

FOREWORD

The following assessment is a natural extension of the work that the Advanced International Studies Unit has done to support greenhouse gas mitigation in transition economies. The assessment sets a baseline by describing where current climate change activities in Russia stand. In fact, it is the first comprehensive look at the institutional ability of a country to develop climate change policies and programs. Findings cover government, non-governmental organizations, and for-profit companies. The assessment also includes a survey of capacity-building activities in the field that have taken place in Russia to date.

The primary target group for the assessment is U.S. and Russian policymakers; findings from this assessment are designed to be presented in a bilateral forum. The findings of the project team are designed to provide guidance for capacity-building activities that the United States government, other governments, and multilateral institutions are initiating in the region. However, this report is also meant to be shared with the broader climate policy community. A summary report will be available in electronic form on the Internet in both English and Russian.

The project team members would like to express their appreciation to the United States Department of Energy Office of Energy Efficiency and Renewable Energy for support in this endeavor. The team would also like to thank participating in-country experts: Vladimir Berdin, Vsevolod Gavrilov, Vladimir Maximov, Mikhail Saparov, Vitalii Papushkin, Oleg Pluzhnikov, and Lydia Popova. Special acknowledgment is due to Brian Castelli, Bob Dixon, Chris Bordeaux, John Millhone and the participating Russian officials who were generous with their time and views; this assessment would not have been possible without them.

The project team would also like to thank Pacific Northwest National Laboratory reviewers and editors Meredydd Evans, Tom Secrest, Jan Tarantino, and external reviewers Alexey Kokorin, Ellina Levina, Marina Martynova, and Leonid Maximyuk for their valuable comments that have improved the quality of this manuscript substantially. Responsibility for any remaining errors or misrepresentations, including those due to translation, remains with the authors.

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EXECUTIVE SUMMARY

Russia presents both challenges and opportunities for anyone concerned with addressing global climate change. Russia ratified the United Nations Framework Convention on Climate Change (FCCC) in 1994, and it has emerged with potential opportunities for carbon mitigation that are as promising to environmentalists as its vast fossil fuel reserves are to oil and gas executives. At the same time, however, Russia faces several formidable barriers to capturing this new carbon market.

The idea of conducting the following assessment came about from three premises: 1) it is important for Russia to have the resources and capabilities to meet its obligations under the FCCC, 2) Russia should develop and expand its efforts to mitigate greenhouse gas emissions, and 3) Russia must overcome existing barriers to greenhouse gas mitigation. An understanding of the “state of the state” in Russian climate change is critical to outlining where Russia needs to go in these areas and how it can get there.

There were four components to the assessment:

1. background research
2. interviews with selected policy-makers (see Appendix 1)
3. written responses from selected experts
4. discussions with the Russian for-profit sector.

Climate Change Trends and Politics: An Overview

The legal and administrative basis for work on climate change policy in Russia stems from two federal mandates and a series of government programs. The two documents are a statute establishing the Interagency Commission of the Russian Federation on Climate Change Problems (referred to in this document as the Interagency Commission) and a decree ratifying the FCCC. Both were signed in 1994. The four federal agencies playing the largest role in climate change policy and programs are, in alphabetical order, the Ministry of Economy, the Ministry of Fuel and Energy, the State Committee for Environmental Protection, and the State Committee for Hydrometeorology and Environmental Monitoring (Roshydromet). The status of the group as an interagency commission limits its role to one of compiling proposals and suggestions and coordinating work among the various participating agencies. Because it is not a Governmental Commission (a higher-level designation), its decisions are not binding. In other words, the commission cannot mandate the activities of ministries and state committees.

Russian legislators have not been involved actively in the formation of climate change policy, but the State Duma did ratify the FCCC, and it will be responsible for ratifying the Kyoto Protocol.

No Russian non-governmental organizations (NGOs) work exclusively on climate change issues. However, several NGOs include climate change in their portfolio of activities. In

addition, several “quasi-NGOs” have emerged to play important roles in the climate research and policy development process.

The project team also asked detailed questions about flexible mechanisms, such as international emission trading, joint implementation (JI), and the Clean Development Mechanism (CDM). A large proportion of the intellectual and financial support for climate programs in Russia is devoted to thinking on these issues. In addition, major Russian greenhouse gas producers have already begun discussions with international companies to buy and sell “carbon credits.” Following meetings held between the Ministry of Fuel and Energy and the Japanese government, United Energy Systems (UES), the Russian utility monopoly, prepared a list of projects that could mitigate carbon for potential sale in a future international market. These projects were recommended to the Japanese government for the preparation of pre-feasibility studies. While the Russian and Japanese governments have not held official discussion on transferring emission credits under the proposed projects, the Japanese companies participating in the studies have expressed interest in an exchange.

Key Findings and Recommendations

There is no shortage of sophisticated thinking on climate change issues in Russia. Russian researchers and government officials have produced a plethora of documents at the national level, and they are actively engaged in international negotiations and policy fora. Furthermore, strong informal linkages have developed across governmental organizations and NGOs.

However, Russia faces some serious challenges in complying with the FCCC and advancing policies and programs to mitigate climate change. This will naturally lead to problems with complying with the Kyoto Protocol, which many Russian officials would like to ratify. Severe financial difficulties and a lack of clearly defined roles for various agencies present the dangerous possibility that Russia will develop, in the words of one Russian policymaker, “all of the bureaucracy with none of the resources.” The project team developed seven findings and recommendations, which are divided into three categories.

Management Issues

- **Agencies would be more effective if they clarified their respective roles in climate policy and programs.** Jurisdictional concerns are a focus both for FCCC compliance and for Russian efforts to lay the groundwork for international emission trading programs. Because of a lack of authority vested in the Interagency Commission, several agencies are working simultaneously on programs such as JI and monitoring. Jurisdictional issues also appeared frequently in discussions about flexible mechanisms. Many government agencies and for-profit companies¹ are waiting to

¹ The term “for-profit” is used throughout this report because “private” does not adequately describe many large monopolies in the energy sector in which the government owns a controlling interest. Gazprom, for

see which government organization will develop and manage infrastructure for trading and JI. **Recommendations:** Better clarification of responsibilities is a difficult political task, but it would reduce overlap in programs and allow agencies to develop unique areas of expertise.

- **FCCC compliance should remain a core focus of Russian climate change programs.** While this point may seem obvious, compliance in inventories and reporting should not go overlooked. A great deal of agency time and effort has been devoted to flexible mechanisms, but Russia will be unable to participate in any international trading regime if it is not in compliance with the FCCC. Support such as the U.S. Country Studies Program has helped Russia to comply with reporting requirements, and some continuation of this support should be sought in the international community. It is in the interest of all FCCC parties to promote a high standard of inventory collection and reporting under the Convention, and solid performance by a major emitter such as Russia could improve confidence in the entire regime. **Recommendations:** The international community should continue to provide support and technical assistance for reporting and monitoring greenhouse gas sources and sinks.
- **Low-cost planning and evaluation measures – which do not currently exist – could allocate scarce resources more effectively.** Planning is a relatively inexpensive way for Russian climate change institutions to establish priorities and improve performance. A planning exercise would also provide guidance to the Russian budgetary process on where funding was most urgently needed. Performance standards and goals could be divided into three groups: meeting FCCC commitments, developing flexible mechanisms, and managing research and program implementation. **Recommendations:** The Interagency Commission should hold a planning exercise to set goals and set performance standards.

Technical Assistance

- **There is no shortage of programs, just a shortage of funding.** International donors sponsored at least five workshops on climate change policy in Russia in 1998 alone. As a result, the climate policymaking community in Russia does not need more “Climate 101” training. It is difficult to say how much of the federal program “The Prevention of Dangerous Climate Changes and Their Negative Consequences” is actually being implemented in Russia, and its current funding levels are also unclear. Shortfalls in budget revenues and extra-budgetary income have made it extremely difficult to calculate what percentage of the \$40 to 50 million allocated for climate change programs in Russia for 1997 to 2000 has actually been spent, making complementary assistance programs very difficult to design. **Recommendations:** Highest priority should be given to support for personnel to work full-time on climate change policy and programs and support for information technology.

example, is a joint-stock company with a board of directors and shares which are traded on an exchange, but none of the Russians interviewed felt comfortable describing it as a private company.

- **Russia would benefit from targeted technical assistance in three key areas: joint implementation, monitoring, and legal infrastructure.** In addition to funding existing programs, three areas in the assessment emerged as areas in need of targeted assistance. While an ad hoc process already exists for approving individual JI projects, many program points need to be clarified. In addition, several co-existing frameworks also exist for emissions monitoring, but there is a need to define a cost-effective system that will correspond to guidelines developed by the Intergovernmental Panel on Climate Change (IPCC). Finally, a substantial body of energy and environmental law exists, but it is not clear how it should be used to handle greenhouse gas emissions and allowances. ***Recommendations:*** Focused technical cooperation could sort through existing structures and adapt them to the needs of a climate change program.
- **Technical cooperation should include major greenhouse gas producers in the for-profit sector.** Two for-profit companies—UES and Gazprom—produce a substantial amount of industrial CO₂ and methane emissions. Targeted technical assistance for these companies and their subsidiaries would address the two largest sources of anthropogenic greenhouse gas emissions in Russia. Giants in the for-profit sector also have monitoring experience and a strong incentive to reduce fuel losses and resultant greenhouse gas emissions. ***Recommendations:*** Initiatives involving key players such as Gazprom, UES, and other industrial emitters could leverage major reductions in emissions.

Other Findings

- **All Russian stakeholders should enhance their outreach programs.** This may seem like a second-order priority in the face of basic needs for programs, but key groups such as the Federal Assembly, high-level officials in the Ministry of Finance, and the media are in need of more information on climate change policy and its affect on Russia. ***Recommendations:*** Both donors and the Interagency Commission should target these audiences for improved outreach. Limited funding for these activities may be available from individual ministry budgets.

