the purported rule, a new norm may emerge.

Not all state practice forms customary international law. State acts engaged in because they are convenient or polite do not give rise to custom, because the sense of legal obligation is absent. Instead, states must have a conviction that the rule is obligatory, referred to as opinio juris. Such opinio juris may be implied if state practice is general and consistent over a lengthy time.

3. General Principles of Law

General principles of law are those concepts and rules found in the major legal systems of the world and appropriate for application in international relations. Since such rules have been adopted in national law, consent to their application in international law is inferred. Thus, the International Court of Justice recognized the existence of corporations as

legal persons in the Barcelona Traction case based on wide recognition of the personality of such business entities in modern law. Barcelona Traction, Light and Power Company, Ltd. (Belg. v. Spain) 1970 ICJ 3 (Feb. 5). General principles have often been used to fill in gaps in international law during interstate litigation.

4. "Soft Law"

States now often place normative statements and agreements in non-legally binding or political instruments, such as declarations, resolutions, and programs of action. These instruments, often referred to as "soft law" may make it easier to press dissenters into conforming behavior, because states are free to use political pressure to induce others to alter their policies, although generally they cannot demand that others conform to legal norms the latter have not accepted. Non-binding commitments may be entered into precisely to reflect the will of the international community to resolve a pressing global problem over the objections of one or a few states causing the problem, while avoiding the doctrinal barrier of their lack of consent to be bound by the norm. New problems also may require innovative means of rulemaking when non-state actors are the source of the harm and target of the regulations; they generally cannot negotiate or be parties to treaties, and they are not involved in the creation of customary international law, but they have a direct interest in any legal regulation adopted. Their participation may thus be crucial to effectiveness of the law. The emergence of codes of conduct and other "soft law" in part reflects the desire to bring them into the law-making process.

Several other reasons may be adduced for the increasing use of nonlegally binding instruments:

1. The statutes of most international intergovernmental organizations do not invest organs of the institution with the right to adopt binding decisions, so that they can express their will—or rather the will of their member states on specific matters—only through recommendations or other declarative acts. The recommendations may contain normative statements, but they are not binding. International conferences of states, like the Stockholm Conference on the Human Environment, often similarly result in declarations that express the conclusions of the meeting and agreed principles for future action, including statements of law. Some recommendations, such as the resolutions of the UN General Assembly concerning the prohibition of large-scale pelagic driftnet fishing, or the recommendations of the Organization for Economic Cooperation and Development concerning transboundary pollution, can became binding rules at the end of an evolution of state practice (customary law) or by repetition and incorporation in binding national and international legal instruments.

2. Multilateral conventions relating to environmental protection have created specific organs such as the Conferences of Parties, assisted by secretariats and, in some cases, by specialized bodies. The power of such organs to adopt decisions and norms that are binding for the states parties varies and is often uncertain. Legal counsels may issue opinions that have an impact but are not legally binding.

3. Non-binding texts are typically easier than treaties to negotiate quickly and amend in the light of new problems. Scientific knowledge and public awareness can be the major factors pressing for international action.

4. States may decide to forego the often lengthy treaty-making process to avoid domestic constitutional or political barriers. Recommendations, joint declarations, guidelines, or other common rules of conduct express their commitments, but do not necessitate formal ratification. Texts that are not subject to national ratification can take instant effect. This is the case, for instance, with the safety regulations drafted by the International Atomic Energy Agency

5. In some circumstances, the subject matter under consideration may make non-legally binding instruments more appropriate than formal agreements. The best examples are Action Plans, such as Agenda 21, adopted by the 1972 Rio Conference on Environment and Development, and the Arctic Environmental Protection Strategy. The contents set out general policy goals and guiding principles, rather than specific legal obligations capable of immediate implementation.

6. The drafting and implementation of soft law instruments more easily allows the participation of international institutions and non-state actors than does the process of treaty negotiating, which is usually formal and restricted to delegates from states. IUCN prepared the first draft of the World Charter of Nature, which was sent out by the UN General Assembly to the member states for comments, after which the Assembly adopted it on October 28, 1982. NGOs also can participate in the adoption and the monitoring of special agreements that are formally not binding, such as Memoranda of Understanding (MOUs). The Convention on the Conservation of Migratory Species of Wild Animals (Bonn, Sept. 19, 1979), for example, was complemented by several MOUs or administrative arrangements signed not only by states but also by so-called “co-operating organizations” including intergovernmental and non-governmental bodies.

7. Some non-governmental industrial, environmental, and consumer protection associations adopt norms that can be implemented as legal rules. The International Organization for Standardization (ISO), a non-governmental body founded in 1946 to promote voluntary international standards and to facilitate global trade, has adopted a number

of worldwide technical standards related to the environment. The ISO is composed of over 100 national standardization bodies, one from each represented country. Although ISO is an NGO, most national bodies participating in it are public agencies, giving it a mixed character.

In sum, non-binding rules have the necessary flexibility to enable the international community to approach problems requiring international cooperation, such as the protection of migratory species, or to address new matters, like promoting sustainable energy sources. Parallel to this evolution, it may be noted that national authorities also make use of non-binding or voluntary agreements with private parties, such as industrial associations, forest or other landowners, indigenous groups, or scientific institutions. These non-binding instruments can involve scientific research, land use, or reduction of pollution. While non-binding international agreements sometimes are criticized as ineffective, compliance with such instruments may reach high rates. Different factors affect compliance with non-binding norms, just as they affect compliance with binding ones. Compliance may be enhanced by the presence of a legally binding text that provides the legal foundation for the non-binding instrument. The content or substance of the non-binding norm can assist compliance if it is sufficiently precise to allow for immediate implementation and enable the appropriate bodies to monitor compliance and to take sanctions against those who do not respect it. The involvement of regional and local authorities in compliance procedures also can be a positive factor. National authorities may foster awareness of such norms through media coverage, at all levels, involving regional and local authorities as well as civil society.

THE EMERGING OF INTERNATIONAL ENVIRONMENTAL LAW

Jeffrey M. Pollock and Jonathan S. Jemison

The growth of an increasingly global marketplace and a nearly universal concern for environmental protection has resulted in a complex maze of regulations facing manufacturers, importers and exporters. Companies whose activities impact foreign markets must monitor with increasing scrutiny the impact that international agreements and treaties will have on their business.

Similarly, importers and companies retaining services in foreign countries must be mindful of an ever increasing web of foreign and international laws. This article provides an overview of the international environmental laws currently affecting the conduct of business in the global market and offers some practical knowledge on what companies will need to do to comply with them. In light of the number of articles already published on International

Organization for Standardization (ISO), on ISO standards 9000 (covering consultant technical services), and 14000 (addressing manufacturing practices), these topics are not addressed. Laws regulating the environmental aspects of international trade derive from several sources: international and bilateral environmental treaties; trade agreements; individual country municipal laws; customary international laws; and "soft law" instruments. In a somewhat uncoordinated fashion, these laws target environmental problems such as the transportation of hazardous waste, air pollution, toxic-waste dumping, and the depletion of the ozone layer.

International Environmental Treaties

There are five primary treaties regulating environmental matters: the Basel Convention, the Vienna Convention, the Montreal Protocol, the Kyoto Protocol, and the Convention on the Impact of Environmental Assessment.

THE BASEL CONVENTION

The Basel Convention regulates the international shipment of hazardous waste. It seeks "to directly stop international trade in waste destined for disposal in countries which do not have regulatory infrastructure, and which cannot ensure environmental sound management of such disposal."

The Basel Convention requires an exporting nation to inform an importing nation of the amount and content of the hazardous waste and to obtain written consent from the importing nation that it will accept such a shipment.

To prevent circumvention of this system, a country which is not a party to the agreement may not export or import hazardous wastes to or from parties unless it does so pursuant to a separate multilateral or bilateral agreement. Furthermore, each party to the agreement must prohibit persons within its jurisdiction from transporting hazardous waste unless they are authorized, and then, only when in compliance with the specific rules. Forty nations have ratified this treaty, including all of the world's industrialized nations, except the United States and New Zealand.

THE VIENNA CONVENTION AND MONTREAL PROTOCOL

The Vienna Convention obligates countries to take measures to "protect human health and the environment against adverse effects resulting or likely to result from human activities which modify or are likely to modify the ozone layer. It provides a list of chemical substances which have the potential to modify and deplete the properties of the ozone layer." In addition, the Vienna Convention requires participating countries to adopt legislative measures to control and limit the behavior of individuals within a state's jurisdiction to prevent them from conducting activities which are shown to cause further depletion of the ozone layer. The participants also agreed to cooperate in the research effort to determine which human

activities effect the depletion of the ozone layer, although individual participating countries have the latitude to exploit their own resources in accordance with their own environmental policies.

In 1987 the Montreal Protocol amended the Vienna Convention by specifically providing for the parties' gradual reduction in the production and consumption of chlorofluoro-carbons (CFCs) and other chemical substances. The Montreal Protocol also set controls on the trade of such chemicals with non-parties.

In 1990 the London Amendment strengthened these control procedures by requiring the parties to the Montreal Protocol to phase out the production of CFCs by the year 2000, and to gradually phase out other controlled substances by 2005.

CLIMATE CHANGE TREATY AND KYOTO PROTOCOL

The Climate Change Treaty seeks to stabilize greenhouse gas concentrations to prevent them from reaching levels which could endanger the climate system. The developed countries who are parties to the agreement obligate themselves to take the lead in dealing with this climate control problem by promising to implement national policies and to take the corresponding measures to help assist in the reduction of greenhouse gas emissions. Despite the obligations imposed by the Climate Change Treaty, it placed no legally binding requirements on the parties. The Kyoto Protocol of 1995, however, amended the Climate Change Treaty by imposing the specific legal requirements that the initial agreement lacked. In particular, the Kyoto Protocol requires 39 specific industrialized and developed countries to reduce the emissions of greenhouse gases to five percent below 1990 levels between the years 2008 and 2012, although it specifically declines to extend the reduction of emissions requirement to developing countries.

THE CONVENTION ON ENVIRONMENTAL IMPACT ASSESSMENT

The Convention on Environmental Impact Assessment addresses environmental problems that arise when one country's activity impacts the environment of a neighboring country. The treaty lists 17 activities believed to have the potential to affect the environment outside the borders of the country where the activity originates. Parties to the treaty must take appropriate measures to prevent and control the environmental impact from those activities identified in the treaty as having this potential for transboundary environmental effects. The parties must notify any party that could be affected by the environmentally unsafe activity, and must implement an impact assessment procedure which permits public participation and preparation of the necessary documentation.

Although the parties signed this treaty in 1991, it will not enter into force until at least 16 of the signatories ratify the treaty. When doing business in or with a country that is a party

to one of these environmental treaties, it is important to have a full understanding of the import of a particular treaty to a company's proposed activity. For instance, the Basel Convention places requirements on the transboundary shipping of hazardous wastes, so in order to effectuate compliance with the treaty, a party must know what substances are considered wastes and whether those wastes are hazardous.

In the case of the Basel Convention, this task is not a simple one because the treaty broadly defines "wastes" to arguably cover not only items for disposal, but also materials intended for recycling purposes. Thus, when recyclable material partially consists of elements considered to be hazardous, the Basel Convention regulates the trade of such recyclable material.

Furthermore, when a company operates in a country which is a party to a particular treaty, it should take compliance measures to avoid the threat of liability. For example, in March of 1998, the Japanese government had to investigate and confirm reports that Japanese trading companies were exporting worn-out automobile tires to North Korea in violation of the Basel Convention.

Bilateral Environmental Treaties

In addition to the international treaties involving many nations, environmental regulation is prominent in bilateral treaties, where neighboring states enter into treaties between one another. These bilateral agreements very often deal with environmental issues which arise at the border, where one country's activities affect the environment of the common border and the neighboring state.

For example, the United States and Canada are bound by the Great Lakes Water Quality Agreement, which limits the amount of copper discharged into the Great Lakes. Last year, Ontario's largest public power company, Ontario Hydro, admitted to dumping 1,110 tons of toxic copper and zinc into Lake Ontario and Lake Erie over the past 25 years. Although the company's liability under the Great Lakes Water Quality Agreement remains unresolved, its daily discharge of copper was twice the amount of the limit set by the treaty.

INTERNATIONAL TRADE AGREEMENTS -- GATT AND NAFTA

In the spirit of protecting trading practices, a few international laws actually limit the extent to which a country, state, or municipality can implement or apply laws that protect the environment.

The General Agreement on Trade and Tariffs (GATT) requires a country to implement its environmental policy with the "least trade restrictive methods." Thus, when one country implements a municipal law pursuant to an environmental treaty which imposes stricter standards than other countries, GATT has the authority to strike down the law as being

discriminatory toward other nations with respect to trade. For example, in 1991 GATT struck down the United States' Marine Mammal Protection Act (MMPA) as being discriminatory against foreign exporters. Although the United States could hold members of its own jurisdiction to environmental standards, it could not ban an acceptable product merely because it was not produced by means acceptable to United States' standards. Resently, the World Trade Organization (WTO) has jurisdiction to consider challenges to environ-mental rulings such as the one involving the MMPA, but there is an ongoing movement to prevent the WTO rules from thwarting multilateral environmental agreements.

The North American Free Trade Agreement (NAFTA), on the other hand, takes a different approach to the conflict between trade and environmental interests by addressing environmental concerns in conjunction with the trade goals. Although NAFTA creates a free trade zone among Canada, the United States, and Mexico, it also focuses upon the promotion, development, and enforcement of environmental policies. In its preamble, two of NAFTA's 15 resolutions address the environment. An environmental side agreement to NAFTA, the North American Agreement on Environmental Cooperation (NAAEC), which went into force immediately after NAFTA became effective, also addresses these environmental issues. In general, NAFTA does not impose greater environmental requirements on the parties, but rather gives each country the power to preserve and maintain their environmental regulations in light of the free trade established, so long as the requirements are not discriminatory and have a reasonable scientific basis.

More specifically, NAFTA preserves each country's right to choose an appropriate level of environmental protection; provides each country with the right to use standards more stringent than those imposed internationally to maintain that protection; and prohibits each country from lowering environmental standards for the purpose of attracting new investment. Although NAFTA does not require the parties to have similar environmental standards, the ultimate goal is to reach a harmonization of requirements.

Other Sources of International Law

Formal treaties are not the only source of international environmental law. Customary international law and soft law also play an integral role in international law-making. Understanding the significance of these laws and how they differ from one another and from treaty law is critical because each source of international law may call for compliance with a specific provision of environmental law.

Custom becomes a binding authority in international law when "states in and by their international practice ... implicitly consent to the creation and application of international legal rules." Customary international law is often regional in nature because it evolves from

the implied practices or norms of several states. Whether certain states are bound may be entirely dependent upon whether they expressly dissented from the international law when it was being formulated.

When dealing with international environmental law issues, the difficult part of a lawyer's job is determining whether a specific country is bound by a customary international law that requires compliance by a company which conducts an activity which may impact the environment.

Soft law is a legal phenomena in international law which refers to the non-binding international agreements or norms which have altered the process by which international law has developed over the past decade. Although soft law is non-binding, it is not completely void of legal significance. The concept of soft law has developed from the notion that resolutions and recommendations of international organizations "gradually acquire some legal value." The basic role of soft law is to raise expectations of conformity with legal norms, and to create uniformity in the creation of these norms. Once there is compliance with a uniform legal norm, the formation of binding hard law is a relatively simple task.

Reliance on treaties to develop international law is often difficult because the formation and creation of them is time-consuming in nature. Soft law permits international parties to reach an agreement on issues more rapidly, and therefore respond more quickly to scientific and technological changes. Over time, soft law could evolve into customary international law and thus become binding. For example, a resolution by the General Assembly of the United Nations may indicate the attitudes of several states on a particular matter, and thus may be able to influence the creation of a customary international law.

Additionally, soft law principles, such as United Nations resolutions and recommendations, need to be respected because blatant disregard of them, even if by mistake, could expose a company to a significant liability threat. An example of this is the "mistake" made by the Swiss firm, Ciba Geigy, when it accidentally delivered 117,000 gallons of a deadly insecticide containing DDT to a Tanzania cotton marketing board. The company's action violated a United Nations code of conduct, and thus presented Ciba Geigy with a threat of liability.

The importance of understanding soft laws does not rest in the notion that certain soft laws dictate current international environmental laws that require compliance, but rather that they indicate current trends in international law which may be turned into binding law in the future. This is especially true in the environmental law context because a plethora of nongovernmental organizations exist which attempt to influence the creation of new regulations by petitioning soft law instruments. In addition, the policies of international

entities, such as the World Bank, sometimes adopt soft law principles. For example, when the World Bank places environmental requirements derived from soft law into their lending policies and conditions, international actors have additional reason to comply because of the financial incentives.

One specific soft law instrument making its presence known in international environmental law is the ISO 14000. It intends to provide all industries with a structure for an environmental management system that will ensure all operational processes are consistent and effective and will achieve the stated environmental objectives of a given organization.

ISO 14001 details the basic requirements a company must meet to have an efficient management system (EMS). Once a company develops an EMS, it can apply for ISO 14001 certification. Although there are costs and potential problems associated with applying for certification, merely doing so provides companies with some benefits as well. Furthermore, once a company becomes ISO 14001 certified, it puts itself in a better position within the global market because, as more larger multinational companies become certified, they likely will require their suppliers to be certified as well.

Thus, even though ISO 14001 certification is not a binding environmental provision, it could affect the ability of a company to do business in the global market in the near future.

Conclusion

International environmental law is a growing field of law derived from a variety of sources of authority. Manufacturers, importers, and exporters participating in the global market must perform proper due diligence whenever they deal with activities which may effect the environment. Due diligence is especially important in this field because the law is constantly changing and expanding. Practitioners representing clients in the global market must make the effort to stay abreast of these environmental laws, while recognizing that clarity or great consistency will not come quickly.

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Alexandre Kiss and Dinah Shelton

MULTILATERAL ENVIRONMENTAL AGREEMENTS

"Conventional norms" or treaties concerning the environment now number more than 1,000, although many agreements contain only a few provisions related to the topic. The 1967 Outer Space Treaty, for example, contains only one relevant provision, Art. IX, which concerns protecting the earth against pollution from outer space and, in turn, protecting outer

space from earth-source contamination. Hundreds of other treaties, however, are exclusively devoted to environmental protection….

International environmental treaties are characterized by the degree to which states parties must regulate the behavior of non-state actors that are the source of most harm to the environment. Previously, most treaties, such as those to establish diplomatic relations or to lower trade barriers, primarily applied to the conduct of state authorities.

The geographic coverage of environmental treaties varies widely. Some instruments aim to regulate the entire international community. Art. 35(3) of Protocol I to the 1949 Geneva Conventions Relative to Protecting Victims of International Armed Conflicts, for example, prohibits all states engaged in such conflicts from employing methods or means of warfare that are intended, or may be expected to cause widespread, long-term, and severe damage to the natural environment. The London conventions of 1972 and 1973 concerning pollution of the high seas and the Convention on International Trade in Endangered Species similarly have global reach.

These treaties illustrate the broad framework of international law that has been established for the protection of water, soil, the stratosphere, and biological diversity.

Global norms often are more effective when implemented and enforced regionally. The law of the sea, for example, has been adapted and reinforced for some two dozen different maritime regions around the world, including the Mediterranean, Persian Gulf, West Africa, South-East Pacific, Red Sea, Gulf of Aden, Caribbean, and East Africa. In these areas, regional seas conventions have been concluded, which rely on the same principles and generally include the basic norms previously articulated in global instruments. At the same time, the agreements take into consideration the different ecological conditions in each regional sea.

The regional approach is motivated by the similarity of the geography and environment among neighboring states bordering regional seas and is enhanced in many cases by like economic, cultural, and political conditions.

Regional economic cooperation in part enhances regional cooperation on environmental matters because of a desire to avoid market distortions and competitive disadvantage for states with high environmental standards.

As it has grown, the field of international environmental law has developed some innovative features that contrast with other areas of international regulation. Environmental treaties, in particular, have developed a set of unique common characteristics that often include:

(1) an absence of reciprocity of obligations

(2) interrelated or cross-referenced provisions from one instrument to another

(3) framework structures

(4) interim application

(5) institutions with expansive mandates

(6) innovative compliance and non-compliance procedures

(7) simplified means of modification or amendment.

Part 3. INTERNATIONAL PRINCIPLES AND RULES

Under traditional views, public international law derives from one of four sources: international conventions; international customs; general principles of law recognized by civilized nations; and judicial decisions and teachings of highly qualified legal scholars. From the large body of international instruments dealing with environmental issues, it is possible to point out international principles. The general principles and rules of international environmental law have emerged from international treaties, agreements, and customs. The significance of the generality of these principles is that they can be applied to the international community for the protection of the environment.

There is no universally agreed upon set of general principles and concepts of International Environmental Law. They usually include both principles of the international legal system as well as those common to the major national legal systems of the world. The ICJ sometimes analyzes principles of domestic law in order to develop an appropriate rule of international law.A general overview of the principles of international environmental law is best approached with a certain degree of caution. First, international environmental law principles can hardly be dissociated from the politically sensitive and complex issues surrounding the notion of sustainable development. Second, a general approach is at odds with the sheer heterogeneity of the phenomenon of principles. The current interest in the principles of international environmental law stems to a large extent from a need to define and give content to the notion of sustainable development.[10] *Philippe Sands, for example, argues that in the absence of clear, substantive obligations such principles can play an important secondary role in the emerging international law of sustainable development. Thus, a discussion of the status of international environmental law principles entails, directly or indirectly, entering a notoriously controversial and contentious matter.*[11]

[10] LluõÂs Paradell-Trius Principles of International Environmental Law: an Overview. RECIEL 9 (2) 2000.

[11] P. Sands, `International Law in the Field of Sustainable Development: Emerging Legal Principles', in W. Lang, Sustainable Development in International Law (Graham Trotman, 1995), 53, at 66.

Caution is also warranted by the difficulty, if not impossibility, of a general definition of the nature, status and role of international environmental law principles. This notion embraces a variety of legal tenets and norms of a differing nature and normative authority. Some are established rules of customary international law, while others are emerging rules. Yet other principles have a lesser normative status. They may be guiding interpretative standards or merely aspirational norms.[12] *Prominent examples of reliance on soft law as part of the international environmental law-making process, including the formulation of principles, are the declarations of intergovernmental conferences, such as the 1972 Stockholm Declaration of Principles for the Preservation and Enhancement of the Human Environment (Stockholm Declaration) and the United Nations Declaration on Environment and Development (Rio Declaration). A number of international institutions have also spelled out principles in resolutions or declarations such as the 1978 UNEP Draft Principles of Conduct on Natural Resources Shared by Two or More States (UNEP Draft Principles). Nongovernmental organizations have also contributed by adopting documents setting international environmental law principles.*

Principles are perhaps more widely used in international environmental law than in any other field of international law. Principles can indicate the essential characteristics of legal institutions, designate fundamental legal norms, or fill gaps in positive law. Principles may appear in constitutions and statutes, or they may be judicially constructed. A principle also may provide the general orientation and direction to which positive law must conform, a rationale for the law, without itself constituting a binding norm.

GENERAL PRINCIPLES OF INTERNATIONAL ENVIRONMENTAL LAW

Max Valverde Soto

I. SOVEREIGNTY AND RESPONSIBILITY

International environmental law has developed between two apparently contradicting principles. First, states have sovereign rights over their natural resources. Second, states should not cause damage to the environment. Although the concept of a state's sovereignty over its natural resources is rooted in the old principle of territorial sovereignty, the United Nations General Assembly has further encouraged it declaring, inter alia, that the right of peoples and nations to permanent sovereignty over their natural resources and wealth must be

[12] LluõÂs Paradell-Trius Principles of International Environmental Law: an Overview. RECIEL 9 (2) 2000.

exercised in the interest of their national development, and of the well-being of the people of the state.

This resolution reflects the right to permanent sovereignty over natural resources as an international right, and has been accepted by tribunals as a reflection of international customs. National sovereignty over natural resources has been affirmed in international agreements.

The concept of sovereignty is not absolute, and is subject to a general duty not to cause environmental damage to the environment of other states, or to areas beyond a state's national jurisdiction. As stated in the 1992 Rio Declaration: states have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental and developmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other states or areas beyond the limits of national jurisdiction.

This is a derivation from the general maxim that the possession of rights involves the performance of corresponding obligations.

The responsibility not to cause environmental damage precedes the Rio Declaration. There is an obligation of all states to protect the rights of other states, as elaborated in Trail Smelter, a case which stated that:

under principles of international law ... no state has the right to use or permit the use of territory in such a manner as to cause injury by fumes in or to the territory of another of the properties or persons therein, when the case is of serious consequence and the injury is established by clear and convincing evidence.

This principle was further developed in 1961 when the United Nations General Assembly declared that "[T]he fundamental principles of international law impose a responsibility on all states concerning actions which might have harmful biological consequences for the existing and future generations of peoples of other states, by increasing the levels of radioactive fallout." The duty to avoid environmental damage also has been accepted in international treaties as well as in other international practices.

Moreover, in the case of shared resources, this is a resource which does not fall as a whole within the jurisdiction of one state; the primary concept is the obligation for equitable and harmonious utilization of the resource. This obligation is primarily related to cooperation on the basis of a system of information and prior consultation and notification in order to achieve optimum use of such resources without causing damage to the legitimate interests of other states.

In those areas beyond the limits of national jurisdiction, such as the high seas, the applicable concept is not one of sovereignty, but is one of common heritage of humanity. Simply stated, global property is open and its wealth cannot be appropriated by states. States are only administrators of the property's wealth and benefits. States must cooperate in the conservation and share the economic benefits of those areas. Recently, the concept of common heritage of humankind has been applied to the protection of Antarctica.

II. PRINCIPLES OF GOOD NEIGHBORLINESS AND INTERNATIONAL COOPERATION

The principle of good neighborliness places on states a responsibility not to damage the environment. The principle of international cooperation places an obligation on states to prohibit activities within the state's territory that are contrary to the rights of other states and which could harm other states or their inhabitants.

The principle of good neighborliness is closely related to the duty to cooperate in investigating, identifying, and avoiding environmental harm. Most international environmental treaties have provisions requiring cooperation in the generation and exchange of scientific, technical, socioeconomic, and commercial information. This obligation to cooperate is not absolute. Instead, it is limited by municipal conditions such as the protection of patents.

The exchange of general information is critical in monitoring the domestic implementation of international obligations. For example, a cooperative exchange of information regarding the trade of endangered wildlife is critical in tracing the population flow of animals. The same occurs with greenhouse effect emissions. Due to the importance of exchanging information, some conventions have created separate international bodies with information generating and distribution functions. Additionally, many conventions contain provisions dealing with scientific knowledge, atmospheric changes, marine pollution, and cultural preservation. Other subprinciples embodied in good neighborliness and international cooperation are the principles of prior notification and consultation. Prior notification obligates acting states to provide prior, timely notification and relevant information to every state that may be adversely affected by its environmental activities. Of course, states shall immediately notify other states of any natural disasters or other emergencies that are likely to produce transboundary effects. Also, notification is particularly important when there is an oil spill, industrial mishap, or nuclear accident.

Moreover, upon request, the acting state is bound to enter into a good faith consultation with potentially affected states over a reasonable period of time. However, the acting state is not bound by the opinions of the consulted states, but should take them into

account. Finally, when one state is acting in the territory of another, notification and consultation is not enough. Prior informed consent is required. This consent is mandatory in activities such as transporting hazardous wastes through a state, lending emergency assistance after an accident, and prospecting for genetic resources.

III. PRINCIPLE OF PREVENTIVE ACTION

The pollution prevention principle should be differentiated from the duty to avoid environmental harm. Under this new rule, a state may be under the obligation to prevent damage within its own jurisdiction. Therefore, the discharge of toxic substances in such quantities or concentrations which exceed the capacity of the environment's degradation capacity, must be halted in order to ensure that serious or irreversible damage is not inflicted upon ecosystems. Action should be taken at an early stage to reduce pollution, rather than waiting to restore contaminated areas.

To ensure this principle, states have established authorization procedures, commitments to environmental standards, ways to access information, the use of penalties, and the need to carry out environmental impact assessments. For example, environmental impact assessments have been incorporated as a decision-making instrument by international organizations as well as in many conventions. The preventive principle has been supported by international instruments preventing the introduction of pollutants, and also by agreements in the field of international economic law. Finally, it has also been endorsed by international case law.

IV. PRECAUTIONARY PRINCIPLE

This rule, although still evolving, is reflected in principle fifteen of the Rio Declaration, which states that where there are warnings of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation. Since scientific certainty often comes too late for politicians and lawyers to protect against environmental danger, the burden of proof is switched. To wait for scientific proof regarding the impact of pollutants discharged into the environment could result in irreversible damage to the environment and human suffering. Traditionally, states wishing to adopt certain protective measures had to prove beyond a doubt the hazard and the urgency of the desired action. Fortunately, because of the precautionary principle, this traditional view of burden of proof was reversed so that a state would not have to wait for proof of harm before taking action. Another possible interpretation of the shift in the burden of proof is that states wishing to undertake certain activities will have to prove that the activities will not cause harm to the environment.

The first treaty to embody this principle is the 1985 Vienna Convention for the Protection of the Ozone Layer. Subsequently, the precautionary approach for the protection of the environment has been widely addressed. Regrettably, there exists no precision as to the principle's requirements, and its formulations vary. What remains ambiguous is the level at which the lack of scientific evidence cannot be claimed as an argument to postpone measures.

When can a preventive action be legally required? While the 1991 Bamako Convention links the preventive and precautionary principles and does not require the possibility of damage to be serious (lowering the level at which the lack of scientific evidence launches action), the 1992 Convention for the Protection of the Marine Environment of the North-East Atlantic increases the threshold needed to implement preventive measures, requiring more than a mere possibility of damage.

V. THE DUTY TO COMPENSATE FOR HARM

States are responsible to ensure that activities within their jurisdiction or control do not cause damage to the environment of other states or areas beyond the limits of their national jurisdiction. Injuries result from violations of this generally accepted rule. Any state responsible for a violation of international law has to stop the wrongful conduct and re-establish the condition that existed prior to the wrongful conduct. If it is impossible to re-establish the pre-existing condition, the state should provide compensation. An illegal or wrongful act exists where: a) conduct consists of an action or omission imputed to a state under international law; and b) such conduct constitutes a breach of an international obligation of the state. This definition poses three problems in relation to international environmental law. First, what is the criteria for imputing liability to a state? Second, what is the definition of environmental damage? Third, what is the appropriate form of reparation?

With regards to the first question, there are three options: fault (negligence), strict liability (there is a presumption of responsibility but defenses are available), and absolute liability (no cause of justification is possible, and a state would be liable even for an act of God). While fault is based on due diligence, strict and absolute liability impose responsibility for acts not prohibited under international law. Strict liability emphasizes the harm rather than the conduct.

It is a widespread opinion that international law lacks absolute or strict liability as a general rule. There is no single basis of international responsibility applicable in all circumstances, but rather several, the nature of which depends upon the particular obligation in question. Therefore, international law is not conclusive on the standard of care to be shown in the fulfillment of environmental obligations. For example, strict liability for ultra-hazardous activities can be considered a general principle of law since it is found in municipal

legislation worldwide. Some treaties even support absolute liability for these activities. However, strict or absolute liability is more difficult to impute for activities that are not ultra-hazardous. It should also be considered that the damage can be produced directly by state organs, by private individuals within the territory, or in the execution of lawful measures.

As to the second question, environmental damage should be defined as a result of a violation of international law. This presents a dilemma since customary international law is still emerging and some environmental treaties rely heavily on voluntary cooperation. In addition, environmental damage has been defined as any injury to natural resources as well as degradation of natural resources, property, landscape, and environmental amenities.

Finally, focusing on reparation, the Permanent Court of Justice declared:

The essential principle contained in the actual notion of an illegal act ... is that reparation must, as far as possible, wipe out all the consequences of the illegal act and re-establish the situation which would, in all probability, have existed if that act had not been committed. Restitution in kind, or if it is not possible, payment of a sum corresponding to the values which a restitution in kind would bear; the award, if need be, of damages for loss sustained which would not be covered by restitution in kind or payment in place of it - such are the principles which should serve to determine the amount of compensation due for an act contrary to international law.

The problem is that at the environmental level, an identical reconstruction may not be possible. An extinct species cannot be replaced. However, at the very least, the goal should be to clean-up the environment and restore it so that it may serve its primary functions. But, even if restoration is physically possible, it may not be economically feasible. Moreover, restoring an environment to the state it was in before the damage could involve costs disproportionate to the desired results. Such elements, combined with the lack of legal precedent and the insufficiency of the traditional state's inability to assess environmental damage, makes the panorama difficult.

VI. PRINCIPLE OF COMMON BUT DIFFERENTIATED RESPONSIBILITY

The protection of the environment is a common challenge to all countries. Due to different development paths and the need to share in the responsibility for ecological degradation, some countries may be asked to carry more of the burden of conservation. The idea is that states should comply with international obligations for the conservation of the environment on the basis of equity and in accordance with their common but differentiated responsibilities and respective capacities. This principle was acknowledged in the Rio Declaration at principles four and seven.

This principle includes two constituent elements. The first is the common responsibility of states for the protection of the environment. This signifies that states should participate in the world effort for conservation. The second element is the elucidation of the different circumstances of states. For example, industrialized countries have contributed more to the global warming than underdeveloped countries. On the other hand, the capacities of developing countries to prevent damage may be less advanced. Also, the environmental policies of states should enhance and not affect the present and future development of developing countries. While all states are bound to participate in the environmental solution, the adoption of national standards and international obligations can differ. For example, the time period for the national implementation of preventive measures can vary from country to country.

VII. THE PRINCIPLE OF SUSTAINABLE DEVELOPMENT

The principle of sustainable development was defined by the 1987 Brundtland Report as a development that meets the needs (in particular the essential needs of the world's poor) of the present without compromising the ability of future generations to meet their own needs. It imposes the idea of limitations on the environment's capacity to meet present and futures needs.

Sustainable development prompts that the primary focus of environmental protection efforts is to improve the human condition. According to the anthropocentric approach, the protection of wildlife and natural resources is not a goal in itself, but is a necessity for ensuring a higher quality of life for humans.

Sustainable development, as reflected in international agreements, encompasses at least three elements:

A. Intergenerational Equity.

   Intergenerational equity is each generation's responsibility to leave an inheritance of wealth no less than what they themselves have inherited. The present generation holds the natural resources in trust for future generations. Early and recent treaties have referred to this principle.

B. Sustainable Use of Natural Resources.

   The primary roots of the principle of sustainable use of natural resources can be traced to 1893, when the United States proclaimed a right to ensure the proper use of seals in order to save them from destruction. The term has been used in conservation conventions.

   While attempts to define the principle of sustainable use of natural resources have been made, no general definition exists. Terms such as proper, wise use, judicious

exploitation, sound environmental management, ecologically sound, and rational use are used interchangeably without definitions.

