Rural Development, Natural Resources and the Environment

Lessons of Experience in Eastern Europe and Central Asia

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Rural Development, Natural Resources and the Environment:

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Contents

Acknowledgments ........................................................................................................ v
Abstract .................................................................................................................. vii
Introduction .............................................................................................................. 1

Rural Development

Europe and Central Asia Region: Irrigation Development in
Eastern Europe and the Former Soviet Union .................................................. 5
Albania: Rural Development Project—the Rural Finance
Component........................................................................................................... 10
Albania: Irrigation Rehabilitation .................................................................. 15
Azerbaijan: Farm Privatization ....................................................................... 20
Bulgaria: Agricultural Policy Notes ............................................................ 24
Estonia: Challenges of EU Accession ......................................................... 29
Latvia: Agricultural Development Project (FY94) and
Rural Development Project (FY99) .......................................................... 32
Moldova: Land Reform and Farm Restructuring ...................................... 38
Moldova: Rural Finance Project .................................................................... 42
Poland: Agriculture Wholesale Markets .................................................. 46
Russia: Transforming the Agricultural Research System .................. 51
Turkey: Agricultural Policy Notes .............................................................. 56
Turkey: Direct Subsidy Program .................................................................... 59

Natural Resources and the Environment

Europe and Central Asia Region: Transition
Toward a Healthier Environment.................................................................. 64
Bulgaria: Environmental Liabilities Project ............................................. 70
Estonia: Haapsalu Bay/Matsalu Nature Preserve ..................................... 75
Kazakhstan: National Environment Action Plan ..................................... 79
Poland: Reducing the Costs of Complying with EU
Environmental Legislation.......................................................................... 85
Poland: Rural Environment Protection Project ...................................... 90
Romania and Ukraine: Danube Delta Biodiversity Conservation .. 97
Romania: Stakeholder Consultations for Biodiversity
Conservation Management and Forestry Sector Work ......................... 101
Russia: Environmental Management .................................................. 107
Turkey: Eastern Anatolia Watershed Management ................................ 112
Ukraine: Transcarpathian Biodiversity .................................................... 118

Appendix: Selected ECSSD Active and Completed Projects ................ 122
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ABSTRACT

This volumes documents the development experience in rural, natural resources and environment projects, research and technical assistance activities through the Europe Central Asia Region. This experience has varied widely between sectors and between countries. However, certain lessons learned should inform future activities in the same sectors. Some of the most important findings for these economies include the importance of institutional capacity to sustain reforms, the value of facilitating local participation to increase the sustainability of development programs, and the requirements for fostering a dialogue between stakeholders, including the private sector.
INTRODUCTION

The rural sector, and specifically agriculture, plays an important role in the economies of the countries in the ECA region. The share of agriculture in the employment and national income of ECA countries is far greater than the average for Western European countries. While the regional proportion of the agricultural population was 17% in 1997, it contributed 9% of the region’s Gross Domestic Product (GDP). In Western Europe, the agrarian sector contributed less than 3% to GDP. This region has one of the world’s biggest, and to a considerable extent, most unexploited food production capabilities. Compared with its potential in arable land, the region plays a small role in meeting the growing new demand for food and agricultural products.

Improving the relative inefficiency of agriculture, and protection of the natural environment, are two of the most important challenges facing the countries of the Commonwealth of Independent States (CIS) and Central and Eastern Europe (CEE). During the socialist era, agriculture and food production were determined by government planning, without regard to efficiency or comparative advantage. The large-scale livestock and crop cooperatives were ill-suited to market-based private agriculture. Creating viable private farming based on private ownership of land, and allowing market signals to determine levels and types of production have been some of the most difficult tasks of the transition period.

In 1990-91 the countries of the ECA region set out to create market economies based on private property. The reform process has proved to be more complex than anyone had originally expected for many of these countries. The pace of transformation of the agrarian sector and the rural economy is lagging behind the rate of changes in the economy as a whole for most of the Former Soviet Union and the former Yugoslavia. The recovery of farm production and productivity is making only faltering progress or no progress at all in these countries. However, this contrasts sharply with much of Central Europe and the Baltic States, where reforms have been implemented at a much faster pace, and the recovery has been noticeably quicker.