INTRODUCTION

Russia presents both challenges and opportunities in climate change that are global in scope. Russia ratified the United Nations Framework Convention on Climate Change (FCCC) in 1994, and it has emerged with a potential market for carbon mitigation that is as promising to environmentalists as its vast fossil fuel reserves are to oil and gas executives. At the same time, however, Russia faces several formidable barriers to capturing this new carbon market.

The idea of conducting the following assessment came about from three premises: 1) it is important for Russia to have the resources and capabilities to meet its obligations under the FCCC, 2) Russia should develop and expand its efforts to mitigate greenhouse gas emissions, and 3) Russia must overcome existing barriers to greenhouse gas mitigation. An understanding of the “state of the state” in Russian climate change is critical to outlining where Russia needs to go in these areas and how it can get there.

Several multilateral programs involving Russia have conducted isolated evaluations of projects or initiatives—these programs are catalogued in Appendix 3. However, there has never been a comprehensive assessment of current Russian policymaking institutions in the field of climate change. Donors or policy analysts have needed information on what has happened and what needs to happen. This assessment was designed to meet that need.

The assessment described in this document evaluates the capacity of Russia to implement its commitments under the FCCC. Compliance with the FCCC is important for several reasons. First, compliance is a priority for Russia because it is a precursor for the use of flexible mechanisms such as joint implementation (JI) and international emission trading. Second, compliance is a constructive focus for parties to the FCCC that might otherwise be divided on how to attain emissions reductions. Finally, an effective assessment can identify ways to build a “climate infrastructure” that will be valuable under any international arrangement to mitigate carbon emissions.

The assessment also surveyed Russian policymakers about their thoughts on flexible mechanisms, such as international emission trading and JI. The project team included this element in its scope because a large proportion of the intellectual and financial support for climate programs in Russia is devoted to thinking on these issues. In addition, major Russian greenhouse gas producers have already begun discussions with international companies to buy and sell “carbon credits.”

There were four components to the assessment:

- 1) **Background research.** Preliminary research focused on existing programs and infrastructure, particularly in-country programs for environmental monitoring. This research took place in the United States and in Russia during March through July 1999.

- 2) **Interviews with selected policymakers.** Members of the project team conducted interviews in Moscow in May 1999. See Appendix 1 for a list of the project team and the interviews conducted. Interview participants received a Russian-language questionnaire on trading systems to provide them with some context for discussions. The actual discussions were intended to be relatively informal in order to elicit more candid responses and allow the subjects to spend the most time on areas with which they were most familiar.
- 3) **Written responses from selected experts.** Several additional Russian experts in the field of climate policy agreed to provide us with comments in response to the questionnaire on flexible mechanisms. These additional participants included officials currently working on climate issues at the Ministry of Economy, the State Committee for Environmental Protection, the National Pollution Abatement Fund, and the International Bank for Reconstruction and Development. The team collected these responses from May to July 1999.
- 4) **Discussions with the Russian for-profit sector.** The project team also conducted an interview with representatives of United Energy Systems (UES), a national power producer and shareholder in regional utilities, and Gazprom, which produces almost 45 percent of CO₂ emissions from fuel combustion and 60 percent of industrial methane emissions in Russia (Roshydromet 1997, pp 21, 24). The project team also spoke with several senior energy managers in other key industries.

BACKGROUND

Emissions Trends

Gross inefficiencies and economic distortions resulted in a situation where Russia was the second most energy-intensive economy in the world in its baseline year of 1990.

Russians used more energy per unit of output than any other country in the world except Ukraine. As a result, basic measures to improve the efficiency of energy use (which is the single largest contributor to greenhouse gas emissions) are relatively inexpensive. A Russian government study indicated that low cost/no cost options in the energy system alone could reduce emissions by more than 200 MtC/year, or more than 10 percent of Russian emissions in 1997. Other measures in the energy sector could reduce emissions an additional 40 percent from 1997 levels at a cost of \$40 to \$80/ton.² Those costs do not reflect other environmental benefits, such as improved local air quality.

Carbon mitigation in Russia offers another advantage—it is easily attainable with existing technology. Joint implementation, as outlined in the FCCC, is particularly attractive in Russia for this reason. Russia is also of global interest because it would be a net seller in any emission trading system, private or public.

The importance of Russia in future international carbon credit and allowance markets is due to several factors. Under current agreements pertaining to the FCCC, Russia is not required to reduce emissions below 1990 baseline levels. These are relatively lenient provisions for an industrialized nation because Russia has been classified as an economy in transition. In addition, the economic crisis and financial difficulties associated with the transition to a market economy resulted in a drop in gross domestic product and in energy use in Russia that caused a dramatic reduction in greenhouse gas emissions. By 1997, Russian CO₂ emissions had fallen by almost 40 percent relative to 1990 levels, making the volume of the emissions reduced more than twice as large as all industrial emissions produced by Lithuania, Latvia, and Estonia.³

Permit trading and project-based crediting are of great interest to Russian policymakers because either system could generate increased foreign investment and technology transfer in many sectors in need of urgent assistance, ranging from forestry to residential heating. Given the current shortage of investment capital in Russia, many of these projects have been postponed or cancelled. The incentive of credits could make these projects more attractive, depending upon the market value of the credits.

Unfortunately, serious problems threaten to overshadow this potential. Russia faces chronic revenue shortfalls, and the country is still recovering from the banking crisis and ruble devaluation of August 1998. Investor confidence in Russia is extremely low, and

² 1997 emissions statistics were drawn from the U.S. Energy Information Administration, while estimates of potential CO₂ reduction were obtained from the Russian Climate Change Country Study, Task 6 (p. 17).

³ U.S. Energy Information Administration data. Figures were corroborated with estimates based on fuel consumption data for Russia from British Petroleum.

Russian Commitments under International Climate Agreements

Russia signed the United Nations Framework Convention on Climate Change (FCCC) in 1992 and ratified it in 1994. In 1999, Russia signed the Kyoto Protocol. In 1994, the Russian Government established the Interagency Commission of the Russian Federation on Climate Change Problems (the Interagency Commission) to coordinate all activities related to the development of climate change mitigation policies (see Appendix 2 for the Commission's legal mandate). The commission is led by the Russian Federal Service for Hydrometeorology and Environmental Monitoring (Roshydromet).

In the FCCC, Russia is classified as an Annex I country, or an industrialized country which has made a commitment to reduce its emissions. Russia is also a country which is "undergoing the process of transition to a market economy."

Under the Kyoto Protocol, Russia agreed to targets whereby CO₂ emissions in the period 2008 to 2012 would not exceed a baseline level of emissions in 1990. In the Kyoto Protocol, which Russia has signed but not ratified, Russia is an Annex B country, or a country that has made a commitment to reduce or stabilize emissions.

Russian official documents have established the following domestic objectives in support of the FCCC and the Kyoto Protocol (see Interagency Commission, 1995 and 1998):

- develop and implement climate change mitigation and adaptation policies to stabilize anthropogenic emissions at the baseline level of 1990 by the budget period 2008 to 2012
- provide the FCCC Secretariat with information about these policies on a regular basis
- create a national monitoring system for greenhouse gas sources and sinks no later than one year before the first budget period
- create inventories of greenhouse gases for all sectors of the economy according to the rules and recommendations of the Intergovernmental Panel on Climate Change (IPCC)
- provide the FCCC Secretariat with information about greenhouse gas emissions on a regular basis
- participate in international research programs on climate change.

the country has lost its investment-grade rating from major rating agencies. Officials are feeling pressure to reduce a formidable foreign debt to both the International Monetary Fund and private investors. Funds for climate change research and policy are scarce in a setting where social support to pensioners is sporadic and government employees can go unpaid for months at a time. In this situation, talk of climate change initiatives may seem almost far-fetched despite the major benefits that these initiatives could bring.

Stakeholders

The legal and administrative basis for work on climate change policy in Russia stems primarily from two government documents and a series of government programs. The two documents are a statute establishing the Interagency Commission and a decree ratifying the FCCC. The government has earmarked funds for the program “Prevention of Dangerous Climate Changes and Their Consequences” and for the federal energy-saving program, “Russian Energy Efficiency for 1998-2005,” which has had a direct impact on emissions by reducing the use of fossil fuel. Currently there is no government resolution relating to activities under the Kyoto Protocol other than the government decree on signing the protocol, which was released in advance of the signing on March 11, 1999.

The four federal agencies playing the largest role in climate change policy and programs are, in alphabetical order, the Ministry of Economy, the Ministry of Fuel and Energy, the State Committee for Environmental Protection, and the State Committee for Hydrometeorology and Environmental Monitoring (Roshydromet). All four agencies sent representatives to the preparatory talks for the Fifth Meeting of the Conference of Parties to the FCCC held in Bonn May 31 to June 11, 1999. The Ministry of Economy has started attending these meetings relatively recently.

The Interagency Commission and other stakeholders have several incentives for participating in international climate negotiations and domestic programs to mitigate greenhouse gas emissions: ensuring that Russia complies with the FCCC, potential trading revenues, project-based investment (FDI) and technology transfer, and prestige. While the Interagency Commission as a whole does not have any direct incentives tied to its performance, participating ministries could benefit greatly from any type of international arrangement involving carbon credits, particularly project-based crediting.

The Interagency Commission, Its Secretariat, and Program Agencies

Governmental Statute 346 established the Interagency Commission in April 1994. The statute specified that the Head of Roshydromet would head the commission, and it listed 28 other commission members (see Appendix 2 for an English-language translation of the decree). The commission head retained his position at Roshydromet, and the commission secretariat was housed at his agency.