C. Integration of environment and development.

"In order to achieve sustainable development, environmental protection shall constitute an integral part of the development process and cannot be considered in isolation from it." Therefore, when implementing environmental obligations, economical and social development should be taken into consideration, and vice versa.

Although traditionally international organizations such as the World Bank or the World Trade Organization never addressed environmental protection, a change is slowly coming. Regarding macroeconomics, the move towards sustainable development requires, for example, new accounting systems to evaluate a country's progress. The accounting system would include pollution control efforts and environmental damage when calculating the gross national product (GNP). Mining extraction, for example, would not simply reflect an increase in the GNP, but also a reduction in natural resources. In microeconomics, sustainable development would require, for example, imposition of the costs of environmental damage on the state which caused the damage.

The integration of environment and development can be traced to the 1949 United Nations Conference on Conservation and Utilization of Resources, which recognized the need for "continuous development and wide-spread application of the techniques of resource conservation and utilization." Regional and global treaties are also taken into consideration under this approach.

VIII. CONCLUSION

The legal meaning and consequences of the above stated principles remain open. Some have evolved over a short period of time and sometimes in different contexts. Additionally, state practice is also evolving. Another element which complicates the environmental field is that some of the principles have no definite meaning. There is also no agreement concerning the legal consequences of these rules. Together, this makes it difficult to compel the international community to protect the environment.

The rules of permanent sovereignty over natural resources, the responsibility to prevent environmental damage, good neighborliness, and cooperation in relation to environmental protection are well established and rooted in state practice and international instruments. Even more, permanent sovereignty can be regarded as customary international law.

On the other hand, the duty to compensate for environmental harm can be considered a corollary of the general duty to compensate for damages provoked by international wrongful acts. Nevertheless, the difficulty to assess the environmental damage within the existing liability rules makes the application of the rules problematic. Also, there is no agreement as to the applicable type of responsibility (subjective or objective). Notwithstanding, the trend is to avoid these vague notions and define the state-required conduct necessary to prevent harm to other states. Therefore, the obligation to avoid environmental harm would be stated as an obligation to take certain measures to ensure that activities within the control of the state conform to international environmental protection standards. These rules of conduct will be the rules used to decide whether an agreement has been violated.

Preventive action and precautionary and sustainable development principles are more difficult to uphold, since they are rather new and vague concepts. However, they deserve attention, since they will undoubtedly shape the future development of international law. For example, if the principle of sustainable development quickly takes root in the international law regime, all developmental decisions could be subjected to environmental inquiry.

Finally, the influence of international litigation should not be underestimated. The decision of international tribunals such as the European Court of Justice (granted supra national adjudicative power within the European Community) and the International Court of Justice on environmental matters, will contribute to the codification of these principles.

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SOME BASIC PRINCIPLES OF INTERNATIONAL LAW

International law rests on several foundational principles, some of which have particular importance for the development of international environmental law. The UN Charter in Article 2 sets forth those principles deemed to be of constitutional importance to the United Nations and its member states: sovereign equality; good faith compliance with agreements to which a state is a party; cooperation in addressing matters of international concern; non-interference in the domestic affairs of states; and peaceful settlement of international disputes. Key to all of these principles is the concept of state sovereignty.

1. Sovereignty

State sovereignty, one of the oldest principles of international law, means that each state has exclusive legislative, judicial, and executive jurisdiction over activities on its territory. Sovereignty is exercised subject to international law, however, and is not absolute.

States may enact or accept limits on their own freedom of action in order to protect common interests or the interests of other states. Treaties to which a state becomes a contracting party result in selfimposed limits on sovereignty. In recent decades, states have concluded a large number of environmental treaties containing obligations that must be executed on their territories, including agreements to protect species of wild fauna and flora, prohibit the dumping of harmful substances into rivers, lakes or the sea, and prevent atmospheric pollution.

As a consequence, states are obliged to exercise broad control over public and private activities, and this necessarily places legal limits their freedom of action.

The sovereign rights of states include exclusive jurisdiction over their resources. Principle 21 of the Stockholm Declaration, adopted in 1972, explicitly applies this principle to environmental matters by affirming that "[s]tates have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental policies." On the Stockholm Conference and Declaration, see Chapter II, Section A. Two decades later, the Rio Declaration modified this language by referring to "environmental and developmental policies."

It is thus up to each state, subject to its treaty and customary obligations, to determine the level of environmental protection it aims to achieve.

Exploitation of a state's resources has the potential to infringe the sovereignty of other states due to transfrontier environmental impacts; in addition, many species of wild animals, birds, and fish migrate across boundaries, threatening to create interstate disputes over rights to them.

Avoiding conflict and managing these resources requires international law. Hence, the Stockholm Declaration and other international texts balance state sovereignty with "the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction."

2. Cooperation

An obligation to cooperate with other states emerges from the very rationale for international law and finds reflection in the proliferation of international agreements and institutions. In the field of environmental protection, equitable use of shared resources, such as transboundary watercourses and international lakes, especially depends upon international cooperation. The general need to cooperate to conserve the environment is expressed in several non-binding texts, starting with Principle 24 of the Stockholm Declaration. Several UN General Assembly resolutions, the 1982 World Charter for Nature, and the Rio Declaration on Environment and Development also refer to it.

The principle of cooperation underlies all treaty obligations, but several texts specify the aims of state cooperation. Article 197 of the 1982 Convention on the Law of the Sea is an example:

States shall cooperate on a global basis and, as appropriate, on a regional basis, directly or through competent international organizations, in formulating and elaborating international rules, standards and recommended practices and procedures consistent with this Convention, for the protection and preservation of the marine environment, taking into account characteristic regional features.

Similarly, Principle 5 of the Rio Declaration calls for cooperation to eradicate poverty. Principle 27 adds that cooperation shall be conducted in good faith and shall include further development of international law in the field of sustainable development. Specific duties of cooperation apply to the transnational transfer of activities and substances that cause severe environmental degradation or are harmful to human health.

Environmental treaties and other texts frequently call for cooperation in the transfer of funds, knowledge, information, and technology, to assist developing countries to comply with their treaty obligations or more generally to achieve sustainable development.

3. Common Concern of Humanity

The cohesion of every society is based upon and maintained by a value system.

The system may demand respect for the human person, propriety, patriotism, cultural values, or a particular social order. The protection of such fundamental values is generally recognized as a common concern of the community and is ensured through law, especially constitutional law.

During the second half of the 20th century states created an international political organization to maintain international peace and security and improve human well-being. This ambitious effort led to identifying defining domains of common concern. The international recognition of human rights and fundamental freedoms was a first step in developing the concept of an international community built upon the fundamental values of humanity. Similarly if somewhat later, protection of the human environment became accepted as a common concern of humanity. The ecological processes of the biosphere, such as climate change, necessitate protection at the global level, while transboundary and many domestic environmental issues cannot be managed effectively by national efforts alone. The modalities of protection and preservation are formulated in international law and policy and enforced by national and international institutions.

The term “common interest” appeared early in international treaties concerning the exploitation of natural resources. The preamble to the International Convention for the

Regulation of Whaling (Washington, Dec. 2, 1946) recognizes the "interest of the world in safeguarding for future generations the great natural resources represented by the whale stocks" adding that "it is in the common interest" to achieve the optimum level of whale stocks as rapidly as possible. The Convention for the High Seas Fisheries of the North Pacific Ocean (Tokyo, May 9, 1952) expresses the conviction of the parties that it will best serve the common interest of mankind, as well as the interests of the contracting parties, to ensure the maximum sustained productivity of the fishery resources of the North Pacific Ocean.

The international concept of common concern does not connote specific rules and obligations, but establishes the general legal basis for the concerned community to act. Designating a matter as one of common concern removes the topic from states' exclusive domestic jurisdiction and makes it a legitimate matter for international regulation. The conventions cited above thus imply a global responsibility to conserve disappearing or diminishing wild fauna and flora, ecosystems, and natural resources in danger.

The right and duty of the international community to act in matters of common concern still must be balanced with respect for sovereignty. States retain exclusive jurisdiction subject to the obligations international law creates to assure the common interest.

4. Common Heritage of Mankind

The common heritage of mankind is a controversial concept that emerged at the end of the 1960s to challenge older concepts of *res nullius* and *res communis* as a legal approach to regulating the use of common resources.

Res nullius, which in many legal systems includes wild animals and plants, belongs to no one and can be freely used and appropriated when taken or captured. The designation of res communis implies the reverse, common ownership that precludes individual appropriation but allows use of the resources, e.g., navigation on the high seas. The concept of common heritage of mankind is distinct from both earlier concepts, in part because of its inclusion of the word "heritage," connoting a temporal aspect in the communal safeguarding of areas legally incapable of national appropriation.

In part based on this concept, special legal regimes have been created for the deep seabed and its subsoil, Antarctica, and the Moon.

The nature of the common heritage is a form of trust whose principal aims are exclusive use for peaceful purposes, rational utilization in a spirit of conservation, good management or wise use, and transmission to future generations. Benefits of the common heritage may be shared in the present through equitable allocation of revenue, but this is not the essential feature of the concept. Benefit-sharing can also mean sharing scientific

knowledge acquired in common heritage areas, and is applied to activities in Antarctica or on the Moon.

GUIDE TO INTERNATIONAL ENVIRONMENTAL LAW
Alexandre Kiss and Dinah Shelton

Customary international law, general principles of law, and normative instruments have advanced a kind of common law of the environment. Norms and principles have emerged to become widely accepted and repeated consistently in treaties and national laws concerned with environmental protection. New norms and principles are in the process of formation, as international environmental law evolves to meet new challenges.

Principles are perhaps more widely used in international environmental law than in any other field of international law. Principles can indicate the essential characteristics of legal institutions, designate fundamental legal norms, or fill gaps in positive law. Principles may appear in constitutions and statutes, or they may be judicially constructed. A principle also may provide the general orientation and direction to which positive law must conform, a rationale for the law, without itself constituting a binding norm. Principles have been called "rules of indeterminate content," having a degree of abstraction so great that it is not possible to deduce precise obligations from them with any degree of certainty. Given this range of meaning, it is unsurprising that even the concept of "principle" and the juridical value, if any, of a principle vary from one legal system to another.

All of the major non-binding normative instruments on the environment contain principles that are taken up, defined, and given concrete meaning in international treaties and jurisprudence. Some treaties also make use of principles. The Treaty of European Union, for example, in Title XVI sets out the principles meant to guide EU policy on the environment and shape its legislation. Art. 174(2) provides that EC environmental policy shall be based on "the precautionary principle and on the principles that preventive action should be taken, that environmental damage should as a priority be rectified at source and that the polluter should pay."

It is precisely the complexity of many environmental issues that makes specific regulation so difficult at the international level and why principles play such an important role in setting forth the general approach of anticipation rather than reaction to environmental problems. The preventive model is necessary, because our understanding of the environment is no longer able to keep pace with our ability to modify it, often in irreversible ways. Prevention thus may lead to precaution.

A. SUBSTANTIVE PRINCIPLES

International law first faced issues of environmental protection in the context of bilateral disputes resulting from transfrontier pollution. The international community subsequently realized that environmental problems are not so limited, and that approaching environmental protection through rules designed to resolve bilateral problems would provide only limited solutions or might serve only to transfer the environmental harm elsewhere. From this understanding, various substantive principles arose that apply to state conduct generally.

1. Prevention of Harm

Traditional international law respects each state's exclusive jurisdiction over its territory. Yet, acts that are permitted to take place or originate on the territory of one state may cause damage or infringe upon the sovereignty of another state, giving rise to conflict between the rights of the two states. Case law precedents and the adaptation of general rules of international law have produced the foundational norm of international environmental law that prohibits transfrontier pollution. States first defined the pollution that must be prevented in OECD Council Recommendation C(74)219, of Nov. 14, 1974. The same definition has since appeared, with minor modifications, in all major international texts on the topic: pollution means the introduction by man, directly or indirectly, of substances or energy into the environment resulting in deleterious effects of such a nature as to endanger human health, harm living resources and ecosystems, and impair or interfere with amenities and other legitimate uses of the environment.

Originating in the Trail Smelter arbitration, the duty to prevent extra-territorial environmental harm was most famously stated in the 1972 Stockholm Declaration, Principle 21 quoted in Chapter II, Section A. The principle has been repeated in MEAs like the Convention on Biological Diversity (Art. 2) and the UN Climate Change Convention. The U.S. Restatement of Foreign Affairs Law (Third), § 601, similarly refers to the obligation of states "to conform to generally accepted international rules and standards for the prevention, reduction, and control of injury to the environment of another state or of areas beyond the limits of national jurisdiction." The International Court of Justice has called the duty to prevent extra-territorial environmental harm part of customary international law. The duty to avoid transfrontier pollution requires each state to exercise "due diligence," which means to act reasonably and in good faith and to regulate public and private activities subject to its jurisdiction or control that are potentially harmful to any part of the environment. The principle does not impose an absolute duty to prevent all harm, but rather requires each state to prohibit those activities known to cause significant harm to the environment, such as the

dumping of toxic waste into an international lake, and to mitigate harm from lawful activities that may harm the environment, by imposing limits, for example, on the discharges of pollutants into the atmosphere or shared watercourses. The general duty of prevention clearly emerges from the international responsibility not to cause significant damage to the environment extraterritorially, but the preventive principle seeks to avoid harm irrespective of whether or not there are transboundary impacts. The rationale derives from the interdependence of all parts of the environment and the fact that it is frequently impossible to remedy environmental injury: the extinction of a species of fauna or flora, erosion, and the dumping of persistent pollutants into the sea create irreversible situations. Even when harm is remediable, the costs of rehabilitation are often prohibitive. Art. 192 of the UN Convention on the Law of the Sea first expressed the general requirement of prevention by affirming that "[s]tates have the general obligation to protect and preserve the marine environment." Subsequently, Art. 20 of the 1997 UN Convention on the Non-Navigational Uses of International Watercourses (New York, May 21, 1997) affirmed the same duty for international freshwater. The 1992 Convention on Biological Diversity lists the measures that should be taken to ensure conservation and sustainable use of biological resources within states parties.

The requirement to prevent harm is complex owing to the number and diversity of the legal instruments in which it appears. It can perhaps better be considered an overarching aim that gives rise to a multitude of legal mechanisms, including prior assessment of environmental harm and procedures to license or authorize hazardous activities, including setting the conditions for operation and the consequences of violations. Emission limits and other product or process standards, the use of best available techniques (BAT), and similar techniques can all be seen as applications of the principle of prevention. Prevention also can involve the elaboration and adoption of overarching strategies and policies.

Prior assessment of activities, monitoring, notification, and exchange of information, are general obligations contained in nearly all environmental agreements. Since the failure to exercise due diligence to prevent significant transboundary harm can lead to international responsibility, the presence or absence of properly done environmental impact assessments can serve as a standard for determining whether or not due diligence was exercised.

2. Precaution

The proclamation of the precautionary principle can be considered one of the most important provisions in the Rio Declaration. Principle 15 provides:

In order to protect the environment, the precautionary principle shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible

damage, lack of full scientific certainty shall not be used as a reason for postponing costeffective measures to prevent environmental degradation.

Formulations of the precautionary principle are relatively recent, but since 1992 the precautionary principle has appeared in almost all international instruments related to environmental protection.

Concrete application of the precautionary principle is often found in treaties for the management of living resources, especially those concerning fishing. In addition, the Biosafety Protocol (Cartegena, Jan. 29, 2000) to the Convention on Biological Diversity is based upon the precautionary principle. Art. 1, on the objectives of the Protocol, refers explicitly to Rio Principle 15, while Arts. 10 and 11 contain the key provisions on precaution. Art. 10(6) says that "lack of scientific certainty due to insufficient relevant information and knowledge regarding the extent of the potential adverse effects of an LMO shall not prevent the party from taking a decision on the LMO in order to avoid or minimize such potential adverse effects." Art. 11 uses similar language in allowing a country to reject an import even in the absence of scientific certainty about its potential to cause harm. These provisions are broader than Rio Principle 15, because they lack reference to "serious or irreversible damage" or to cost-effectiveness.

In general, the precautionary principle can be considered as the most developed form of prevention that remains the general basis for environmental law. Precaution means preparing for potential, uncertain, or even hypothetical threats, when there is no irrefutable proof that damage will occur. It is prevention based on probabilities or contingencies, but it cannot eliminate all claimed risks, because these are claims that lack any scientific basis, such as those based on astrological predictions or psychic visions. Precaution particularly applies when the consequences of nonaction could be serious or irreversibile. Policymakers must consider the circumstances of a given situation and decide whether scientific opinion is based upon credible evidence and reliable scientific methodology. Such a development expands the important role of scientists in the protection of the environment: decisionmakers must adopt measures based upon a general knowledge of the environment and the problems its protection raises. Like in all environmental matters, the public must support the decision.

The role of scientists thus includes a general environmental education of the public as well as of those who take the formal decision.

3. The "Polluter Pays" Principle

The polluter pays principle seeks to impose the costs of environmental harm on the party responsible for the pollution. This principle was set out by the OECD as an economic principle and as the most efficient way of allocating costs of pollution prevention and control

measures introduced by the public authorities in member countries. It is intended to encourage rational use of scarce environmental resources and to avoid distortions in international trade and investment.

The Rio Declaration Principle 16 contains one formulation of the polluter pays principle:

National authorities should endeavor to promote the internalization of environmental costs and the use of economic instruments, taking into account the approach that the polluter should, in principle, bear the cost of pollution, with regard to the public interest and without distorting international trade and investment.

The polluter pays principle is incorporated in the 1992 Convention for the Protection of the Marine Environment of the North-East Atlantic (Paris, Sept. 22, 1992). According to Art. 2(2)(b) "[t]he contracting parties shall apply: . . . the polluter pays principle, by virtue of which the costs of pollution prevention, control and reduction measures are to be borne by the polluter." This can be interpreted in different ways depending upon the extent of prevention and control and whether compensation for damage is included in the definition of reduction. Further, the very concept of the "polluter" can vary, from the producer of merchandise to the consumer who uses it and who pays the higher price resulting from anti-pollution production measures. International practice thus far, which is mainly that of the EU, seems to aim at eliminating public subsidies for pollution abatement by companies.

In fact, pollution control costs can be borne either by the community, by those who pollute, or by consumers. Using the example of an industry that discharges pollutants into a river, there are at least five possible allocations of the economic consequences:

1. The river can remain polluted and rendered unsuitable for certain downstream activities, causing the downstream community to suffer an economic loss;

2. The downstream community can build an adequate water treatment plant at its own cost;

3. The polluter may receive public subsidies for controlling the pollution. In all these hypotheses, the affected community bears the cost of the pollution and of the measures designed to eliminate it or to mitigate its effects;

4. The polluter bears the costs of pollution control in application of the polluter pays principle;

5. The enterprise incorporates the costs of pollution abatement in the price of the products and passes them on to the consumer.

The polluter pays principle can be applied most easily in a geographic region subject to uniform environmental law, such as within a state or in the European Union. In fact, the

polluter pays principle has been well defined in EU law. Polluters should pay for the cost of pollution control measures, such as the construction and operation of anti-pollution installations, investment in anti-pollution equipment and new processes, so that a necessary environmental quality objective is achieved. EC Directive 84/631 (Dec. 6, 1984) on the control within the European Community of the transfrontier shipment of hazardous waste illustrates application of the principle. It instructs the member states to impose the costs of waste control on the holder of the waste and/or on prior holders or the waste generator.

B. PRINCIPLES OF PROCESS

Several values are reflected in the emphasis on procedural principles in international environmental law. Access to environmental information can assist enterprises in planning for and utilizing the best available techniques and technology. Early and complete data assists decisionmakers to make informed choices. In addition, the process by which rules emerge, how proposed rules become norms and norms become law, is highly important to the legitimacy of the law, and legitimacy in turn affects compliance.

When those governed have and perceive that they have a voice in governance, they may see the decisions taken as ones in which they are stakeholders and which they will uphold.

1. Duty to Know

Proper action to prevent harm to the environment cannot be taken without knowledge of the environmental conditions, nor can the impact of proposed activities be evaluated without basic information on the relevant area. Thus, the implementation, as well as the formulation, of environmental laws and policies require the collection of reliable information and the continuous assessment of the environmental milieu. The techniques adopted in international and national environmental laws to ensure this are surveillance, reporting, and monitoring.

International environmental instruments generally require the acquisition of data through inventories or surveillance, mainly a scientific activity, on which further action, such as monitoring, may be based. See, e.g., UN Straddling Stocks Convention (Aug. 4, 1995), Convention on Biological Diversity (June 5, 1992), the UNFCCC (May 9, 1992), MARPOL (Feb. 17, 1978), UNCLOS (Dec. 10, 1982), and the Rhine Chemicals Convention (Dec. 3, 1976). The parties to the CBD, for example, are obliged to identify important components of biological diversity and monitor them, through sampling or other techniques. It can be done by individual enterprises, by associations, or by local or national authorities. Once the information is obtained, it must be assembled, organized, and analyzed by an appropriate

agency or institution to which the information is sent. It is common to find environmental laws requiring reporting by enterprises or state institutions.

Monitoring is a necessary foundation for giving effect to all environmental obligations. Generally, a monitoring organ can propose legal changes based on reports and information that make it possible to assess the effectiveness of existing measures. Monitoring provides constant feedback for decisionmaking, from long-term protection to rapid guidance in emergencies. To ensure progress, the effectiveness of surveillance and monitoring must itself be assessed.

The duty to know imposes a further procedural obligation related to the principle of prevention—prior assessment of potentially harmful activities. This duty is expressed in the Rio texts in the Declaration, Principle 17; Chapter 22 of Agenda 21; Art. 8(h) of the Statement on Forests, and Art. 14(1)(a) and (b) of the Biodiversity Convention. Art. 206, Convention on the Law of the Sea (Dec. 10, 1982) is also clear: "When states have reasonable grounds for believing that planned activities under their jurisdiction or control may cause substantial pollution of or significant and harmful changes to the marine environment, they shall, as far as practicable, assess the potential effects of such activities on the marine environment and shall communicate reports of the results of such assessments."

2. Duty to Inform and Consult

A state that plans to undertake or authorize activities capable of having significant impact on the environment of another state must inform the latter and should transmit to it the pertinent details of the project, provided no national legislation or applicable international treaty prohibits such transmission. The 1992 Rio Declaration formulates the obligation as follows:

"States shall provide prior and timely notification and relevant information to potentially affected States on activities that may have a significant adverse transboundary environmental effect and shall consult with those States at an early stage and in good faith." Principle 19.

As the Rio Declaration indicates, the duty to consult often accompanies the duty to inform. This is evidenced in Art. 5 of the 1979 Geneva Convention on Long-Range Transboundary Pollution, which calls for consultations between any state affected by long-range transboundary air pollution or exposed to a significant risk of such pollution and the state on whose territory and within whose jurisdiction a substantial part of such pollution is or may be created because of existing or proposed activities.

In addition, countries should enter into consultations on an existing or foreseeable transfrontier pollution problem at the request of a country that is or may be directly affected

and should diligently pursue such consultations on the particular problem over a reasonable period of time.

Such consultations, "held in the best spirit of cooperation and good neighborliness," should not entail unreasonable delay or impediments to activities or projects.

The obligation to enter into consultation signifies that the state that is the potential polluter must be willing to discuss the information that it has forwarded to the potentially affected state, which in turn may make observations concerning the project. However, the observations need not be fully accepted by the state that proposes to act; otherwise the potentially affected state would have an effective veto over planned projects.

Parallel to the interstate duty to inform and consult, an emerging international obligation suggests duties towards the residents of the potentially affected state. Norms requiring equality of information and access to administrative or judicial procedures are contained mainly in non-binding international texts and in some judicial opinions, although some bilateral treaty arrangements have been concluded. Information is required on projects, activities, and new developments that could engender a risk of damage to the environment of non-residents. Non-residents may also seek access to information that the competent national authorities make available to their own interested local persons.

Non-residents informed of potential or actual harm that could affect them should be allowed to participate in decision-making procedures, have a right to appeal when relevant rules have been improperly applied by decisionmakers, and be provided access to justice and remedies in case of environmental damage. Non-resident participation in decisionmaking includes the right to make oral or written observations or to express an opinion in any other manner under the same conditions as residents. Where existing laws and procedures in the state of origin have not been respected, non-residents should have at their disposition the same remedies as residents.

The right of non-residents to demand compensation for damage they have suffered due to transfrontier pollution is undoubtedly the most accepted norm related to equality of access.

Apart from the duty to inform and consult on planned activities, treaties and state practice indicate states should immediately inform other states likely to be affected by any sudden situation or event that could cause harm to their environment and provide those states with all pertinent information.

The duty to notify of environmental crises is spelled out in numerous international treaties.

3. Public Participation

Public participation is based on the right of those who may be affected to have a say in the determination of their environmental future. The Rio Declaration on Environment and Development established a robust principle for including the public in environmental decisionmaking. Principle 10 declared that access to information, public participation, and access to effective judicial and administrative proceedings, including redress and remedy, should be guaranteed, because "environmental issues are best handled with the participation of all concerned citizens, at the relevant level."

Participation may take place through elections, grass roots action, lobbying, public speaking, hearings, and other forms of governance, whereby various interests and communities participate in shaping the laws and decisions that affect them. The major role played by the public in environmental protection is usually through participation in environmental impact or other permitting procedures.

The most comprehensive international agreement on the role of thepublic is the regional Convention on Access to Information, Public Participation and Access to Justice in Environmental Matters (Aarhus, June25, 1998). The treaty builds on prior texts, especially Principle 1 of the Stockholm Declaration, which it incorporates and strengthens.

C. EQUITABLE PRINCIPLES

In most national legal systems, equity has played a major part in determining the distribution of rights and responsibilities in conditions of scarcity and inequality. The general value of equity is largely accepted in this context, but debate exists on the appropriate principles to determine equitable allocation, e.g., whether decisions should be based on need, capacity, prior entitlement, "just deserts," the greatest good for the greatest number, or strict equality of treatment. In addition, a single factor, such as need, may be asserted by more than one actor or group of actors. Equity also may provide a basis for decision in the absence of law or when it is necessary to fill in gaps in existing norms, such as when new issues emerge that give rise to disputes. International tribunals have applied equity in this way, but usually on the basis that the equitable principle being invoked is a general principle of law.

In international environmental law, some developing countries have argued for exemptions from legal norms or for preferential treatment on the basis that international legal rules impose upon them a disproportionate environmental burden due to the export of pollution from wealthier countries, while they are unable to share in the benefits derived from activities producing the pollution. Trade preferences that accord differential and more favorable treatment to developing countries, as an exception to Art. I of GATT, reflect such equitable adjustments to the law.

Developing countries have successfully pressed the issue of equitable allocation of resources and burden-sharing for several reasons. First, they hold the major part of the earth's biological resources and need or want to use them for economic development, while developed states have an interest in the conservation and sustainable utilization of these resources, many of which are the source of desired products, as well as a foundation of ecological processes (for example, tropical forests as carbon sinks). Second, developing countries have been able to focus on fairness in pointing out the predominant responsibility of wealthier states for pollution. Third, developing states can legitimately plead their inability to participate in or comply with environmental protection agreements due to poverty and weak institutions.

Equity has been utilized most often in environmental agreements to fairly allocate and regulate scarce resources and to ensure that the benefits of environmental resources, the costs associated with protecting them, and any degradation that occurs (that is, all the benefits and burdens) are fairly shared by all members of society.

1. Intergenerational Equity

Intergenerational equity as a principle of international justice is based on the recognition of two key facts: (1) human life emerged from, and is dependent upon, the earth's natural resource base, including its ecological processes, and is thus inseparable from environmental conditions; and

(2) human beings have a unique capacity to alter the environment upon which life depends. From these facts emerges the notion that humans who are alive today have a special obligation as custodians or trustees of the planet to maintain its integrity to ensure the survival of the human species.

Those living have received a heritage from their forbearers in which they have beneficial rights of use that are limited by the interests and needs of future generations.

Three implications emerge from the principle of intergenerational equity: first, that each generation is required to conserve the diversity of the natural and cultural resource base so that it does not unduly restrict the options available to future generations to satisfy their own values and needs. Second, the quality of ecological processes passed on should be comparable to that enjoyed by the present generation. Third, the past and present cultural and natural heritage should be conserved so that future generations will have access to it. These rights and obligations derive from a notion of human society that extends beyond the totality of the current planetary population, giving it a temporal dimension.

2. Common but Differentiated Responsibilities

All of the texts adopted at Rio include some formulation of the principle of common but differentiated responsibilities. Principles 6 and 7 of the Rio Declaration afford priority to the needs of the least developed and most environmentally vulnerable states, expressing the general principle of common but differentiated responsibilities. The principle was controversial.

Principle 7 of the Rio Declaration, however, speaks not of historical responsibility but rather of the responsibility of developed countries for the present and future pursuit of sustainable development in view of the pressures their societies are placing on the global environment and on the resources they command.

The principle of common but differentiated responsibilities is now widely incorporated in MEAs. It calls broadly for developed countries to take the lead in solving existing global environmental problems. Thus, even though the responsibility for protecting the environment is to be shared among all nations, countries should contribute differently to international environmental initiatives depending on their capabilities and responsibilities.

3. Equitable Utilization of Shared Resources

Equitable utilization is a widely accepted principle applied in apportioning shared resources, such as watercourses and fish and other exploited species. It finds expression in Art. 2 of the 1997 UN Convention on the Law of Non-Navigational Uses of International Watercourses, which calls on the parties to take all appropriate measures to ensure that international watercourses are used in a reasonable and equitable way.

The 1909 Boundary Waters Treaty between the United States and Canada relies upon equality of use for the generation of power (each country being entitled to use half of the waters along the boundary) and equitable sharing of water for irrigation.

In contrast, the 1959 Nile Agreement between the Sudan and Egypt for Full Utilization of Nile Waters confirmed the "established rights" of each party, without identifying them, while additional amounts were allocated on other equitable bases. While the Nile agreement seems to view established rights as guaranteed by law, most other instruments take the better view and include prior entitlements as one factor in determining equitable allocation.

The idea of equitable utilization in the past had as a corollary that no use had inherent priority over any other. Today, there appears to be a move towards recognizing that some resource uses do have priority over others.

In the use of freshwaters, for example, emphasis is being placed on the satisfaction of basic human needs—that is, the provision of safe drinking water and sanitation. The Watercourses Convention provides that in the event of a conflict between the uses of an international watercourse, special regard is to be given to the requirements of vital human

needs (Art. 10), while the UN Committee on Economic, Social and Cultural Rights, in its General Comment 12 on the Right to Water, insists that priority be given to safe drinking water and sanitation, with a guaranteed minimum amount to be provided to every person. Thus, substantive human rights considerations help determine appropriate allocation.

Part 4. MAKING INTERNATIONAL LAW AND MANAGEMENT WORK

The issue of states' compliance with international environmental law has become one of the central topics of environmental awareness and action.

As more and more areas of social life are being heavily regulated by international law, to understand the connection between law and state action becomes crucial. Explaining why states do or do not comply with international law is important for designing international commitments and improving the effectiveness of international institutions.

Very often, the formal act of accepting a legal obligation is only a point signalling the beginning of a broad process of lawmaking. Law is thus much more about process than about form or product. There is an increasing number of voices advocating a more expansive view of law and aiming to situate it in a broader social context.[13]

Harold Koh's formulation of 'transnational legal process' has been especially influential. International legal obligation is created, he maintains, in a series of continuous repeated interactions in which a legal rule is constructed, interpreted, clarified, internalized, and enforced. Even after binding commitments are made, their clarification, interpretation and implementation is constantly renegotiated and reflected upon in light of changing circumstances, new information, or a deepening consensus among the key actors.[14]

Compliance demands profound changes in political, social and individual patterns of thinking, and entails private consumers' acceptance of decisions that would have direct impact on their daily lives, as well as major changes in productions industries. Such profound changes in values and perceptions are likely to proceed differently across cultures.

In order to achieve effective compliance and enforcement of national and international environmental law, it is important to define "compliance" and "enforcement" at the outset. The First Conference on Environmental Enforcement defined these terms as follows: Compliance is the full implementation of environmental requirements. Compliance occurs when requirements are met and desired changes are achieved, e.g., processes or raw

[13] Asher Alkoby. Theories of Compliance with International Law and the Challenge of Cultural Difference. 2008. Journal of International Law and International Relations. 4(1).
[14] Harold Koh. Transnational Legal Process. 1996. 75 Neb. L. Rev. 181 at 184.

materials are changed, work practices are changed so that, for example, hazardous waste is disposed of at approved sites, tests are performed on new products or chemicals before they are marketed, etc. The design of requirements affects the success of an environmental management program. If requirements are well-designed, then compliance will achieve the desired environmental results. If the requirements are poorly designed, then achieving compliance and/or the desired results will likely be difficult.[15]

Enforcement is the set of actions that governments or others take to achieve compliance within the regulated community and to correct or halt situations that endanger the environment or public health.[16]

Enforcement usually includes a range of activities such as monitoring, inspecting, reporting, gathering evidence to detect violations, and negotiating with individuals and industrial plant operators to develop mutually acceptable methods for achieving compliance. As a last step to compel compliance, enforcement includes recourse to legal action or dispute settlement.

In international law, the law of state responsibility determines the consequences of a state's failure to comply with its international obligations. In general, it requires a state that breaches an international obligation to cease the violation and provide reparations for any harm caused to another state.

STATE SOVEREIGNTY AND GLOBALIZATION: ARE SOME STATES MORE EQUAL?

Ivan Simonovic

DEVELOPING TRENDS: GLOBALIZATION

If there is a single phenomenon most relevant for the various developmental trends and relevant for sovereignty of the state and its future, it is globalization. Globalization itself is not an entirely new phenomenon. There have always been some global travelers, global exchange, and global aspirations. There have also always been global problems, but the human capacity to create them, or to solve them, was lacking. There was a certain awareness

[15] European Union Network for the Implementation and Enforcement of Environmental Law. Official website. Available at: http://www.impel.eu/events/eu-environmental-enforcement-networks-conference/ (accessed 22 June 2016).

[16] Capt. Suresh Bhardwaj Compliance Monitoring and Enforcement for Environmental Obligations. The materials of the 12th Annual General Assembly of IAMU. Available at http://iamu-edu.org/wp-content/uploads/2014/07/Compliance-Monitoring-and-Enforcement-for-Environmental-Obligations.pdf

of globality and global concerns, but there was no real possibility to influence them. Therefore, the problems were simply registered and accepted as a part of our destiny.

Historically, we have experienced some aspects of globalization, but what is going on at present is unprecedented. Shrinking space, shrinking time, and disappearing borders are linking people's lives more deeply, more intensively, and more immediately than ever before.

The technological base of globalization is provided by breakthroughs in communication and information technologies. People, goods, services, and especially information are circling the globe in a previously unimaginable way. "More than $1.5 trillion is now exchanged in the world's currency markets each day, and nearly a fifth of the goods and services produced each year are traded."