Between 1990 and 1996, agricultural value added at the regional level fell by more than 10% per year. Agricultural production was an estimated 50% below the 1998-90 level. However, the extent of the fall in production differed considerably, not only from country to country, but also from one product to another. In the Commonwealth of Independent States (CIS) countries, in recent years the output levels of all
main agricultural products was far below the 1989-90 levels. The biggest decrease (40%—60%) can be found in animal products. In Central Europe and in the Baltic countries, the output of main products, including animal products, fell also, but to a lesser extent. By 1996-98, only the production of oilseeds and vegetables in Central Europe and the Baltic's exceeded 1998-90 levels.

Yet behind the general decline, the first signs of recovery can already be seen. In all Central European and Baltic countries, the rapid decline in production stopped in 1993-94. From 1995 on, the sector's output was once again growing in Central Europe and the Baltics, even if at a moderate rate. However, agricultural production has begun to grow only in a few CIS countries, such as the Caucasus region, where radical land reform was carried out. There are also signs of increased environmental awareness and recognition of the complexity of rural social problems.

The mandate of the Environmentally and Socially Sustainable Development Sector Unit (ECSSD) of the Europe Central Asia region (ECA) in the World Bank is to support the ongoing transition in the rural sectors in the region by providing financial support and technical assistance for rural, environment, and social development for the countries of Central and Eastern Europe, the Newly Independent States and Turkey. The development of rural communities and social institutions, and the sustainable use of natural resources, and the protection of the environment, are synergistic and interdependent. Fundamentally, a healthy rural economy and environment are the cornerstone for a country's long-term economic and physical well being. The work of the ECSSD in these areas can be placed into several broad thematic groups: (a) rural policy reform, agribusiness development, and strengthening rural finance; (b) restructuring services including irrigation, agricultural research and extension; (c) environmental management and protection; and (d) natural resources management; and (e) social development.

The World Bank, through ECSSD, is a significant supporter of rural and social development, and protector of the environment throughout the region. This is reflected in the US $1.5 billion regional lending portfolio for agricultural projects to support the recovery of the rural sector and to alleviate the negative social consequences of this difficult economic transition. To assist in improvements in urban environmental management, improved water supply and sanitation, solid and hazardous waste management, coastal zone management, and forestry management, ECSSD has allocated US $363.2 million for 17 environmental projects in 13 countries. In addition, the Bank manages 20 Global Environmental Facility (GEF) grants for a total of US $213 million dedicated to biodiver-
sity conservation, energy efficiency, alternative energy sources, and climate change.

This volume contains notes highlighting the lessons learned from best examples in the ECSSD financial and technical assistance portfolios for the ECA region. These notes are derived from a number of sources: project documents; interviews with task teams; published output of research and technical assistance activities; and the notes, comments, and suggestions of the task team leaders themselves.

Several important lessons and principles emerged from the review of the various projects, technical assistance, and research activities included in this volume. Below are some of the most important conclusions drawn from this exercise:

- In general, the greatest transformations have taken place in the price and market environment, while the most substantial lag in reforms has been in solving the problems of financing agriculture and in the area of institutional reforms.
- There are considerable differences in the reform performances of individual countries. The transformation of agriculture is most advanced in Central Europe and, in particular, in the European Union candidate countries. Further reforms are needed in these more advanced countries in the institutional systems and agricultural financing, and in land tenure systems. The transformation of agriculture in the CIS countries is still in its early stages. The system of institutions and instruments of the planned economy have not yet been fully dismantled, and a functioning agrarian market is still non-existent.
- The difference between the greater success of the more rapidly reforming countries and the stagnation of the slow reformers suggests that a brief but acute transition is better than long chronic economic sluggishness that accompanies slow transition, as in the case in the CIS countries.
- In all countries, the process of agricultural reform has been strongly influenced by day-to-day politics. Very often, politics determine the pace and extent of reforms, at the expense of economic rationality. In general, there is a lack of carefully considered, long-term strategies, and a lack of an objective and realistic evaluation of the economic consequences of different options.
- The method of stakeholder consultations and participatory approaches have proven especially effective rather than the prescriptive or advice-based approach. The degree of government ownership of reforms is contingent on institutional developments that are linked to political events beyond the control of project managers but which
can be accounted for through consultations with a broad set of the beneficiaries of a given development intervention.