While the secretariat is housed at Roshydromet and headed by the Head of Roshydromet, Roshydromet is not in charge of determining policy for the commission. Rather, it compiles and prepares materials from ministries and other program agencies for presentation to the entire commission.

The status of the group as an interagency commission limits its role to one of compiling proposals and suggestions and coordinating work among the various participating agencies. Because it is not a Governmental Commission (a higher-level designation that would be headed by an official at the Deputy Minister level), its decisions are not

binding. In other words, the commission cannot mandate the activities of ministries and state committees.

Currently the secretariat consists of the Head of Roshydromet and an assistant. There is not a program budget per se for the secretariat outside of money for convening meetings of the commission. The Head Negotiator for international climate change agreements in Russia, who is also affiliated with Roshydromet, attends meetings of the Conference of the Parties and of the Umbrella Group on behalf of the Russian government. Member agencies, such as the State Committee for Environmental Protection or the Ministry of Fuel and Energy, fund the climate change programs out of their own budgets. In addition, the composition of the commission has changed slightly, and a representative from Gazprom has joined its ranks.

The composition and mandate of the commission can be changed only by a decree, which would be issued either by the president of Russia or the prime minister. While Roshydromet has collected proposals for a revised and updated membership list for the committee, no decree has been issued to bring this into effect. Commission members have held discussions proposing the division of responsibilities among various agencies for various parts of the climate program, such as National Communications and Kyoto Protocol research and policy. However, no official decree has been issued on this division of responsibilities, so the original mandate of the Interagency Commission remains in effect.

Changes in the distribution of authority on climate change policy will depend in part on the changes in government resulting from turnover in the position of Prime Minister. Issues surrounding possible changes in interagency coordination of activities relating to the FCCC and the Kyoto Protocol will depend on the structure of federal governmental bodies, which will be confirmed in the formation of the new cabinet of ministers of Russia. The administrative units that seem most involved in the discussion of climate policy leadership are the administrative bodies of the executive branch: ministries and state committees.

The best analogy to the Interagency Commission in the United States is the White House Climate Change Task Force. Task force members are affiliated with certain programmatic agencies, and the committee secretariat has very limited funding for actual programs. Program funding comes instead from participating agencies.

The Interagency Commission coordinates climate change activities, but there is a large degree of flexibility and latitude for ministries and other government agencies interested in undertaking activities relating to the implementation of the Kyoto Protocol. Government entities in addition to the four major players are also interested in a role in flexible mechanisms. For example, the Russian National Pollution Abatement Facility has participated in drafting a number of documents on flexible mechanisms and Russia. A representative of the facility said that the fund would be capable of participating in permit transfers, preparing databases of project information, analyzing the greenhouse gas impacts of federal programs, preparing projects for the World Bank Prototype Carbon

Fund, providing negotiation and contracting support, and investigating co-financing for greenhouse gas mitigation projects implemented jointly by Russia and foreign partners.

The Ministry of Foreign Affairs has monitored international negotiations, but its officials have not played a significant role in the development of international climate change policy. A Deputy Minister represents the Ministry on the Interagency Commission.

While the Ministry of Economy has increased its participation in climate change issues in recent years, the Ministry of Finance has not been particularly active or involved with international climate change policy. This may be because there is no single champion of these issues at the ministry, or it may be due to the fact that pressing economic problems have consumed its limited staff and resources. The Ministry of Finance is also represented with a seat on the Interagency Commission at the Deputy Minister level.

In addition to the statute creating the Interagency Commission, there are several laws that have an indirect effect on climate (see Benioff et al. 1997, pp 120-1). For example, the Federal Energy Conservation Law might indirectly reduce energy intensity and result in reductions in fossil fuel consumption and subsequent greenhouse gases, and the 1997 Forest Code is expected to promote sequestration.

The Legislative Branch

The Russian legislative branch, the Federal Assembly, is composed of the Federation Council (regional officials) and the State Duma (popularly elected representatives). The Federal Assembly has not been actively involved in the formation of climate change policy, but the State Duma did ratify the Framework Convention on Climate Change, and it will be responsible for ratifying the Kyoto Protocol. The statute that created the Interagency Commission on Climate Change was issued by the Chairman of the Government of the Russian Federation. The term “Government” in this sense is roughly analogous to the Executive Office of the President in the United States.

The Russian government has passed two decrees related to the Kyoto Protocol. On February 11, 1999, a decree was passed to sign the protocol. In addition, the government passed a decree on June 30, 1998 (No. 879-r) which in Point 10 (b) directs the State Committee for Environmental Protection and the Ministry of Fuel and Energy together with other interested ministries and agencies to develop proposals on mechanisms for greenhouse gas emission trading.

The ratification procedure for the FCCC, and the procedure that would have to be followed for ratifying the Kyoto Protocol in Russia, is as follows: first, the interested ministries and agencies would introduce a proposal on ratification to the Office of the Chairman of the Russian Government. That office would submit it to the State Duma, which is the lower house of the Russian Parliament. The proposal would undergo a review in interested committees and sub-committees of the Duma. In the event that the State Duma decided in favor of ratification, the issue would be referred for examination to the Federation Council, which is the upper house of the Russian Parliament. If

endorsed by the Federation Council, the proposal would be sent to the executive office of the President of Russia, where a corresponding Presidential Decree would be prepared. The preparatory discussion stage in the Duma would include hearings at the committee level in order to acquaint deputies with the issue and to allow them to develop preliminary positions.

The Federal Assembly has not demonstrated any opposition to climate change mitigation activities or participation in the development of flexible mechanisms. This may be explained by two factors. First, general awareness of climate change issues among legislators is relatively low, and economic crises have forced other priorities onto the legislative agenda. Second, officials who are familiar with the issues have realized that Russia would receive considerable financial revenues as a result of an international emission trading or project-based crediting regime.

Non-Governmental Organizations

There are no Russian NGOs working exclusively on climate change issues. However, several NGOs include climate change in their portfolio of activities. For example, the Socio-Ecological Union, the largest Russian environmental NGO, is a member of the Climate Action Network for Central and Eastern Europe (CAN/CEE). The Center for Nuclear Ecology and Energy Policy, which is a part of the Socio-Ecological Union^[S1], has sent representatives to climate change meetings, and several of their bulletins have focused on climate change issues. However, neither the Center nor the Socio-Ecological Union as a whole has any staff currently working full-time on climate change issues.

The Center for Energy Efficiency (CENef) has conducted research on climate change mitigation since its inception in 1992, and it has coordinated a number of climate change workshops for international organizations, such as the United Nations Environment Program and the IPCC. CENef has several specialists who spend at least part of their time on climate issues. CENef also helped to establish regional energy efficiency centers, and nearly 50 exist across Russia. Several of these centers have participated in workshops focusing on climate change.

In addition to the NGOs listed above, several federally funded research institutes have emerged to play important roles in the climate research and policy development process. For example, the Institute for Global Climate and Ecology, a federal research institute under Roshydromet and the Russian Academy of Sciences, served as the lead agency for the U.S.-funded Russian Country Study and Strategic National Action Plan. Other research institutes are closer to “quasi-NGOs” in form: they are independent organizations but depend heavily upon federal funds. The Institute for Environmental Economics at the Moscow Higher School of Economics is one example of this type of organization. The Institute has served as a lead organization on several climate-related studies, primarily due to the interest of its leadership in climate change issues. Another example is the Center for Energy Policy, an independent non-profit organization founded in 1997, has helped to organize several meetings on climate change with international participation. The center has also posted information on Russian climate change policy

on its web site. Finally, the State Institute of Energy Strategy, which is affiliated with the Ministry of Fuel and Energy, has overseen some research on flexible mechanisms. However, it has a very small staff and limited funding that comes almost entirely from the Ministry.

The For-Profit Sector

Greenhouse gas emissions from the Russian for-profit sector is dominated by a small number of large entities with a disproportionate influence on climate. The phrase “private sector” is somewhat of a misnomer, because large energy companies, which produce a significant portion of Russia’s industrial CO₂ and methane emissions—are partly owned by the Russian government.

In the natural gas sector, Gazprom has been involved in several mitigation-related projects. It has an official pilot phase JI project with Ruhrgas, the German gas company, and Volgatransgas, a regional subsidiary that is wholly owned by Gazprom, to reduce methane losses in pipelines. The project partners plan to reduce emissions by reducing the hours of operation of the compressor stations, and they will calculate reductions with a computer program. However, this project did not provide for the use of permits or carbon crediting; the project partners have yet to decide how credits will be allocated (Correspondence with Ralph Bussmann, Ruhrgas AG, 7/26/99). Gazprom had worked with Ruhrgas previously on a project measuring methane leakage at compressor stations.

The Russian utility sector is a natural monopoly dominated by a joint-stock company called Unified Electrical Power systems of Russia, commonly known as UES (its Russian acronym is *RAO EES*). The Russian government owns a 52 percent stake in UES and appoints its president. However, the company is operated by a board of directors, and the remainder of the shares are owned by foreign investors (36 percent) and employees (12 percent).

UES works with 72 regional distribution companies, or *energosystemy*, which are often referred to in English as *energors* (e.g., Samarenergo and Mosenergo). The regional distribution companies are also owned by shareholders, and their shares are listed on Russian stock exchanges. The major shareholder in the energors, however, is UES, which owns from 49 to 100 percent of each energo. As one international review notes, “UES’ control over the energors is based neither on formal rules nor on market and trading relationships, such as economic price signals” (IEA 1995, p 201). In some cases, the energors are also power producers, so they would also be eligible to participate in mitigation projects as distinct entities. Mosenergo, for example, has acquired several power plants from the City of Moscow, and it is the second largest regional power producer after UES.