At the push of a button, we can obtain information from any corner of the world regarding what is going on in any other corner of the world. Through technological advances, it has become quite possible to transact business in several places around the globe at the same time; in fact, doing so is becoming a daily requirement for more and more professions. Different nations and their problems, beliefs, and perspectives enter our homes through the internet and through the global coverage of the media. The world is no longer a collection of relatively autonomous neighborhoods that are only marginally connected and generally immune to events occurring elsewhere; rather, it has become a "global village."

It is an unprecedented and challenging situation, offering new opportunities but also exposing us to new risks. Globalization makes new technologies known and available world wide. It facilitates the exchange of knowledge and ideas, which leads to their rapid advancement. Markets are expanding, enabling the full use of national comparative advantages and economies of scale. All this carries a promise of increasing productivity and hence a better quality of life.

However, there is a dark side to globalization as well. AIDS existed before, but increased travel and migration has made it global. Terrorists are spreading their networks globally: they often originate from one country, are financed from another, and act in a third, using weapons provided in a fourth, against citizens of a fifth country. Other criminals are also using the benefits of expanding markets. Money laundering operations are by and large transnational. In 1995 the illegal drug trade was estimated at 8 percent of the world's trade, more than the trade in motor vehicles or in iron and steel.

Globalization exposes national economies not only to the benefits but also to the instabilities related to the changes of the global market. The financial crises in Asia and the Russian Federation impacted economies all over the world. A number of the developing

countries have become victims of the world market--perhaps due to their inability to adapt to it--and are now even worse off.

Globalization also creates a threat of cultural domination. Although only 10 percent of people speak English worldwide, almost 80 percent of all web sites are in English. Further, "(t)he single largest export industry for the United States is not aircraft or automobiles, it is entertainment-- Hollywood films grossed more than $30 billion worldwide in 1997." Therefore, it is not surprising that in negotiations on the accession of new members to the World Trade Organization (WTO), the issues of telecommunications and the entertainment industry have become critical.

We have identified that the technological basis of globalization is the development of communication and information technology. The main social effect of globalization is growing interdependence. People are becoming more and more aware that we are all in the same boat. We share the same natural resources, the same nuclear risks, and the same economic and financial flows. Increased interdependence requires coordination of policies that should reflect a more globally oriented attitude. Isolationism is unreasonable and unacceptable because activities in one country affect other countries and impinge on the rights of their citizens as well.

The only way to fight AIDS is to fight it globally, pooling knowledge and resources. The key to fighting terrorism is to fight its manifestations internationally and to address its root causes. The United Nations Convention Against Transnational Organized Crime is an important effort to confront the global criminal threat. If we all suffer from the instabilities of the global market and the emerging economic system, we should logically coordinate global measures and mechanisms to keep them stable. International cultural exchange is a part of globalization, but international mechanisms to protect and promote cultural diversity should also be developed.

It seems clear that we have become more interdependent in many ways. Events taking place in other countries affect our interest directly and indirectly. Both international and internal conflicts create refugees fleeing from their homes and looking for safety and prosperity outside the borders of their own states, quite often in countries on a different side of the globe. The wars and armed conflicts are not only creating refugees but they are also cutting lines of communication, impeding trade, blocking the use of natural resources, and leading to their wanton waste and destruction. Finally, the development of arms technology is jeopardizing not only neighboring states but also the future of human life on Earth.

Environmental protection, a key to the maintenance of conditions for human life on Earth, represents a special case of human interdependence, requiring coordination and

cooperative action. For centuries, the Earth and environment were predominantly treated as if they were indestructible. The environment was regarded as a mere reservoir to be exploited for economic gains. Although the environment may be indestructible, "conditions favorable to human life" on Earth are not.

If the environment is not protected, these conditions will continue to deteriorate. Environmental issues are therefore increasingly becoming a national and international security issue. The emerging concept of "environmental security" is important because it reflects the growing potential for internal and international conflict over scarce resources. The concept is indicative of the importance of "maintaining an ecological balance" and in demonstrating the need for "prevention and management of conflicts precipitated by environmental decline." The potential for conflict will be reduced only if an ecological balance is maintained and resources protected.

Acid rain, global warming, and ozone depletion are typical environmental threats that have transboundary consequences. The way to overcome them is not to stop development but to cooperate, taking care to balance between environmental protection, social development, and economic growth. Global cooperation is a prerequisite in this respect.

The interdependence of peoples' lives and the need for cooperation calls for a certain level of shared values, beliefs, and commitments. Information and communication technology, especially global media, helps to develop them. The Conference on Security and Cooperation in Europe in its document of the Moscow meeting on the Humanitarian Dimension in 1991 explicitly stated that issues relating to human rights, democracy, and the rule of law are of international concern because the respect for these rights and freedoms constitutes one of the foundations of the international order.

When the Universal Declaration on Human Rights (UDHR) was accepted fifty years ago, it was perceived by many as merely a list of good wishes. It has since proved to be an efficient program of action that has inspired different nations, international and national organizations, non-governmental organizations (NGOs), and many individuals to fight for recognition and protection of the human rights contained in the UDHR.

The scope of the benefits and influence of human rights defenders have all evolved significantly from what they were half a century ago. Especially since the World Conference on Human Rights in Vienna 1993, there is an ever growing acceptance that the promotion and protection of human rights is a legitimate concern of the international community. An increasing number of states have recognized the value of working for international cooperation in the area of human rights and have accepted various forms of human rights assistance, monitoring, and field presence as supplementary to national mechanisms.

In spite of these clearly positive developments in the international protection of human rights, some serious obstacles still remain. Two main obstacles are the isolationism of some states and the misuse of human rights for specific political ends. Some states demonstrate their isolationism by rebuffing international concern for human rights in order to protect national sovereignty or preserve certain traditional customs, both of which are used as a shield for violating human rights. Further, violations of human rights occur in the application of double standards to evaluate human rights in accordance with specific political interests.

Globalization is a fact. It has a technological basis (the development of communication and information technologies) and an economic (integrated trade and finance), social (interdependence), and ideological content (universal acceptance of core value and beliefs, including human rights). Globalization requires the introduction of some sort of international coordination that is impossible without the development of suitable regulatory structures and mechanisms. In this process, international organizations and international law have a special role.

GUIDE TO INTERNATIONAL ENVIRONMENTAL LAW

Alexandre Kiss and Dinah Shelton

MAKING INTERNATIONAL LAW WORK: COMPLIANCE AND ENFORCEMENT

Ensuring compliance with international treaties and custom is one of the main issues in international law. In a society composed of sovereign states that have exclusive jurisdiction over their territory, including maritime areas and an air space, compliance with obligations that the states have accepted raises specific problems that increase when environmental matters are in question. First, most environmental problems initially arise within the limits of national jurisdiction and do not immediately and directly harm other states, so the latter cannot file claims for reparations unless the obligations are designated as ones owed erga omnes. One may think of the use of CFCs, the emission of greenhouse gases, or the destruction of biological diversity. In such instances, the normal sanction in treaty law, which consists in other states withholding equivalent treaty benefits from the breaching party, also cannot be used, and other types of noncompliance consequences must be foreseen.

Secondly, violations of MEAs are most often committed by non-state actors, from individuals to large-scale industries. Governments are responsible, because they have accepted the treaty obligations, but, in practice, compliance may be difficult, because the state must commit scarce political and economic resources to ensure the required result. In many

instances, the political costs of enforcing national and international law on the private sector may be higher than when the state regulates its own activities. States have various direct sanctions available to control the behavior of state agents, from disciplinary measures to dismissal. The regulation of non-state behavior, however, is likely to require legislation that may be difficult to adopt when the non-state actors play a powerful role in the domestic political arena. This is a key factor in the environmental field. Where there are costs imposed on industries that have a high degree of political influence, the state may find it difficult to ensure compliance.

Both the will and capacity of the state to comply can become compromised.

1. State Responsibility

In international law, the law of state responsibility determines the consequences of a state's failure to comply with its international obligations. In general, it requires a state that breaches an international obligation to cease the violation and provide reparations for any harm caused to another state. This responsibility based on fault may be distinguished from imposition of liability for the deleterious effects of lawful acts, that is, liability without fault. In environmental law, the latter concept can be seen as an application of the polluter pays principle, requiring that the operator or actor who benefits from a lawful activity bear the risk of loss when harm is done to others.

According to international law, states are responsible for international law violations that can be attributed to them. In August 2001, the International Law Commission completed its Draft Articles on the Responsibility of States for Internationally Wrongful Acts, which the UN General Assembly "took note of" in Resolution 56/83 (Dec. 2001). According to Art. 2 of the Draft Articles, a state commits an international wrong when an act or omission attributable to it constitutes a breach of an international obligation of the state. Art. 3 adds that the characterization of an act of a state as internationally wrongful is governed by international law.

In other words the primary rules of conduct for states, i.e., their rights and duties, establish whether an act or omission constitutes a wrongful act. At present, as discussed in the next section, only a handful of treaties make states strictly liable for any harm that occurs in another state's territory as a result of specific activities, even if the state has otherwise complied with its legal obligations. The large majority of multilateral environmental treaties focus not on the harm to the injured state, but on the conduct of the acting state, imposing duties of comportment and of result.

Although traditional norms of state responsibility most frequently concern the treatment of aliens and their property, the Trail Smelter arbitration of 1941, recognized that

principles of state responsibility are applicable in the field of transfrontier pollution, and consequently states may be held liable to private parties or other states for pollution that causes significant damage to persons or property. The UN Survey of International Law, a few years later, concluded that there is "general recognition of the rule that a State must not permit the use of its territory for purposes injurious to the interests of other States in a manner contrary to international law." UN Doc. A/CN.4/1/Rev.1 (UN Pub. 1948. V.1(1)), at 34 (1949).

The principle of state responsibility for transboundary environmental harm is contained in numerous international texts. Principle 21 of the Stockholm Declaration declares that states have the responsibility to ensure that activities under their jurisdiction or control do not cause damage to the environment of other states or to areas beyond national jurisdiction and refers to responsibility for transfrontier pollution in Principle 22. The rule was reiterated in Principle 2 of the 1992 Rio Declaration and was again confirmed at the 2002 World Summit on Sustainable Development. It has also been reaffirmed in declarations adopted by the United Nations, including the Charter of Economic Rights and Duties of States and the World Charter for Nature, and has been adopted by other international organizations and conferences.

The law of state responsibility requires establishing a link of causality between a culpable act and the damage suffered, and the damage must not be too remote or too speculative. Pollution poses specific problems for several reasons. First, the distance separating the source from the place of damage may be dozens or even hundreds of miles, creating doubts about the causal link even where polluting activities can be identified.

Second, the noxious effects of a pollutant may not be felt until years or decades after the act. Increase in the rate of cancers as a consequence of radioactive fallout, for example, can be substantially removed in time from the polluting incident. This problem was highlighted by the 1986 Chernobyl accident, which immediately caused 29 deaths, but which directly or indirectly may have produced thousands of cases of cancer over the long term. Intervening factors may play a role as well.

Third, some types of damage occur only if the pollution continues over time. This is true of the deterioration of buildings and monuments, for example, or, in certain circumstances, vegetation. Proof of causation also is made difficult by the fact that some substances cause little harm in isolation but are toxic in combination. Imputing responsibility to one source rather than another is difficult.

Fourth, the same pollutant does not always produce the same detrimental effects due to important variations in physical circumstances. Thus, dumping polluting substances in a river

will not cause the same damage during times of drought as it will during periods where water levels are high. Similarly, wind or the lack of it, fog, or sunlight can modify the impact of air pollution or even the nature of pollution. Urban smog, for example, is exacerbated by atmospheric inversions (layers of warm, still air held below a cold air mass) that block elimination of the air pollutants.

The latter derive from multiple sources, including industry, domestic heating, and motor vehicles. In such a situation it appears impossible to impute injury to a single precise cause in order to impose responsibility. Long-distance pollution, especially long-range air pollution, poses unique problems in identifying the author of the harm and precludes relying on traditional rules of state responsibility.

Even at a short distance, proving the identity of the polluter can pose problems. For example, gas emissions from motor vehicles are harmful, including the fumes of each individual automobile. Yet it is difficult to apply rules of responsibility and demand reparations from each driver, because the numbers are too great and the effects produced by each unit are relatively limited. Nonetheless the cumulative effects are significant due to the part played by nitrous oxide (NO2) and burned hydrocarbons (HC) in the formation of ozone at medium altitudes during sunny periods; they are also factors in the depletion of forests.

Another issue of state responsibility concerns the extent to which states are accountable for the actions of private parties under their jurisdiction or control. As a general rule, it can be said that the state whose territory serves to support the activities causing environmental damage elsewhere or under whose control it occurs is responsible for the resulting harm. The necessary element of an act or omission by a state agent is generally present, because the large majority of domestic activities capable of causing serious environmental harm outside the country requires prior approval or licensing under domestic legislation. Such approval normally will suffice to engage the responsibility of the competent territorial authority.

The issue of reparations is also difficult. In the Chorzow Factory case, the Permanent Court of International Justice indicated the scope and purpose of reparations in the law of state responsibility:

reparation must, in so far as possible, wipe out all the consequences of the illegal act and re-establish the situation which would, in all probability, have existed, if that act had not been committed.

Restitution in kind, or, if that is not possible, payment of a sum corresponding to the value which a restitution in kind would bear, the award, if need be, of damages for loss sustained which would not be covered by restitution in kind or payment in place of it.

IMPLEMENTATION, ENFORCEMENT, AND COMPLIANCE WITH INTERNATIONAL ENVIRONMENTAL AGREEMENTS--PRACTICAL SUGGESTIONS IN LIGHT OF THE WORLD BANK'S EXPERIENCE

Ibrahim F. I. Shihata

THE NEED FOR SELECTIVITY

Due to the complexity of the actions to be taken under numerous international environmental agreements and the uncertainty attached to their effects, the build-up of environmental legal regimes needs to be phased in within a time frame that is sensitive to the circumstances of each state party or each category of state parties. The overwhelming bulk of treaty law in this area is the product of only the last two decades. Proper implementation of many of the new obligations will involve a great deal of commitment from states. It is unrealistic, however, to assume that all states have the same institutional and financial capacity to implement these conventions at once or within the same period. The GATT and the International Labor Organization's practice of applying more lenient rules to some countries until they have had a chance to catch up with others provides a good example. This is also the case in some of the most recent environmental conventions, like the Framework Convention on Climate Change.

The time-frame for actions under each convention may require short, medium, and long-term perspectives. Social changes, such as new environmental patterns of behavior, need time to emerge and prevail. They also require flexibility to allow for adjustments and improvements. This calls first for a full understanding by each state of its new commitments and its interests in honoring them. States should be allowed to set priorities before committing to carry out new obligations. It also calls for partnership and forward-looking approaches, where governments, NGOs, and international organizations work together to promote compliance with international environmental law.

ROLE OF SUPERVISION

The major new environmental conventions establish mechanisms meant to monitor and facilitate implementation and compliance, notably conferences of the parties, separate secretariats, and financial mechanisms. Suggestions have been made to replace the separate conferences and secretariats with a unified body following the GATT (now WTO) model. This view is not commonly shared, however, and there is room for improvement under the present fragmented structures. Conventions' secretariats are seen by many as more technical, less political, and less bureaucratic than full-fledged international organizations. Nonetheless, they lack the capacity to enforce the conventions' obligations. Even their power to verify

implementation is limited and can be hampered in the absence of the parties' cooperation, especially in view of the fragmentation of state institutions dealing with environmental issues and the large number of enterprises affecting the environment. The 1991 U.S. General Accounting Office survey and the 1992 study conducted for the United Nations Conference on Environment and Development (UNCED) on the Effectiveness of International Environmental Agreements found that even in conventions such as MARPOL 1973/78 that provide for regular submission of implementation reports for consideration by the conference of the parties, the proportion of states rigorously complying with reporting requirements was disappointingly low.

By following up on the reporting requirements and by disseminating information on the impact of the conventions on national legislation, secretariats can assist the parties to assess compliance and to take up the matter with the defaulting states, bilaterally and at the conferences of the parties. Quite often, default is not intentional but results from poor implementation capacity, especially when the convention does not require that a state comply with its requirements as a condition for its entry into force with respect to that state. This calls attention to the important role of supervision in bringing about compliance. Supervision has an increasingly significant role in the more sophisticated legal regimes being created by modern environmental agreements. Setting up efficient reporting mechanisms and procedures under a multilateral convention to promote a better knowledge of each state's practices is useful. However, compliance is likely to be more forthcoming from developing countries if they are assisted in pursuing alternative technologies and in building up their capacity to implement and internalize the new behavior in their local cultures. Implementing international conventions often requires states to build institutions, adopt domestic regulations, and develop and implement national environmental plans for sound environmental conditions. Political will to meet these requirements is necessary but not sufficient; governments must have the necessary means to carry out their obligations. International efforts should therefore primarily be targeted at helping states to comply with their commitments by providing technical and financial assistance to those in need. The latter point is now recognized in the concept of "common but differentiated responsibilities" contained within Principle 7 of the Rio Declaration on Environment and Development. It is explicitly reflected in Article 1 (1) of the 1990 Amendment to the 1987 Montreal Protocol and in Article 3 (1) of the Climate Change Convention, among others.

USE OF EXISTING INTERNATIONAL LEGAL MECHANISMS

Some existing international mechanisms may also be used to bring about a greater degree of compliance with environmental obligations with little or no modification of their

constituent instruments. The establishment by the International Court of Justice of a Chamber for Environment Matters is a relevant example. Another potentially important example which has been generally overlooked is the possible use of the International Centre for Settlement of Investment Disputes (ICSID). ICSID provides conciliation and arbitration facilities for legal disputes arising out of investments which may occur between a state party and a national of another state party. Such investment disputes can be environmental in nature. While consideration might be given to amending the ICSID convention to provide explicitly for the coverage of environmental disputes between investors and their host states, no such amendment is needed as long as the dispute arises from the investment at issue. The potential use of ICSID as a forum for the settlement of environmental disputes between states and foreign investors is of particular importance. The increasing globalization of trade and investment is bringing multinational corporations to the front of environmental problems and prospects. Both states and multinational corporations may find ICSID an effective forum for settlement of their environmental disputes. Awards of ICSID arbitral tribunals have the same finality and legal force as final decisions of local courts in all the states party to the ICSID convention.

THE PROCESS-ORIENTED APPROACH AND INFORMAL MECHANISMS

Effective international environmental agreements also need innovative thinking with respect to enforcement and compliance mechanisms. Classical means and mechanisms may find application in the environmental arena, but their effectiveness in this field should not be taken for granted. The need for effective implementation tends to favor a process-oriented approach, not the sequential approach traditionally followed in environmental regulations.

The sequential approach, which can also be seen as a reactive approach, is based on the assumption that a breach of law triggers action. It puts the violation of an international norm at the center. As a result, the rules and mechanisms are accusatory and remedial in nature. They include international responsibility, dispute settlement mechanisms, and resort to sanctions and penalties. While these legal institutions are important, some of them may be of little use when it comes to dealing with concepts such as the global environment or the principle of inter-generational equity.

There is room for another implementation approach promoting ways to ensure respect for law on a continuous basis, bringing states into compliance with their obligations, preventing any failure to comply and redressing a violation. These objectives favor a process-oriented approach with multiple components: information, communication, consultation, monitoring, technical assistance, and empowerment of all stakeholders.

The process-oriented approach has shaped new types of dispute- settlement regimes, the main objective of which is not so much to condemn the wrong-doer, as to bring that state to engage in consultation and negotiations and find ways of redress. The Montreal Protocol's non-compliance procedure provides a good example. In this respect, creating the possibilities for compliance, such as providing for technical and financial assistance, may be more effective than resorting to classical means of enforcement. This is especially the case when assistance is coupled with monitoring and exchange of information to ensure the goals are met. As previously explained, this calls for institutional supervisory techniques favoring cooperation and the sharing of technical expertise.

Conferring powers on an international body to set and implement environmental standards has been suggested by both state representatives and academics. Following the process-oriented approach, it would be much easier to arrange for reciprocal recognition of environmental permits and labels by competent national authorities (governmental or non-governmental), according to agreed standards and authentication procedures, as traditionally done with driver's licenses, car license plates, and vaccination certificates. There are already many examples of this approach under international environmental agreements. The waste export notifications and authorizations issued by national authorities under the 1989 Basel Convention is one recent example.

Continuous cooperation among national agencies through direct, permanent contacts has been instrumental in the success of many environmental agreements. Establishing permanent networks to operate as channels of communication and verification should serve as an effective way to ensure compliance with the monitoring requirements of international environmental agreements under present conditions. The agreements can facilitate the task by increasingly empowering national agencies (both governmental and non-governmental) to carry out such functions, thus ensuring the "self-enforcement" of treaty obligations.

By incorporating new standards and rules into national law in this low-key manner, local courts would have jurisdiction over disputes concerning their violation. At the inter-state level, non-judicial methods of addressing violations of international environmental agreements may also be relevant. While the precedent of the "Implementation Committee" established under the 1987 Montreal Protocol may have a mixed record, other, perhaps less formal, mechanisms can be more effective. An important illustration consists of periodic reporting, which, in cases of apparent or alleged violations, would be followed by independent auditing by committees of technical experts, whose reports would be submitted for discussion in the conference of the parties or would be followed by notification to all parties by the convention's secretariat. In this context, the International Labor Organization's

experience in monitoring compliance with numerous multilateral conventions, including many with direct relevance to the environment, is instructive. Information diffusion through international facilities such as the UNEP's Geneva-based International Register of Potentially Toxic Chemicals has resulted, in practice, in the blacklisting of violators, based not on official international regulatory action, but on national regulatory decisions.

Periodic reviews of each environmental convention by its parties, undertaken in light of technical reports by the secretariat explaining how the convention has been reflected in the practice of state parties, could also provide important opportunities for compliance through peer pressure as well as for appropriate amendments. Built-in review schedules have already appeared in a number of environmental agreements including the previously mentioned 1987 Montreal Protocol and the 1989 Basel Convention. The same purpose can be served by including environmental issues in periodic meetings of state leaders at the summit and ministerial levels. In addition to raising concerns of international and domestic environmental issues in this manner, lifting their institutional profiles may strengthen the hand of the respective governments in their follow-up efforts. More generally, prior consultation can prove to be a very effective method both for solving problems by reaching consensus agreements before a crisis arises and for monitoring the implementation of agreements to ensure that they do not unravel.

THE ROLE OF INTERNATIONAL FINANCIAL INSTITUTIONS

The role of international financial institutions (IFIs) and the Global Environment Facility (GEF) should be highlighted in the context of implementation of international environmental agreements. Through their policy dialogue and loans, especially concessional ones, IFIs provide incentives for observance of the environmental standards they require. Their technical assistance also helps to set up institutions and establish appropriate legal and regulatory frameworks. The grants that they administer facilitate the preparation of national environmental plans and the issuance of new environmental laws.

The GEF, with its focus on additional concessional funding to meet incremental costs of projects with global benefits in the four focal areas of concern, has a special and growing role. By providing an economic incentive for developing countries to comply with international environmental treaties, the GEF constitutes part of a global approach based on the principles of cooperation in a spirit of global partnership and of common, but differentiated, responsibilities. The positive incentives provided through these different forms of financial assistance have their sanctional aspects too; assistance is suspended or canceled in case of default under the loan or grant agreements. Flexibility is the key. Take, for example, the GEF financing granted to the Russian Federation in April 1996. Russia, as successor to

the USSR, is party to the 1987 Montreal Protocol on Substances that Deplete the Ozone Layer. It had not been able to meet its phase-out obligations as required by the amended Protocol and had also fallen behind in its contributions to the Multilateral Fund. Russia is one of the world's largest producers and consumers of ozone-depleting substances (ODS) and the GEF financing enables it to comply with its financial and substantive obligations under the Protocol.

The GEF has been designated on an interim basis as the "financial mechanism" for funding the activities envisaged under the Biodiversity Convention and the aforementioned Climate Change Convention. It may become the agreed financier of incremental costs of projects with global environmental benefits under future conventions as well (e.g., in the field of forestry). Many of the GEF-funded projects are co- financed by the World Bank, the role of which is not limited to promoting implementation of these global environmental agreements.

WORLD BANK EXPERIENCE

The following examples illustrate how the approaches proposed in this article have been successfully implemented in the practice of the World Bank (Bank) with which the writer has been associated as General Counsel since 1983.

A Bank policy, first adopted in 1984, requires it to refrain from financing any project which contravenes the borrowing country's obligations under international environmental agreements. By refraining from financing such projects, the Bank contributes to increasing the country's awareness of international requirements and provides a negative incentive for compliance with them. In addition, the Bank makes loans, and the GEF extends grants, which enable the recipient countries to meet their obligations under international environmental agreements, such as the Montreal Protocol and the Biodiversity Convention. By requiring adherence to certain environmental conventions as a precondition to benefiting from certain of its grants, GEF also contributes to the wide acceptance and implementation of these conventions.

The Bank's loan agreements with governments provide in their General Conditions that they prevail over conflicting provisions in domestic law. As agreements between two international persons, they are treated as treaties and are normally subject to ratification by legislative authorities in the borrowing countries. They normally include environmental conditions which are honored in practice. The applicable sanction in case of default is suspension, followed, if needed, by cancellation of partially disbursed loans and the possible acceleration of repayment of amounts disbursed. Also, the Bank can refrain from further lending until key conditions are met. Although loan agreements have elaborate provisions governing settlement of disputes through international arbitration when they cannot be

resolved by negotiation, all disputes between the Bank and its borrowers are settled through dialogue and no arbitration has ever taken place. The enlightened self-interest of the borrowers in continuing their on-going relationships with the Bank helps in this respect. For actions unrelated to a specific Bank-financed project, such as the adoption of national environmental plans, the Bank does not stop at making such action a general requirement but administers funds to finance the preparation of such plans through grants (normally funded by other donors).

Environmental impact assessment reports on projects considered for World Bank financing are normally required to be submitted and circulated before project appraisal. The adoption of environmental and/or resettlement plans are also required when needed as conditions of signature or effectiveness of the loan agreement. Failure to adopt them could cause suspension and eventually cancellation of the loan.

The above enforcement mechanisms are not a substitute, however, for the assistance provided by the Bank, through its policy dialogue and loans, and by GEF, through its grants, to developing and transitional countries to strengthen their legal and regulatory frameworks and strengthen national environmental agencies with adequate reporting, verification, and monitoring powers.

While the Bank does not provide a uniform model environmental law, the review by the Bank staff of states' draft legislation gives it the opportunity to render advice which is taken seriously by Bank borrowers, providing another example of the efficacy of the process-oriented approach. The Bank's pioneering work on environmental policies and procedures through its successive policy statements gives another example of this approach, where dialogue and a mix of positive and negative incentives play an instrumental role in ensuring compliance.

The Bank's experience suggests that the main reasons for countries' failure to comply with international environmental agreements include:

1. Fragmented internal decision-making processes on environmental and investment matters, conflicting mandates and lack of cooperation among governmental agencies and by industry enterprises.

2. Lack of familiarity with the requirements of environmental conventions and of available sources of external institutional and financial assistance.

3. Limited enforcement capability to support environmental requirements.

4. Difficulties in arranging financing, especially of local costs for environmental investments.

5. Inability to develop less environmentally damaging substitutes due to scientific and technological weaknesses.

ENFORCEMENT OF ENVIRONMENTAL LAW IN UNITED STATES AND EUROPEAN LAW: REALITIES AND EXPECTATIONS

Sevine Ercmann

ENFORCEMENT METHODS AT THE NATIONAL LAW LEVEL

A. Generalities

To effectively protect public health and the environment, governments must first implement legal requirements (including administrative, civil, and penal provisions) at national and international levels. Implementation of legal requirements starts with effective compliance measures and improved administrative control and participation. These procedures should be followed by better participation, information, and judiciary control measures, culminating in effective enforcement.

In order to achieve effective compliance and enforcement of national and international environmental law, it is important to define "compliance" and "enforcement" at the outset. The First Conference on Environmental Enforcement defined these terms as follows: Compliance is the full implementation of environmental requirements. Compliance occurs when requirements are met and desired changes are achieved, e.g., processes or raw materials are changed, work practices are changed so that, for example, hazardous waste is disposed of at approved sites, tests are performed on new products or chemicals before they are marketed, etc. The design of requirements affect the success of an environmental management program. If requirements are well-designed, then compliance will achieve the desired environmental results. If the requirements are poorly designed, then achieving compliance and/or the desired results will likely be difficult. . . . Enforcement is the set of actions that governments or others take to achieve compliance within the regulated community and to correct or halt situations that endanger the environment or public health.

Enforcement usually includes a range of activities such as monitoring, inspecting, reporting, gathering evidence to detect violations, and negotiating with individuals and industrial plant operators to develop mutually acceptable methods for achieving compliance. As a last step to compel compliance, enforcement includes recourse to legal action or dispute settlement.

The success of each enforcement program depends on how the state exercises its discretion in determining its particular needs and environmental priorities and on choosing the

appropriate enforcement method. Effective compliance might require reorganizing existing administrative structures, implementing environmental legislation, using administrative instruments such as circulars, drafting legally binding instruments that are precise and comprehensive, and making short-term economic sacrifices.

B. Means of Enforcement

Enforcement is essential in establishing the credibility of environmental requirements. Once credibility is established, continued enforcement is essential to maintain credibility. Credibility encourages compliance by facilities that would be unlikely to comply if environmental requirements and agencies were perceived as weak. The more credible the law, the greater the likelihood that national and international efforts to protect the environment will be taken seriously.

The first step in achieving enforceable environmental measures is to draft laws and other instruments that would provide the necessary authority for enforcement. Effective grants of authority may be prescribed through decrees, regulations, and authorization through licenses. The legal provisions need to be stated clearly, precisely, and practically. Ultimately, this requires broad statutory, regulatory, and administrative authority, especially with respect to environmental standards.

The most important means of enforcement is legal action. This powerful tool is an effective method of compelling compliance and imposing consequences for violating the law. Legal action may be pursued through administrative measures, civil law application of liability rules, or by imposing criminal sanctions. The improvement of judicial control measures is important to overcome inefficient application of legislation.

Civil law may be an effective enforcement measure, enabling an agency to prohibit plant operators from continuing illegal activities that endanger the environment, or to seek reimbursement of costs incurred for cleanup. In addition, strict liability may also encourage voluntary compliance. Any instrument that is incapable of providing compliance and that cannot be enforced reduces the credibility of the instrument's goals. This applies at both the national and international levels.

Other enforcement measures include inspection, reporting, evidence gathering, record keeping, negotiation, and dispute settlement. Inspection is a primary element of most of the enforcement methods, and may be carried out regularly or randomly. Normally, it does not require a concrete suspicion, and it may be supplemented by reporting and record-keeping obligations. Inspection is a significant element of most enforcement methods used by international instruments. Gathering of information consists of recording, sampling, and analysis for the verification of compliance with established standards and technical methods.

Gathering evidence at the national level is particularly important with regard to administrative and penal law infractions. With international environmental law, it takes the form of factfinding.

Enforcement can also be achieved by negotiations with individuals or establishments that do not comply with administrative or legislative measures. The Commission of the European Communities now uses negotiations as a method to develop mutually acceptable compliance schedules. The Commission meets regularly with the relevant authorities of the Member States to negotiate the provisions of new directives or to facilitate the interpretation and the implementation of old ones. This method has so far proved to be highly successful. But while negotiations may be useful to promote compliance, there is a risk that negotiations may lead to compromised environmental values or standards.

Other enforcement means, including area monitoring and remote sensing, concern the ability of agencies to carry out their enforcement duties. New technologies permit automated and consistent monitoring of industrial emissions and discharges, thereby assisting enforcement agencies in their work.

A new trend for implementing or enforcing national and international environmental measures is emerging, offering a mix of economic incentives on the one hand, and economic sanctions on the other. For example, in the United States, EPA is using more consultative procedures to develop regulations to implement the Clean Air Act. Under the threats of government regulation and toxic tort litigation, companies are "voluntarily" meeting EPA's suggested goals for reducing toxic emissions. In Eastern Europe, negotiations for the privatization of state assets include agreements to clean up waste disposal sites.

C. Enforcement Authorities

1. Powers

In order to establish the credibility of an enforcement program, the laws should clearly specify the power and functions of the authorities responsible for enforcement. Generally, enforcement authorities are responsible for authorizations, permits, monitoring, and reporting. They might have emergency powers to enter and correct immediate dangers to the local population or environment or to take remedial actions. All these activities concern civil or administrative law. When applying administrative and eventually penal sanctions, the authorities should have powers to 1) seize property; 2) bar a facility or company from government loans, guarantees, or contracts; 3) require service or community work to benefit the environment; 4) impose restrictions on financial assistance; 5) seek reimbursement for public authorities' cleanup expenses; 6) impose fines with specified amounts per unit; and 7) seek imprisonment.

2. Sanctions

Administrative, civil, and even criminal sanctions may be used to enforce environmental laws. In the majority of western European countries, both penal and administrative actions can be brought for violations of environmental laws. Criminal actions can also be used to ensure compliance with regulatory requirements. For instance, in the United States, criminal sanctions could apply to facilities that operate without a permit, although in Europe such measures might fall more within administrative sanctions.

One of the factors improving compliance with environmental laws may be the deterrence effect of criminal sanctions. Enforcement can affect people's behavior by encouraging them to avoid sanctions, thus deterring future violations. This effect makes criminal enforcement a powerful tool for achieving widespread compliance. In order to maximize the leverage of deterrence, violations must be detected at a high rate, to which swift and appropriate sanctions must follow.

Possible types of sanctions include 1) denial or revocation of permits, requiring an establishment to cease operations or even close (this may apply both in the administrative and penal contexts); 2) shutdown of operations (administrative or penal); 3) adverse publicity (administrative or penal); 4) economic sanctions, such as denial of government funding; 5) fines; or 6) imprisonment.

D. Promoting Compliance Through Public Awareness

Other methods for obtaining compliance with environmental requirements include motivating the community and creating public awareness through education and incentives. The success of this approach depends on the cultural, regulatory, and economic priorities of the state at issue. However, the experience of many countries shows that education or increased public awareness has led to successful implementation of regulations pertaining to health and the environment, even when such implementation was adverse to their economic interest. Italy's experience in the Val Bormida area, Cengio, Savona is a good example. The Val Bormida inhabitants were economically dependent on ACNA, an organic chemical plant that had caused serious pollution of the soil, the ground and surface waters, and the air in that region. Despite their prevailing economic interests, the local population, through negotiations, obtained concessions from ACNA favorable to the environment. This involved a combination of two systems of environmental regulation: (a) economic regulation by the ACNA Group and trade unions; and (b) public regulation through legislative action by setting limits on emissions. This case also illustrates the possibility that employers and employees together can take action to protect the environment without state intervention. This example illustrates the importance of public awareness, education, dissemination of information, and participation in

order to achieve enforcement. Furthermore, it constitutes an example of a successful personal relationship between enforcement program staff and managers to provide an incentive towards attaining compliance.