UES is a major greenhouse gas emitter. It controls nearly all of the large thermal power plants (over 1000 MW) and most of the large hydropower plants (over 300 MW). This network provided nearly 18 percent of installed capacity in 1995, not including the nine power plants that UES leases to regional distribution companies (IEA/OECD 1995). UES

also exports more than 14 billion kWh of electricity to countries in the Commonwealth of Independent States and nearly 6 billion kWh to other countries in Europe and the Far East.

UES also has one of the best inventories of greenhouse gases collected to date in Russia (it surveyed all of its facilities), but the results have yet to be published.

Industrial emitters are responsible for most of the remainder of emissions in the for-profit sector. These facilities include metallurgical combines, aluminum smelters, and other large, energy-intensive plants. In cases where plants have recently been modernized, these facilities monitor energy use in a way that would make it relatively easy to calculate emissions at the source level. Single plants may actually be more amenable to new policies and projects, because the benefits are proportionally greater. The largest monopolists, who already reap generous profits from their existing, albeit inefficient, operations, have a smaller incentive to undertake voluntary action.

Oil companies form another group of industrial stakeholders with considerable financial clout. Large holding companies such as LUKoil and Tyumen Oil could be actors in future greenhouse gas mitigation projects. LUKoil became the first vertically integrated oil company in Russia when it was formed in 1992, and Tyumen Oil was formed during government restructuring of the oil industry in 1995 and 1996. Both companies are comparable to major western oil companies in terms of their production, reserves, and refining capacity (BISNIS 1996, p 2).

Other joint stock companies that could oversee greenhouse gas mitigation projects include district heating companies, which are often owned by municipalities. These companies are discussed in the following section.

Other Stakeholders

Russian regions and cities are important stakeholders in climate change policy for two reasons. First they have very strong incentives to participate in project-based trading, which would attract investment to participating regions and cities. At the same time, these two groups can be ignored only at the risk of project failure; resistance to a mitigation project at the local or regional level will guarantee that it is never implemented. Second, regions oversee environmental data collection, which will form the backbone of any greenhouse gas monitoring system. The region of Novgorod is participating in a U.S.-Russian program to develop a pilot greenhouse gas monitoring project at the regional level.

Municipal governments have also been active in climate-related projects. These entities have a stake in project-based crediting because they frequently own the local district heating company or hold a majority of the shares if it is a joint stock company. Nearly 80 percent of the Russian population receives heat from district heating systems, which are energy-intensive, inefficient, and run for long periods of time in a relatively cold climate. Cities such as Chelyabinsk, Kostroma, Togliatti, Nizhny Novgorod, and Izhevsk are

already investing their own limited revenues in efficiency measures that reduce fuel use and corresponding greenhouse gas emissions. At the municipal level, Chelyabinsk and Lytkarino are participating in projects through the U.S. Initiative on Joint Implementation (USIJI). The projects are designed to mitigate greenhouse gas emissions by improving efficiency in municipal heating systems. These types of projects are attractive to local governments because they also save large amounts of money by reducing the amount of fuel that cities must buy for heat.

FINDINGS

On a positive note, there is no shortage of sophisticated thinking on climate change issues in Russia. Russian researchers and government officials have produced a plethora of documents, and they are actively engaged in international negotiations and policy fora. Furthermore, the Interagency Commission provides a structure for the policymaking process by approving proposals made by ministries and agencies. This process is relatively clear to all parties involved, and strong informal linkages have developed across governmental organizations.

However, Russia faces some serious challenges in complying with the FCCC and advancing policies and programs to mitigate climate change. Severe financial difficulties and a lack of clearly defined roles for various agencies present the dangerous possibility that Russia will develop, in the words of one Russian policymaker, “all of the bureaucracy with none of the resources.”

The following seven findings and recommendations are divided into three categories—management issues, technical assistance, and other issues.

Management Issues

Agencies would be more effective if they clarified their respective roles in climate policy and programs.

Jurisdictional concerns are a focus both for FCCC compliance and for Russian efforts to lay the groundwork for international emission trading programs. Because of a lack of authority vested in the Interagency Commission and a lack of funding for the federal program “The Prevention of Dangerous Climate Changes and their Negative Consequences,” several agencies are working simultaneously on programs such as JI and monitoring. At the same time, various members of the Interagency Commission have made suggestions about dividing up work on the FCCC and the Kyoto Protocol between different implementing agencies, such as the Ministry of Fuel and Energy, the State Committee for Environmental Protection, and the Ministry of Economy. However, no formal decision has been made to this effect.

Jurisdiction issues also appeared frequently in discussions about flexible mechanisms. For example, a representative of the Ministry of Economy stated that jurisdiction would be the key legal issue in any trading system. While all of the interview subjects demonstrated a good grasp of the issues surrounding flexible mechanisms, their views of the system that might emerge in Russia varied widely. The biggest differences of opinion centered on the types of mechanisms that would be used and the agencies that would have jurisdiction over the actual implementation of a trading system.

A representative of the Ministry of Economy told the project team that his ministry could handle the allocation of permits in a domestic or international system, possibly through a

special body within the ministry. Another interview participant from the State Committee for Environmental Protection suggested that his agency could issue permits for international trading and its regional affiliates could issue domestic permits. Interview participants from the Ministry of Fuel and Energy suggested that the ministry could oversee project-based crediting and allocation of credits under these projects. Most interview subjects also differentiated between the development of the actual system and its infrastructure and the development and implementation of projects.

A final jurisdictional issue involves the rights of regions to issue or hold allowances or permits under a system. While regions are very interested in trading and project-based crediting, the federal officials interviewed did not foresee allocating allowances to regions. While this may be open for further discussion with regions, this difference in interests is likely to be a source of future conflict if any sizable revenues are involved. One of the interview participants felt that this difference was the greatest potential barrier to implementing flexible mechanisms in Russia. In addition, regional and federal overlap in monitoring and compliance also seems inevitable.

This confusion does more than slow the development of infrastructure. Many agencies and for-profit companies are waiting to see which government organization will develop and manage the infrastructure for trading and JI before moving ahead with programs. A clear division of responsibilities could encourage emitters to take early action to mitigate their emissions.

On a positive note, the project team noted a large number of informal working relationships among experts that transcended the boundaries between ministries and between government agencies and NGOs. Several agencies worked together to prepare a draft joint statement for the U.S.-Russian Bi-National Commission on Economic and Technological Cooperation proposing an experimental program to test Kyoto mechanisms. The State Committee for Environmental Protection, the Ministry of Fuel and Energy, the Ministry of Economy, and The Ministry of Foreign Affairs all supported the proposal.⁴

Key ministries and agencies (particularly the State Committee for Environmental Protection, the Ministry of Fuel and Energy, and the Ministry of Economy) have encouraged the close cooperation of experts from government, academia, and the NGO community on issues surrounding the Kyoto Protocol. The results of this type of cooperation can be seen in documents such as "The Kyoto Protocol and Russian Energy," which was distributed by the Institute of Energy Strategy under the Ministry of Fuel and Energy. Interest in the Protocol has also been the primary motivation behind the development of the new Russian Energy Strategy. The strategy is scheduled to be released by the end of 1999.

Interagency cooperation has also been critical to a number of policy research efforts. For example, experts from several agencies and institutes worked on the World Bank national strategy study for Russia (BEA 1998), and project participants presented materials from

⁴ Roshydromet felt that the realization of this type of program was premature.

the concluding report at the June 1999 meeting of the FCCC Subsidiary Body on Implementation in Bonn. Officials from several ministries also discussed emission trading and project-based crediting at a conference on emission trading sponsored by the U.S. Agency for International Development, which was held in Moscow on July 1-2, 1998.

Multiple agencies have also cooperated on other documents:

- a national strategy in the area of greenhouse gas emissions reductions and the practice of crediting unused permits for greenhouse gas emissions (1997 and 1998)
- a draft resolution of the Russian government on the issue of preparing for Russian participation in international greenhouse gas permit trading and the use of other mechanisms outlined in the Kyoto Protocol
- a schedule of participation in ministries, agencies, and other Russian organizations in international greenhouse gas emission trading
- a proposal to prepare an early trading mechanism (2000 to 2007)⁵
- an application to the Global Environmental Facility for a project entitled “Support for an Emission Reduction Strategy and an Increase in Greenhouse Gas Mitigation”
- both national communications to the FCCC.

Recommendations: Recommendations here are presented with the caveat that this is the area where international assistance may be of the least use. Better clarification of responsibilities may be a difficult political task, but it would reduce overlap in programs and allow agencies to develop unique areas of expertise. The elevation of the Interagency Commission to the status of a governmental commission might also help to clarify roles, because commission mandates would then be binding for its member agencies. Having distinct points of contact for JI and trading would facilitate these processes for investors. Finally, jurisdiction of regional offices of federal agencies should also be clarified, particularly in the area of monitoring.

FCCC compliance should remain a core focus of Russian climate change programs.

Compliance in inventories and reporting may seem like an obvious point, but it should not go overlooked. While a great deal of agency time and effort has been devoted to flexible mechanisms, Russia will be unable to participate in any international trading regime if it is not in compliance with the FCCC. Support such as the U.S. Country Studies Program has helped Russia to comply with reporting requirements, and some continuation of this support should be sought in the international community. It is in the interest of all FCCC parties to promote a high standard of inventory collection and reporting under the Convention, and solid performance by a major emitter such as Russia could improve confidence in the entire regime.

⁵ At the meeting of the FCCC Subsidiary Body on Implementation in June 1999, Switzerland distributed a non-paper with a proposal for early Joint Implementation under the Kyoto Protocol in 2000-2007; Russian officials believe that early emission trading might also be proposed.

Russia does not yet have a detailed inventory of greenhouse gas emissions for different economic sectors. While the second national communication provides estimations of emission from fossil fuel combustion, fugitive oil, gas, and coal emissions, waste, agricultural emissions, and industrial emissions, these estimates are incomplete. While the Second National Communication also includes preliminary estimates of non-CO₂ gases, such as hydrofluorocarbons, perfluorocarbons, and SF₆, these are also incomplete. The only available estimates of greenhouse gas emissions from the Russian utility sector were developed by the International Energy Agency (IEA 1997), and these were limited to CO₂ emissions. For-profit companies such as UES have created inventories of their emissions, but these results have not been published.

Recommendations: Support for continued improvements in monitoring and reporting are essential if Russia is to comply with the FCCC. Good inventories and reporting will also improve international confidence in the feasibility of implementing flexible mechanisms in the event that Russia ratifies the Kyoto Protocol.

Low-cost planning and evaluation measures could allocate scarce resources more effectively.

Planning could be a relatively inexpensive way for Russian climate change institutions to establish priorities and improve performance. However, little formal planning at the interagency level is taking place. Discussions held with interview participants indicated that there were no programs in place that could measure staff output or program costs. Evaluation of existing programs is even more difficult because many of them have not been funded at planned levels because of revenue shortfalls. Basic accounting and program tracking systems still need to be established. In their absence, the Interagency Commission has had a difficult time identifying successful projects to replicate, just as it has a difficult time eliminating costly, ineffective initiatives.

Recommendations: A planning exercise would provide guidance to the Administration on where funding was most urgently needed. Performance standards and goals could be divided into three groups: meeting FCCC commitments, developing flexible mechanisms, and managing research and program administration. In addition, the Russian government should hold an initial planning exercise that includes a discussion of what can realistically be expected in terms of institutional performance, what standards of performance should be applied, and how they might be expected to change over time. Examples of performance criteria include the following:

- responses to JI proposals (turn-around time for review and certification)
- involvement of the for-profit sector
- IPCC working group and expert review participation
- success in obtaining external funding
- availability of current information to key policymakers and the public.

Technical Assistance

There is no shortage of programs, just a shortage of funding.

The climate policy community in Russia does not need more “Climate 101” training. Numerous workshops and other programs have taken place in Russia over the past 5 years (see Appendix 3 for a complete list). Extensive programs to mitigate climate change exist, but are not funded at adequate levels.

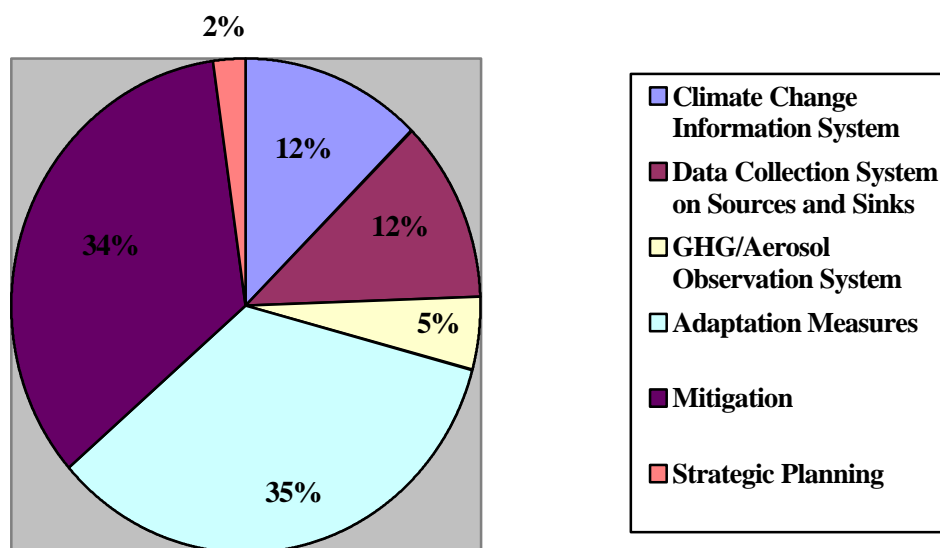
In 1995 Russia fulfilled a commitment to the FCCC by compiling its First National Communication, an official document describing all policies related to the mitigation of climate change and providing information about Russian emissions. The Second National Communication was compiled in 1998 and recently was submitted to the FCCC Secretariat. In late 1996, the Russian government adopted a Federal Target Program, “Prevention of dangerous climate changes and their negative consequences.”

This document describes climate change mitigation and adaptation measures in all sectors of the Russian economy. Both National Communications and the Program were prepared by Russian experts from different ministries under the supervision of the Commission. Russia prepared a six-volume report containing a description of all climate change-related activities as a part of the U.S. Country Studies Program in 1994 to 1997. The target program was designed for implementation in 1997 to 2000, with a total multi-year budget of approximately \$40 to 50 million dollars.⁶ The federal budget was supposed to provide 72 percent of funding, with the remainder drawn from non-budgetary sources.⁷ The program was divided into six subprograms, illustrated in the figure.

⁶ The government approved expenditures of 239.4 billion rubles in 1996 prices. The range listed above reflects volatility in the exchange rate during 1996; for purposes of conversion, we assumed a Central Bank rate of between 4800 and 5800 rubles to \$1 USD.

⁷ These could include fines from polluters, user fees, and other income unrelated to taxation.

Allocation of Climate Change Funds by Project Type (Total Proposed Funding: \$40 to 50 million)⁸



The program compiled piecemeal efforts from twenty-three Russian ministries and state committees, and it covered everything from housing renovations to conservation efforts on Lake Baikal.

It is difficult to say how many of these programs are really being implemented in Russia. As the first FCCC in-depth review team commented, “Measures were not described in the communication or in documentation provided to the review team in sufficient detail to show how they would work, to determine what their status of implementation might be or to assess in a reliable fashion their specific impacts in terms of climate change mitigation” (Nondek et al. 1997, p 4). The status of implementation is a particularly serious issue given problems in disbursing allocated funds from the government to specific ministries. Another 1997 report stated that “funding for this work is frozen and actual progress is very slow at present,” partly due to the fact that funding from the target program had not been made available (Benioff et al. 1997, p 120).

The level of funding for programs is also unclear. Government support for environmental programs in general shows evidence of serious problems. Current environmental investments in Russia are estimated to be about 93 percent domestic and 7 percent international, primarily from the World Bank and the Global Environmental Facility (Golub 1998, Table 17). Domestic programs, however, have experienced difficulties obtaining funding even when funds are earmarked in the budget. When the government experiences a shortfall in anticipated revenue, it simply disburses fewer funds. This practice makes it extremely difficult to know what percentage of the \$40 to 50 million allocated for climate change programs in Russia has actually been spent.

⁸ Source: *Climate Change Action Plan Report*, 1999, pp 17-18.

Nearly one third of the Russian climate change initiative was to be funded by “non-budgetary means.” These means could include fines paid by polluters or other sources of revenue outside of taxation. Unfortunately, programs that are dependent upon extra-budgetary resources, such as pollution fees, are very vulnerable to macroeconomic problems. Russian environmental funds are received primarily from pollution charges while taxes and user charges are funneled directly into the budget (Danish Ministry of Environment and Energy 1997, p 64). Non-payments plague all of these areas and make planning difficult. For example, the average collection rate on pollution charges and other revenues for environmental funds is only 40 to 50 percent. In all but a few cities, the local administration and environmental committee collects the charges, not the tax revenue service (Danish Ministry of Environment and Energy 1997, p 35).

Areas most in need of current funding include support for climate change researchers and policy analysts and the informational technology necessary to support their work.

Personnel

Climate change experts both inside and outside the Russian government have experienced difficulty in receiving funding to support their work. Many climate researchers or policymakers have not been able to work full time on climate change issues, particularly in the NGO sector. Even within the government, much of the funding received by experts appears to be project-specific money from grants and international technical assistance rather than core support for budget items such as salaries for the Interagency Commission secretariat, a manager for the JI project process, and legal counsel.

Information Technology

While many of the officials interviewed had some access to electronic mail and the Internet, many of them shared computers or had other limits to access. Some members of the Interagency Commission had work-based access to the Internet, while other relied on home-based computers and electronic mail accounts. The Interagency Commission neither has a web site, nor an electronic mail address that is well known or easy to locate.

Recommendations: Highest priority should be given to support for personnel, support for information technology, and support for evaluation of existing programs. Support for personnel can be as simple as making sure that climate experts have the funding to work consistently on climate change issues. Designated funds could ensure that government officials and NGO experts with expertise in climate change would not be forced to leave the field because of lack of funding. Designated travel and research grants, in addition to salary support, would address this urgent need. Support for information technology in the form of computer hardware/software and access to the Internet would also facilitate in-country and international cooperation on climate change issues. Evaluation components of existing programs have been absent from Russian climate change initiatives to date, and information on cost-effectiveness or impact of climate change initiatives has not been available. Evaluations would improve reporting to the FCCC and

allow officials to differentiate between cost-effective program components and components which may need to be redesigned or eliminated.

Russia would benefit from targeted technical assistance in three key areas: joint implementation, monitoring, and legal infrastructure.

In addition to funding existing programs, three areas in the assessment emerged as areas in need of targeted assistance.

Joint Implementation

Discussions on joint implementation indicated that while an ad hoc process already exists, there is a need to clarify many aspects of implementing JI, ranging from registration and baselining to additionality and credit allocation. Pilot phase JI has been conducted through ad hoc meetings of the interagency commission on climate change. Agencies including the Russian Pollution Abatement Fund participated in the development of procedures and methodology for the identification, evaluation, and realization of JI projects. In addition, several member agencies and for-profit companies have prepared a project or series of projects that could be considered as potential JI projects. Discussions with interview participants indicated that there were many different views on project registration and the division of credits. In addition, some participants felt that an independent government organization should oversee JI, while others felt that the job should be assigned to a specific ministry or state committee.