E. Roles and Responsibilities of NGOs, Individuals, and Enforcement Authorities

Two other elements that play a significant role in any strategy involving the enforcement of environmental laws are the roles of citizens and nongovernmental organizations (NGOs), and the specialization of environmental enforcement. Citizens and NGOs can help detect violations and notify the authorities, apply public pressure, and bring suits to enforce the law. In the context of community pressure, the role played by NGOs merits particular attention. NGOs have been very successful in enforcing compliance through community pressure. A good example of including NGOs in an enforcement system would be the European Union (EU) implementation of Environmental Impact Assessment (EIA) procedures in national laws, once it is completely integrated.

Another element of efficient enforcement is specialized training. This entails training specialized officials and police dealing with environmental issues to detect environmental infractions and to support other enforcement authorities in the detection of environmental offenses. Strengthening the involvement and the specialization of public prosecutors in enforcing environmental laws also warrants particular attention.

With respect to the roles and responsibilities of environmental enforcement authorities, the key issues to be determined concern the following two queries. First, how should responsibilities for enforcement be divided among the various levels of government (national, regional, provincial, and local)? This question addresses the vertical allocation of powers between the different levels of environmental authorities, which in the continental law system might implicate constitutional amendments. In this context, two factors should be taken into account: 1) the technical complexity of the problem to be regulated and enforced; and 2) the geographical areas where ecological impact is likely to result from the activity to be regulated and enforced.

Second, which governmental authorities should be involved (specifically created authorities or different sectorial authorities such as health or agriculture)? This query concerns the horizontal division of power between authorities involved in enforcement, particularly whether specific regulatory authorities should be involved and, when specific enforcement authorities do not exist, whether such authorities should be created. In allocating enforcement authority, conflicts of interest should be avoided between management and enforcement functions vested in the same authority.

Forcing public authorities to comply with environmental requirements is usually not an easy task, even if pursued by governmental agencies. The reasons for this are manifold: fines for publicly owned and operated facilities are normally paid out of the state's budget; there are problems involved in making managers and operators of public facilities liable for failing to comply with environmental requirements; and politics might also interfere with enforcement by one governmental body against another.

F. Other Developments

1. NGO and Citizen Standing

It is necessary to grant citizens, and interested citizen associations in particular, standing (locus standi) to secure judicial review. These rights ensure the proper administration of environmental laws and influence agencies to comply with the laws. Standing rights involve citizens and interested associations in the enforcement of environmental laws and regulations. While enforcement often lies within an agency's discretion, citizen suits have an undeniable effect of raising awareness and activating politicians.

Standing rights not only secure judicial review, but can also directly involve the individuals and associations in enforcement. The divergent provisions of certain EU Member States concerning the right of interested individuals and associations to bring actions before the national courts for noncompliance with EU environmental legislation affect the ability of the Commission to monitor the effective implementation of environmental legislation. In fact, the denial of an individual's standing to challenge a Member State's failure to fulfill an EU requirement might bring into question the doctrine of direct effect.

A series of cases concerned with the application of the direct effect doctrine determined that even if no procedural rules provide a remedy under national law, the doctrine would allow enforcement of Community rules. The direct effect doctrine provides an individual having sufficient interest with standing rights only where or when the protection of his health and the improvement in his life or his welfare is affected. In such cases, the individual affected by an authority's failure to enforce such rights is entitled to bring a case before the national courts by which the EU rights must be upheld.

2. Environmental Managers

Another enforcement mechanism is the requirement that major commercial enterprises and plants designate environmental officers or managers. This requirement targets companies that are likely to contribute considerably to pollution or other kinds of environmental degradation. This approach has been successful in Germany. The appropriate governmental authorities could issue guidelines on the qualifications required of environmental managers and officers.

The rights and duties of environmental managers should include 1) implementing legal regulations; 2) implementing measures and conditions of specific environmental media aimed at the protection and economic use of the media concerned; 3) keeping records of the results of environmental check-ups or audits; 4) informing the public of any shortcomings and suggesting measures to the plant's operator regarding their remediation; 5) proposing the application of suitable technologies; 6) effecting the development and implementation of measures within the plant aimed at environmental restrictions and preventing or decreasing waste production; and 7) educating the staff working in the plant on the measures associated with the use of environmental methods. Finally, companies should not discriminate against environmental managers for fulfilling these various duties and tasks.

ENFORCEMENT OF INTERNATIONAL ENVIRONMENTAL TREATIES: AN ANALYSIS

Andrew Watson Samaan

THE ROLE OF INTERNATIONAL BODIES IN ENFORCEMENT

There is a plethora of international environmental organizations which attempt to analyze and resolve environmental issues. However, none of these organizations have enforcement power. The international environmental infrastructure began to manifest itself in the form of the United Nations Environment Programme (UNEP), established by the United Nations General Assembly in 1972. UNEP's purpose is to promote cooperation and coordination among nations, to recommend environmental policies and to provide general policy guidelines in the international environmental arena for all nations. The UNEP Secretariat is the focal point for environmental action and coordination within the United Nations system. The Governing Council of UNEP, the Secretariat, which is headed by the executive director, and the Environmental Fund are all located in Nairobi, Kenya, thereby making UNEP the first UN body to have its head-quarters outside the developed world.

UNEP is actively involved in the assessment and monitoring of the global environment. Through a program called Earthwatch, information exchange, research activities, monitoring of environmental issues and a continual review and evaluation of the environment on a global scale take place periodically in order to identify new problems. UNEP's involvement has been critical in the arrangement of various protocols, conventions and other agreements. It is a relatively small UN body and is limited by personnel and financial constraints. UNEP does not have the power that one of the more specialized agencies of the United Nations has, such as the Food and Agriculture Organization (FAO),

and therefore it has little influence on the environmental policies pursued by other United Nations agencies. In addition, UNEP, financed solely by voluntary contributions to the Environmental Fund, is inadequately funded. UNEP's major limitation is its lack of implementation and enforcement powers at the national level. Unfortunately, it must rely on the member states to implement and comply with its endeavors.
Other organizations concerned with the environment and enforcement of environmental treaties include: International Law Association (ILA), the International Union for Conservation of Nature and Natural Resources (IUCN), the World Wide Fund for Nature (WWF), the World Meteorological Organization (WMO), and Greenpeace, all of which are Non-Governmental Organizations (NGOs). As the network of NGOs continues to develop, its effects will become increasingly far-reaching and powerful. Until recently, international environmental law was essentially an academic field with few practical applications. Now, however, the provisions in international agreements are being translated into national and local legislation. For example, countries that are parties to the Montreal Protocol (dealing with Chloroflourocarbons (CFCs) have enacted, or are in the process of enacting, legislation which would restrict the use of CFCs. This legislation will directly affect the local home appliance dealer who sells refrigerators and air conditioners.

Effective domestic laws within an international framework of regulations would be the ideal situation in which to regulate and enforce international environmental law. Infringement upon state sovereignty is a major stumbling block in treaty negotiations and enforcement efforts. Because the enforcement laws would be those of the sovereign state, states could monitor their own compliance without harboring the paranoia and stigma that come with international policing.

Self-compliance, at first glance, appears to be a prime target for abuse. However, the various international NGOs act as very capable policing agencies; moreover, these organizations are already in place and operating. Further, "this allows the individual states to control their own resources without the 'interference' by other states trying to 'internationalize' the resources."

Part 5. INTERNATIONAL ENVIRONMENTAL MECHANISMS AND IMPLEMENTING MEASURES

Sources of International Environmental Laws often suggest using special mechanisms and procedures to achieve the aims of sustainable development. While most instruments call for the adoption of legislation or regulation, some also detail the specific content of the measures to be taken.

The variety, complexity, and acceptance of these legal mechanisms have increased in recent years through the mutual influence of national and international environmental law. International environmental agreements today usually require states parties to adopt environmental impact and/or risk assessment procedures, licensing, and monitoring. Environmental auditing, product labeling, use of best available techniques and practices, and prior informed consent also commonly appear in global and regional instruments. States often enact and implement several techniques and procedures simultaneously in response to treaty mandates, as well as to particular threats to the environment, national and local conditions, traditions and cultural norms, and the economic situation specific to each country.[17]

Environmental agreements and national laws often regulate a single environmental milieu, e.g., water, air, soil, biological diversity due to the particular environmental problems facing a given area, political or economic priorities, or the ease of achieving consensus on a specific environmental issue. The main focus of the contemporary world is to create integrated approach for all nations. A more comprehensive approach seeks integrated pollution prevention and control. Mechanisms regulating pollution prevention and control exist also on the regional level, for example, in the European Union. An effective integrated approach includes action based on sustainable development, use of clean technologies and less harmful substances, application of the precautionary principle, and public information and participation during the evaluation of the effects of new substances and proposed activities.

5.1 ENVIRONMENTAL IMPACT ASSESSMENT

INTERNATIONAL ENVIRONMENTAL IMPACT ASSESSMENT
Potential for a Multilateral Environmental Agreement
Kevin R. Gray

ECOLOGICAL MODERNIZATION

To gain a full understanding of EIA, it is important to be familiar with its theoretical underpinnings. EIA is a unique form of regulatory management, being a product of ecological modernization. Ecological modernization was a response to the failures of traditional

[17] Alexandre Charles Kiss and Dinah Shelton. A Guide to International Environmental Law. BRILL, 2007. 313 p.

institutional models in addressing environmental problems. It marks the third epoch of economic development with the first representing the industrial revolution and the second comprising the construction of industrial society. What distinguishes the current phase of economic evolution is that the industrial system incorporates ecological concerns into government decision making, while economic and technological institutions are reevaluated. The underlying premise is that ecological crises are evidence of a fundamental omission in the workings of modern societal institutions.

As environmental issues entered the government agendas of industrialized countries, attention focused on the dangerous increases in the levels of air and water pollution. Responsibility was divided into separate administrative regimes to combat isolated problems such as air pollution, water degradation, and species endangerment. What resulted was a fragmentation of laws that merely shifted pollution rather than reducing or eliminating it.

This approach was segmented further to address the type of pollutant or contaminant. Regulatory instruments, such as permits, licenses, and quality targets were commonly used. Governments would also undertake or supervise clean-up operations for existing environmental damage. This was characteristic of the command and control approach, where environmental laws and policy were structured to merely contain the environmental damage.

Government action consisted mainly of measures that were prepared unilaterally. Consultation with industry was not fathomed. Industry was perceived to be a non-cooperative actor whose priorities did not include environmental protection. Consequently, governments resorted to prohibitions and restrictions as a way to govern economic behavior. The success of this strategy depended on strong enforcement to deter industry from flouting the law. However, prosecuting environmental offenses were prolonged affairs requiring a breadth of institutional resources exhausted well after environmental damage occurred.

Ecological modernization proposed a more integrative form of environmental management. The consolidation of environmental problems became the focus instead of its compartmentalization. Attention was redirected towards appreciating the cumulative effects on the environment induced by economic activity. Environmental impact was measured by "ecosystemic" limits. Scientific analyses were applied to ascertain the interrelationship of environmental media. Degradation could now be anticipated through the application of science and possibly prevented, rendering the end of pipe solution obsolete. The capacity to assess the effects of proposed projects catapulted the development of EIA.

Ecological modernization also marked a migration away from the regulatory approach to environmental management to a more flexible strategy, allowing for firms and industry to incorporate environmental concerns into their economic rationale. Ecological terms were

absorbed into the language of business which "conceptualized environmental pollution as a matter of inefficiency, while operating within the boundaries of cost-effectiveness and administrative efficiency." Internalization of environmental costs was associated with economic planning. A healthy environment was perceived to foster greater economic activity.

Concurrent with this development was governments' appreciation of the need to accommodate prevailing economic interests. This rapprochement between industry and government was grounded in the notion that ecological problems and economic growth were reconcilable. A mutually beneficial result was possible, forging a new relationship between government and industry that was designed to seek solutions that pre-empted conflict Sustainable development, as advanced in the Brundtland Report, is one of the "paradigm statements of ecological modernization," recognizing the union of economics and ecology. The marriage is solemnized by recent declarations made by the United Nations General Assembly (UNGA) at the 1997 Earth Summit, concerning the importance of integrating economic, environmental, and social objectives to obtain sustainable development.

The evolution of EIA is a manifestation of ecological modernization's departure from the narrow cost-benefit analysis that values resource costs in monetary terms while overlooking environmental, social, and health impacts. Evidence of environmental degradation was noticed too late in the development process for effective curative action to be taken. Instead of revisiting decisions authorizing the commencement of development, governments began to scrutinize projects submitted for approval. EIA became a method for decision makers to avoid the irreversible decisions of the past--or at a minimum--make better-informed decisions in the future. Although recommendations emerging from an EIA did not bind the decision maker, the overall effect of completing an EIA induced more "environmentally-benign" decisions. A complete disregard of the results in an EIA was undesirable when governments were able to manage the development process by imposing environmental conditions.

The notion of command and control regulation disappears under EIA. Authorities are empowered with exercising various options to effect the compromise between the competing goals of economic development and environmental protection. A process is initiated to determine how a project can proceed with minimal or no environmental consequences while accommodating economic needs. EIA became a valuable tool for governments to restrict unchecked economic growth and modify the nature of development.

INTERNATIONAL DEVELOPMENT OF EIA

The birthplace of EIA is regarded to be in the United States with the passage of the National Environmental Policy Act (NEPA). In the U.S., as well as other industrialized

countries, there was an increasing awareness of environmental degradation, stimulating pubic interest activism at the local, regional, and national levels. Aided by a fuller comprehension of environmental problems due to the proliferation of scientific and technical data, environmental public interest groups were more vocal. The environmental consequences from poorly planned development galvanized public pressure for greater intervention in the development process. NEPA called for an interdisciplinary approach to planning and the development of procedures to give environmental factors appropriate consideration in decision making.

It did not take long for other countries to adopt their own EIA requirements. Over 70% of the world's nations adopted either informal or mandatory EIA requirements. Although numerous EIA regimes mirror each other in many ways, they are still tailored to match the jurisdiction's geophysical characteristics, environmental needs, level of socioeconomic development, and cultural and governmental traditions. Regardless of these differences, it is a generally accepted mechanism for determining environmental impact. The OECD has declared EIA to be a lasting tool for environmental management and an obligation that its members should meet, confirming its acceptance by industrialized countries.

Possibly the first indirect recognition of EIA at the international level was contained in the World Charter for Nature (Charter), which outlined principles of conservation to guide human conduct. The Charter is a non-binding instrument, although it symbolically expresses the world's attempt to harmonize the relationship between humanity and the biosphere. The common elements in EIA domestic legislation are mirrored in the Charter. It calls for an exhaustive examination and assessment of activities likely to pose a significant risk to nature and requires that activities should either not proceed or proceed with minimal potential adverse effects based on an assessment's findings. If an activity is likely to cause irreversible damage to nature, it is to be avoided. Where activities are likely to pose a significant risk to nature, it should be preceded by an exhaustive examination where the proponents demonstrate that expected benefits outweigh potential damage to nature. If the adverse effects are not fully understood, the activities should not proceed. Any assessments are to be disclosed to the public to allow for effective consultation and participation, and all persons, in accord with their national legislation, are to be afforded an opportunity to participate in the formulation of decisions of direct concern to their environment.

Since the Charter, the use of EIA has been expressed in various non- binding (soft law) documents. Agenda 21 calls for the assessment of impacts upon the environment and the monitoring of those effects and changes. The signatory states are required to ensure that relevant decisions are preceded by environmental impact assessments and to take into account

the costs of any ecological consequences. Principle 17 of the Rio Declaration states that, "Environmental impact assessment, as a national instrument, shall be undertaken for proposed activities that are likely to have a significant adverse impact on the environment and are subject to a decision of a competent national authority." Similar to the language of national EIA instruments, EIAs are to be conducted unless the project will not have significant adverse effects and/or the commencement of activities is not contingent on governmental approval. Recently, EIA was declared by the UNGA to be a principal equivalent with the "polluter-pays principle," the "precautionary principle," and the "common but differentiated responsibilities principle."

… Because EIA requirements are divided into MEAs that address a particular environmental problem, they are subject to differing regimes with varying procedural requirements. In addition, there may be a prioritization commanding EIAs to be done in environmentally sensitive or transboundary areas. This results in geo-political hierarchy of EIA requirements, questioning the universality of an EIA obligation. The lack of mandatory requirements for an EIA in all circumstances challenges the presumption that states perceive themselves to be obliged to undergo an EIA.

It must be remembered that EIA is only a mechanism to attain environmental objectives. It is not an obligation that stands in isolation. However, EIA is only a means of establishing a process to comply with that international legal duty. As a purported procedural requirement, its authority as a customary international legal principle may be limited.

The difficulty with international law is that it bases global norms and customs on the practice of state actors. This can be manifest in simple ways such as signing treaties and making representations at an international forum. However, it is specious to link behavior at this level to evidence of international culture of environmental protection. If environmental awareness is globally prevalent, it must reflect a deeper universality that goes beyond official documentation.

A veritable commitment to EIA is bolstered by internationally shared norms. EIA is a process that discloses commonly held perspectives on the environment. Decision making is open to public participation which democratizes public concern, facilitating the incorporation of cultural and political responses to environmental change. A prevailing view of how to regulate economic development is the sum of these components. Since EIA requirements are designed to accommodate differing values towards the environment, it is helpful to examine environmental problems under a cross-cultural microscope. Awareness of peoples' perceptions of the environment facilitates the conception of environmental regimes that mirror the plurality of community values.

Transboundary Environmental Impact Assessment (Espoo)

The notion of transboundary pollution, and the corresponding obligation of states to prevent this, is reflected in a number of MEAs. The Trail-Smelter Arbitration is the first international authority establishing the duty of states to prevent transboundary pollution. This represents a form of "limited territorial sovereignty." The global interdependence of ecological relationships can obligate a state to ensure proper mechanisms are in place to prevent transboundary pollution in accordance with the doctrine of state responsibility. At a minimum, there may be a customary obligation to notify other states of cross-border effects and possibly consult with them. In discharging this duty, a state may be required to assess the effects of any polluting activity.

Espoo provides for EIA requirements in a transboundary context. It was negotiated under the auspices of the United Nations Economic Commission of Europe and consists of 28 parties whom have ratified the Agreement. The Treaty creates obligations to take all appropriate and effective measures to prevent, reduce, and control significant adverse transboundary environmental impact from proposed activities, and ensures that affected parties are notified of a proposed activity, listed in Appendix I, that is likely to cause a significant adverse transboundary impact. States are required to establish an EIA procedure for the Appendix I activities. Where a project does not fall under the projects enumerated in Annex I, an affected party can request an EIA if the project may cause significant adverse transboundary impact. A decision by the affected party not to participate in an EIA gives the party of origin the freedom not to carry out an assessment subject to its national law. Where the parties are unable to agree whether the impact is likely, the question can be submitted to an inquiry commission. Providing for the arbitration of such disputes is crucial because it avoids any reliance on a dubious EIA done by the state of origin. The affected state may have different standards, thresholds, or past experiences that contribute to the characterization of the environmental impact. A dialogue is created for the exchange of cultural perceptions of the environment.

The novel provisions of Espoo relate to public participation. The public in the affected area has a right to be informed of and to participate in the EIA procedure, even though the procedure takes place in another country. Public participation in making comments or objections to the competent authority of the party of origin is permitted during interstate discussions concerning the significance of the transboundary environmental impact. The level of participation is equivalent to what is offered to the public in the party of origin, with a

baseline requirement that the public is informed and provided with possibilities for making comments or objections on the proposed activity.

Although novel in principle, the greatest challenge for the Espoo regime will be how the responsibilities for facilitating cross-boundary consultation will be allocated. Espoo does not expressly resolve which party is under the obligation. Having two consultation/decision making processes operating simultaneously can be problematic because public participation commences at different stages in the EIA process amongst the parties. In addition, the scoping process may differ in relation to public access, there may be temporal or substantive inconsistencies for information provided to the public, post-project analysis obligations can vary and there may be contrasting levels of public participation and available remedies. This could lead to abuse as affected parties may engage another state's judicial system simply because it facilitates public participation more favorably. There are also jurisdictional problems associated with one state conducting public hearings in another state. The development of a coordinated procedure that reflects the political and cultural elements of government decision making of the neighboring states will be critical to the proper functioning of transfrontier public participation in Espoo.

Espoo does not usurp the application of the parties' existing EIA legislation. Sovereignty over decisions concerning the environment is upheld. A process is outlined in Espoo but its substantive details are left to the discretion of the parties. The outcome of an EIA must be taken into account, including public comments and the results of consultations between the parties, when decisions are arrived at concerning a proposed activity. However, the wording falls short of mandating action recommended in the EIA. As a regime, Espoo demonstrates the need for the precarious balance between proscribed EIA procedures and state freedom to govern their environment.

European Environmental Impact Assessment Directive

The greatest example of international cooperation on EIA is Directive 85/337 (Directive). It has been praised as illustrating a "model for subsequent legal instruments." The success of the Directive has exceeded expectations as developers have incorporated the consideration of environmental impacts into their activities. Its institutionalization is evident in the European Commission's internal requirements for other areas of policy making, where the conducting of an EIA is considered when the proposed measure's impact on the environment is significant. Unlike Espoo, the purpose of the Directive is not limited to ensuring development decisions in one member state affecting another's environment accords to a baseline requirement. The Directive goes further by imposing standards on one particular

member state where the environmental effects are confined to that state. Consequently, interference with national sovereignty over environmental regulation is greater.

It is interesting how such a broadly applicable measure would be palatable to a group of diverse nations in the EC that share different cultural and historical backgrounds. The Directive provides that the principles of the assessment of environmental effects should be harmonized, with particular reference to the projects requiring an assessment, the main obligations of the developers and the content of the EIA. Harmonization of environmental standards subjects member states to laws that may not correlate to local environmental conditions.

Overcoming this dilemma is attributable to a common understanding that the European environment is a shared resource regardless of a project's location. In EC environmental action, there is an implicit agreement by member states to a general relinquishment of sovereignty. Membership in the EC itself can be seen as an association formed on civic lines, based on common values, that erode prevailing cultural divisions in Europe. Reinforcing the environmental consensus is a relegation of law making to a strong centralized authority vested in the executive, legislative, and judicial organs of the EC. Enforcement mechanisms are available to the EC under Article 169. A failure to comply with EC law can result in the European Commission bringing an action in front of the European Court of Justice, which has ruled that member states cannot derogate from environmental directives by pleading other interests.

Harmonization in the EC may also be motivated by economic considerations. Environmental regulation can be equalized in order to ensure the free movement of goods. The preamble of the Directive recognizes the disparities between the laws in member states regarding the assessment of environmental effects, which may create unfavorable competitive conditions and thereby directly affect the functioning of the common market. However, the attempt to equal assessment requirements imposes greater hardships on member states with less developed economies. EC environmental legislation generally does not make any exemptions for less prosperous member states. Difficulties in implementing the Directive were particularly acute in these member states, especially in the areas of environmental information, public consultation, quality of the EIA and a number of qualified personnel to undertake an EIA.

Because EIA is a procedural measure that ensures greener decision making, the requirement is implemented through a directive instead of a regulation. The former maintains discretion for states to transpose their obligations as they see fit, as opposed to a regulation, which mandates directly applicable standards that cannot be deviated from. Sovereignty over

environmental decision making is preserved because a directive does not bind member states until it is implemented, unlike MEA obligations that arise when the treaty is ratified. This is appropriate for an EIA instrument that is inherently process-oriented, reflecting a nation's unique legal and democratic culture. Environmental administration may also be decentralized, transferring decision making to the local level. This type of system accords with the doctrine of subsidiary, an EC objective that purports to bring decision making as close as possible to citizens.

AN INTERNATIONAL EIA REGIME?

Following this analysis, the question becomes: why is an international regime necessary? EIA regimes exist at local, national, and international levels suggesting that an international regime would be overkill. However, this paper uncovers inconsistencies in how, and if at all, EIAs are being conducted throughout the globe. They are also reflections of different perceptions of the environment and risk channeled through the filter of cultural theory. A universal model of EIA may have to amalgamate the hierarchist model that extols the virtues of environmental management while balancing that with the individualist notion that EIA can discourage investment and pose a barrier to economic development. Moreover, the egalitarian perspective, expressed by the NGO community, will urge for strict requirements that allow economic activities to proceed in a cautious fashion.

Currently, EIA is "at a crossroads of process development." It is suspected that the role of EIA will become more proactive, applying to the institutional as opposed to project level. This will uncover attempts to forestall environmental degradation at an earlier stage. Consistent requirements in the international community may be called for as the enlargement of EIA requirements result in greater discrepancies amongst states. As economic activity takes on a transnational character and the interaction between states in global development intensifies, the need for uniformity becomes more apparent. The goal of preserving fairness in the global economy through equalized environmental regulation demands standardization of EIA.

A new approach to global environmental management is promoted by an EIA regime. The preponderance of MEAs are command and control type treaties which are imbued with disagreement over the definition and boundaries of a problem, the costs of addressing the issues, the identity of the actors responsible for the environmental damage, as well as power imbalances extant in the international system. The regulation of the environment through setting performance standards or targets is exceedingly difficult due to the obvious social and economic inequities in the international system. Negotiations become a painstaking exercise in responding to the needs of developing countries while appreciating the industrialized

countries' drive for continuous economic growth. The inevitable result is an ineffective response to mounting international environmental problems as convention requirements are reduced to the lowest common denominator.

EIA is a primarily procedural instrument averting the obstacles to setting limits in most MEAs. A multilateral EIA agreement departs from the minimum standard MEAs, ensuring that countries can maintain the highest possible substantive and procedural requirements according to their economic needs, without violating any international norms. Standards are tailored to each project addressing both the particular objectives of the community and the individual projects' impacts on the environment. Decision making is returned to the national, regional, and even local level from the international arena far removed from the public. It can placate states that are sensitive to foreign interference with its sovereignty over environmental decision making and natural resources exploitation. The dual objectives of creating an international scheme that proscribes a universally agreed process while having an instrument that restores flexibility in addressing environmental concerns are satisfied.

EIA is accepted internationally as a proactive instrument in environmental policy. It is normal to see EIA requirements in most MEAs constituting a method of demonstrating compliance. These are not isolated to situations of transboundary impacts but extend to commitments where the anticipated environmental effect is confined to one country. The responsibility of states or sub-national authorities to conduct an EIA for activity entirely within their jurisdiction is a regular feature in MEAs. It is arguably a customary principle of international law at least where the environmental impact is expected to be grave. However, EIA requirements can never amount to binding obligations for states. It is a mechanism riddled with exceptions and qualifications undermining any proscriptive norm. The need for flexibility will always underscore a desire for state discretion in applying EIA legislation. The content of an EIA is highly dependent on the specific project that it is analyzing as well as the potentially affected environment. A more appropriate EIA is evident where decision makers have institutional maneuverability to customize the requirements. The objective of sustainable development can be attained while minimally interfering with domestic environmental policy.

A global commitment to EIA provides a safeguard against all ecologically irresponsible decisions. How such an obligation is fulfilled should remain with states to mold the EIA process to suit their own cultural, political, and economic realities. Basic requirements guaranteeing transparency of decision making, public participation, environmental screening, and post- project environmental monitoring could keep a state's observance in check. Where the specifics of the process is endogenous, there is a greater

incentive to comply with them. States are authors of their own cultural sensitivity and more suitable agents for their population. A general but internationally agreed public participation requirement encourages interaction, allowing citizens to influence decisions impacting the local environment. This fosters EIA's greatest value: promoting environmental awareness.

MEAs base the requirement to conduct EIAs on a variety of factors, including:

1. lists of categories of activities that by their nature are likely to have significant effects;

2. lists of areas that are of special importance or sensitivity (such as national parks); the impact of any activity within or affecting such areas must be assessed;

3. lists of categories of resources or environmental problems that are of special concern;

4. an initial environmental evaluation of all activities, a quick and informal assessment to determine whether the effects are likely to be significant;

5. defined and listed criteria which make an impact "significant."

Most multilateral environmental agreements (MEAs) that mandate EIA procedures also include provisions requiring consultation and dissemination of information to the public. For example, the 1986 Convention for the Protection of the Natural Resources and Environment of the South Pacific Region, Art. 16(3), requires states parties to share the information gathered in the assessment with the public and affected parties. The Convention on Biological Diversity (1992) similarly emphasizes public participation as a goal of environmental assessment in Art. 14(1)(a), and includes a notification and consultation requirement in Art. 14(1)(c). This Convention expansively requires assessment of national policies, as well as of proposed projects. Art. 14(1)(d) of the Convention contains emergency clauses, typically found in the more comprehensive EIA regimes, which allow immediate emergency action when there is grave danger to biological diversity.

It is also important to note that the World Bank and the regional banks all require environmental impact assessments. In October 1991, the World Bank issued an Operational Manual including Operational Directive 4.01 that describes its procedure of environmental assessment during project preparation and before appraisal, closely linked to a feasibility study of the project. The environmental assessment covers project-specific and other environmental impacts in the area influenced by the project. Its purpose is to ensure that the project options under consideration are environmentally sound and sustainable. All

environmental consequences should be recognized early in the project cycle and taken into account in project selection, siting, planning, and design. The environmental assessment should also identify ways of improving projects, by preventing, minimizing, or compensating for adverse environmental impacts.

The Operational Directive distinguishes types of environmental assessment: project-specific, regional, and sectoral, where similar but significant development activities are planned for a localized area, for sector investment loans, and loans through intermediaries, emergency recovery projects, and larger issues, such as ozone depletion or pollution of international waters. The preparation of the environmental assessment is the responsibility of the borrower, but the Bank's task manager assists and monitors the project and screens it in order to determine the nature and extent of the environmental work required. After the screening, the project is assigned in one of three categories:

- Category A: A full environmental assessment is required;
- Category B: Environmental analysis is required, but not a full one;
- Category C: No environmental assessment is required.

The Operational Directive includes checklists of potential issues for an environmental assessment. It also proposes outlines and models for the assessment and prescriptions for the assessment and the screening procedures.The Bank expects the borrower to ensure coordination among government agencies and to take into account the views of affected groups and local NGOs. It also requires the borrower to provide relevant information to affected groups and local NGOs and to hold meaningful consultations with them. The environmental assessment should form part of the overall feasibility study or project preparation and be submitted to the Bank which decides on the loan.

5.2 AUDITS

ENVIRONMENTAL AUDITS: BARRIERS, OPPORTUNITIES AND A RECOMMENDATION

Keith M. Casto, Tiffany Billingsley Potter

…Regulated entities conduct "environmental audits" to comprehensively evaluate their facilities, operations and procedures in order to achieve compliance with applicable environmental regulatory requirements. Moreover, companies of all types and sizes increasingly emphasize international environmental standards. Certification to international

environmental standards can help certifying companies avoid trade barriers and achieve environmental compliance. The present focus for most industries is on the ISO 14000 series of international environmental management standards, referred to as "ISO 14000."

Although environmental audits may take many forms, the two most common are compliance audits and management audits. A compliance audit is an investigation by internal or external environmental specialists of a facility's compliance with applicable environmental laws and regulations and the identification of non-regulatory environmental liability risks. A management audit consists of reviewing the managerial risk control systems and procedures used by the corporation or facility to detect and remedy possible violations and potentially problematic environmental conditions. Often, a company voluntarily conducts a management audit to review environmental compliance and risk control measures. Management auditing is often an integral part of an entity's overall environmental management system (EMS). An EMS that includes voluntary management auditing, such as that contemplated by the ISO 14000 standards, can be an effective means for a regulated entity to achieve long-term compliance through preventative environmental management.

Such preventative environmental management can be vitally important because, under the current "command and control" environmental regulatory scheme, violations of applicable regulatory requirements can result in severe legal sanctions such as penalties, fines, injunctions, government contract debarment for corporate offenders, and even incarceration and fines for individual corporate officers, directors, shareholders and employees. This increasing stringency, complexity and volume of regulatory requirements and enhanced penalties for criminalization of violations compel careful self-analysis by regulated entities in order to avoid liability for non-compliance.

Yet, at the same time, there is currently a strong disincentive to undertake environmental auditing because of the potential discover-ability by government agencies and third parties of incriminating information and documents generated as a result of environmental audits, and the potential use of the information and documents in civil or criminal enforcement actions and civil toxic tort or cost recovery litigation. Information generated by environmental audits may become self-incriminating evidence in a later governmental regulatory enforcement action addressing problems such as regulatory violations, releases of hazardous substances, failures to comply with permits, or historical contamination, even if the discovered violations are ultimately rectified prior to enforcement.

Environmental audits undertaken for the purpose of uncovering and correcting environmental, health and safety problems actually may increase the risk of civil litigation or criminal prosecutions. Audit results may prove constructive (or actual) prior knowledge of

non-compliance, heightening the risk and magnitude of criminal liability under some environmental statutes. These potential disincentives for environmental auditing make the issues of environmental "audit privilege," or potential immunity resulting from the environmental audit process, timely and important. In fact, such protections relative to environmental audit results are one of the most hotly debated issues arising from ISO 14000.

Recently, environmental policy has begun to recognize the distinct benefits of encouraging voluntary environmental audits. This recognition has forced policy makers to address the tension between performance of audits and the legal/regulatory disincentives involved in disclosure of audit results. A number of states have also recognized the importance of encouraging environmental auditing by passing legislation that provides either some level of privilege for audit results, immunity for the audited entity, or both. Although similar federal legislation has been proposed, it has so far failed to be enacted into law.

These so-called "audit privilege statutes" recognize the shortcomings of traditional privileges of attorney-client, attorney work product and "critical self-analysis" in protecting the results of environmental audits. The statutes attempt to encourage environmental auditing through a combination of audit privilege and, in some cases, limited immunities.

The question arises whether an audit privilege against disclosure is the appropriate remedy to facilitate auditing, since dissemination of audit results is an inherent function of all types of environmental audits and EMSs. At the same time, real incentives must be provided for regulated entities who undertake voluntary environmental auditing as part of an EMS, and act upon the results of those audits to achieve and maintain compliance.

THE ENVIRONMENTAL AUDIT: CAN IT HELP?

I. Leo Motiuk
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WHAT IS AN ENVIRONMENTAL AUDIT?

The audit is a process in which operations and facilities are examined to determine whether they satisfy environmental law and regulations, as well as corporate policies. Its purpose is to identify problems and, if found, to remedy them and prevent their reoccurrence in the future. The audit is not designed to preempt or replace day-to-day environmental management systems, but rather to ensure that these systems function properly.

WHY AUDIT?

An effective audit program can help management achieve cost effective compliance and minimize risk. Frequent scrutiny heightens awareness and can often prevent violations.

When violations are found, a prompt and effective response may deter citizen suits and appeal to government prosecutors as a substantial mitigating factor. Emphasis on the need to review and update emergency systems and procedures often proves to be the critical factor between success and failure when a business confronts an environmental risk.

An audit has a substantial role to play in making investment decisions. Detailed knowledge of a facility's conditions may help expedite negotiations for the sale of an asset or contribute critical information for planning future growth.

The audit can be of substantial assistance to business in dealing with the complex web of external factors that influence its operations. It can provide the "environmental confidence" demanded by shareholders and other investors. A credible program may make the difference in both retaining the loyalty of the consumer at the retail level and in soliciting valuable contracts from "blue-chip" corporations that have made environmental considerations a cornerstone of their purchasing practices. In order to make such a favorable impression, an organization needs a program that meets the stringent criteria now being developed in this country and throughout the world by both governments and trade associations.