Nearly all of the experts interviewed saw incentives for participating in JI. The World Bank representative noted that an absence of domestic financing for specific mitigation projects made JI very attractive. Other participants also noted that the stream of revenue into specific projects under JI provided incentives to participate in that program, whereas revenues from trading might simply be funneled into the general revenue budget. The head negotiator for Russia in climate change issues noted that the legal obstacles for putting JI in place were not as formidable as they were for emission trading. However, the representative from UES noted that his company did not have any current incentives to participate in JI. He felt that the government should create incentives for investors and companies, and he pointed to Japan as an example, noting that the Japanese were prepared to identify partners and develop projects that would then be certified by the government.

Interviewees uniformly felt that the additionality component of JI was confusing and problematic, but they differed in their opinions of its viability for project-based reductions. While the interviews and additional discussions uncovered a wide variety of environmental monitoring systems that are already in place, there is an acute need to begin thinking about how to handle verification under any system that develops. The UES representative said that participation in JI would not be worth the effort if negotiations and bureaucracy were substantial.

Monitoring

Monitoring is and will continue to be an enormous task involving many different players. While there are several co-existing frameworks for emissions monitoring, there is a need to define a cost-effective system that will correspond to IPCC guidelines. Work is taking place in this area, but expanding these projects beyond select regions and emitters will require a significant funding commitment.

Environmental monitoring is currently being carried out by several institutions. Some limited results have been published in Russian Federation Climate Change Study and in the Second National Communication (Interagency Commission 1998; Roshydromet 1997, Volume 1). While the agencies of the Interagency Commission have spoken frequently about the need to monitor emissions, this objective has yet to be supported with the necessary funds to design and implement monitoring systems.

Vitalii Papushkin of CENef, emphasized that while data collection at many industrial sources was extensive and well developed, lack of verification was a serious problem. He mentioned that natural gas consumption was relatively well measured because of the attendant financial incentives to do so. Data aggregation and availability are also issues, because the Russian National Communications do not list industrial emissions by sector (with the exception of cement production). More data on major direct and indirect sources of greenhouse gases in industry would aid policymakers in identifying promising mitigation projects.

Papushkin also mentioned that the most serious problems in measurement were occurring outside of large cities. Large combined heat and power systems (i.e., over 100 MW) are fairly well monitored, while “small” systems (anything under 100 MW) are not. Small systems rely instead on technical parameters to estimate emissions rather than actual measurements. These system-based differences in quality of monitoring are much more pronounced than any regional differences.

Monitoring industrial emissions brings its own set of issues. Gases within production processes, such as coke gas, may not be monitored. In addition, while most large enterprises have a laboratory that monitors emissions, these laboratories are the first to be shut down when the enterprise lays off workers or scales back production. However, the infrastructure exists. While small factories do not have these facilities, small factories are not generally found in energy-intensive sectors of the economy. Therefore, the problem is not as great as it could be.

A UES representative said that systems to measure emissions had been in place “for decades.” Each power plant has been monitoring CO₂ emissions for the past two years. Ironically, power plants once measured CO₂ emissions to control the efficiency of the combustion process. However, plants removed the CO₂ monitors in the 1960s when they found that measuring oxygen content and fuel content was more effective. Fuel content analysis is similar to the process used in the United States: content is measured by the seller, the buyer, and an arbiter.

In 1995, the Russian government received a grant from the Global Environmental Facility to reduce greenhouse gas emissions related to the production and consumption of methane, but the money for the project has not been disbursed in full. The grant consisted of five components, including identifying sources of anthropogenic methane emissions and developing measures to reduce these emissions. Unfortunately, one of the two project implementation units—Gasrekom—did not complete its requirements in time to meet the World Bank conditions for continuing the grant. The other project implementation unit—Investenergoeffect—had completed its work on schedule but was unable to finish due to the interruption of the grant. The Ministry of Fuel and Energy is currently petitioning the World Bank and the Global Environmental Facility for a continuation of this work and is awaiting a decision.

None of the government officials interviewed felt that an NGO would be capable of monitoring trading or project-based crediting systems. Participants mentioned using either an independent Russian organization (such as a special inspectorate) or an international organization (such as an independent commission established by the FCCC). While environmental groups and for-profit companies might be supportive of the idea of a non-governmental monitoring body, it is the government that will ultimately endorse an official monitoring agency.

Legal Infrastructure

The development of legal infrastructure in the area of climate change is becoming an urgent issue – relevant legal issues range from penalties for non-compliance to thinking about the legal definition of allowances and how property law and securities law will pertain. This need includes interpretation of domestic codes and an understanding of how international agreements on climate change might affect Russia. For example, the head negotiator mentioned that he had several questions about how to interpret liability under the Kyoto Protocol.

Participants also felt that the development of laws would be important. The jurisdictional issue arose here; participants mentioned that a government statute or decree would clarify the relative roles of various Interagency Commission members. Russian legal experts could also make a contribution in the international arena. A representative of the Federal Forest Service observed that international law would form the basis of any system established in Russia, commenting, “Russia will have to play by the rules if there is an international law in effect” (Interview with Alexander Panfilov in May 1999).

There are only a few legal experts in Russia with any experience in climate change issues, and a number of respondents in the assessment felt that it would be very important to develop a trained cadre of lawyers to support the governmental work in climate change law.

Any mechanisms building on existing legislation will also require extensive legal analysis. The interview participant from the IBRD, for example, pointed out that current

mechanisms that could serve as a basis for trading or JI are based on two different sets of laws – energy (the Law on Energy Savings) and environmental (the “polluter pays” environmental funds).

Recommendations: Clear roles and continuity in program contacts in the JI Secretariat could improve access to the process for potential investors. Continued technical assistance and cooperative programs in monitoring could foster a system that would be acceptable at an international level. Finally, legal exchanges and specialized training in emissions-related law would allow the Russian government to evaluate current legal issues and develop a viable infrastructure for flexible mechanisms.

Technical cooperation should include major greenhouse gas producers in the for-profit sector.

Two natural monopolies—UES and Gazprom—produce more than half of all industrial CO₂ and methane emissions in Russia. Technical assistance for these companies and their subsidiaries would address two of the largest sources of anthropogenic greenhouse gas emissions in Russia. The role of the government as a shareholder in both companies may provide some leverage with these organizations: the Russian government owns a 52 percent stake in RAO-EES and a 46 percent stake in Gazprom. Giants in the for-profit sector also have monitoring experience and a strong incentive to reduce fuel losses and resultant greenhouse gas emissions.

Both companies have demonstrated an interest in climate change issues. A UES representative gave the project team a chart detailing the 54 retrofit projects that had been proposed for a Russo-Japanese initiative to reduce greenhouse gas emissions in Russian heat and power plants. Project costs ranged from \$2 million to \$1.2 billion, and resultant annual emission reductions ranged from 40,000 to 3 million metric tons of CO₂ per year.

In addition, these companies already conduct monitoring. UES has also tracked emission reductions for CO₂ in the combined heat and power sector plants using gas, coal, and fuel oil from 1990 to 1997. For 1999, UES has initiated a procedure that will include gross CO₂ emissions indicators in the annual report of every UES facility. UES monitoring systems and its administrative set-up allow it to oversee emissions trends on a project or a regional basis. Gazprom received funding from the Global Environmental Facility in 1995 for a methane reduction project, and the Ministry of Fuel and Energy was tasked with monitoring the project. Gazprom is also conducting off-line monitoring for one of its subsidiaries, Volgatransgaz, as a part of a pilot phase activity implemented jointly with a German partner. Cooperation with both companies could smooth the way to a more comprehensive reporting system and minimize the tension surrounding the release of facility-level data on emissions. One representative from the Ministry of Fuel and Energy mentioned the difficulty of obtaining emissions data from companies even when they were partially state-owned.

A failure to work successfully with these two emitters would almost guarantee the failure of an emissions mitigation strategy, be it domestic or international. One interview

participant felt that a major barrier to using flexible mechanisms would be the need to develop a system of accountability for participating companies.

Finally, international cooperation should also include major industrial emitters outside of the fuel and energy complex. Metallurgical companies are an important source of emissions, and these companies often produce waste heat and co-generated power that are important to their surrounding communities. Metallurgical companies have begun to consider the issue of greenhouse gas emissions recently, and they are a promising source of project-based emission reductions.

Recommendations: Donor agencies should consider focused technical assistance, particularly in-kind training, for key companies such as Gazprom and UES. Programs focused on internal trading and monitoring could be particularly useful. Both companies have strong export markets and operate at a profit. Therefore, the Russian government might also want to consider legislative or regulatory incentives that would encourage the development of a pilot internal trading program at either Gazprom or UES based on the experience of companies such as British Petroleum or Royal Dutch Shell. Targeted outreach could also make corporate leadership in key Russian industries aware of the benefits of programs that can both save money and mitigate greenhouse gas emissions.

Other Findings

All Russian stakeholders should enhance their outreach programs.

Key groups such as the Federal Assembly, high-level officials in the Ministry of Finance, and the media are in need of more information on climate change policy and its affect on Russia. NGOs have done a limited amount of work in this area, but there has not been a sustained outreach effort that has extended beyond the environmental community.

The Russian public would also benefit from more information on flexible mechanisms that are being considered by the Russian government. One interview participant mentioned that the Russian public might be concerned that selling emissions rights could limit economic growth potential in the future, or that they would perceive this type of sale as squandering a natural resource. The Russian business community could also benefit from more information on the economic and environmental benefits of mitigation projects. This effort could, in turn, attract new project developers.

Recommendations: Both international donors and the Interagency Commission should target the audiences mentioned above for improved outreach. Limited funding for these activities may be available from individual ministry budgets. In addition, outreach is an area where NGOs can play a valuable role. International donors should consider funding for NGOs to launch public awareness projects on climate change issues and funding to support advocacy for Russian climate change interests at an international level.

CONCLUSION

In the seven years since Russia signed the Framework Convention on Climate Change, a strong cadre of Russian policymakers with a commitment to climate change mitigation has emerged. They have developed projects and produced guidance documents against a backdrop of economic and political flux. They have also fought for funding from a government that is simultaneously grappling with tax arrears, foreign creditors, and privatization.

The intent of this assessment was to establish a baseline for activities. The findings from this assessment lead to the proverbial Russian question: What is to be done? The answer depends on who is asking the question.

For Russian officials, there is good news. Important improvements in the Russian climate change program could be made at little or no cost. These improvements include clarifying the roles of ministries in the Interagency Commission and its status, educating legislators about climate change issues, and setting performance goals for the national climate change initiative. Issues such as jurisdiction are internal, and only Russian policymakers can lead the way in this area. Finally, policies that support investment and market economic growth would benefit climate programs indirectly by increasing the revenues available for government programs.

For the international donor community, there is also good news. Strategic assistance could benefit Russian climate change programs significantly. Focused technical assistance on JI and legal issues would build a foundation in Russia for flexible mitigation mechanisms. Support for salaries and information technology would also further Russia's efforts to comply with the FCCC. All of these efforts could be provided at a relatively low cost.

This good news is not meant to imply that progress in climate change mitigation will be easy. Monitoring remains a formidable task that will require close cooperation between government and the private sector and a serious funding commitment. Improving transparency and accountability in climate change programs will take time. Russia has everything to gain from a successful climate program, and the global climate has much to lose from its failure.

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APPENDIX 1: PROJECT TEAM AND LIST OF CONTACTS INTERVIEWED

Project team

Susan Legro, PNNL, U.S. Project Lead

Inna Gritsevich, CENef, Russian Project Lead

Vladimir Berdin, State Committee for Environmental Protection, In-Country Consultant

Vladimir Maximov, National Pollution Abatement Facility, In-Country Consultant

Mikhail Saparov, IBRD Energy Efficiency Project Implementation Unit

Oleg Pluzhnikov, Ministry of Fuel and Energy, In-Country Consultant

Ilya Popov, Institute of Nuclear Ecology and Energy Policy of the Socio-Ecological Union / Brown University, Researcher

Interviews Conducted in Moscow – May 1999

Meeting at the Ministry of Fuel and Energy: Oleg Pluzhnikov, Ministry of Fuel and Energy; Alexander Popov, Ministry of Fuel and Energy; Evgenii Minaev, Ministry of Fuel and Energy; Sergei Yeryomin, Ministry of Fuel and Energy; Inna Gritsevich, CENef; Susan Legro, PNNL.

Meeting at Roshydromet: Alexander Metalnikov, Roshydromet; Evgenii Utkin, Roshydromet; Inna Gritsevich, CENef; Susan Legro, PNNL.

Meeting at Federal Forestry Service (FFS): Alexander Panfilov, Federal Forestry Service; Inna Gritsevich, CENef; Susan Legro, PNNL.

Meeting with Lev Yeryomin, UES: Inna Gritsevich, CENef; Susan Legro, PNNL.

Meetings at CENef: Vitalii Papushkin, CENef; Inna Gritsevich, CENef; Susan Legro, PNNL.

Meeting at the Ministry of Economy: Shophiev, Ministry of Economy; Inna Gritsevich, CENef.

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APPENDIX 2: LEGISLATION ESTABLISHING AND UPDATING THE INTERAGENCY COMMISSION ON CLIMATE CHANGE

Decree of the Government of the Russian Federation

1420 On Ratification of the Statute on the Interagency Commission of the Russian Federation on Climate Change Problems and its Composition

The Government of the Russian Federation decrees:

To ratify the proposed Statute on the Interagency Commission of the Russian Federation on Climate Change Problems and its composition.

Representative of the Government of the Russian Federation V.
CHERNOMYRDIN

Moscow
19 April 1994
No. 346

RATIFIED
by decree of the Government
of the Russian Federation
of 19 April 1994
No. 346

STATUTE

on the Interagency Commission of the Russian Federation on Climate Change Problems

1. The Interagency Commission of the Russian Federation on Climate Change Problems (further referred to as “the Commission”) is created in conjunction with the decree of the Government of the Russian Federation of 22 January 1994 No. 34 “On the Formation of an Interagency Commission of the Russian Federation on Climate Change Issues.”

The Commission in its activities will be directed by the Constitution of the Russian Federation, by the laws of the Russian Federation, by resolutions of the chambers of the Federal Assembly, by edicts and orders of the President of the Russian Federation, and also by the original statute.

2. The main tasks of the Commission are:

coordination of the work of ministries and agencies of the Russian Federation on lessening the negative impact of economic activity on the climate, preventing adverse consequences of climate change for the country's economy and environment;

coordination of the activities of ministries, agencies, and organizations of the Russian Federation in ensuring the fulfillment of the obligations of Russia resulting from the U.N. Framework Convention on Climate Change (further referred to as "the Convention"), directed towards the stabilization of concentrations of greenhouse gases in the atmosphere at a level which would not allow for dangerous anthropogenic effects on the climate system;

organization and coordination of activities regarding the participation of the Russian Federation in official bodies of the Convention, and also in international cooperation in climate change issues.

3. The Commission in the goals of fulfilling the tasks imparted to it:

prepares proposals and makes recommendations to enterprises, institutions, and organizations on mitigating anthropogenic emissions of greenhouse gases on the basis of the use of environmentally clean technologies, and also on the increased absorption of these gases by realizing forestry methods and the increase in forested areas.

organizes and coordinates the activities of ministries and agencies of the Russian Federation in the development and realization of systems of measures, directed at the fulfillment of Russia's obligations resulting from the Convention;

examines proposals and determines the position of the delegation of the Russian Federation at sessions of the Conference of Parties of the Convention and also in negotiations over the development and acceptances of supplementary protocols to the Convention;

participates in the development of legislative and other regulatory acts of the Russian Federation on problems related to anthropogenic climate change.

On questions requiring decisions of the Government of the Russian Federation, the Commission will introduce the appropriate proposals.

4. The Commission will be headed by the Chairman-Director of the Russian Federal Service for Hydrometeorology and Environmental Monitoring. The composition of the Commission will include representatives of interested ministries and agencies of the Russian Federation, and also leading scientists and specialists in the field of study of climate change issues.

The personnel composition of the Commission is ratified by the Government of the Russian Federation by a declaration from the chair of the Commission in concurrence with interested ministries and agencies.

The Commission convenes in meetings as necessary, but not less than two times per year.

Resolutions of the Commission are accepted by a simple majority vote.

Resolutions accepted by the Commission in accordance with its jurisdiction are binding for all ministries and agencies represented in the Commission, and also enterprises, institutions, and organizations active in the sphere of its authority.

5. The organizational-technical verification of the work of the Commission will be [illegible] and Environmental Monitoring.

RATIFIED

by Decree of the Government
of the Russian Federation
of 19 April 1994
No. 346

COMPOSITION of the Interagency Commission of the Russian Federation on Climate Change Problems

Bedritskii, A.I.	Head, Federal Service for Hydrometeorology and Environmental Monitoring (Chair of the Commission)
Avdiushin, S.I.	Deputy Head of Roshydromet (Deputy Chair of the Commission)
Kuraev, S.N.	Department Head of Roshydromet (Secretary of the Commission)
Alekseychuk, G.P.	Head of the Main Directorate of Roskommashch
Antonenko, L.K.	Deputy Head of Roskommetallurgia
Berezin, V.F.	Deputy Minister of Transport of the Russian Federation
Bushuev, V.V.	Former Deputy Minister of Fuel and Energy of the Russian Federation
Golytsin, G.S.	Director of the Institute of Atmospheric Physics of the Russian Academy of Sciences, Academician of the Russian Academy of Sciences

Gubanov, V.A.	Head of Committee for Environmental Safety and Emergency Situations of the Russian Ministry of Atomic Energy
Egorov, N.N.	Deputy Minister of the Russian Federation for Atomic Energy
Efremov, A.G.	Deputy Minister of Agriculture and Foodstuffs of the Russian Federation
Izrael, Y.A.	Director of the Institute of Global Climate and Ecology of Roshydromet and the Russian Academy of Sciences, Corresponding Member of the Russian Academy of Sciences
Isaev, L.K.	Deputy Chair of Gosstandart Russia
Kozlov, G.V.	Deputy Minister of Science and Technology Policy of the Russian Federation
Kostin, V.F.	Deputy Minister for Environmental Protection and Natural Resources of the Russian Federation
Krasnopivtsev, A.A.	Deputy Minister of Finance of the Russian Federation
Kra*****	[illegible] of the State Construction Agency (Gosstroy)
Laverov, N.N.	Vice President of the Russian Academy of Sciences, Academician of the Russian Academy of Sciences
Lapshov, B.M.	Deputy Chair of the State Committee for Defense Industries of Russia
Mamedov, G.E.	Deputy Minister of Foreign Affairs of the Russian Federation
Milov, Y. G.	Deputy General Director of the Russian Cosmic Agency
Natal'chuk, S.M.	Deputy Chair of Roskomvod
Nechaev, I.E.	Group Head for the Main Operating Body of General Supply for the Ministry of Defense
Pisarenko, A.I.	Deputy Director of the Russian Forestry Service
Piskunov, D.I.	Deputy Chair of the State Committee on Industry
Ryabenko, E.A.	Deputy Chair of the Russian Committee on the Petrochemical Industry
Khetagurov, S.V.	Deputy Minister of the Russian Federation for Civil Defense, Emergency Situations, and Liquidation of Natural Disasters
Tsaregorodtsev, A.D.	Deputy Minister of Health and Medical Industry of the Russian Federation
Yusupov, M. Y.	Deputy Minister of Economics

GOVERNMENT OF THE RUSSIAN FEDERATION
DECREE
May 7, 1997 No. 552

**ON THE RATIFICATION OF THE COMPOSITION OF THE
INTERAGENCY COMMISSION OF THE RUSSIAN FEDERATION
ON CLIMATE CHANGE PROBLEMS**

The Government of the Russian Federation decrees:

1. To ratify the appended list of the Interagency Commission of the Russian Federation on Climate Change Problems.
2. To declare to be no longer in force the part of the Decree of the Government of the Russian Federation of 19 April, 1994 No. 346 "On the Ratification of the Statute on the Interagency Commission of the Russian Federation on Climate Change and Its Composition" (A collection of laws from the President and the Government of the Russian Federation, 1994, No. 17, Article 1420) referring to the composition of the Interagency Commission of the Russian Federation on Climate Change Problems.