Well-run audit programs may have substantial political consequences for the future. It is clear that the present "command and control" system of environmental regulation has not worked effectively. While there is a strong argument that better performance could be achieved by a combination of greater corporate flexibility, pollution prevention and marketplace pressures, the present climate of public distrust of corporate efforts stands in the way of change. A reversal of this trend, brought about by respected audit programs, could well be the catalyst for a new era of trust that would allow more experimentation regarding alternatives to the "command and control" approach.

THE DISADVANTAGES

An effective environmental auditing program requires a human and financial resources commitment, which can be substantial. In addition, depending upon the scope of the audit, there could be temporary disruption of plant operations.

There may be difficulty encountered in maintaining the confidentiality of the program. More significantly, there is the potential for substantial corporate and personal liability if follow-up action for identified problems is incomplete. Finally, even if the evaluation leads to a prompt, thorough and appropriate corrective action, there is no guarantee against prosecution.

ACHIEVING A BALANCE

No business should commence the environmental audit process unless it is prepared to commit adequate resources and to respond to the findings. On the other hand, given the ever-

increasing pressures of civil and criminal enforcement and the shift of consumer loyalty to the "green" seller, the better choice is to know your liabilities and respond to them, rather than to remain oblivious and run the risk of scorn for making a "willful blindness" argument.

STRUCTURING THE AUDIT

Each business is unique. Therefore, no two auditing programs will be identical. At the outset, management should clearly define the scope and objectives of the audit. Since the objectives may change over time, the program should be regularly reviewed and, when necessary, modified.

Top management must underscore its support of the program through its actions. It must mandate that information flow up and down the chain of command, and it must insure accountability, in terms of resources and follow up, for responding to problems identified by the audit. The most enlightened top management will create an atmosphere where there are incentives not only for complying with existing law, but also for anticipating future regulation or dramatic public opinion changes. These incentives could include bonuses for stellar performance, negative evaluations for mediocre results, and disciplinary sanctions for willful or negligent non-compliance.

Those responsible for the audit should be very familiar with the operation of the facility. In addition, they should be well-schooled in the applicable regulations, knowledgeable about and committed to the corporate policy, and capable of clearly communicating the task and follow up to the workforce.

The individual in charge needs the confidence of top management. He should not hesitate to make prompt disclosure, if required, and should feel comfortable implementing a rapid response.

Some companies have instituted annual or biennial compliance audits. These audits review the facility's compliance at the time of the audit. While this form of auditing is effective, it has two major shortcomings.

First, the annual or biennial compliance audit is performed with advance notice given to plant personnel and managers. This usually results in the facility being on its best, rather than normal, behavior. Since compliance can vary throughout the year, a one-time audit cannot review all variations and usually does not result in long-term compliance.

Secondly, compliance auditing fails to examine many of the issues that should be considered in an effective program. These items may not directly affect compliance at the moment in question, but they do pose risks of accidents, releases or exposures that could become future liabilities.

Other companies rely upon internal auditing which is effective for routine compliance checks. However, if used as the sole auditing source, it often perpetuates non-compliant items (i.e., if the internal auditor fails to identify an item, it is likely to continue to be unidentified). External auditing utilizes persons with no previous biases who can review the facility objectively and thereby increase the chance of identifying those items which would be missed in routine audits.

Given the complimentary advantages and shortcomings of the external and internal audit approaches, a hybrid of the two is recommended. External audits should be performed annually or biennially as the fact gathering tool, while routine auditing should be performed more often by internal auditors.

The external auditor should perform a unit-by-unit inspection of all machines, processes, storage areas, and records. Once the data is obtained, a systematic checklist should be developed for use by the environmental manager or facility personnel in performing routine and frequent internal audits.

The company must be careful in making sure that appropriate and prompt action is taken in regard to non compliant items marked on the checklist. Otherwise, the program will result in a voluminous and damaging record that shows noncompliance noted over and over again in distribution lists reflecting the entire corporate hierarchy. Further, make certain that the written record also identifies the compliance actions. Unfortunately, some companies do a superb job in noting their noncompliance but then fail to remember to record the corrective actions.

INTERNATIONAL CORPORATE ENVIRONMENTAL COMPLIANCE AND AUDITING PROGRAMS

August, 2005

by Ridgway M. Hall Jr. and Kristine A. Tockman

Throughout the world, companies are encountering increasingly stringent and complicated environmental laws. In addition, they are being challenged to make environmentally friendly products. European environmental groups and the general public have become increasingly vocal over environmental concerns and increasingly effective in persuading lawmakers to adopt tougher environmental standards. Companies that do not comply with these new rules are at a competitive disadvantage. To ensure adherence to sound environmental practices, international organizations are increasingly emphasizing the importance of environmental auditing programs.

THE EU AND INTERNATIONAL ENVIRONMENTAL AUDITING

EMAS

Development and Requirements of EMAS

The EU Council established EMAS in Regulation 1836/93, allowing voluntary participation in an environmental management and auditing system for industrial facilities. The regulation became effective in April 1995. In July 1998, the EU Commission will reconsider whether the regulation should remain voluntary.

The scheme's objective is to promote continuous improvement in environmental performance through a company's establishment of an environmental policy and management program, through an objective audit of those policies, and through providing information about environmental performance to the public. The EU Commission drafted EMAS using U.S. corporate experience with environmental management and using the ISO 9000 quality management system developed by the International Organization for Standardization as a model. Lawmakers hope that companies will voluntarily participate in the regulatory scheme in order to avoid being put at a competitive disadvantage.

Consumer demand may also prove a strong incentive to participate in the scheme. Many large manufacturers are planning to participate. Because they have high profiles, they are under intense public scrutiny to comply with tough environmental laws. Other firms may be forced to participate as consumers demand proof of a firm's commitment to eco-friendly policy. EMAS has developed a logo showing participation in the scheme. Although the logo cannot be used on products or product advertisements, it can be used on corporate letterhead, brochures, reports, and general company advertising that does not mention a product.

The scheme especially encourages participation by small and medium-sized companies. To that end, EMAS directs the EU Commission to submit proposals to provide expert advice, information, technical assistance, training, and other support measures to smaller firms. EU member states may also encourage smaller firms to participate in the scheme by establishing support structures of their own. That kind of support could allow small and medium-sized companies to better compete with larger firms, which have more regulatory expertise at their disposal.

Environmental Policy and Program

EMAS requires participating companies to develop an environmental policy that demonstrates a commitment to legal compliance and continuous improvement of environmental performance. The policy must also be based on principles of "good management." Such principles describe elements of environmental stewardship, including fostering a sense of responsibility for the environment among employees "at all levels" and maintaining a policy of transparency, namely, providing information to, and keeping an open dialogue with, the public. The policy also must address approximately 10 specific issues.

A written environmental policy must be adopted at the corporate level. Based on that corporate environmental policy, the company must develop an environmental program for each of its participating sites. The company policy must identify quantifiable deadlines and goals. Although outlining a generalized and optimistic policy may seem safer for some companies, it is not necessarily the best plan to follow. Since companies will be audited against progress with their own programs, auditors may demand a detailed program--with numbers and milestones. Failure to meet these objectives will then be broadcast in a negative public environmental statement. Companies must, therefore, tread carefully when writing their policy, making sure their programs are specific enough to satisfy auditors, yet not risking poor public environmental statements for failing to achieve these objectives.

Unlike the BS7750 standards developed by Great Britain, which commit a company only to continued improvement of environmental performance and allow companies when setting up their environmental policies and goals to take financial and operational requirements into account, EMAS requires companies to ensure that "the environmental impact of all activities is reduced to the minimum."

The Environmental Management System

The EMAS regulation defines an environmental management system (EMS) for a company as "that part of the overall management system which includes the organizational structure, responsibilities, practices, procedures, processes and resources for determining and implementing the environmental policy." The EMS must meet requirements concerning organization and training, preparation of registers on environmental effects, and recordkeeping, all of which must be periodically audited.

Organization and Training. These requirements include:

1. defining and documenting "responsibility, authority and interrelations of key personnel who manage, perform and monitor work affecting the environment";

2. appointing a "management representative" with "authority and responsibility for ensuring the management system is implemented and maintained";

3. ensuring all employees are aware of potential environmental impacts of their work activities and understand the importance of complying with the regulations and the environmental benefits of improved performance.

Fostering a sense of responsibility for the environment among employees is an imprecise requirement, and it may be difficult for companies to determine when they are in compliance.

Registers. The company must keep two registers. It must investigate the environmental effects of all its activities at the site and compile in one register a list of all "significant"

effects. In general, the company must consider effects from normal and abnormal operating conditions; accidents; and past, current, and planned activities. Specifically, the company must consider:

1. controlled and uncontrolled releases to air and water;
2. solid and hazardous wastes;
3. contamination of land;
4. natural resource use;
5. discharge of thermal energy, noise, dust, odor, vibration, and visual impact;
6. effects on specific parts of the environment and ecosystems.

In the second register, the company must track all legal and policy regulations applicable to the company's activities, products, and services.

Recordkeeping. A company must establish comprehensive records detailing its environmental policy, program and objectives to "demonstrate compliance with the requirements of the environmental management system," as well as documenting progress in attaining environmental goals. These records may prove to be helpful to companies involved in litigation who want to show their commitment to the environment and their EMS.

Environmental Auditing

EMAS requires an environmental compliance program, which it defines as "a management tool comprising a systematic, documented, periodic and objective evaluation of the performance of the organization, management system and processes designed to protect the environment, with the aim of assessing compliance with company policies."

Either company employees or external auditors must perform the audits at least once every three years. Top company management may decide how frequently it will require certain steps in the auditing process, depending on the scope of the company's activities, emissions, history of environmental problems, and interaction with the environment in general. Audits shall investigate:

1. control and reduction of the activities' environmental impacts;
2. energy and raw material management;
3. waste management;
4. noise reduction;
5. new products and processes;
6. product design, packaging, transportation, use, and disposal;
7. staff information and training on environmental issues;
8. environmental compliance of contractors and suppliers;
9. accident planning and prevention;

10. external information on environmental issues.

A company is audited against the standards contained in its environmental policy, which must show compliance with all applicable laws, efforts at continuous improvement of environmental performance, and good management practices. The auditor must prepare a written report describing the company's state of compliance with its environmental policy and identifying areas where corrective action is needed. The audit findings must be formally submitted to top company management. The company must also establish a mechanism to follow up on audit results to see that any necessary corrective action is taken.

Legal requirements include all local, regional, and national environmental laws, as well as all applicable EU laws. The requirement could pose significant problems because sometimes EU and national laws directly conflict with each other.

EMAS differs from the BS7750 and ISO standards in that it is primarily an environmental protection system, rather than simply an environmental management system. This difference has distinct consequences. Companies participating in an environmental management standard, like BS7750, essentially must show they have "effective management control over (their) environmental performance . . . the standard of performance itself is very much of secondary importance." EMAS participants, however, must not only define an environmental management system, but must devise measures aimed at protecting the environment and improving their environmental performance.

Although the scope of EMAS' requirements make it expensive to implement, EU member states and participants hope that these stricter requirements will translate into increased consumer confidence in their company or product, as well as greater prestige. They may also gain a competitive advantage by adopting the standards.

Environmental Statements and Validation

EMAS requires participants to prepare a comprehensive statement after each audit or audit cycle. These statements must be written specifically for the public in clear, non-technical language and must include:

1. A description of the participant's activities at the site.

2. The participant's environmental policy, including specific goals, for the site.

3. "An assessment of all significant issues relevant to the activities concerned."

This implies disclosure of all "significant" items noted in the environmental register as well as all instances of noncompliance. The regulation does not give companies an indication of threshold, that is, to specify a measuring time for emissions limits, for example. In other words, if a company exceeded limits during a period of half an hour, it would be in

compliance if a 24-hour measuring time were used, but not if it was expected to comply at all times.

4. "A summary of the figures on pollutant emissions, waste generation, consumption of raw material, energy, water, noise and other significant environmental aspects." The emissions the company must track are defined broadly here as well.

5. "Other factors regarding environmental performance." This is a catchall requirement; the "other factors" do not necessarily need to be significant. The auditor is thus given more power to require disclosure of anything he or she feels significant.

6. A deadline for the submission of the next statement.

EMAS also requires verification and validation. A "verifier" is a third party required to check compliance with the regulation of environmental policies, programs, management systems, audit procedures, and environmental statements. The verifier is responsible for investigating the technical validity of the company's audit as well as confirming whether or not the environmental statement is reliable and thorough. The verifier then cites in a report cases of noncompliance with the regulation, technical problems with the company's EMS, or audits and points of disagreement with the company's environmental statement. Once the EMS, auditing procedures, and accuracy of the environmental statement have been approved, the verifier may validate the environmental statement. The validation is the critical step that allows the company to participate in the EMAS system.

DEVELOPING INTERNATIONAL STANDARDS FOR ENVIRONMENTAL MANAGEMENT

Structure and Elements of the ISO

ISO is a global federation of national standards bodies, comprising over 100 members, one member per country. ISO's purpose is to "promote the development of standardization and related activities in the world with a view to facilitating international exchange of goods and services, and to developing cooperation in the sphere of intellectual, scientific, technological and economic activity." The U.S. representative to the ISO is the American National Standards Institute (ANSI), headquartered in New York. ISO's work is carried out by some 2,600 technical bodies, international organizations, and advisory groups, which are divided into technical committees. Each ISO member has the right to be represented on any technical committee it chooses.

Draft international standards adopted by the technical committees must be approved by the member bodies before the ISO Council accepts them as international standards. The draft standards must receive at least 75 percent approval by the member bodies voting.

In 1991, the ISO established the Strategic Advisory Group for the Environment (SAGE) to assess the need for international standardization of key elements of sustainable industrial development. SAGE is divided into subgroups, which made recommendations for the scope, objectives, and processes of standardization in their particular field. The subgroups studied environmental management systems, environmental auditing, environmental performance standards, life cycle analysis, environmental guidance for product standards, and industry mobilization plans.

SAGE recommended establishing a separate ISO technical committee on the environment. ISO adopted SAGE's recommendation, and Technical Committee 207 (TC207) was created. The U.N. Conference on Environment and Development requested all parties to support the use of ISO international standards as a "basis for environmental measurement, control, management and for harmonizing appropriate technical regulations."

The ISO 9000 Quality Management Standards

The ISO 9000 series, first published in 1987, is a set of manuals that describe international criteria for establishing and maintaining an effective quality management system. The voluntary system has been adopted in many countries around the world, including the United States.

The 9001 standard describes the concept of quality and provides guidelines as to which quality model to use. The 9002 standard is aimed at ensuring conformity at all stages in a product's life cycle: The standard's specific requirements involve development, production, installation, and servicing. The 9002 standard requires contractors to demonstrate their control over production and installation processes that will result in acceptable products.

The 9003 standard similarly requires suppliers' demonstrations of their ability to detect and control problems in the final inspection and test phase. The 9004 standard gives a more detailed explanation of the elements of a quality management system.

The ISO 14000 Environmental Management Standards

Still under development, these voluntary international standards focus on corporate environmental management systems. The standards will help companies develop methods to achieve their environmental goals and to determine whether their management systems are effective in preventing or detecting environmental violations.

Besides providing companies with organization models for complying with various regional and national regulations, the standards provide guidelines and methods for companies that want to improve their environmental performance beyond what the law requires. The standards are expected to be released in 1996, but could be ready as early as 1995. The ISO prohibits the use of its standards as regulations, so the 14000 series cannot be

used by an enforcement agency to determine whether a company has complied with environmental laws. The standards would not replace governmental regulations.

ISO 14000 is expected to be a process standard, not a performance standard. It will not set environmental goals, prescribe regulations, or set levels of achievement. (The company sets its own environmental performance standards based on the substantive regulations adopted by the EU or the country itself.) Instead, ISO 14000 will provide companies with methods they can use to achieve environmental goals and regulatory compliance.

Several draft standards have been issued recently by ISO 14000 subcommittees. ISO 14000/CD 14001 describes the essential elements of an environmental management system. The standard's scope is intended to apply to environmental effects that the company can control and over which it can be expected to have an influence. The standard outlines environmental policy criteria, planning procedures, and more specific implementation and operation standards. It also includes an annex to the specifications to elaborate some of its core elements and to avoid misinterpretation.

ISO 14010, Guidelines for Environmental Auditing: General Principles of Environmental Auditing, is designed to "guide organizations, auditors and their clients on the general principles common to the execution of environmental audits." The draft standard also defines the environmental audit and related terms and discusses the general principles of environmental auditing. ISO 14011/1 is the draft standard for auditing environmental management systems. It establishes audit procedures for planning and performing an audit of an EMS to determine whether an EMS complies with audit criteria. ISO 14012 provides qualification criteria for environmental auditors. ISO 14024 addresses environmental labeling. ISO 14040 sets forth principles and practices for life cycle assessments, and ISO 14060 addresses environmental aspects of product standards.

Since ISO 14000 does not set specific environmental performance levels, one of its major goals is to develop effective tools companies can use themselves to measure their performance. For example, life cycle analysis gives companies a process for assessing their products' environmental impact and management from "cradle to grave," from the raw materials used in manufacturing, intended and unintended manufacturing wastes such as emissions, energy consumption, and land use, to the final disposal of the product.

The environmental auditing process is also a major EMS tool. Working groups on the EA subcommittee of the TC207 are developing step-by-step standards for conducting an EMS audit, establishing general environmental auditing principles, and identifying qualifications for both internal and third-party auditors.

The environmental performance evaluation is an internal method a company can use not only for self-evaluation, but for setting improvement targets. As emphasized above, ISO 14000 will not set the targets for the company, but will set the standards for the "methodologies" behind a company's environmental management system. These methodologies, not the actual environmental compliance data a company gathers in the process, are the focus of the audit.

Members of TC207 predict that ISO 14000 will have just as much, if not more, impact on industry than the ISO 9000 quality standards. A single set of international environmental management standards could help companies achieve their commitments to environmental excellence; could harmonize national rules, labels, and registration processes; and could avoid conflicting regulations. Similarly, registered companies approved by independent third parties demonstrate to the public that they are serious about their commitment to environmental protection. The credibility of that commitment is an important factor with an environmentally conscious consumer market.

A universally accepted standard could promote international trade by avoiding the disparate regional and national management standards that can cause trade barriers. If adopted, ISO 14000 could raise the standards for production, use, recycling, and disposal of products in developing nations, leading to greater sustainable development for those countries. ISO 14000 could become "a condition of doing business" in the competitive market.

5.3 STANDARDS

GUIDE TO INTERNATIONAL ENVIRONMENTAL LAW
Alexandre Kiss and Dinah Shelton

International agreements sometimes call on states parties to establish standards for products and processes that impact the environment. Standards are prescriptive norms that govern products or processes or set limits on the amount of pollutants or emissions produced. Four categories of standards are common: process, product, emission, and quality standards.

In international environmental law, process standards specify design requirements or operating procedures applicable to fixed installations, such as factories, or designate permissible means and methods of activities like hunting or fishing. Sometimes, a particular process or technique is imposed on operations, such as the installation of purification or filtration systems in production facilities. International process standards include the

requirement that hazardous waste be incinerated (1991 Antarctic Environment Protocol), the ban on driftnet fishing (1989 Wellington Driftnet Convention), and operating procedures for biotechnology (EU Directives).

Process standards often are used to regulate the operations of particularly hazardous activities or substances. In a far-reaching provision, the Montreal Protocol on the Ozone Layer calls on states parties to determine the feasibility of banning or restricting the import from non-state parties of products produced with, but not containing, ozone-depleting substances.

The provision is unusual in regulating trade with non-parties and because process standards that apply to imported products raise questions about their compatibility with the international trading regime set up under GATT and the WTO.

Product standards, in contrast, are used for items that are created or manufactured for sale or distribution. Such standards may regulate:

• The physical or chemical composition of items, such as pharmaceuticals or detergents. Examples include regulations that control the sulphur content of fuels or list substances whose presence is forbidden in certain products, for instance, mercury in pesticides.

• The technical performance of products, such as maximum levels of pollutant or noise emissions from motor vehicles or specifications of required product components, such as catalytic converters.

• The handling, presentation, and packaging of products, particularly those that are toxic. Packaging regulations may focus on waste minimization and safety.

For economic reasons, product standards usually are adopted for an entire industry. In general, standards for new products are drafted to reflect the best available pollution control technology, in some cases requiring a percentage reduction of pollutants emitted in comparison with older sources. International product standards include the 1991 Amendments to MARPOL 73/78 requiring construction of new oil tankers with "double hulls," the ban on trade in products containing ozone-depleting substances (1987 Montreal Protocol, Art. 4(3) as amended), and the requirement to provide unleaded fuel for motor vehicles (Sofia Protocol to the 1979 Convention on Long-Range Transboundary Air Pollution, Art. 4).

Emission standards are required by international agreements, such as the Protocols to the 1979 Convention on Long-Range Transboundary Air Pollution and the regional seas agreements. They call on states parties to specify the quantity or concentration of pollutants that can be emitted in discharges from a specific source. As a general rule, emission standards apply to fixed installations, such as factories or homes; mobile sources of pollution are more

often regulated by product standards. Emission standards establish obligations of result, leaving to the polluter the choice of means to conform to the norm. Often the environmental milieu of the discharge, e.g., groundwater, air, soil, is a variant factor. Emission standards may also change according to the number of polluters and the capacity of the sector to absorb pollutants. Different standards may be imposed in response to particular climatic conditions, for example persistent fog or inversion layers.

Emission standards are based on several assumptions: (1) a certain level of some contaminants will not produce any undesirable effect; (2) there is a finite capacity of each environment to accommodate substances without unacceptable consequences (the assimilative capacity); and (3) the assimilative capacity can be quantified, apportioned to each actor, and utilized.

Each of these assumptions has been questioned, because all chemicals discharged into the environment are likely to lead to statistically significant deterioration. Pollution occurs when the effects of the contamination can be measured. Emission standards most often reflect a political decision about the amount of pollution that is deemed acceptable.

Finally, quality standards fix the maximum allowable level of pollution in an environmental milieu or target during normal periods. A quality standard may set the level of mercury permissible in rivers, the level of sulfur dioxide in the air, or noise level of airplanes in the proximity of residential areas. Quality standards often vary according to the particular use made of the environmental resource. For example, different water quality standards may be set for drinking water and for waters used for bathing or fishing.

Quality standards also can vary in geographic scope, covering national or regional zones, or a particular resource, such as a river or lake, but each quality standard establishes base norms against which compliance or deviance are measured. The 1992 UN Convention on the Protection and Use of Transboundary Watercourses and International Lakes calls on each party to define, where appropriate, water-quality objectives and to adopt water-quality criteria, setting forth guidelines for this purpose in Annex III. Some bilateral and regional agreements on freshwaters and air foresee or mandate water-quality objectives, as well.

5.4 INTERNATIONAL TRADE

SOVEREIGNTY AND ECOLOGY: AN INTRODUCTION TO THE ISSUE

Paul Stanton Kibel

One of the most controversial policy debates today is over the relationship between environmental protection levels and increased international trade. The core of this debate is a disagreement as to the impact of the emerging international trade framework on the natural environment. This emerging international trade framework is expressed most clearly in the General Agreement on Tariffs and Trade (GATT) and the other agreements negotiated within and enforced by the World Trade Organization (WTO).

The critics of the emerging international trade framework maintain that increased international trade contributes to environmental degradation in at least two ways. First, the critics maintain that competition among different nations places downward pressure on environmental standards, as each nation seeks to attract and retain corporate investment. Second, the critics maintain that the GATT does not provide appropriate rules, and the WTO does not provide a competent forum, for the resolution of complex international environmental questions.

The promoters of the emerging international trade framework have responded to these critiques with two basic arguments. First, the promoters have argued that there is insufficient economic evidence to support the claim that increased international trade will result in a reduction of environmental standards. Second, the promoters have argued that even if such environmental degradation occurs, the economic benefits of increased international trade outweigh these environmental costs.

The debate over the environmental impact of the emerging international trade framework has been vigorous. It has engaged a broad spectrum of citizens and interests, including environmentalists, diplomats, regulators, industry, agriculture, banks, lawyers, economists, indigenous groups, and labor unions. Despite this broad spectrum of participants, however, in many important respects, the debate has been somewhat limited. This is because the debate has so far focused primarily on two issues-the shortcoming of current trade rules and trade's impact on air and water pollution standards. Although air and water pollution standards and trade rule defects certainly provide some basis for evaluating the trade-environment debate, there are other criteria that may be of equal, or perhaps greater, ecological and legal significance. There are four criteria in particular that have been neglected in the discussion.

First, pollution standards do not indicate the extent to which we are preserving ecosystems, such as native forests, coral reefs, or wetlands. A nation can raise its pollution standards, while simultaneously logging its rainforests or destroying its underwater reefs. Second, pollution standards do not indicate the cumulative effect of increased industrialization and resource exploitation on the natural environment. The fuel efficiency of

individual automobiles may be improving, but if worldwide another 500 million cars are on the road, the cumulative effect on air quality and global warming will be disastrous. Third, in the trade-environment debate, discussion of sovereignty has focused mostly on the rights of nations to set pollution standards without international interference. The concept of sovereignty, however, includes not only national rights but also national obligations, such as the obligation to not drive endangered species into extinction. Fourth, by focusing primarily on the reform of existing international trade rules and international trade institutions, environmentalists may have missed important opportunities to strengthen the international rules and institutions expressly designed to protect the natural environment. Financial and intellectual resources put into challenging GATT and the WTO could also have been spent to directly enforce the conservation provisions of treaties such as the United Nations Convention on Biological Diversity, the United States Statement of Forest Principles, and the United Nations Convention on the Law of the Sea.

The point here is not to belittle the efforts of those working to promote strict pollution standards, or of those working to reform international trade rules. This is clearly important work that should continue. Rather, the point here is to recognize that critical ecological and legal questions have remained on the margins of the trade-environment debate.

Trade Restrictions

Import/export restrictions, both temporary suspensions and permanent trade bans, are commonly utilized for the protection of endangered wild flora and fauna. The 1973 Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), for example, uses trade restrictions as a means of protecting threatened and endangered species. CITES lists in a first appendix all species threatened with extinction that are or may be affected by trade. Trade in these species is virtually prohibited, requiring prior grant and presentation of export and import permits issued under stringent conditions for limited non-commercial purposes.

Two additional appendices list those species that may become threatened with extinction unless trade is regulated. Trade regulations also prohibit or regulate ozone-depleting substances and transport and dumping of toxic and dangerous wastes.

The Montreal Protocol on Substances that Deplete the Ozone Layer was the first global environmental agreement containing trade restrictions on industrial products as a

subsidiary but necessary measure to ensure effectiveness of the treaty. The Protocol addresses trade as part of the effort to ensure that non-parties do not benefit from the advantages of the Protocol without accepting its obligations. Its provisions also limit the possibility that parties can circumvent their obligations by ensuring that the production of controlled substances cannot be transferred to the territory of non-parties.

The North American Free Trade Agreement (NAFTA) between Canada, Mexico, and the United States mentions in its preamble the will of the three contracting governments to promote sustainable development and to strengthen the development and enforcement of environmental laws and regulations. Chapter 11 regulates trade and investment. Art. 104 and Annex 104.1 state that in the event of any inconsistency between the Agreement and the trade-restrictions set out in CITES, the Montreal Protocol, the Basel Convention on Wastes, a 1986 agreement between Canada and the United States on hazardous wastes, and a 1983 agreement between Mexico and the United States for the Protection and Improvement of the Environment in the Border Area, the obligations of the environmental agreements prevail to the extent of the inconsistency.

The same provision requires, however, that the parties implementing these agreements adopt the implementing alternative that is the least inconsistent with other provisions of NAFTA Art. 104. Like NAFTA, the Central European Free Trade Agreement (CEFTA) provides that its implementation shall not preclude prohibitions or restrictions on imports, exports, or goods in transit justified by the conservation of exhaustible natural resources if such measures are made effective in conjunction with restrictions on domestic production or consumption (Art. 18). On the compatability of these measures with the GATT/WTO trading regime.

Agenda 21, based almost entirely on earlier work at UNCTAD, calls for reversing unilateral trade barriers that restrict access to markets, as well as for reducing external debt. It insists on improved access for exports of developing countries and an open, non-discriminatory and equitable multilateral trading system. It provides that, in particular, states should avoid use of trade restrictions or distortions to offset differences in cost arising from differences in environmental standards and regulations, and should ensure that environmental regulations or standards do not constitute a means of arbitrary or unjustifiable discrimination or disguised restriction on trade. Even when based upon the required international consensus, trade measures necessary to render effective environmental objectives should be non-discriminatory and the least restrictive necessary to achieve the objectives. Transparency and notification are required, as well as public input in the formation, negotiation, and implementation of trade policies.

Although setting out general guidelines, the difficult issues involved in using trade restrictions for environmental protection were not settled at Rio nor have they been resolved by later developments.

INTERNATIONAL CORPORATE ENVIRONMENTAL COMPLIANCE AND AUDITING PROGRAMS

August, 1995

by Ridgway M. Hall Jr. and Kristine A. Tockman

GATT

The original GATT was written over 40 years ago when environmental policy was in its infancy; consequently, there are no major environmental measures in the GATT itself. However, there are some exceptions to a country's GATT obligations based on environmental protection. Article XX (b) exempts measures taken that are "necessary to protect human, animal or plant life or health." Article XX (g) exempts measures "relating to the conservation of exhaustible natural resources if such measures are made effective in conjunction with restrictions on domestic production or consumption." These exceptions are made under the condition that the measures not be "applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail, or a disguised restriction on international trade."

There has been widespread disagreement about how to interpret GATT rules to reflect environmental concerns while maintaining free international trade. Some of the most controversial issues are as follows:

1. Production and process methods. GATT rules prohibit a country from using production processes as a way to distinguish (and consequently discriminate against) an imported product that is physically indistinguishable from a domestic one. Since sometimes it is not the product but the production methods themselves which harm the environment, it is desirable to be able to differentiate between products based on their production methods. If this were allowed, on the other hand, countries could easily construct production processes designed to exclude foreign products. A nominally environmentally motivated measure could be tailored to restrict imports.

2. GATT and International Environmental Agreements (IEAs). It has been proposed that GATT be amended to allow countries to impose trade measures for environmental purposes only when those measures are related to an IEA. Advocates of this approach feel it will limit the ability of countries to use the environment to disguise trade barriers made for protectionist purposes.

3. Use of Trade Measures to Protect the Environment. The United States has long used trade measures to protect the environment. U.S. trading partners are concerned with what they see as a U.S. trend to impose such trade measures to protect the environment outside U.S. jurisdiction without international consensus. Much debate focused on limiting countries' ability to impose unilateral trade restrictions.

The WTO was created to help implement the agreements reached during the Uruguay Round negotiations and to provide a permanent forum to address new international trading issues. The preamble of the Agreement Establishing the World Trade Organization states that the parties agree to pursue trade "with the objective of sustainable development, seeking both to protect and preserve the environment and enhance the means for doing so in a manner consistent with their respective needs and concerns at different levels of economic development . . . ." This is the first time that a major multilateral trade agreement has recognized sustainable development as a guiding principle.

The Uruguay Round Ministerial Decision on Trade and the Environment, signed on April 14, 1994, seeks to coordinate trade and environment policy by establishing a Committee on Trade and the Environment under the WTO. The Ministerial Decision directed the Committee to make environmental and trade policy mutually supportive using the following terms of reference:

1. identifying trade and environmental policy linkages to promote sustainable development;

2. giving special consideration to the needs of developing countries;

3. avoiding protectionist measures while promoting environmental objectives agreed to at the U.N. Conference on Environment and Development in Rio de Janeiro;

4. implementing trade disciplines to govern trade measures used for environmental purposes as well as environmental policies that have significant trade effects;

5. making recommendations to ensure these goals are fully compatible with the international trading system.

NORTH AMERICAN FREE TRADE AGREEMENT

The scope and depth of environmental provisions in the North American Free Trade Agreement (NAFTA) represent an unprecedented attempt to deal with environmental problems raised by international trade and will have far-reaching effects on future trade agreements. NAFTA's environmental protection provisions are much stricter than those in GATT. Unlike the original GATT, whose text does not include the word "environment," environmental issues were an integral part of NAFTA negotiations. The environmental

provisions were drafted to ensure that the parties could take legal action to protect the environment while not impeding free trade.

NAFTA states that the United States, Canada, and Mexico must trade and invest "in a manner consistent with environmental protection and conservation," to "promote sustainable development," and to "strengthen the development and enforcement of environmental laws and regulations." Under NAFTA's TBT Agreement, each country may set its own standards of environmental protection as long as the standards do not act as unnecessary obstacles to trade. NAFTA also discourages pollution havens, stating that countries should not encourage investment by lowering their environmental standards.

In fact, NAFTA supports the principle that environmental standards should be harmonized upwards. Parties are called on to "pursue equivalence" and use "international standards" as a basis, but "without reducing the level of protection of human, animal, or plant life or health."

Expected benefits of increased trade and investment include more available resources being devoted to environmental protection and cleanup and an increase in environmentally friendly products and services. Growth and higher incomes also help raise interest in environmental protection.

The dispute resolution measures in NAFTA place the burden of proof on the country challenging an environmental regulation. A country defending an environmental standard can elect to have the case decided by a NAFTA panel rather than a GATT panel. The right to select the forum applies only under certain environmental treaties or domestic environmental laws. Therefore, if a country imposes an environmental measure aimed at protecting the "global commons," the complaining country, rather than the defending party, chooses the forum.

During his campaign, President Clinton indicated that NAFTA needed stronger environmental provisions before it could be signed. Pursuant to the President's statements, negotiations commenced on the North American Agreement on Environmental Cooperation (NAAEC), which became known as a "side" or "supplemental" agreement to NAFTA. The NAAEC was reached on August 13, 1993, and finalized in early September.

The NAAEC's objective is to promote sustainable development, cooperation in the protection of the environment, and compliance with environmental laws. The NAAEC requires each country not only to ensure that its laws provide for high levels of environmental protection, but to strive continually to improve those laws. Each country must publish laws, regulations, procedures, and rulings and must promote public participation in developing environmental laws and policies.

The NAAEC established the Commission on Environmental Cooperation. The Commission is charged with facilitating cooperation between the United States, Canada, and Mexico on virtually any environmental issue. Reports must be prepared on particular environmental issues, the state of the North American environment, and the activities each country has taken to fulfill their treaty obligations. The Commission's governing body, the Council, must monitor NAFTA's environmental effects. The Council's subsequent reports could play a very important role in determining the relationship between environment and trade.