Chairman of the Government
Of the Russian Federation
V. Chernomyrdin

Ratified
By Decree of the Government
Of the Russian Federation
Of 7 May, 1997 No. 552

**COMPOSITION OF THE
INTERAGENCY COMMISSION OF THE RUSSIAN FEDERATION
ON CLIMATE CHANGE PROBLEMS**

Bedritskii, A.I.	Head, Federal Service for Hydrometeorology and Environmental Monitoring (Chair of the Commission)
Avdiushin, S.I.	Deputy Head of Roshydromet (Deputy Chair of the Commission)
Berdin, V.Kh.	Department Director, Roshydromet (Corresponding Secretary of the Committee)
Alginin, V.I.	Deputy Minister of Agriculture and Foodstuffs of the Russian Federation
Berezin, V.F.	Deputy Minister of Transport of the Russian Federation
Borisov, V.I.	Head of Administration of the State Construction Agency (Gosstroy) of Russia
Bushuev, V.V.	Secretary of State / Deputy Minister of Fuel and Energy of the Russian Federation
Galitskii, V.I.	Deputy Chairman of the State Statistical Committee of Russia

Golitsyn, G.S.	Director of the Institute of Atmospheric Physics of the Russian Academy of Sciences, Academician of the Russian Academy of Sciences
Gubanov, V.A.	Head of Committee for Environmental Safety and Emergency Situations of the Russian Ministry of Atomic Energy
Desyatnikov, V.A.	Secretary of State /
Egorov, N.N.	Deputy Minister of the Russian Federation for Atomic Energy
Izrael, Y.A.	Director of the Institute of Global Climate and Ecology of Roshydromet and the Russian Academy of Sciences, Corresponding Member of the Russian Academy of Sciences
Isaev, L.K.	Deputy Chair of Gosstandart Russia
Klepikov, V.A.	Deputy Head of Service of the Ministry of Defense of Russia
Kozlov, G.V.	First Deputy Minister of Science and Technology Policy of the Russian Federation
Kovalev, V.N.	Deputy Minister of Finance of the Russian Federation
Kuz'michev, E.P.	Deputy Director of the Federal Forest Service
Laverov, N.N.	Vice President of the Russian Academy of Sciences, Academician of the Russian Academy of Sciences
Milov, Y. G.	Deputy General Director of the Russian Cosmic Agency
Onishchenko, G.G.	First Deputy Minister of Health of the Russian Federation / Surgeon General of the Russian Federation
Sedykh, A.D.	Division Head of the Russian Joint-Stock Company "Gazprom"
Sidorov, V.S.	Deputy Minister of Foreign Affairs of the Russian Federation
Solovyanov, A.A.	Deputy Head of the State Committee on Environment of Russia
Faleev, M.I.	Deputy Minister of the Russian Federation for Civil Defense, Emergency Situations, and Liquidation of Natural Disasters
Shophoev, E.S.	Deputy Department Head of the Russian Ministry of Economy

APPENDIX 3: SURVEY OF PROGRAMS RELATED TO INSTITUTIONAL CAPACITY IN RUSSIA

A major part of the background research for the assessment consisted of gathering information on what had already been done in Russia relating to climate change institutional capacity.

Efforts related to institutional capacity in Russia to date can be divided into four kinds of work: 1) program/project evaluation, 2) attempts to identify institutional capacity needs, 3) attempts to build institutional capacity, and 4) institutional assessments in related fields.

Program Evaluation and Project Evaluation

In-depth review of National Communications: The FCCC Secretariat has coordinated two in-depth reviews of Russia's national communications, which must be submitted according to Articles 4 and 12 of the Convention. The review of the first national communication was conducted in 1996 and included a 5-day visit to Moscow. Major points that surfaced during the review included the following: emission data were not reported in accordance with IPCC standards, documentation for the methodologies used in developing the inventory was insufficient, and data and projections for several non-CO₂ gases were not reported. The report also cited a lack of detailed information on energy-saving measures, laws, and programs, particularly where funding levels and implementation status were concerned. (Nondek et al., 1997: 1-2)

At the time this assessment was being conducted, an in-depth review of the second national communication was being compiled by a team led by Katia Simeonova. The team visited Moscow in early July 1999 for meetings with government officials and other experts responsible for the communication. A final report was expected in winter 1999-2000.

Other evaluations: In addition, several papers have addressed individual JI projects and national programs in the transition economies (see Evans 1995, Schwarze 1999).

Attempts to Identify Institutional Capacity Needs

The U.S. Environmental Protection Agency (EPA) has posited some long-term goals for the U.S. and the Russian climate change policy system through a series of "policy priorities" for economies in transition. They include the following:

- “(I) establishing methodological and institutional foundations of continuously inventorying and reporting national greenhouse gas (GHG) emissions
- (II) developing a transparent and reliable system of independent verification and monitoring of emissions reductions

- (III) conducting economic assessments by analyzing the full costs and benefits of GHG emission-reduction measures in different economic sectors; and
- (IV) developing and testing a system of measures that encourages the implementation of GHG emissions reduction projects and programs by both industry and regional administrators.”⁹

Attempts to Build Institutional Capacity

At the time of this report, U.S. government agencies are funding several institutional capacity-building activities for Russia in the field of climate change. These activities build upon a variety of joint programs that have been implemented over the past several years. Work to date has ranged from support for national emissions inventories to bilateral workshops on flexible mechanisms such as emissions trading.

Country Studies: The U.S. Country Studies Program, an interagency initiative involving 10 federal agencies, has provided financial and technical support to 55 countries since 1992. Their stated objectives are to “strengthen the technical, institutional, and human capacity of developing and transition countries to address climate change issues and to increase support for the objectives and principles of the UNFCCC.” (Benioff et al. 1997, p xi). Russia is one of the 18 countries developing a Strategic National Action Plan with support from this program. This action plan is designed to promote technology diffusion, support commitments to the FCCC, and be used as the basis for national communications. Several publications related to climate change mitigation in Russia have resulted from the Country Studies Program work, including a 1997 article on the potential for greenhouse gas mitigation in the energy sector and in forestry. These articles identify options and compare their relative costs rather than assess existing capacity or programs.

Country Strategy Studies: The World Bank has also collected money from individual country donors for a series of country strategy studies. The Russian study, headed by Alexander Golub, examined mitigation strategies including flexible mechanisms.

Climate Change Training: The Environment Center in the Global Bureau of the U.S. Agency for International Development (USAID) is planning a series of 12 training programs on climate change in FY 1999. Russian policymakers are eligible to participate in these programs. USAID also sponsored a study tour for Russian environmental managers and policymakers on climate-change-related issues in January 1999.

USAID also sponsored a workshop in July 1998 to discuss various aspects of emissions trading. Other workshops and discussions on emissions trading were also held in April 1998 by the World Bank and in October 1997 by the United Nations Environmental Programme (UNEP). In JI-related work, the U.S. Environmental Protection Agency sponsored a business roundtable in July 1998.

⁹ Alexei Sankowski, "Global Climate Change Policy Priorities in the Russian Federation," 1999. ICF Kaiser International Consulting Group, Washington, D.C., p.1.

Infrastructure Development: The Environmental Protection Agency is currently funding at least two projects to build infrastructure in support of climate change mitigation. EPA is funding the Environmental Defense Fund to work with Russian officials to examine legal issues related to international climate change policy, and the agency is funding Pacific Northwest National Laboratory to support the development of a regional pilot monitoring system for GHG emissions. EPA has also provided support to the World Resources Institute for NGO outreach and development on climate issues, but this project has been limited to Eastern Europe.

Institutional Assessments in Related Fields

Country Study Evaluation: In 1994, the Global Environmental Facility produced an assessment of existing national studies on GHG emissions, noting that as of 1992, 65 countries had decided to undertake country studies (Fuglestedt 1994, p 3). This comes the closest to a climate change assessment, although it looked only at the terms of reference for the studies and a review of costing and staffing. Only studies underway at the time of the review were reviewed for usefulness. The availability of studies for this review was described by the authors as “meager.”

National Environmental Action Plan Assessments: The Regional Environmental Center (REC) in Budapest, Hungary, assessed the ability of governments in Eastern Europe and the Baltic region to carry out environmental policies. They assessed the development and implementation of national environmental action programs in 12 countries in the region, and their assessment looked at the capacity of environmental management, the capacity of polluters to comply with standards and manage emissions, and “green lobby” development (NGOs, business councils, academic coalitions, and other environmental advocacy groups). (REC 1995, Annex 1, Section 3).

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