Part 6. STATE COMPLIANCE WITH INTERNATIONAL ENVIRONMENTAL LAW: THE RUSSIAN FEDERATION

International law has the priority over the national legislation in Russia. The Article 15 of the Russian Constitution states that "commonly recognized principles and rules of international law and international agreements of the Russian Federation form a constituent part of its legal system. If an international agreement of the Russian Federation establishes rules other than those provided for by the law the rules of the international agreement are complied with."[18] *Because of the principle of international law priority, the World Declaration of Human Rights (1948), the international covenants on human rights (International Covenant on Civil and Political Rights, and the International Covenant on Economic, Social and Cultural Rights. 1966). the European Convention on Protection of Human Rights and Fundamental Freedoms (1953). the European Social Charter (1965), Vienna Convention for the Protection of the Ozone Layer (1985), Montreal Protocol on Substances Depleting the Ozone Layer (1987), Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal (1989), Stockholm Declaration on Environment and Development (1992), Stockholm Declaration of Principles for the Preservation and Enhancement of the Human Environment (Stockholm Declaration) and the United Nations Declaration on Environment and Development (Rio Declaration)and many other special international legal instruments relating to environmental protection and natural resource use to which Russian is party, are directly applicable in Russia.*[19]

The basic environmental acts comply with the principle of international law priority and other international environmental principles. The environmental legislation in Russia has

[18] *The Constitution of the Russian Federation*. Available at http://www.constitution.ru/en/10003000-01.htm (accessed April 10, 2016

[19] *Oleg Kolbasov (Deceased). - International Legal Instruments and Mechanisms on the Environment A Russian Perspective. In: AREA STUDIES -RUSSIA (Regional Sustainable Development Review). Vol. I. Nicholay Laverov (ed.). 2009. EOLSS Publishers/UNESCO.*

changed greatly since the 1990s. For the first time in the Russian history the Constitution has established the basic environmental rights and obligations in its Articles 42 and 58. These provisions form the basis for plethora of regulations of environmental issues.

Pursuant to Article 42 of the Constitution, each individual has the right to a favorable environment, true information on environmental conditions, and compensation for damage caused to health and property by environmental change or degradation. The criteria for determining favorable environmental conditions include international and national environmental quality standards, pollution emission limitations, and limitations on other environmental impacts. These include limitations on noise, radiation, and electromagnetic impacts, requirements for waste storage, standards for land zoning, limitations on the maximum allowable extraction of raw materials, and natural resources and products, as well as recommendations for balancing the components and state of the natural environment (availability and spatial distribution of forests, water availability, biodiversity, etc.). The right to have access to information about the environment proclaimed in the Constitution, is regulated in legislative acts and regulations, and is protected by the judiciary. The right to compensation for damage caused to an individual's health and property by an environmental change or degradation is established and regulated by administrative, civil, and criminal law, and is protected by the judiciary, hi addition to these rights, the Constitution proclaims the obligations of citizens to treat natural resources with care, and to protect the natural environment. The Constitution also determines the obligations of the state to protect the environment.[20]

The constitutional norms are specified in the legislation on the federal and regional level. The environmental legislation consists of the set of federal laws and many subsidiary legislative acts such as Government resolutions, Ministry orders, directives, etc. which clarify the provisions of laws. The most important environmental laws in Russia are: Federal Law "On Environmental Protection" (2002); Federal Law "On Environmental Impact Assessment" (1995); Federal Law "On Specially Protected Areas" (1995); Federal Law "On Atmospheric Air Protection" (1998); Federal Law "On Wastes of Production and Consumption" (1998);Water Code of the Russian Federation (2006); Forest Code of the Russian Federation (2006); and Land Code of the Russian Federation (2001).The above-mentioned legislative acts form the basis for the state policy of the Russian Federation in the field of environmental protection. These laws established the institutional arrangements, both administrative and economic mechanisms for environmental enforcement and compliance, as

[20] Ibid

well as the set of requirements for enterprises in the field of resource use and environmental protection.

The executive authorities of the federal, regional and local levels are obliged to ensure proper exercise of the environmental rights and obligations stated in the Constitution and the laws. They regulate the use of natural resources and environmental protection, determine and control the legal status of natural objects and areas, direct human activities that impact the environment. The main instruments of the executive branch are environmental monitoring and control, system of measures to prevent accidents, setting environmental standards, conducting environmental impact assessment, processing environmental payments and participation in international cooperation on environmental issues.

Russia traditionally takes part in international cooperation on environmental issues. The First Conference on International Conservation of Nature (Beni) was held on November 17-19. 1913. Delegations from 17 countries (Switzerland. France. Germany, Austria. Sweden. Norway. Belgium, the Netherlands. Spain. Portugal, Denmark. Italy. Great Britain. Argentina. Australia, the US and Russia) attended the conference. It was decided to set up an advisory commission for international conservation of nature. However, owing to complex international political circumstances, the Commission has not actually started work. Full-scale international cooperation on environmental protection gradually developed after the Second World War under the support of the UN. UNESCO. FAO. and other organizations. The then Soviet Union became a Party to many environmentally oriented international legal instruments: the International Convention for the Regulation of Whaling (1946). the International Convention for the Prevention of Pollution of the Sea by Oil (1954), the Convention on the Continental Shelf (1958). the Ramsar Convention on Wetlands of International Importance especially as Waterfowl Habitat (1971). and others. The number and significance of international legal instruments aiming to solve environmental problems grew considerably after the UN Stockholm Conference on the Human Environment (1972). These instruments embraced practically all components and spheres of the global environment, as well as diverse human activities connected with impact on the environment. In the present millennium, Russia is a party to over 100 multilateral global and regional conventions and other acts relating to environmental protection and natural resource use. Russia has concluded many general and specific agreements on cooperation in environmental protection and in determining the regime of natural resource use on a bilateral basis, including agreements on the protection and use of transboundary watercourses and international lakes, and on the protection of migratory birds (among others). Russia uses widely such forms of cooperation as international conferences and organizations. It

participates as a member in the work of over two dozen governmental and non-governmental organizations of environmental character.[21]

RUSSIA AND INTERNATIONAL ENVIRONMENTAL COOPERATION

Vladimir Kotov and Elena Nikitina

Helge Ole Bergesen, Georg Parmann, and Øystein B. Thommessen (eds.), Green Globe Yearbook of International Co -operation on Environment and Development

CHANGES IN POLICY AND INSTITUTIONAL FRAMEWORK OF COOPERATION

Following the disintegration of the USSR in late 1991 Russia has become its legal successor in various international environmental agreements. Currently it is a member of nearly one hundred international accords on nature and resource protection and conservation. Approximately seventy of these are multilateral and the rest bilateral. Russia participates in the environmental activities of international intergovernmental and non-governmental organizations, in their co-operative research programmes.

Significant changes are under way in the policy and institutional framework of Russia's international environmental co-operation. However, the system of co-operation is still far from its final form, and is of a transitional character. In large measure it reflects the serious political and economic changes initiated in Russia during 'transformation'—a transition from a totalitarian to a democratic state, from a commandbased to a market economy. Environmental co-operation today represents a conglomeration of new and old approaches, of changing tenets, perceptions, and concepts. It involves both the inertia of older days and an impulse towards the new; disillusionment with the past and a desire to escape from it. A set of different factors defines the general framework of co-operation and shapes its structure, as well as new potentials for the development of co-operation and its limitations.

Perestroika followed by 'transformation' in Russia marked a turning point in the environmental co-operation system. In particular, national and international environmental policies abandoned the ideological and institutional framework of a totalitarian regime. A new basis for international co-operation with the West was under formation. Progressive environmental policy started taking shape, with restructuring of environmental management, adoption of new legal and economic mechanisms, and an upsurge of the environmental movement and environmental glasnost. Environmental policy became decentralized, with wider rights granted to the regional and local levels. New independent environmental institutions have now been created in Russia, destined to represent Russian interests in international environmental co-operation.

[21] Ibid

However, there are also serious limits to the effectiveness of international environmental co-operation. The development of international environmental co-operation between Russia and the West has been defined largely by an inertia acquired back in Soviet totalitarian times, when the major reasons for active participation in cooperation lay rather far from a true environmental involvement. These goals were mainly of a declarative character, highly politicized in their essence, and tightly integrated into the foreign policy priorities of a communist state. Numerous international environmental commitments were undertaken by the Soviets without any in-depth evaluation of their effects on the national scale, of the possibilities for compliance, and the opportunities they might present—in balance, of real environmental interests. Some former institutional characteristics and perceptions continue to have an impact on the system of international environmental co-operation, which is still, as mentioned, in a transitional phase.

It is not only the legacy of communism that shapes Russia's major problems in the field of international environmental co-operation today, and the implementation of international environmental obligations. The ‘transformation’ process has, in addition to its positive effects on environmental policy formation, had certain negative implications for ecological stability in the national scale, as well as for international environmental security. It has imposed certain limits on environmental problem-solving in Russia, and on the effectiveness of Russia's participation in international environmental co-operation. Due to the general weakening of state authority during ‘transformation’, the state has seen a sharp decrease in its potential for effective action in the field of environmental protection, and this in turn negatively affects the prospects of international environmental co-operation. Industrial production has plummeted (by as much as 50 per cent in 1994 compared to the 1990 level), thereby limiting the financial opportunities of the state for implementation of its national and international environmental policies. Investment has come to a standstill, largely as a result of extreme inflation. Subsequently, the processes of structural changes in the economy, the introduction of clean technologies, and the installation of purification facilities have been frozen. Domestically there seems to be a widening gap between Russia's recent progressive intentions in international environmental co-operation in general and in dealing with global environmental changes in particular, and their implementation under the current situation.

During the 1990s Russia has also become involved in the UNCED (United Nations Conference on Environment and Development) process. This has had a considerable influence not only on its national environmental policy, including adoption of the concept of sustainable development among its priority goals, but also on strategies towards participation in

international environmental co-operation towards solving the major issues on the global environmental change agenda.

How can we evaluate the recent modifications in the political, ideological, institutional, and economic framework of Russia's international environmental co-operation? It seems that in general environmental issues are beginning to rank higher on the national scale of priorities (despite some short-term fluctuations). Environmental issues have been depoliticized, and are becoming more independent of other goals. We cannot yet say that they are playing the major role in the political and public life of contemporary Russia, that they do in Western societies. However, the clear increase in the significance of environmental issues and of the international environmental agenda indicates that important systemic alterations are under way in this country.

Recently there have been institutional changes in the framework of international co-operation. Under the previous total supremacy of the state under communism, no social function (no matter how important) not performed by a special governmental institution had any chance for realization. Throughout practically the whole Soviet era Russia's natural endowment was not represented institutionally within the structure of power. It was considered that the industrial ministries that exploited natural resources and the environment were to protect them as well. In fact, within this system ministries were over-exploiting natural resources, polluting the environment—and regulating themselves in their own activities. There was no specialized state institution to protect nature, nor any specialized institution dealing with issues of international environmental co-operation.

As a result of *perestroika*, major institutional changes were undertaken in this field. The State Committee on Environmental Protection was formed in 1988, and that meant that control functions over polluters and resource-users were withdrawn from the latter. The Committee became responsible for coordinating international environmental co-operation, as other ministries had transferred their functions of regulating the implementation of international environmental agreements. Thus, the environmental management function acquired its independence. Later on, during ‘transformation’, sectorial industrial ministries were dismantled in Russia, while the State Committee on Environmental Protection saw its status raised, and was turned into the present Ministry of the Environment and Natural Resources. A 1994 statute underlines its special institutional role in the regulation of international environmental cooperation. The ministry is to be in charge of the implementation of the country's environmental obligations as result of Russia's participation in environmental conventions and accords, and in activities of international organizations;

moreover, international activities of other governmental bodies in the sphere of the environment and resource use are to be coordinated with the ministry.

Currently a special inter-agency body is being established within the ministry with participation of other governmental organs. It is to be responsible for the implementation of international environmental projects with participation of the World Bank and other international financial organizations. Following the decentralization of environmental management in Russia, a considerable amount of environmental ministry competence was transferred to regional and local organs. This meant greater opportunities for foreign partners to establish closer environmental co-operation at the local level.

The introduction of a new system of economic mechanisms of environmental management in Russia has also spread to the sphere of international co-operation. Charges and fines for pollution and resource use are being applied to solving not only domestic environmental problems, but global ones as well. Carbon-dioxide emission charges are now being adopted in Russia, together with a system of fees for the production and consumption of ozone-depleting substances. These are meant to induce enterprises to finance industrial restructuring and to switch over to alternatives to ozone-depleting substances.

New actors – independent producers, non-governmental organizations, the mass media – that were previously totally controlled by the state, have appeared on the national arena. It is inevitable that the structure of interests that they represent and implement in the environmental sphere will change. This issue is of high importance, especially for the West trying to create new patterns of co-operation with Russia. Previously environmental interests were suppressed. With democratization, they are being gradually realized and revealed. We may expect them to take shape in the sphere of international environmental policy in the near future, associated with a return to the normal international practice of identifying and protecting national interests.

Such a return to conventional practice would help to enhance the predictability of Russia's international environmental policies, making it dependent on ecological imperatives, not on exogenous pressures. That would have a positive effect on international environmental cooperation with Russian participation. On the other hand, one should take care not to view the future prospects associated with these changes through rose-coloured spectacles. Many obstacles still exist. One of them lies in the deep-rooted habits of Russian bureaucracy, and in its aspirations to control completely the processes within its competence. Without constant assessment and pressures from the democratic public on the bureaucratic apparatus, serious failures are possible.

GOALS AND STRATEGIES OF INTERNATIONAL ENVIRONMENTAL COOPERATION

The early 1990s have been marked in Russia by the formation of new strategies of environmental co-operation, developed within the framework of significant modifications in environmental policies. These strategies have been normatively fixed at the governmental level in a number of official documents. Basic among them is the Law on Environmental Protection (19 December 1991), the first in the history of the country. It envisages that in its environmental policies Russia will proceed from the necessity to provide international environmental security and the development of international environmental cooperation. The following major principles are to guide national approaches in this field:

- every state has the right to use its environment and its natural resources for purposes of economic development and providing for the needs of its people;
- the environmental welfare of one state cannot be provided at the expense of others;
- the economic activities of a state should not damage the environment within and beyond its jurisdiction;
- any activity with unpredictable environmental consequences is inadmissible;
- global, regional, and local control should be provided over the state of the environment and changes in it;
- free international exchange of ecological information and environmentally safe technologies should be maintained;
- states should provide mutual assistance in case of environmental emergencies;
- all environmental disputes are to be settled by peaceful means.

Article 92 of the Law, in which these principles are set out, has a declarative character, announcing the state's obligations towards its public and to the international community to work towards environmental security. The major principles of environmental cooperation stated there were already established at the international level (the 1972 Stockholm Conference, the 1982 World Charter on Nature). Russia's environmental law was adopted in the midst of the most romantic period of reforms; as a result, some of its provisions, including those dealing with the issues of international co-operation, are characterized by a certain detachment from hard reality. For instance, if principles of environmental damage or of exclusion of environmental risk are to be executed in practice, then Russia will have to halt a greater part of its economic activities.

As yet, no final concept for Russia's participation in international environmental co-operation has been shaped. The Ministry of the Environment has indicated in the major federal programme, ‘Environmental Security of Russia’, that it is necessary ‘to work out a

concept and prior directions' for Russian participation in international environmental co-operation during a period of transition to a market economy, as well as 'major measures to provide compliance with international obligations in support of international environmental security'. Though these goals were set by the ministry early in 1993, as yet no results of its efforts on the issue have been announced.

Today the UNCED process provides the framework for the elaboration of conceptual designs and strategies of Russia's international environmental co-operation. Participation in UNCED preparations was initiated by the Soviet Union, and Russia as its successor took part in the Rio Conference (in which seven states of the former USSR participated) and in the implementation of its provisions. The UNCED process has had a rather strong impact on Russia's environmental policies and strategies. During UNCED, Russia signed the Convention on Biological Diversity and the Framework Convention on Climate Change, and supported Agenda 21 as well as principles of rational use, conservation, and utilization of forests. Russia is also a member of the Commission on Sustainable Development. After the Conference, Russia held parliamentary hearings on the implementation of the Rio provisions in 1993. Institutional structures—an inter-agency commission on the realization of UNCED provisions—were established, and mechanisms for control over their adherence are being instituted.

Russia is one of few countries to adopt a national action plan on the issue—'the National Plan of Action for Realization of the UNCED Decisions'. This serves as a basis for Russia's domestic efforts to provide sustainable development, and it incorporates major items of strategies and concrete measures in environmental protection along the lines fixed in Agenda 21, with sections on environmental management, international co-operation, environmental education, priority measures to improve the state of the environment, and mechanisms for realization of the plan.

The major impact of the Rio process would seem to be that the concept of sustainable development is becoming a foundation for Russia's environmental policy. According to a recent presidential decree (No. 236 of 4 February 1994), a national programme is to be elaborated on implementation of a strategy of sustainable development. This strategy is to envisage concrete actions and principles of national policy realization both at the domestic and international levels.

A wide range of provisions on international co-operation are conceived in Russia's national plan of action on UNCED implementation. First, it indicates the major directions for realizing the 1992intergovernmental environmental agreement of the Commonwealth of Independent States (CIS) and for developing international cooperation between the former

Soviet republics. Secondly, it notes that the international obligations of Russia within a framework of environmental accords need close integration with other countries, especially European ones; the special role of European ministerial conferences on the environment is stressed. Thirdly, implementation of the UNCED national action plan requires an expansion of foreign financial and technical assistance at the bilateral level and within the framework of international financial organizations, especially the World Bank and the European Bank for Reconstruction and Development.

In evaluating the impact of the Rio process on Russia, V. Danilov-Danilian, Russia's minister of the environment, indicated that the major priorities of Agenda 21 aimed at providing environmental policy formation in the developing countries, and expanding their environmental activities. Various actions had already been undertaken in Russia in this field, especially regarding its scientific potential, development of environmental protection mechanisms, and environmental monitoring. The minister stressed that the real problem today lay in defining the mechanisms of international co-operation to provide financing for global environmental problem-solving, as well as the formation of national control mechanisms over the distribution and use of financial resources earmarked for this purpose.4 At the Rio Conference, Russia, together with other countries of Eastern Europe, was accorded the special status of a state in transition to a market economy, with certain privileges granted in financing of environmental measures, in technology transfers, and in financial allocations to international environmental funds. Provisions for the transitional period were reflected in the Russian national plan of action which envisaged modifications in management mechanisms to adapt to a market economy, including a gradual shift from a centralized and strictly controlled system of management to a decentralized one.

In the course of the post-Rio process Russia took part in the 1993 Lucerne Conference on the environment in Central and Eastern Europe, where a programme of action to solve the most urgent problems in these countries with transitional economies was adopted. Russia has proposed a list of specific sites and territories which need foreign aid in order to improve their environmental situation.

The Rio process has affected and diversified the framework of Russia's environmental activities, especially within the agenda for global environmental change. The process of formulating goals and strategies and undertaking actions is developing—some of these initiated earlier on certain aspects of global change management, and some of them to be shaped in the near future. Together with more traditional issues (ozone-layer protection, climate change, transboundary air pollution), new fields of international co-operation for Russia have emerged. These include protection of biodiversity, conservation of forests,

development of nature-protection areas and reserves, environmentally benign destruction of chemical and nuclear weapons, and solving transboundary environmental problems between the states of the former Soviet Union. The domestic implementation of international provisions on these issues requires serious restructuring and behavior adaptation on the part of various actors. For instance, the domestic realization of the Rio principles on conservation of forests requires certain amendments to Russia's national forestry strategies. It is necessary to increase control over timber-cutting and export, to develop legislative norms for forest conservation, and to adopt a national programme for the conservation and reproduction of Russian's forests. Indeed, these forests account for a quarter of the world's total forest resources and are important in providing ecological stability on a planetary scale. Domestic implementation of the provisions of the biodiversity convention necessitates the elaboration of a national strategy for conservation and sustainable use of elements of biodiversity, including preservation of *in situ* and *ex situ* species, as well as scientific research and specialist training. Particular attention should be paid to establishing mechanisms of access to information on genetic resources and technologies, and national measures to finance the implementation process.

Assessing the first steps which Russia has taken in formulating its national goals and strategies for international environmental cooperation, one might conclude that, despite the abundance of official government documents regulating the country's international environmental co-operation, there is as yet no clear and comprehensive concept on this issue. However, participation in international environmental co-operation is not engaged in for its own sake: it is motivated by the necessity of solving environmental problems at the national and international levels. What major environmental concerns is Russia now facing whose solutions will require such mechanisms as international cooperation? Unfortunately it is still rather difficult to get clear answers to this question. Several official documents published recently in the press and covering goals and strategies on international environmental cooperation share a common serious shortcoming. Basically, they seem to be mere summary lists of ministerial guide-lines, composed with such remarkable bureaucratic skillfulness as to be reminiscent of the old adage ‘a tongue is given to conceal one's thoughts’. In Russia, government documents on environmental issues ought to be expressed in the most democratic way, so that the public can catch their essence. Instead, they often follow the old bureaucratic traditions – in the form of a charade created for the purposes of internal bureaucratic games.

ENVIRONMENTAL INTERACTIONS OF RUSSIA WITHIN THE COMMONWEALTH OF INDEPENDENT STATES (CIS)

The disintegration of the Soviet Union had a considerable effect on Russia's environmental co-operation. Fourteen new neighbours emerged, with their specific environmental interests and priorities. Serious problems arose in connection with adherence to the international environmental obligations of the former USSR, accompanied by problems in environmental interaction between former Soviet republics and the settlement of previously latent controversies between them. During the Soviet period these disputes had been mitigated by the central government, which had defined for all Soviet republics their common strategy of participation in international environmental regimes. The approaches of Ukraine and Belarus as UN charter members were coordinated with the position of the USSR, so that all of them functioned as a single actor. The central government controlled compliance with international environmental obligations, and determined major directions and implementation patterns for the Soviet republics.

Now new states have acquired sovereign rights over their natural resources and jurisdiction over environmental protection, and are shaping their own independent environmental policy, also in international environmental co-operation. This has resulted inconsiderable variations in national approaches towards participation in international environmental regimes and adherence to the treaty obligations of the former USSR. Today the implementation of certain environmental commitments is in jeopardy, and the extent of compliance with them is decreasing.

A new set of questions has emerged recently. Russia has declared itself the successor to all international obligations of the former USSR, but what is the actual division of responsibilities between the other new states on this issue? How will the new actors interact, with Russia representing them in international regimes? What is to be the role of the new states in connection with the global environmental change agenda? Will CIS become a member of international regimes, as is the case of the European Community?

Considerable deviations have become apparent in the approaches taken by the new states towards global environmental changes, especially as regards the issues of global climate change, ozone-layer depletion, and acid rain. Attitudes towards the assessment of global warming risk are addressed from national perspectives, with consequent variations in response. The distribution of temperature and precipitation patterns as a result of climate change might have differing effects on nature and the economy of the various states. Considerable differences exist in the ‘input’ of certain states as regards global warming – much greater in the case of the industrially developed regions of Russia, Ukraine, Belarus, and the Baltic states. This means that they would have to bear higher costs to restructure their

industries to meet environmental requirements. All these factors affect their attitudes to the emerging international climate-change regime.

The regional prospects of implementing the ozone-layer protection regime within the CIS are rather uncertain as well. After the disintegration of the Soviet Union, the problem of coordinating ozone layer protection activities among the former republics emerged. On the initiative of Russia's Ministry of the Environment, an inter-state coordination meeting was convened in late 1992 on ozone layer protection, with the participation of the CIS, the three Baltic states, and Georgia. Issues of compliance with the Montreal Protocol were discussed, as well as those of scientific technological co-operation. Also on the agenda were the problems of other states participating in the international ozone layer regime, and the possibility of joint obligations as a group of states, with mutual obligations, as well as the question of creating a multilateral fund to finance co-operative research. The possibility of establishing a joint co-ordination mechanism within the CIS was indicated. Among the important questions dealt with was adherence to the international obligations of Russia in terms of control over trade in restricted chemicals, including with non-parties. Though the major production and consumption of ozone-depleting substances is concentrated in Russia, various ties exist between the former republics (technologies, raw materials, export import operations). The amendment to the Montreal Protocol regarding trade restrictions would affect the interests of many of them. However, as yet no solution has been found to the problem of how to modify trade patterns to adhere to international provisions.

A range of interstate environmental problems within the CIS has come into existence. In particular these concern air and water pollution regulations and protection of living resources of the inland seas of the former Soviet Union. New joint approaches are urgently needed to protect the biological resources of the Caspian Sea—including the elaboration of an interstate agreement between Kazakhstan, Turkmenistan, Russia, and Azerbaijan on fisheries conservation and reproduction, especially sturgeon stocks. Another item on the interstate environmental agenda concerns solving the problem of the Aral Sea by mutual efforts, not only of the regional states, but on a broader basis. As yet there is no environmental protection programme for the rivers and seas of the Arctic basin. Russia needs to regulate with Kazakhstan the issues of pollution prevention in the rivers Irtish and Ishim, which bring their highly polluted waters from Kazakhstan, and deliver them to the Arctic Ocean. Co-ordination between Russia and Ukraine is necessary to regulate transboundary water pollution in the rivers of the North Donets, and the Desna, and between Russia and Belarus, on the River Dneper.

Various factors define the potential for environmental interstate disputes. In 1993 the local council of Krasnoyarsk in Russia imposed a ban on deliveries from Ukraine of wastes from nuclear power stations for recycling at the chemical plant Krasnoyarsk-2. However, this ban was not called because of environmental considerations: Ukraine had not been meeting its obligations for foodstuff deliveries to Siberia, and in response to proposals for negotiations just kept silent but continued its nuclear wastes deliveries.

Serious disagreements may arise between Russia, Ukraine, Belarus, Moldavia, and Kazakhstan on transboundary air pollution. Russia, for instance, receives ten times more air pollutants from Ukraine and Belarus than it sends in the opposite direction. The major source within the former Soviet republics is Ukraine, with air pollutants export totaling that of Germany and Poland combined (in 1990 its SO2 and NOx exports to Russia accounted for 405,000 and 118,000 tons respectively). Russia is sending to Kazahkstan about twice as much air pollutants as it receives (in 1990, 70,000 and 40,000 tons). The question of regulating this problem within the common Soviet territory had not been raised before. Inter-republican fluxes were not controlled within the Long Range Transboundary Air Pollution (LRTAP) regime, since they were considered internal. Recently they have gained international status, but they are still not regulated. New CIS members not previously members of the LRTAP regime might decide to join. The Baltic states have already declared their intention. As to Moldova, however – a considerable source of transboundary air pollution in Europe—the prospects are still uncertain.

At present, priority is being given to the institutionalization of environmental interactions of new independent states with each other, as well as with the West. Various efforts have been undertaken to coordinate their environmental activities. A multilateral interstate environmental agreement was signed within the CIS at the beginning of1992 (by Azerbaijan, Armenia, Belarus, Kazakhstan, Kirghizia, Moldova, Russia, Tajikistan, Turkmenistan, and Uzbekistan), which envisages coordination of environmental policies and joint financing of environmental programmes. It has laid a basis not only for international co-operation between CIS members, but also for coordination and elaboration of joint approaches towards their participation in international environmental regimes. The major goals of this agreement are harmonization of environmental legislation, norms, and standards; co-ordination in introducing economic mechanisms of environmental management; and implementation of joint projects aimed especially at solving transboundary problems. Also foreseen are promotion of environmental monitoring systems, data exchange, a system of national parks, and mutual assistance in case of environmental emergencies. An interstate

environmental council and environmental fund have been established for implementation of this agreement.

Several bilateral environmental agreements have recently been adopted between Russia and other CIS members, with the emphasis onco-operation on specific environmental problem areas. In 1992 Russia signed intergovernmental agreements with Kazakhstan and Ukraine on the joint use and protection of transboundary watercourses. However, a long way lies between their signing and actual implementation within the CIS.

RUSSIA AND THE GLOBAL ENVIRONMENTAL CHANGE AGENDA

During the final years of its existence the Soviet Union, and thereafter Russia, became involved in the process of international regime formation dealing with global environmental problems—acid rain, ozone layer depletion, and global climate change. In connection with the management of these three environmental risks we may trace different histories and patterns of domestic implementation, and varying results when it comes to fulfilling international obligations.

Acid Rain and Transboundary Air Pollution

The elaboration of the 1979 Convention on Long Range Transboundary Air Pollution (LRTAP) coincided with the period of East–West detente in the late 1970s. The national approaches taken by the USSR and its readiness for domestic implementation had their national specificities. The major issue was that, due to westerly air currents, the import of air pollutants to the European part of the country was considerably higher than their export across the Soviet Union's western border. The USSR, and Russia within it, were victims of transboundary air pollution. By the beginning of the 1990s about1,730,000 tones of sulphur dioxide (SO2) was carried annually across the western border of the USSR from Europe, whereas five times less was going in the opposite direction. Nitrous oxide (NOx) imports accounted for about 930,000tons, with their export being fifteen times less. The major fluxes originated in Poland, Germany, Czechoslovakia, Hungary, and Finland. The exception was Scandinavia: SO2 export from the USSR was higher than import, but the situation for NOx flows was quite the opposite. Norway and Sweden were net-importers of SO2.

A provision envisaging regulation either of air pollutant emissions or their transborder flows was introduced into the convention at the request of the Soviet Union. For the USSR this meant that in order to comply with the Sulphur Protocol, major efforts to reduce air pollutant emissions would have to be concentrated mainly at enterprises situated along its western borders. Only the European part of the country was included in the area covered by the convention. Thus, measures to restructure polluting industries were not to be applied to the industrialized regions of non-European Siberia.

Domestic implementation of this international regime coincided with considerable structural changes in Soviet energy policy. At the end of the 1970s and the beginning of the 1980s the energy sector of the European part of the USSR was in the process of shifting from coal to natural gas and to nuclear energy development. These radical changes in the national energy balance that needed considerable governmental capital investments were not attributable to the Soviet entry into the international regime. Rather, these changes were the result of the impact of indigenous factors—the exhaustion of energy resources in the European USSR, the necessity of their transportation from the north and Siberia, and the shift to cheaper fuel—natural gas, and so on. All these factors served to facilitate for the USSR compliance with the Sulphur Protocol. From the beginning of the 1980s an active national policy for air protection was launched—with adoption of the law on air protection, elaboration of norms and standards, installation of air purification facilities at industrial enterprises, and the compiling of a register of air pollution sources.

Various efforts were undertaken to reduce emissions from industrial enterprises engaged in the production of energy, ferrous and nonferrous metals, chemicals, and fertilizers that contributed to transboundary air pollution. As a result, SO2 transborder flows were reduced, and national obligations were met. Sulphur dioxide emissions from the European USSR dropped by 29 per cent during the years1980–90. In Russia today we can note a 41 per-cent reduction from the base level of 1980. However, these reductions are also attributable in part to the severe decline in industrial production in Russia as a result of economic crisis. In June 1994 Russia became a party to the Protocol to the LRTAP Convention on Further Reduction of Sulphur Emissions.

Nevertheless, despite numerous attempts to solve the problem of reconstructing the non-ferrous enterprises on the Kola Peninsula—-major contributors to transborder pollution of Scandinavia—a satisfactory answer has not been found. In 1992 SO2 emissions from the Severonikel and Pechenganikel smelters on Kola accounted for 300,000 tons according to official figures. In addition to transborder damage, these emissions have an extremely negative impact on the Kola Peninsula and nearby Karelia. Emissions affect about 126 hectares of forests, one-third of the territory of the Lapland biosphere reserve, and residential areas of the natives of the north. At present, consideration is being given to options for solving this problem by the joint efforts of regional states. As a result of a tender invited by the Russian Ministry of the Environment, it seems likely that a Scandinavian consortium of Norwegian and Swedish companies will be involved in this work.

The issue of NOx air pollution has not been solved in Russia. Discharges from transport have increased considerably during recent years. This problem is receiving

considerable attention in Russia, since these emissions constitute about 41 per cent of the total NOx emissions, and there is a stable upward trend. Envisaged for the near future in Russia are measures to control emissions from cars and to introduce new emission standards similar to those in the West, as well as to shift transport to natural gas and to use catalytic converters. It appears that it is much more difficult to control NOx emissions than SO2 discharges. But in the absence of innovations and of control and monitoring over car emissions, the situation might deteriorate further in the future

Ozone Layer Protection

Over the two past decades the Soviet Union and then Russia have taken an active part in international research activities aimed at ozone layer protection. As a result of monitoring the dynamics of the stratospheric ozone layer, extensive data have been accumulated and analysed. At present a system of twenty-nine monitoring stations is functioning in Russia (forty-three in the USSR), created at the end of the 1950s as a result of the International Geophysical Year. The national system is incorporated into an international one, and there is daily monitoring of the state of the ozone layer over Russian territory. In line with international co-operative arrangements, data from German and Bulgarian stations are used in these evaluations. Operational data exchange on the state of the ozone layer over the Arctic was staged recently between Russia, Finland, and Canada, with Russia responsible or the publication of maps on its dynamics. Regular ozone layer monitoring has been organized on the four stations in Antarctica, and in 1987 this programme was expanded into a cooperative effort with German scientists. Russia has also participated in several projects within the framework of the World Meteorological Organization and UNEP (the United Nations Environment Programme).

Russia is responsible for about 9–10 per cent of the world's production of ozone-depleting substances. According to official figures in 1990 total production and consumption of ozone-depleting substances including halons accounted for 124,652 tons (with halons alone at 4,242 tons).10 Russia's Ministry of the Environment has indicated that in 1991 CFC (chlorofluorocarbons) production decreased from the previous year by 16 per cent, and halons by 40 per cent. The main production of ozone-depleting substances in the former Soviet Union is concentrated in Russia (80 per cent), and about 15 per cent in Tajikistan; other producers are located in Ukraine, Belarus, Lithuania, and Latvia.

From the mid-1980s the Soviet Union became involved in work on the formation of an international regime for the ozone layer. After signing the international agreement, a process of domestic implementation was initiated, including institutional formation, organizational measures, and elaboration of responses to the risk of ozone layer depletion. Two national

programmes were adopted on this issue: on research into the ozone layer (1990), and on elaboration of technologies of ozone-benign halon production (1992). Attempts to shape national goals and strategies were undertaken at the end of the1980s. It was decided to approach the task of reducing and preventing the risk of ozone depletion by means of control over production and consumption of ozone-depleting substances, with the goal being first to reduce, and finally to phase them out completely by the year 2000;provision was also made for research and monitoring of the state of the ozone layer. The provision to reduce and then to cease production and consumption of ozone-depleting substances was introduced in Russia's 1991 Law on Environmental Protection. Nevertheless, practical measures to implement the provisions of environmental law and environmental programmes have been realized rather slowly and ineffectively. Adequate government financing has not been provided, and specific reduction goals have not yet been imposed on target groups. This has resulted in partial adherence to international treaty obligations. According to an official statement issued by the Ministry of the Environment, Russia is currently not complying totally with the Vienna Convention and its Montreal Protocol. In 1992 obligations to reduce production and consumption of ozone-depleting substances were met, as well as the Protocol's provisions on information exchange and scientific research. However, due to the critical economic situation in Russia, the remaining obligations were not fulfilled, it was reported in 1992 at the fourth meeting of the parties to the Montreal Protocol. An additional set of serious obligations has been imposed on Russia after it signed the 1992 amendments to the Montreal Protocol. Starting from1996 Russia is to halt completely the production and consumption of refrigerants containing CFCs, as well as exclude all trade in them (at present about 50 per cent of the refrigerators produced in Russia are exported). Experts have warned that it may be difficult to restructure the industrial production completely during the remaining period and to meet international obligations.

Russia is currently in the process of elaborating a national programme: ‘Production of ozone-benign refrigerants and compliance with international obligations of Russia to protect the ozone layer. This programme envisages continuing ozone layer research, including the construction of a model of interactions between the ozone layer, man, and the biosphere, to provide regular monitoring of ozone layer dynamics. It presupposes elaboration of concrete actions to convert Russian enterprises to ozone-benign technologies, 17 collecting and recycling existing ozone-layer depleting substances. However, given the prevailing economic crisis in the country, the prospects of programme implementation would seem uncertain, and a gap might emerge between the programme as it has been elaborated and its actual implementation.

Protection of the Global Climate

Russian scientists have been involved in international scientific cooperation on the global climate (Global Atmosphere Research Programme, World Climate Programme, as well as in world climate conferences, and activities of the International Panel on Climate Change, etc). Since the 1950s M. Buidyko and his school have been engaged in research on global climate change; and their work, especially the scientific results of analogue palaeoclimatic reconstructions, has become famous in the world scientific community. Forecasts of global warming were presented internationally in the early 1970s. The results of analysis of data compiled in Russia for over a century, combined with the results of palaeoclimatic reconstructions, served as a basis for evaluations of global climate change and its impact on a national scale, as well as for the formulation of national responses.

Until recently, the management of global climate-change risk was not a priority item on Russia's national environmental agenda. The specifics of national perceptions of the effects of climate change have defined Russia's approaches towards the problem, as well as towards the formulation of goals and strategies, and participation in the international regime under formation. Russia's attitudes to this issue have been quite similar to those of the USA. According to Russian scientists, there still exists considerable uncertainty in perceptions on the comparative role of anthropogenic and natural factors in global warming. There are as yet no well-defined answers concerning the consequences of global warming for man and nature on a national scale. For instance, according to the work of M. Buidyko and other scientific assessments, most of the former Soviet territory, and especially areas north of 50 N latitude might benefit from global warming. On a national scale, a 5 per-cent increase in grain production is possible due to a predicted increase in the duration of the growing season by ten to fifteen days by the year 2005, and due to the positive agricultural effect of increased carbon dioxide content on crop production. The boundary of agricultural zones might expand northwards because of permafrost zonereductions. On the other hand, there might also be negative impacts of global warming. Due to changes in precipitation patterns drought might increase, especially in the southern areas, as well as the probability of crop failure. Changes in the permafrost areas might negatively affect engineering constructions.

National approaches to climate-change risk management were formulated by the end of the 1980s, based on the necessity to reduce the negative impacts. The goal was formulated: to stabilize greenhouse gas concentrations in the atmosphere at a level that excludes the negative anthropogenic impact on the global climate, in combination with an adaptation to the risk. After signing the UN Framework Convention on Climate Change in 1992 Russia began to undertake national institutional responses. In 1994 the Interagency commission to

coordinate national activities on the climate-change issue was established, and Russia has outlined an action plan for domestic implementation of the UN Framework Convention. The plan contains a set of measures, including preparation of national registers of emissions by sources and removals by sinks of greenhouse gases, and making these data available at the international level. Efforts in this direction for nitrous and carbon oxides were undertaken by the former State Committee on Hydrometeorology; similar activities are currently being organized for a broader range of greenhouse gases, including carbon dioxide. Another group of national obligations includes national efforts to limit greenhouse gas emissions and to enhance sinks so that by the year 2000 carbon-dioxide emissions will have been stabilized at the 1990level of about 650–700 million tons. The national programme foresees elaboration of measures to mitigate the impacts of global warming, as well as measures of industrial and social adaptation. It envisages the development of integrated plans for coastal zone management, agriculture, and water resources, and for protection of regions that might be affected by desertification, droughts, and floods.

A major potential for lowering greenhouse gas emissions appears to lie in the restructuring of national energy production and consumption patterns. The current energy intensity of Russia's GNP (gross national product) is two times higher than in the countries of Western Europe, and about one-third of the energy resources are wasted. Compliance with Russia's international obligations to reduce greenhouse gas emissions requires considerable investments in restructuring the energy balance. Despite the availability of various modern technologies in the energy, transport, and industrial sectors which might enable a downward trend in greenhouse gas emissions, during the past five years no policy of structural changes in Russia has-been implemented, nor have new technologies been installed, due to the lack of financial resources for industrial investment. However, Russia has been granted certain flexibility in terms of time-scales and emission-level reductions, by classifying it as one in a group of states with economies under transition. In recent years, a 7–10 per cent drop in carbon-dioxide emissions in comparison with the 1990 level has been noted in Russia as a result of lower industrial production. Russia would seem to have considerable prospects in international co-operation on the global warming issue connected with enhancing its greenhouse gas sinks, and especially through conservation and reproduction of its vast forest resources. According to figures from the Russian federal forestry service about one third of the national anthropogenic carbon dioxide emissions are absorbed by the Russian forests.

CONCLUDING OBSERVATIONS: NEW PROSPECTS, NEW POTENTIALS

Although Russia has undertaken a progressive reshaping of its environmental policies, serious difficulties still remain. It will not be easy to solve the problems not only of

compliance with international obligations, but also of the national implementation of international environmental agreements. The situation is defined by a wide range of political, socio-economic factors deeply rooted in the specifics of the transitional period in Russia.

The recent weakening of state authority has had extremely negative consequences for Russia's adherence to its international obligations. Due to the lack of adequate administrative control, environmental standards and norms adopted in compliance with international provisions are being violated. Weaker border controls, and higher levels of poaching in the country result, for instance, in increased non compliance with the obligations undertaken under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).

A certain shift can be noted towards giving priority to solving urgent environmental problems on the national and local scales, rather than problems of a global character. According to data from the early 1990s, practically none of the 750 non-governmental environmental groups registered in the former Soviet Union indicated global environmental protection among their established goals. Their activities were focused instead on regional and local environmental issues.

A crucial limiting factor is the lack of financial resources for domestic implementation of international obligations. Russia's 1994 federal budget allocates for environmental purposes about 0.6 per cent of its spendings, or about 0.15 per cent of GNP. Moreover, it seems that this downward trend in state financing of environmental activities will continue. Currently about one-tenth of the environmental programmes of the Ministry of the Environment receive funding. Only 37 per cent of the envisaged financial resources were actually allotted in 1993 to the major federal environmental programme ‘Ecological Security of Russia’. This deficit of federal resources for environmental purposes is accompanied by a crisis situation concerning capital investments in the environmental sphere. As a result, the installation of purification facilities and modern resource-saving technologies has been reduced considerably during recent years. Financial shortages are a major factor in Russia's non-compliance with some provisions of international environmental commitments. This was illustrated in connection with the violation of the international ozone layer regime, and with restructuring the non-ferrous industries of the Kola Peninsula to reduce SO2 emissions as agreed under the international Long-Range Transboundary Air Pollution regime.

The current domestic financial deficit means that the outlook is serious for environmental problem-solving associated with international environmental co-operation in various forms. Here we could mention the special environmental loans from the international financial institutions, especially from the World Bank and the European Bank for

Reconstruction and Development. Recently the World Bank agreed to an environmental loan to Russia for US$65 million. Within the World Bank, much attention is paid to projects at the regional and local levels—about 80 per cent of the financial resources allotted by the World Bank for elaboration of Russia's national environmental strategy is to be provided at the local level. The major aims of this credit are to assist in building environmental policy, to support restructuring of institutional mechanisms, to develop sectorial efforts in environmentally vulnerable areas, and to provide for implementation of the global change agenda—protection of biodiversity, reductions of greenhouse gas emissions, development of alternative technologies for CFC production and consumption, as well as rational use of natural resources, mainly of oil and gas.

The motives for financial aid are broader than mere assistance to solve environmental problems in Russia that endanger environmental stability in the West. They are supplemented by the new economic opportunities for private investments and the development of new markets, opened in the course of the transformation in Russia. New prospects have opened up as a result of decentralization and emergence of new independent producers on the national arena. The possibilities of impact from the West indirectly improving the environmental situation in Russia are increasing. For instance, the West could exert its influence at the local level, especially in the regions of resource production where export interests are concentrated. Environmental arrangements with local authorities in exchange for financial, technical, and economic assistance could play an important role in getting them to shift to more progressive environmental policies. On the other hand, non-tariff instruments of influence to preserve environmental standards are becoming increasingly important—providing access to foreign markets for Russian resource producers might be an important item in exchange for compliance with environmental security provisions.

Democratization and the transition to a market economy in Russia have revealed new chances for developing environmental cooperation on a bilateral basis, especially with the countries of Western Europe. Whereas previously bilateral contacts were limited mainly to joint research projects and exchange of information, today the range of this type of co-operation has expanded to involve environmental management and joint implementation of international commitments. Within the framework of the highly centralized Soviet state, bilateral cooperation was provided via Moscow, which totally controlled the process. Today, however, with the decentralization of environmental management, the various regions of Russia are playing an important role in the co-operation, and this is also more in line with the interests of the West. For example, for the comparatively small Scandinavian countries it is more logical to concentrate their interests and to establish contacts not with distant areas of

vast Russia, but with the neighbouring regions of Karelia, Murmansk, and St Petersburg. This provides for more specifically targeted co-operation, for greater flexibility of joint projects, and for solving of common transboundary environmental problems.

Some new trends in co-operation with international financial institutions can be indicated here. Mention should be made of the possibilities of providing certain privileges (lower interest rates on loans, longer credit-return periods) in the terms of loans and technical assistance from the West within the framework of environmental projects aimed at the reconstruction of obsolete plants and rationalization of resource use. New opportunities seem to be emerging in connection with the restructuring of Russia's external debt in some of its environmental activities. For instance, reductions in external debt could be provided in line with the costs of measures aimed at shifting to new technologies to reduce greenhouse gas emissions.

Even though financial assistance from the West is of great significance, Russian experts doubt that it can solve entirely the environmental problems of Russia, as well as the problems concerning adherence to its international obligations. It might definitely help in reducing the time-limits of environmental restructuring and perestroika, and contribute to success in this field.

The transitional period in Russia necessarily involves greater instability in the major prerequisites for international environmental cooperation. Effective implementation of international environmental obligations would seem to be closely linked with the success of this transitional period, and whether a solution can be found to Russia’s internal political, economic, and social problems. Success in the domestic implementation of international agreements depends on progress in systemic transformation – on the rapid creation of marketbased and democratic institutions and culture. Realization of an environmental strategy in Russia is dependent on overcoming the economic recession. Thus, for a relatively long period of time, solving the most urgent environmental problems in Russia, as well as domestic implementation of international environmental commitments and compliance with international obligations, will remain intertwined with the prospects of general economic normalization, and with the stabilization of the state.

Solving the environmental problems of Russia and increasing the effectiveness of international environmental cooperation are closely associated with democratization, a necessary prerequisite for exposing and defending environmental interests. This is especially important in the case of Russia, because the environmental consciousness and political will of political leaders on this issue still tend to be rather weak. Political pressures from the green movement and the public are of crucial importance. Indeed, this field might be regarded as

one of the important directions for international co-operation. Co-ordination of actions between NGOs in Russia and in the West is inevitable. Pressures from foreign NGOs exerted in Russia can be even more effective than the desperate efforts of local public to solve environmental problems.

SUSTAINABLE DEVELOPMENT AND THE "GREEN ECONOMY" IN RUSSIA: THE CURRENT SITUATION, PROBLEMS AND PERSPECTIVES

Sergei Bobylev, Renat Perelet

A variety of recent crises have demonstrated the instability of the prevailing model for global development. An important disadvantage of this model is the absolute prioritization of economic growth at the expense of solving social and environmental problems. Mankind is now seeking new ways of developing. In the late 1980s and early1990s, new conceptual approaches were developed within the UN agencies for the development of society and the economy and in particular a new theory which was to have a huge impact on the discussion of new models: sustainable development. The June 2012 UN Conference on Sustainable Development in Rio de Janeiro (Rio+20), the largest United Nations conference of the twenty-first century, actually summed up twenty years of efforts to change the traditional approach to human development and move towards sustainable development. The critical need for such a transition was first declared in Rio de Janeiro in 1992. Unfortunately, the overall results of the past two decades have been disappointing, with negative trends only continuing and intensifying.

The reports and documents released by various UN agencies before and during Rio+20 state that one key condition for the transition to sustainable development is the formation of a "green economy". The nature of the transition to a "green economy" will differ from country to country, depending on each nation's natural, human, physical(artificial) and institutional capital, its level of development, its socio-economic priorities and public attitudes to the environment. The final document produced in Rio de Janeiro, "The Future We Want" (2012), stresses that each country may choose its own path of transition to a "green economy" in accordance with its national plans, strategies and priorities for sustainable development and that there should be no rigid set of rules dictating the process.

According to the definition given in the reports by the United Nations Environment Programme (UNEP), a "green economy" is one that enhances the welfare of the people and ensures social justice and thus significantly reduces environmental risk and degradation. The

main features of such economies are efficient use of natural resources, the preservation and increase of natural capital, reduced pollution, low carbon emissions, conservation of biodiversity and ecosystem services and the growth of income and employment.

The concept of a "green economy" is not a substitute for the concept of sustainable development. However, it is now increasingly widely recognized that achieving sustainability is almost entirely dependent on the formation of the "right" kind of economy. Over the past several decades, humanity has created new wealth on the basis of an environmentally damaging "brown" economy.

Russia also recognizes the need for radical changes in both the model of global development and the country. Representing Russia at the Rio+20 Conference, Prime Minister Dmitry Medvedev said that "society, economy and nature are inseparable. That is why we need a new paradigm of development which is capable of ensuring the welfare of society without excessive pressure on the environment. The interests of the economy, on the one hand and preserving nature, on the other hand, should be balanced and should focus on the long term. And there must be innovative growth and the growth of the energy-efficient, the so-called "green economy", which is unquestionably beneficial to all countries".

The concept of a "green economy" is a new one for Russia and the term is not actually used in official documents. Nonetheless, the country's stated strategic goals over the next10 to 20 years largely correspond to those of transition to a "green economy". General policies on resource use and preservation of the natural environment for the future, and the legal and economic instruments that come with them, all to some degree reflect this. Indeed, the main goal of the Russian economy at its current stage of development, according to documents laying out the country's medium and long term targets, is to move away from its current natural resources-based model. This goal is also central to the concept of a "green economy". Such objectives are largely included in basic strategy documents, including the Concept of Long-Term Development of Russian Federation (2008), the Concept for Long-Term Socio-Economic Development of the Russian Federation through to 2020 ("Strategy 2020") (2012),and the Basic Principles of State Environmental Development Policy of the Russian Federation through to 2030 (2012).To implement its sustainable development goals, however, the country will have to make a great effort to bring under control the growth of its natural resources-based economy, a tendency that has been accumulating more and more momentum. It is becoming increasingly clear and the global economic crisis has confirmed, that the raw materials exporting economic model that has taken shape in Russia has exhausted itself. Environmental sustainability must be an important feature of the new economic model. Unfortunately, "unsustainable" trends have emerged in the country, including depletion of

natural capital as a factor of economic growth, serious impacts on human health from environmental pollution, structural shifts in the economy, an increase in the proportion of extractive and polluting industries in the economy, growth of environmental risks due to intense physical wear and tear on equipment, high levels of resource intensity, a natural-commodities heavy export portfolio and environmentally unbalanced investment policies leading to an increase in disparities between the extractive industries and the processing, manufacturing and infrastructure sectors of the economy.

The emergence of these tendencies is largely due to underestimating or misreporting of environmental factors in macro-economic policies, thus leading to further environmental degradation and depletion of natural resources. These trends can in large part be linked to the restructuring of the economy in the 1990s in favour of raw materials and other polluting sectors and a consequent decline in the "environmental quality" of physical capital, all of which took place against a backdrop of degradation in the more resource efficient and high-tech manufacturing sectors.

This "weighting" of the structure of the Russian economy contributed to high energy prices and a huge increase in the price of oil and raw materials in the 2000s. Overall, the economy saw a significant shift in favour of extractive industries, a process the Russian President has described as "large-scale de-industrialization". The rest of the world, meanwhile, has observed the opposite trend: the vast majority of OECD countries and countries with economies in transition in 1990s and 2000s saw the share of the economy accounted for by the extractive and other high environmental impact sectors shrink. In Russia, environmentally damaging structural changes were exacerbated by the global financial crisis, which on the whole the raw materials exporting industries survived better than other sectors, partly thanks to governmental support.

The crisis has demonstrated the enormous dependence of the Russian economy on the exploitation and marketing of natural raw materials. Few people in Russia may have expected such dependence. Despite much theorizing about innovation, modernisation and diversification, in recent years the country´s economy has actually become increasingly dependent on the export of raw materials, the proportion environmentally damaging industries in the economy has grown and in a number of sectors so has pollution. High technology production is confined to the military-industrial complex, which is still based largely on old Soviet technology.

Ensuring inertial economic growth that is connected to increasing pollution and environmental degradation and environmental imbalance actually leads to deterioration of human health and hinders the possibility of further development of human potential/capital.

This means that solving the extremely important task of improving the welfare of the population does not necessarily lead to improvements in quality of life.

Approximate estimates suggest the economic costs of the health impacts on the Russian population from air and water pollution. They are equivalent to at least 4-6% of GDP. In some regions, especially in the Urals, health problems caused by environmental factors can reach 10% of Gross Regional Product.

A question needs to be asked about the future development of the country. The answer to this question will determine the measures that need to be taken. Under existing approaches in economics and the current unsustainable trends the Russian economy may finally turn into a fully fledged raw-materials exploiting economy at the periphery of world development, with dwindling natural resources, vulnerable to any, even minor, falls in prices for raw materials. A small export and processing sector, combined with massive imports of engineering products, shows Russia's growing technological dependence on developed countries, which may increase the country's economic vulnerability. This is reason enough for early and large-scale modernisation.

Unfortunately, these new environmental and economic realities are not taken into account in the government's long-term economic development papers. For example, even a document as ambitious as "Strategy 2020" only takes environmental factors into account to a minimal extent and is based on the traditional paradigm of increasing GDP.

The new economy should focus on qualitative, rather than quantitative, measures of development. The country should not strive to increase its production and use of natural resources, further impacting on the environment – rather, it needs to make better use and eliminate losses of raw materials what are already involved in the economic cycle. Russia has vast reserves of natural resources associated with modernisation. In energy consumption alone, efficiency measures could lead to savings of 50%, a fact that is emphasised in the official Energy Strategy of Russia until 2030. There is no need, therefore, to chase after quantity, whether in economic indicators like GDP, or physical volumes of oil, gas, metals or other commodities.

From the point of view of environmental sustainability the economy of the future should have the following important features:

- include directions set forth in the documents of the UN and the OECD devoted to "green" growth and low-carbon economy in conceptual plans for economic strategies/programmes/plans,

- recognise the importance of environmental factors for the existence and maintenance of the population,

- give priority to the development of knowledge-intensive, high-tech, manufacturing and infrastructural industries with minimal impact on the environment,

- reduce the presence of the extractive sector in the economy,

- radically improve the efficiency of natural resources use, leading to a sharp decrease in the cost of natural resources and the amount of pollution per unit of outcome (reduction of environmental capacity and pollution intensity indicators),

- reduce pollution.

In Russia, the paths of transition to an innovation based and socially oriented economy and to environmentally sustainable development more or less coincide. To give just one example, the need to radically improve energy efficiency (the goal is a 40% saving by2020) will also have huge environmental benefits. Thus, both social and economic policy and environmental policy in the next 10 to 20 years should be guided by a principle of seeking "win-win" outcomes.

These opportunities for huge savings in natural resources will demand the development and implementation of an effective technology policy that would allow scientific and technological developments to be translated directly into the technology, products and services markets. This in turn will require a shift to a policy of so-called "best available technology". Today, some measures are already in place, including laws on payments and fines for pollution, compulsory monitoring, eliminating the practice of temporary emission permits and cleaning up past environmental damage, as well as a law defining zones "in environmental trouble". The state should promote such technological upgrading and provide support using the full range of economic and legal instruments available. The Ministry of Natural Resources and Environment has already submitted a billon "best available technologies" to the State Duma.

Russia's transition to a "green economy" will require a long period of economic transformation and modernisation, structural and technological change and formation of a new economic model. As such, a key task will be to reduce the costs of the transition and dramatically raise efficiency of use of natural resources. This can be done in two ways.

First, we need to make state regulation more effective in both the extraction and use of natural resources. Economic and legal instruments (taxes, fees, tariff policies, penalties, regulatory compliance and so on) should be used to compel public and private companies to improve efficiency of resource use, prevent losses and adequately compensate for external costs and environmental damage inflicted on society and the natural environment. The principle of "the polluter pays" should be made to work in practice – as opposed to purely formal implementation of this principle seen at the moment.

Secondly, the creation of a competitive environment could play an important role in the transition period. Increased competition between manufacturers and a departure from the prevailing model of monopolies in the energy sector and other parts of the economy would lower costs and encourage enterprises to innovate, diversify production and adopt deep processing of raw materials, thus increasing energy efficiency and reducing the environmental intensity of production due to the introduction of new technologies. The fact that Russian petrol prices are sometimes higher than those in the United States, an oil-importing country, is a sign of a monopolized market. And the creation of a competitive environment is in any case conducive to Russia´s accession to the WTO.

The state could ease and accelerate the transition to a "green economy" with the help of environmentally sustainable/balanced economic reforms and the creation of an appropriate economic environment on the macro level. When the state sets "environmental rules of the game", private businesses have no choice but to recognise and make use of the genuine opportunities offered by the transition to a "green economy" in a number of key sectors. They also tend to respond to adjustments in public policy and price signals by increasing the amount of financing and investment in greening the economy.

An important objective of macroeconomic policy should be to support environmental economics, or so-called "green growth". The raw-materials based economy and especially the energy sector, plays a key tax and revenue generating role in Russia: about half of the state budget currently comes from oil and gas revenues. In the future, we plan to reduce this share. But such structural changes in the economy are hindered by a tax burden that places more demand on the relatively low-environmental impact manufacturing sector than on the extractive industries and "brown" economy. It is clear that the tax system must be transformed to facilitate sustainable development, diversification and modernisation of the economy: maximum level of tax should be imposed on extractive and polluting industries, while minimizing the burden on the manufacturing, processing, high-tech and infrastructure sectors.

The country's current system of subsidies is another hindrance to the transition to a "green economy", especially in the energy sector. State support for oil and gas producers is particularly significant. In 2010, subsidies to the oil and gas industry were estimated at $ 14.4 billion, equivalent to more than 14% of the value of all the tax and other payments the sector contributed to the federal budget that year.6 The bulk of these perks came in benefits from the tax on mineral extraction tax (MET) and export duties:$ 9.8 billion or 68% of the total. Direct government subsidies to oil and gas producers are primarily aimed at stimulating the development of new fields, including the Arctic. In its principles of transition to a "green economy", UNEP makes special note of the need to control costs in areas of depleting natural

capital. For Russia, that means ceasing to force through high-cost mega-projects for exploiting new natural resources deposits, especially oil and gas, with unpredictable consequences for nature and man(cases in point include off-shore drilling on the continental shelf and development in the permafrost zone and areas lacking transport infrastructure). We should refrain from accelerating the development of capital-intensive new fields. If we want to increase output of the final product, it should be done on the basis of improved recovery of deposits, better equipment and deeper processing of raw materials.

Besides making use of economic regulation to push the transition to a "green economy", the state should also make greater use of legal and institutional mechanisms in the fields of nature conservation and environmental protection. New laws are not needed, but the state should make an effort to enforce and implement in practice the country's already extensive environmental legislation, for example by strengthening penalties for violation of the law of Nature and Environment.

Russia's most important priority in greening its economy can be summarised as follows: do not use more natural resources than you have to, as they are limited and additional exploitation will lead to additional stress on ecosystems, depletion of natural capital and environmental pollution. Resource-intensive technologies also lead to overconsumption, huge losses of natural resources and increased pollution. It is necessary to invest in improving the use of already exploited natural resources and protecting the environment through modernisation of the economy, support for innovation, replacement of resource intensive technologies with resource and energy efficient ones, use of the best available technology and the deepening and diversification of raw materials processing methods. This is the road to sustainable development in Russia and the formation of a "green" Russian economy: investing in resource-saving restructuring, radically changing the technological base, greening the economy and reducing environmental intensity, thereby conserving natural capital, will make it much cheaper to address the negative environmental impacts of anthropogenic economic activity in future. Such a path could double or even triple GDP compared to the present levels achieved by extraction and exploitation of natural capital, as well as reducing pollution.

But how do we measure progress towards sustainable development and the "green economy" and how do we assess the rate at which different sectors and activities are "greened"? To do this, we first need to change the views of the vast majority of politicians, businessmen and scientists on the development of the problem itself. Sound bites like "economic growth is the key to progress", or "first economic growth and then addressing environmental problems", have until recently seemed like immutable truths.

The currently prevailing stereotype equates economic growth with the growth of gross domestic product (GDP), the maximisation of profits, cash flows and other financial indicators. The quality of that growth and its costs, both environmental and social, are usually ignored. Thus the economic indicators that are widely used in financial and economic decision-making – including the decisions that led us into the global economic crisis – do not fully reflect real economic, social and environmental processes. An example of such an "incorrect" (at least from the point of view of sustainability) economic measure is the most widely cited indicator of them all – GDP.

Until now, the vast majority of countries, including Russia, have measured the success of development in terms of GDP growth. GDP, which first began to be used in the early1950s, is adequate for most traditional industrial economies. But the current realities of the world economy, with the demands it places on emerging economies to moderniseand transition, are quite different. For example, for countries with large natural capital, GDP growth on the back of the commodities sector has mixed results. The easiest way to achieve this growth is through over-exploitation of oil and gas fields, mineral deposits, forests, land and so on. In Russia's case, impressive pre-crisis GDP figures were largely based on the depletion of natural capital, transforming the Russian economy into a raw materials exporter and making it directly dependent on the global economy. The delegates at Rio+20 noted that measures of progress based on GDP need to be corrected. The UN Statistical Commission has already developed new approaches for greening of the System of National Accounts, including forms of global environmental accounting that would cover the most important aspects of resource efficiency and environmental damage.

All over the world, economists are developing criteria and indicators for sustainable development, containing often very complex system of indicators. International organisations involved in these efforts include the United Nations (Integrated Environmental and Economic Accounting), Goal 7 "Ensure Environmental Sustainability"(part of the Millennium Development Goals), The World Bank (Adjusted Net Savings)and the OECD (a system of environmental indicators). The fundamental point in all these approaches is to subtract the damage from pollution and depletion of natural resources from traditional macroeconomic indicators, effectively adding an environmental correction to key socio-economic indicators of development. Among the purely environmental indicators, the most methodologically integrated and statistically advanced are the World Wildlife Fund's Ecological Footprint and Living Planet Index. These formal indicators (in particular the UN's human development indices and the World Bank's adjusted net savings) reveal significant environmental a social problems facing Russia's development. For example, in 2006 Russia posted an especially

successful GDP growth rate of 8%. Adjusted net savings, however, suggest the economy actually shrunk (with a rate of -13,8%), largely due to the depletion of natural resources.

Russia can play a crucial role in the formation of sustainable development and the new global economy. It has vast natural capital and critically important ecosystem services that contribute to the sustainability of the biosphere and provide economic benefits to all mankind. Its vast areas untouched by economic activity, colossal forests and wetlands, freshwater resources and biodiversity are all major potential contributors to the formation of the new economy in the world. Indeed, Russia could well be described as a net environmental donor to the world. It is only right that the country play a more active role in the greening of the global economy and seeking economic benefits and to capitalising on its unique environmental status. The concept for long-term development (2008) identifies just such opportunities. To realise them, Russia must coordinate its national efforts with international organisations such as the WTO, integrating the principles of international agreements into legislation and practice of economic decisions.

LEGAL ASPECTS: THE STATE OF LEGISLATION AND LEGAL PRACTICE

Ekaterina Khmeleva

An analysis of Russian legislation shows that several principles of sustainable development are reflected in the Constitution of the Russian Federation and have been embodied in a number of environmental laws. Environmental interests are laid out in the first part of Article 9 of the Russian Constitution, which stipulates that land and other natural resources are to be used and protected in the Russian Federation as the basis of the lives and livelihoods of the people living in the country. These constitutional provisions are fundamental to the legal regulation of natural resources and protection of the environment, which is also covered in the first paragraph of Article 72 of the Constitution of the Russian Federation. However, a consistent focus on sustainable development in Russian environmental legislation has yet to be seen.

In 1996, a presidential decree approved the basic concept of Russia's transition to sustainabledevelopment.2 Six years later, government resolution No. 1225-r of August 31,2002, laid out the country's official Environmental Doctrine. Despite the fact that these acts include the basic principles of sustainable development, they remain declarative documents. Their adoption did not lead to the development of concrete legal norms in this area. We have to admit that between 2000 and 2010 Russian legislation was actually

consistently “de-greened”, with the removal of laws directed at protecting the environment and its components. This process can be traced chronologically via a few key moments.

In May 2000, the main federal environmental watchdog the State Environmental Commission (Goskomekologi by its Russian acronym) was dissolved and its responsibilities taken over by the Ministry of Environment and Natural Resources, making it simultaneously responsible for both control and use of natural resources.

In 2002, a new federal law “On Environmental Protection” was adopted. Despite being largely based on the previous law “On Protection of the Natural Environment”, the exclusion of the world “natural” reflects the essence of this law. Many of the norms laid out in this law are only referenced and require the adoption of normative acts to become reality.

In 2006, a new Forest and Water Code was adopted, which sees forests and bodies or water primarily as resources and does not establish mechanisms necessary for their protection as elements of the natural environment.

Also in 2006, changes to the Town Planning Code of the Russian Federation resulted in the abolition of compulsory state environmental assessment (SEA) for most buildings, including the especially dangerous ones and its replacement with unified state assessment. This changed the concept of environmental impact assessment – instead of assessing the admissibility of the environmental impact a proposed building or activity, the purpose of assessment became to check compliance with technical regulations and standards. These changes also reduced the opportunities for public participation in environmental decision-making.

The Russian leadership recognized the need to correct this situation and in 2008 a special session of the Security Council was convened in which then-President Dmitry Medvedev set the goal “to create the necessary preconditions so that in future the growth of the Russian economy will be balanced with high environmental standards”. The need for an improved system of environmental protection was established in a presidential decree.5 But in fact, development of legal amendments to fulfill this goal came into force only after the adoption of decisions on the results of two State Council sessions devoted to reform of state environmental regulation on May 27, 20106 and June 9 20117, which took the form of lists of presidential orders to the government. These orders can be grouped into several main areas of environmental legislation: Improving and expanding the list of objects and activities subject to state environmental assessment and environmental impact assessment; the instruction of strategic environmental assessment into Russian government’s system of decision-making; the creation and development of economic instruments for environmental protection, including the possible re-establishment of environmental funds; protection of the seas from oil

pollution; the development of legislative support and funding for protected areas; creation of legal mechanisms for cleaning up accumulated environmental damage; and the adoption of the basic elements of the state environmental policy until 2030.

The most important decisions are the order on ratifying the UN Economic Commission for Europe´s (UNECE) 1991 convention "On Environmental Impact Assessment in a Transboundary Context" (commonly known as the Espoo Convention), the Protocol on Strategic Environmental Assessment to the Convention (Kiev, 2003) and the 1998 UNECE convention "On access to Information, Public Participation in Decision-making and access to justice in Environmental Matters" (the so-called Aarhus Convention).

On April 30, 2012, the Russian president approved the Foundations of State Policy in the Field of Environmental Development of Russia to 2030. The strategic goal of the Russian Federation's environmental policy reflects both the need to preserve and restore natural ecosystems and the sustainable development of society and the improvement of quality of life as a result of maintaining a high quality environment. The foundations of environment policy include basic tasks and principles of environmental policy, its priorities and key mechanisms for its realization and the document the president approved is structured according to this logic.

The conceptual provisions laid out in the Foundations are directed at developing modern mechanisms for managing the environment and economic mechanisms for its conservations, the use of global standards in conservation and environmental responsibility, the stimulation and development of voluntary and market-based mechanisms for environmental protection, making it advantageous for market players to use higher environmental standards, ensuring publicity and making information about environmental impacts openly accessible. The document is broadly in line with the principles of sustainable development. Given the experience of the un-fulfilled 2002environmental doctrine, which remained a declarative document, the Foundations originally incorporated a provision stating that their effective implementation would require achievement of targets based on environmental impact and environmental conditions, as well as assigning environmental responsibilities.

This document was quickly followed by approval of the Plan of action for implementing the foundations of state policy in the field of environmental development of the Russian Federation for the period until 2030 (approved by the Decree of the Government of the Russian Federation of December 18, 2012 No. 2423-r).9 The plan includes a list of measures mainly aimed at changing the law on the protection of the environment. However, it does not set high-quality environmental indicators to be achieved by 2030.

Pursuant to the presidential orders, in July 2011 the government submitted five bills to the state Duma, respectively concerning the improvement of standardization in the field of environmental protection and the introduction of economic incentives for businesses to adopt the latest technology, legislative consolidation of the requirement for all oil production installations to have oil spill response plans, waste, environmental monitoring and environmental control. It also submitted amendments to the previously adopted law on specially protected areas.

By December 2012, two of these bills had been passed: Federal law No. 331 of November21, 2011 "On amendments to the Federal law 'On Environmental Protection' and other legal acts of the Russian Federation", directed at improving regulation of the system of environmental monitoring (this law came into force on January 1, 2012), and Federal law No. 287 of December 30, 2012, "On amendments to the Federal law 'On the Continental Shelf of the Russian Federation' and the Federal law 'On internal seas, territorial waters and contiguous zone of the Russian Federation'" (which entered into force on July 1, 2013), laying out requirements for the prevention and elimination of oil spills.

We must admit that the delay in passing these bills directed at including such important measure as the creation of sustainable development and "green growth" in the Russian economy, as a stimulant for the rapid transition to improved access to technology and the completion of legal arrangements of negative impacts on the environment. Legal projects of crucial and principal importance for the sustainable development of Russia include changing not only the system of laws on environmental impacts, the adoption of an integrated approach to negative environmental impacts and offering economic benefits to businesses using improved technology, but also classification of buildings and installations according to their level of impact on the environment and establishment of state environmental assessment of especially environmentally hazardous installations .Besides reform of the state environmental regulation in Russia, it is also crucially important to "green" other processes connected with exploitation of natural resources. Primarily this concerns the development of civil society institutions, including environmental NGOs; raising environmental awareness – and by association environmental responsibility and activity – amongst both individual and institutional consumers; introductions of voluntary market mechanisms to encourage environmental responsibility among businesses and so on.

In this connection it could be useful to look at the experience of other countries. In the EU environmental requirements are written into public procurement policies but European Parliament Directive 2004/17/EC of March 31, 2004 and green procurement policies also exist in most of the European member states (including Austria, Belgium, the United

Kingdom, Germany, Greece, Denmark, the Netherlands and France). Similar policies exist in other countries including Canada, Japan, New Zealand, Mexico and the United States. In 2008 the United States adopted a special amendment – the revised Lacey Act – concerning illegally logged Russian timber. The EU also decided to close its markets to illegally logged or processed timber and also banned illegal reprocessing of wood. Adoption and implementation of similar laws in Russia could be an effective mechanism for improving the environmental efficiency of the economy.

Another necessary condition for the completion of Russia´s environmental legislation is legal provision for the effective participation of the public in environmentally significant decision making. This could be achieved by swift ratification of the Aarhus convention on access to information and the Espoo convention on cross-border impact assessments. Preparation for ratification began in 2011, but as of September 2013 the necessary bills had still not been submitted to the State Duma.

LEGAL MEASURES FOR EFFICIENT ENVIRONMENTAL REGULATIONS OF OIL AND GAS INDUSTRY IN WESTERN SIBERIA

Elena Gladun and Gennady Chebotarev

INTRODUCTION

Most environmental problems are global in nature - the result of actions taken and endorsed at a national level can have global ramifications. Many ecosystems that are managed under national jurisdictions have immeasurable global benefits and their destruction can lead to negative impacts in regions far removed from the source.

Whilst global public goods that lie within national boundaries continue to fall under the jurisdiction of the state, it is likely that decisions will be made on the basis of national interests rather than global concerns. For example, hydrocarbon resources which are discovered in the northern regions of Russia have made these territories attractive to the industry. It’s obvious that human activity there is increasing and is projected to increase further in coming years.

The exploration and exploitation of oil and gas reserves result in benefits and wealth for some countries; but at the same time, they produce many direct and cumulative impacts on ecosystems and cultures all along the route from source to market. The ecosystems of the northern parts of Western Siberia are changing now due to intensive industrial development in the waters and onshore and also because of climate change.

The Russian Federation acknowledges the significance of the North regions and its impact to global environment. As President Vladimir Putin once noted, otherwise "global advantages may turn into global headaches". In the raise of hydrocarbon production new sources of contamination will eventually appear and there will be a real threat to fragile northern environment. Thus, environmental protection holds a vital place in regulating human activities in the northern regions and it should become an intrinsic part of any industrial project.

In this realm, the first objective of this paper is to show the most visible impacts of oil and gas development in Western Siberia on its environment. Our second objective is to analyze the Russian legislation regulating the environmental issues of the industrial activities in Western Siberia and to outline its main short-comings and insufficiencies in mitigation of impacts. At least two basic problems can be laid out:

(1) federal environmental legislation as well as the corresponding legislation of the northern regions of Russia is rather fragmentary and there is no coherent approach to protecting environment of Western Siberia in the period of its intensive oil and gas development;

(2) there are no effective mechanisms for environmental protection of Western Siberia, for example, its climate, ecosystems, territories of traditional lifestyle and occupations and of the northern indigenous peoples.

Our paper is aiming to formulate some legal measures that could be effective if incorporated into federal legislation and legislation of the Tyumen Region, the most significant region of hydrocarbon production in Russia.

THE HISTORY OF OIL AND GAS DEVELOPMENT IN WESTERN SIBERIA

Most of Russia's oil and gas reserves are in the northern areas, such as Western Siberia. The Western Siberian oil and gas province (OGP) is the largest hydrocarbon resource deposit in Russia if not in the entire world. Almost all parts of OGP are rich in resources, but the distribution of specific resources is irregular. Most oil resources are located in the southern and central parts of the OGP (the Tyumen Region and the Khanty-Mansisk Autonomous Okrug), with the exception of some prospective oil fields on the coast and offshore. Discoveries and development of gas resources prevail in the northern parts of the OGP (the Yamalo-Nenets Autonomous Okrug), where huge gas fields are located within the Arctic Circle.

The discovery of oil and gas in Western Siberia validated the predictions of the legendary Soviet scientist Ivan Gubkin. A visionary geologist, as early as the mid-1930s, had predicted that the region sat on enormous hydrocarbon resources. The first commercial gas

blowout in Western Siberia was obtained in Beryezovo in September, 1953. It gave impetus to development of exploration in the north of the Tyumen Region. Discoveries of new larger fields in 1965 in Yamal Peninsula made it one of the richest gas provinces. In 1970, the largest pool of valuable oil was discovered in the Siberian Far North. These discoveries are just landmarks in development of a powerful gas and oil sector in the region.

The period from 1971 through 1992 is sometimes called a heroic period of exploration of the northern part of the West Siberian OGP. In 1971, the unique Bovanenkovo oil, gas, and condensate field was discovered. In addition, it was found that the Urengoy, Medvezhie, and Yamburg fields were enormous. In this period, the annual volume of deep drilling reached 935–956 thousand meters. Also, the annual growth of oil and gas reserves in the Yamalo-Nenets Autonomous Okrug was the largest in the country.

At the present time 60 per cent of Russia's proven oil reserves and 80 per cent of Russia's gas reserves are located in the northern territories of the Tyumen Region, much on the continental shelf. The Western Siberian OGP is predicted to remain the main gas supplier for national and foreign consumers in the Russian Federation at least until 2030. Hydrocarbon development in the northern areas of Western Siberia requires enormous amounts of new infrastructure, including pipelines, expanded road and rail networks, and residential facilities. For example, current activity in the Yamalo-Nenets Autonomous Okrug is very high. In the last few years, it has become one of the most attractive investment regions in Russia. Since 2012 the Yamalo-Nenets Autonomous Okrug there have been developed important economic projects: the world's largest deposit of oil, gas and condensate — Bovanenkovskoye — was commissioned, and construction of both a new seaport and a liquid natural gas plant (Yamal LNG) was begun. Ice-breaking tankers for shipping the gas are also due to be constructed.

SOME IMPACTS OF WESTERN SIBERIA DEVELOPMENT ON THE ENVIRONMENT

The discoveries of oil and gas have turned Western Siberia into the main area of hydrocarbon production in Russia. And at the same time a great number of environmental problems have been generated.

All stages of oil and gas industry has a wide range of impacts on practically all components of natural ecosystems - air, landscapes, soil, surface and ground water, flora and fauna. And even deep studies of ecosystems' transformation cannot give a holistic understanding of resource loss, long-term effects of nature disturbances. When biggest oil and gas fields were discovered and commissioned in Western Siberia in the early 1970's local environmental impacts transferred to the regional level. Later in 1980's oil and gas pollution in the Tyumen Region became a serious threat to environment. Oil and gas development

during the “golden” period (1980s – 1990s) led to the pollution of West Siberian Plain and the Kara Sea basin and had the global effect.

We would like to focus on three distinctive problems of Western Siberia which are climate change, regional environmental impacts and alterations in the traditional lifestyle and occupations of the northern indigenous peoples.

Climate change in the northern territories of Western Siberia

Climate change is the most prominent environmental issue on the global agenda today. Certain northern regions have experienced more significant and rapid climate warming than others in recent decades. Western Siberia is a region of global importance due to the massive amounts of carbon stored in the soil system and due to its large biodiversity. The recent increase of global warming could potentially alter the climate of the region and consequently affect its ecosystem services and natural resources.

Studies in Western Siberia indicate an increase of the average temperature of the vegetation period by more than 1C over the last 15 years, coupled with a prolonged growing season. An increase in winter precipitation was also observed along with strong and prevalent springtime warming. Another study of Russian researches revealed a decrease of the duration of the cold season over most of the Western Siberia territories by 1–3 days per decade. A corresponding increase of the growing season length by 2–4 days per decade was reported in the same study.

The scientists forecast strong and lasting warming of the climate in the Russian North, which would be a significant challenge to Russia. As a positive impact, the Northern Sea Route will be open for navigation the whole year, turning into the Eurasian Marine Transport Corridor. As a result, the Arctic region of Western Siberia will gradually gain strategic importance. As the negative impact, climate extremes will be largely manifested by disasters such as floods, drought, heat waves, or fire. The changes in intensity and frequency of climate extremes are becoming the main threat for the region.

Thus, specific and rather precise recommendations are needed for agriculture, oil and gas industry, which can be used to develop climate change adaptation strategies.

Regional Environmental Problems of the Northern Territories

Intensive development of oil and gas fields resulted in colossal environmental problems in Western Siberia. According to the data collected by the Ministry of Natural Resources and Ecology of Russia, in the period of 2010-2012, the oil industry was responsible for 8,6 per cent and the refining industry for 3,9 per cent of the total amount of pollutants emitted into the atmosphere. Pipeline accidents, oil leakage and water pollution disturbed or destroyed flora and fauna on the vast territories.

Future oil and gas activities can also bring numerous environment impacts associated with every stage of hydrocarbon development of both on- and off-shore operations. The most pressing issues include, but not limited to, the following:

- sound pollution and disturbance affecting marine life (in particular marine mammals) during the offshore seismic operations,

- pollution from oil spills, especially in, and under ice and ice-infested waters,

- destruction of species and their habitats, including species essential for indigenous peoples,

- additional disturbance and destruction of sea ice and corresponding ice habitats.

An example of a potentially polluting discharge is the disposal of drilling fluids and drilling muds. These contain toxic agents, anti-corrosion fluids and oils, and are commonly disposed of in waste pits, dumps or storage areas close to drilling rigs. Many storage places are located in water protection areas. Often storage areas are used to dispose of waste oil, waste chemicals, materials used to repair wells, etc. Many storage areas built in the past have not been hydro isolated, allowing ground and rain water to percolate through the waste. Research conducted by Tyumen State University proved that chemical agents migrate from storage places into groundwater. Products of partial decomposition, which are present in storage places, are sometimes much more toxic and carcinogenic than the oil and waste itself.

As a result specific standards should be set to prevent chemical pollution as well as sound pollution, soil pollution and air pollution in the ecologically fragile northern areas.

Some Impacts of Western Siberia Development on Indigenous Peoples

Environmental problems are closely connected with the problem of indigenous peoples of the North. There are four main groups of indigenous peoples living in Western Siberia: the Khanty, Mansy, Nenets and Selkup. Their traditional livelihood was conducted over a large, dispersed area along the Ob River and its tributaries in a semi nomadic way. Reindeer herding is of greatest importance in the area. Reindeer pastures cover almost 50 million hectares for the largest herd of domestic reindeer which counts over 600 thousand head. Near these pastures there are hunting areas of great economic significance, where they get wild fowl, water-fowl, fur-bearing animals, elk and wild deer. For the northern indigenous peoples reindeer herding is not just the economic sector; it shapes their world outlook and style of life.

Since the beginning of industrial exploitation of the North of Western Siberia and creation of the largest oil and gas industry, the life of the northern indigenous peoples has changed greatly. For example, the number of reindeer in Yamal decreased by 30 per cent in the beginning of the twenty first century, though still being the largest in Russia.

Oil and gas operations can have serious direct negative impact on indigenous peoples and their societies, including increased settler population on their lands, displacement of indigenous peoples, large infrastructure projects, decreased local flora and fauna, contamination of water, soil and air, and degradation of valuable lands. This often leads to an increased risk of health problems among indigenous peoples affected, and to loss of or damage to hunting grounds, fisheries, biodiversity, medical plants and spiritual sites, among others.

An even bigger problem is the denial of aboriginal rights to land and of access to natural resources. Indigenous peoples of the North who traditionally used their lands for agriculture and reindeer herding have to resettle and look for new occupations. Thus their ties to the environment are broken and cultural identity weakens.

To preserve indigenous population throughout the oil and gas development period is extremely important, as some researchers comment. They constitute the historical stable population of the region, prior to, during and also after periods of resource extraction. As this is their homeland, indigenous peoples are more likely to stay on after a major industrial project.

A very important objective of the state is to sustain traditional lifestyle and occupations of indigenous peoples on the territories of intensive hydrocarbon production and to recover their lands and other ecosystems after the production is over.

FEDERAL ENVIRONMENTAL LEGISLATION REGULATING OIL AND GAS DEVELOPMENT IN WESTERN SIBERIA

The Tyumen Region is one of the biggest administrative regions in Western Siberia and one of the largest in Russia. The Region occupies a large part of the West Siberian Plain. The Tyumen Region stretches for 2100 km from north to south and 1400 km from west to east. The northernmost point of the Tyumen Region is located on the Yamal Peninsula – it is Skuratov Cape 73° 30 ' n.l., the westernmost one is situated in Severnaya Sosva River head (58° 50 'e.l.), the easternmost point is located in the Nizhnevartovsk district by the Vah River head (86° 00'), the southernmost point is in Sladkovsk district, on the border with Kazakhstan (55° 10 ' n.l.).

There are two large administrative areas located in the North of the Tyumen Region – the Khanty-Mansiisk Autonomous Okrug and the Yamalo-Nenets Autonomous Okrug. All three are separate subjects of the Russian Federation. Because of two other equal subjects within its territory the Tyumen Region is called a “complicated subject of the Russian Federation” which means not only the complicated administrative and legislative structure, joint infrastructure but also problematic process of cooperation and managing of common

territories. The first tripartite cooperation agreement between the Tyumen Region, the Khanty-Mansiysk Autonomous Okrug and the Yamalo-Nenets Autonomous Okrug was concluded in 2004 and two years ago it was extended to 2020. The cooperation agreement includes an extensive set of joint projects and programs, some of which involve joint funding, housing and other projects with high social and economic significance.

According to Article 72 of the Constitution of the Russian Federation the issues of nature use, protection of the environment and ensuring environmental safety are the joint jurisdiction of the Russian Federation and the subjects of the Russian Federation. This means that environmental regulations over all industrial and development projects are adopted and implemented on both federal and regional levels. The laws and other legislative acts of the subjects of the Russian Federation may not contradict the federal laws (Article 76).

The Russian Constitution also provides guarantees of environmental quality in its Article 42. These include the right to favourable environment, reliable information on its state and to compensation of damage inflicted upon one's health or property as a result of violating environmental legislation. By Article 58 everyone is obliged to preserve nature and the environment, carefully treat the natural wealth. These constitutional provisions are disclosed in detail in environmental legislation. Environmental laws and regulations now address most of the priority environmental issues. Government agencies responsible for environmental policy, regulation, and compliance act at both federal and regional levels, but the environmental policy implementation is increasingly centralized. During the last years, traditional legal instruments, for example, environmental quality standards, permitting, and environmental liability, have been set and elaborated, and also some novel measures (such as industry rating, environmental management systems and corporate reporting) have been adopted or further promoted.

The Law "On Environmental Protection", passed in 2002, is the basis for the entire system of environmental legislation. It covers general issues of resource use and environmental protection, regulates sources of negative impacts on the environment and human health. This law also sets the powers and functions of the federal, regional, and local authorities over environmental issues. The essential drawback of the law is that it does not take into account the peculiarities and specific conditions of the northern territories, does not establish specific environmental requirements for economic activities in the North. In particular, the law does not include any rules governing human impact on the northern ecosystems and does not establish precise requirements of oil and gas development in the North.

Another deficiency of the law is its declarative provisions, for example the right to reliable information about the state of the environment (stated in Article 11 of the law) is not provided properly. There are neither federal nor regional laws elaborating the sources, procedures and guarantees of information about the environment.

Another example of declarative approach is Article 73 of the Law "On Environmental Protection" which states the necessity to provide special environmental education for the top-managers of companies and organizations as well as for the experts in the field of environmental protection and environmental safety. It says: "the top-managers, specialists responsible for decision-making in business and other activities that have or may have negative impact on the environment, must be trained in the field of environmental protection and environmental safety. The requirements for such training should be set in special laws". By now there are no such laws on the federal level and some laws that had been adopted in the regions are no longer in force (the Law of the Tyumen Region "On Environmental Education and Training" was abolished in 2005).

Environmental impact assessment plays an important role in ensuring environmental safety of oil and gas development. The Federal Law "On Environmental Impact Assessment" aims to implement the constitutional rights to a favourable environment through the prevention of negative environmental impacts from economic and other activities. This law requires environmental impact assessments for all major industrial projects. Unfortunately, this law does not specifically apply to the projects planned in the northern territories, as the result certain activities have negative impacts on the ecosystems which are more sensitive. The negative impacts will definitely increase in future, hence, the northern territories require additional environmental regulation.

The scope of "resource laws" of the Russian Federation (including the Land Code, the Forest Code, the Water Code, the Subsoil Use Law, the Law "On the Continental Shelf of the Russian Federation") is the use and protection of certain natural resources (lands, water objects, wildlife, forestry, the continental shelf, and mineral resources); the process of oil and gas development. The acts include rules for development and production, rules for allocation of the usage rights, rules on responsibility, requirements for users of resources, and enforcement system, procedures for permitting and licensing, and the powers of federal, regional and local authorities. Unfortunately, these laws set minimum environmental requirements.

For example, the Water Code which was adopted in 2006 after many debates has become one of the most controversial pieces of environmental legislation in Russia. Generally, it introduces management approaches to water objects, to a big extent replace

administrative instruments of water use and regulation with civil ones. Most requirements of the Water Code are rather declarative and therefore there is a greater need for developing the secondary legislation. There are no special provisions for protecting the northern waters from impacts of hydrocarbon industry.

There are two main climate policy documents in Russia: the Climate Change Doctrine published in 2009 and the Climate Action Plan passed in 2011. The main objectives of the Doctrine are to harmonize domestic climate-related legislation with international standards, improve climate monitoring, stimulate the adoption of stronger environmental standards as well as energy-efficiency and energy-saving measures, and encourage the use of alternative energy sources including renewables. The documents provide a broad range of measures, with those specifically relevant to industrial energy efficiency: increased measurement of energy consumption for all industrial consumers; key performance indicators and benchmarks for energy efficiency; cross-sectoral strategies to limit GHG emissions; measures to modernize technologies and equipment for the production of basic chemicals.

However, neither the Doctrine nor the Plan contains quantitative or definitive climate change targets. Although the Doctrine acknowledges that ‘‘a major part of the Russian Federation is within the geographic area affected by maximum climatic changes, in terms of both observations and predictions’’, little has been done to put the suggested policies in place. The Climate Change Doctrine was not implemented at regional and sectoral level in the northern territories; no amendments have been done to the basic environmental laws concerning the climate targets. The other drawback is that the documents do not focus on the northern climate, though as the researches outline, the distinct feature of Russia’s climate is permafrost. It extends over almost 70% of the country’s land area, with the frost penetration in some areas reaching as deep as 1300 m. Permafrost evolution has a major bearing on both climate formation and socio-economic performance in Russia. The maintenance of existing infrastructure and new construction projects depends on the state of the frozen ground, particularly, in the northern parts of Western Siberia.

There also exists “northern-oriented legislation” in Russia. In 2008 two key documents determining the development in the Arctic for the next decade were adopted – the Foundations of Russian Federation Policy in the Arctic until 2020 and Beyond and the Strategy of the Arctic Zone Development and National Security of the Russian Federation for the Period until 2020. They describe the basic national interests in the Arctic, which are: to exploit natural resources, to protect Arctic ecosystems, to use the seas as a transportation system, and to ensure that the Arctic remains a zone of peace and cooperation.

The Foundations of the Russian Federation Policy in the Arctic until 2020 and Beyond sums up its environmental objectives for the Arctic as the "conservation of the Arctic's unique ecosystems, safeguard…the Arctic environment…under conditions of increasing economic activity and global climate change…". To accomplish this, Russia plans to take several steps. The first is to introduce the environmental management and monitoring programs. The second is to focus on the "restoration of natural landscapes" and the responsible disposal of toxic wastes and chemicals. The third is to "…ensure the preservation of the biological diversity of the Arctic flora and fauna through the expansion of the network of protected natural and aquatic environments…" And the fourth is to make sure that nuclear powered vessels are retired and disposed of after reaching a certain age.

However, in section VI of the Foundations, which introduces the stages of realization of the Russian policy in the Arctic, there is no mention of any environmental targets. In light of this, it is clear that the implementation of the new environmental policy in Russian Arctic lacks the mechanisms for realization.

The Foundation and the Strategy have become the benchmark for the development of specific legal provisions concerning the use and protection of the environment in the Arctic. At the same time, the goals can be achieved by setting effective legal measures in the current legislation. However the provisions of the Arctic Strategy have been incorporated neither in the environmental laws, nor in the resource laws.

The Strategy of Social and Economic Development of Siberia was adopted in 2010 under the Federal Government Order and it lays out several measures aimed at a significant strengthening of the innovative character of the economy in Western Siberia. A part of the Strategy is devoted to environmental objectives among which the document outlined: improving the quality of the natural environment and ecological conditions of human life; formation of an environmentally safe and comfortable places of work and leisure; organization of environmentally friendly production; reducing the impact on the environment from all anthropogenic sources; improving the system of environmental standards, environmental monitoring, environmental impact assessment; development of environmental goods and services; regulating of environmental auditing, environmental certification, environmental insurance; formation of the requirements for the development of technologies; preservation and protection of the natural environment (conservation of natural ecosystems, landscapes, clean water sources, increased bio-productivity, reduced species diversity); solution to the problems of wastes (recycling and disposal). Generally, the Strategy provides a broad range of measures, all of them are very vague and none of them are specifically relevant to environmental problems of the northern territories of Western Siberia which should be

decided in the nearest future. Moreover, these environmental objectives are not provided with definite measures in the environmental legislation.

Conducting oil and gas development and production in the Tyumen Region obviously raises questions of deepen environmental protection of the region. This is dictated not only by the unique natural climatic conditions here, but also by economic importance of the resources and colossal environmental burden on the region.

ENVIRONMENTAL LEGISLATION OF TWO ADMINISTRATIVE REGIONS OF WESTERN SIBERIA

Generally speaking, the environmental legislation is rather deficient in the Tyumen Region and its constituent subjects.

The basic Law "On Environmental Protection in the Tyumen Region" describes the powers of regional authorities in environmental protection sphere; also in its scope there are targeted environmental programs, protection of endangered species and monitoring activities in the Tyumen Region. The Law "On Regulation Water Use in the Tyumen Region" is a mere enumeration of the powers of the regional authorities which is a replication from the Water Code of the Russian Federation. Both laws are very broad and do not set any special requirements for oil and gas industry. In this way they fail to protect ecosystems (waters, soils, subsoil, flora and fauna) from immense impacts.

The environmental laws of the Yamalo-Nenets Autonomous Okrug are, similar to the Tyumen Region, very abstract and cover very little environmental issues. The Law "On Environmental Protection in the Yamalo-Nenets Autonomous Okrug" distributes the powers between the regional and municipal authorities, regulates economic initiatives on environmental projects and sets some rules on environmental monitoring, environmental supervision and preservation of endangered species. The Law "On Subsoil Use in Yamalo-Nenets Autonomous Okrug" aims to regulate the use of common minerals which is under the regional jurisdiction. No article in the law deals with environmental protection of the subsoil and minerals.

The primary responsibility for protecting environment, especially in Western Siberia where industrial development is intensive rests with regional governments. Their essential jobs are to realize rules proposed by the central government in the certain conditions and to facilitate environmentally friendly activities in the North. Current legal regulations of the subjects are unable to address main environmental goals due to some factors:

(1) The key state functions in environmental protection are in the scope of federal jurisdiction. Under Article 5 of the Federal Law "On Environmental Protection" such measures as environmental quality standards, permits, environmental liability, objects of

environmental impact assessment, environmental information, environmental protection of the continental shelf can be set only through the federal legislation. When the regional authorities decide to formulate necessary rules over these issues their laws come into contradiction with the federal legislation. For example, the Law "On Environmental Protection in Yamalo-Nenets Autonomous Region" in its Article 6 sets environmental standards and these norms conflict with the federal legislation because in Article 19 of the Federal Law "On Environmental Protection" says: "standards are prescribed only in the Federal Governments orders", and according to Article 5 of the same law, standards setting is the power of the Federal Government.

(2) The scope of regional powers in the environmental sphere is very limited. According to the federal legislation they can have legal initiatives on such matters as monitoring, preservation of endangered species, targeted programs.

(3) The regional authorities have very little expertise in providing effective environmental measures as one of their main tasks for the last decades have been to increase oil and gas production but not to protect the natural environment. As they have recently faced immense environmental problems, the regions of Western Siberia must take their effort for ensuring effective and sustainable natural resource utilization and environmental protection; serious work has to be started to create a legislative basis for dealing with environmental impacts.

LEGISLATION ON THE INDIGENOUS ISSUES

The Yamal Peninsula is home to 10,000 indigenous Nenets, half of whom still practice reindeer herding as a nomadic way of life. It is important to note that in spite of rapidly intensifying industrial, socio-economic and environmental pressures in recent decades, the region continues to experience a growing number of Nenets households and growing numbers of herded reindeer.

Indigenous peoples in Russia has gained constitutional and legislative support: the Russian Constitution guarantees the rights of indigenous peoples "in accordance with generally recognized principles and norms of international law", and shares the responsibility between federal and regional governments for "the protection of traditional living habitat and of traditional way of life of small ethnic communities". Under Article 72 of the Constitution the Federal Government has responsibility and jurisdiction to regulate and protect the rights of indigenous peoples, and the subjects of the Russian Federation must bring their laws into conformity with federal legal framework.

The Concept for the Sustainable Development of Indigenous Peoples of the North, Siberia and the Far East of the Russian Federation is the key document determining the main

principles of Russian national policy towards indigenous peoples of the North. The main objective of the Concept is to strengthen their social and economic potential, to protect the traditional environment, traditional lifestyle and cultural values with the government support as well as through mobilization of the internal resources of the peoples themselves. As one of the objective it states participation of indigenous peoples and their representatives and associations in making decisions when natural resources are explored and used in traditional habitat and the areas of traditional economic activities. Unfortunately, the Concept doesn't suggest legal mechanisms to implement these objectives.

Federal legislation on indigenous peoples consists of the Federal Law "On Guarantees of Rights of Indigenous Peoples in the Russian Federation", the Federal Law "On Territories of Traditional Resource Use" and some rules and regulations in the specific laws such as the Land Code, the Water Code, the Forestry Code.

In 2009, the Russian Government passed the special lists – the List of Traditional Habitats and Areas of Traditional Occupations of Indigenous Peoples of the Russian Federation, as well as the List of Types of Traditional Occupations of Indigenous Peoples of the Russian Federation. Such lists were set to resolve the problem of confirmation of ethnicity by indigenous peoples of the North in order to receive priority rights to use land, forest, water and other resources. According to these lists a specially protected areas can be created where any "non-traditional" activities are restricted or prohibited. Unfortunately, by 2015 such areas have not been settled.

Nevertheless, the regional governments in Western Siberia take much effort to establish long-term political stability and personal continuity alongside with social programs for indigenous peoples. The example of Yamalo-Nenets Autonomous Area show a certain progress of regulations guarantying indigenous interests in hydrocarbon development. The Statute of Yamalo-Nenets Autonomous Area declares the rights of indigenous peoples, guarantees their right to traditional lifestyle and occupations, language, culture, etc., the right to participate in the work of regional authorities, local governments according to their national traditions and customs. Public authorities are obliged to take into account the indigenous peoples' opinion when dealing with issues that affect their interests.

Several laws are related to the problems of land use, traditional nature management, and conservation of natural resources on the lands of indigenous peoples. These are:

1) The Law "On Specially Preserved Areas of the Yamalo-Nenets Autonomous Okrug", which regulates the organization, preservation, and utilization of specially preserved natural areas of particular scientific, cultural, esthetic, or recreational value, and guarantees

protection of the legal rights and interests of the northern indigenous peoples, as well as preservation and development of their traditional lifestyle and occupations;

2) The Law "On Protection of the Natural Habitat and Traditional Lifestyle of the Northern Indigenous Peoples in Yamalo-Nenets Autonomous Region" is targeting to preservation of traditional territories and occupations of indigenous peoples, support traditional way of life, to providing facilities and conditions for revival of indigenous culture. Article 8 of the law regulates participation of indigenous peoples in protection of territories through their representatives. The protection instruments are implemented jointly by state authorities, local government bodies, companies, and aiming at economic, social, environmental, organizational, legal and other objectives in order to preserve territories which indigenous peoples.

3) The Law "On Reindeer Herding" determines legislative, economic, environmental and social fundamentals of reindeer husbandry as one of the most important livelihoods of indigenous peoples.

4) The Law "On State Support to Indigenous Peoples, to their Communities and the Northern Organizations Involved in Traditional Occupations in the Territory of Yamalo-Nenets Autonomous Area" requires that in cases where industrial development takes place on the territory of indigenous peoples, the public authorities must inform indigenous peoples about it and organize consultations with their representatives and communities, also public authorities provide for making legal agreements between indigenous peoples and industrial companies, especially those which develop mineral and energy resources. The law also grants indigenous communities the right to participate in development of special regional programs and in control over their execution.

Implementing the legal norms, the regional authorities create good conditions for oil and gas companies to work closely with indigenous peoples in discussion of special requirements and conditions of the industrial projects.

One example of the involvement of indigenous peoples in decision-making is the project "Yamal LNG", implemented by Russia's largest independent gas producer – Novatek. The Yamal LNG project is based in the estuary of the Ob River which is ice-bound nine months of the year. The project ensures production and marketing of the Russian Arctic's vast natural gas reserves and has involved the construction of a major new maritime route for transporting liquefied natural gas to Europe and Asia. Since it was launched, the Yamal LNG project has made efforts to respect the traditional way of life of indigenous peoples. A strategic environmental assessment was carried out, together with an exploratory study of the various stakeholders involved. An accurate map of the local environment was done, a detailed

analysis of the site's social and economic context was provided. Based on these results, the first phase of the community commitment program was initiated. Its purpose is to mitigate the impact of the Yamal LNG project. A regional support programs for the Nenets peoples were developed and €76 million action plan are deployed. It includes:

- measures to prevent soil and water pollution, together with compensation contracts in the event of any damage caused to the region's ecosystem and fragile natural resources,

- cooperation agreements with local authorities focusing on cultural issues and measures to protect sacred landscapes and places of worship,

- the construction of a logistical infrastructure, housing, educational and medical centers, the - supply of equipment, machines, fuel and food,

- close cooperation with NGOs and local indigenous associations.

Thus, the regional authorities and industrial companies of the Yamalo-Nenets Autonomous Okrug, for example, use all existing legal instruments to protect rights of indigenous peoples. However, opportunities available to them in this regard are quite limited by federal legislation. At the federal level, on the contrary, there is very little initiative to protect the northern indigenous peoples when their territories are projected for oil and gas development.

CONCLUSION

The analysis of the Russian federal and regional legislation have pointed us to the conclusion that in the Russian Federation a certain legal framework exists for regulation of environmental protection but it hardly can satisfy the demand to protect fragile environment of Western Siberia which is intensively exploited today.

In this regard, we can distinguish a number of factors that impede the realization of the objectives set. Firstly, there is no basic federal law specifically relevant to use and protection of the northern environment. The documents focusing on regulation of economic development of the northern territories do not account for the climatic conditions of the North, do not establish special environmental requirements for industrial activities there. Secondly, the lack of effective protection of the environment is originally due to weaknesses in the environmental regulatory legal acts. Thirdly, the possibilities of the regions in regulating environmental protection on their territories are rather limited by the federal legislation. Lastly, there is a lack of unified and coherent environmental regulations for Western Siberia.

The most effective way to regulate environmental issues of oil and gas development is within the framework of the Environmental Strategy of Western Siberia in the Period up to 2030 which can be adopted on the federal level by analogy with the Strategy of Social and Economic Development of Siberia. The proposed Strategy can consider the environmental

and economic peculiarities of the Tyumen Region, the Khanty-Mansiisk and Yamalo-Nenets Autonomous Okrugs and will be focused on the most critical ecological problems of their territories. The Strategy should provide comprehensive approach to the use and protection of the environment of Western Siberia during its development as well as incorporate explicit legal measures.

The adoption of the Strategy should be followed by relevant changes to the federal laws (Subsoil Use Law, Law "On Environmental Impact Assessment", "On Environmental Protection", the Water Code), for example, the Federal Law "On Environmental Protection" can include a chapter "Requirements for oil and gas industry performed in the northern territories of the Russian Federation". Another proposed change to the same law is to increase the legal and administrative capabilities of regional authorities and to vest them with broader powers to manage environmental issues in their territories. Additionally, Article 11 of the Federal Law "On Environmental Impact Assessment" should be amended with the list of objects of the impact assessment at the federal level, which have an impact on the north environment.

Having extended powers the Western Siberian regions – the Tyumen Region, the Khanty-Mansiisk and Yamalo-Nenets Autonomous Okrugs might be able to improve their environmental laws which are rather insufficient and to make considerable changes specifically targeting to the present and future needs of environmental protection.

The major deficiency of the environmental legislation is that it lacks the comprehensive system of legal measures through which the northern environment is protected during oil and gas development.

We have worked out several measures related to significant environmental problems of the Western Siberia which have to be resolved in the nearest future.

(1) Legal measures for climate change adaptation can be the following:

- to set key performance indicators and benchmarks for energy efficiency and specific energy consumption for oil and gas sector,

- to set key performance indicators for GHG emissions from oil and gas industry,

- to increase scientific and other knowledge about climate change through such instruments as personnel trainings, environmental information,

- to carry relevant impact assessments of oil and gas projects focusing on climate impacts,

- to introduce economic mechanisms to support oil and gas companies using mitigation measures.

(2) Legal measures for mitigation of environmental impacts can be the following:

- to establish stringent environmental standards for water pollution, noise pollution and disturbance affecting northern fauna and marine life, especially during the offshore operations,

- to introduce compulsory environmental certification and environmental auditing for operating oil and gas companies,

- to prohibit unfounded disturbance of the territories and destruction of sea-ice and ice habitats,

- to set strict liability measures for oil spills, especially in ice-covered waters,

- to develop the system of waste disposal specially relevant to toxic wastes and chemicals,

- to use oil and gas development technologies compatible with agriculture activities and reindeer husbandry,

- to define the content and the scope of environmental information, the procedure of its provision to the public authorities, operating companies, indigenous peoples and those who is interested in it,

- to specify requirements for environmental training of the personell and top-managers of oil and gas companies.

(3) Legal measures for protecting traditional lifestyle and occupations of indigenous peoples of Western Siberia can be the following:

- to create specially protected areas of traditional habitats and traditional occupations of indigenous peoples under the Governmental Order No. 631-p. The industrial activities on these territories will be much limited or even restricted if they can threaten the way of life of indigenous peoples,

- to implement instruments available for indigenous peoples to get their consent of for the oil and gas activities on their traditional territories,

- to involve indigenous peoples or their representatives into the management of their territories and into joint decision-making,

- to impose responsibilities on oil and gas companies to consult and cooperate with indigenous peoples before and during oil and gas development on their territories.

Though it is not possible to avoid completely physical disturbances in areas where hydrocarbon activities are conducted, to protect environment of Western Siberia through legal instrument is the priority task of the Russian Federation and its subjects today.