- Rural credit institutions have worked especially well when the message that repayment is expected and the funds are lent at market rates. These institutions can be established to enhance rural economic growth and alleviate rural poverty.

- Clear land ownership rights are essential ingredients for rural development. This also extends to rights of access to inputs whether it be seeds, fertilizer or water. Land registration and titling has permitted collateralization for much needed borrowing for private farmers throughout the region. Water users associations and other farmer organizations have emerged to manage critical resources previously maintained at operating losses by the government.

- Win-win solutions\(^1\) need to be identified and funded to mitigate environmental damages created under the communist regimes. The decentralization and devolution to municipalities has required subnational natural resource and environmental actions plans to be prepared and adopted.

- Private sector involvement in environmental management and clean up, wholesale markets and commodity exchanges, sustainable forestry use is essential for long-term sustainability of reforms.

- Short notes are effective means for disseminating research findings and involving policy makers and other stakeholders in constructive dialogues about the course reforms should take.

The following compendium is organized by sector (rural development, natural resources and environment) and then by country in alphabetical order. The task manager’s name is provided following the activity title. An appendix with a list of all completed and active projects in ECSSD is provided at the end.\(^2\)

\(^1\) Win-win opportunities are those which are profitable for the enterprise and also have high environmental impact.

\(^2\) Additional materials and references may be received through the Environmentally and Socially Sustainable Development Sector Unit of the Europe and Central Asia Region of the World Bank Group.
EUROPE AND CENTRAL ASIA REGION: Irrigation Development in ECA Countries

Volker Branscheid

Background

The irrigation sub-sector in Eastern Europe and the former Soviet Union originally ignored the collapse of the command economies in the early 1990s. Countries in these regions continued to expand their irrigation systems according to their respective development plans. Budgetary constraints, privatization drives, and requests for land reform soon halted these development programs, reducing the operation and maintenance of existing systems. Along with other privatization reforms, water authorities such as the Ministry of Amelioration in Moldova and the Irrigation System Company in Bulgaria became autonomous entities. Since these new entities had limited budgetary resources, water users were expected to pay the real cost of water. Farmers could ill afford to do this, chiefly due to the loss or fragmentation of markets for agricultural products represented by the former Soviet Union, Yugoslavia and Comecon. Thus, water authorities soon had to decrease their activities, drastically reduce their staff numbers, and cut back their use of pumping systems because of their high operations and maintenance (O & M) costs.

The new market economy sharply increased energy costs, making energy services too expensive for most producers and consumers. This came to be a great problem in countries that needed to import energy (and thus pay in foreign currency), or that faced internal or external strife. Soon it became apparent that the majority of pumping schemes throughout the region would be too expensive to operate—and perhaps unable to compete—under free market conditions.

As a consequence of the unprofitability of irrigation systems, pumped irrigation was either drastically reduced or abandoned. Moldova and Georgia reduced their pumping capacities to about 15% (mainly attributable to energy constraints, theft, and the deterioration of pumps), while Armenia and Bulgaria abandoned most of their pumped irrigation schemes altogether. Albania generated sufficient electricity, but lost much of its transmission system capacity during episodes of public unrest. Moldova continued pumping activities at about 15% of design capacity, but only because it had no other type of irrigation system.

Surface irrigation also declined sharply. In 1994, Bulgaria only irrigated 9% of its 1.3 million hectares, because of problems associated with
collapse of public finance and hence operation and maintenance activities. Virtually no private land was irrigated in Moldova by 1997, because of strong political resistance and opposition from cooperative farm management. Armenia managed to irrigate about 85%, as it did not experience land reform problems and relied heavily on gravity irrigation. Albania also experienced almost no land reform problems, but was able to irrigate only about 20% of its communal area by 1993. Georgia was able to carry out surface irrigation largely on leasing arrangements on about 60% of its 326,000 hectares in 1998, again largely the gravity irrigation areas. Actually, a profound dichotomy may now be observed to the west and east of the divide represented by the mountainous spine of the Caucasian isthmus. West of that line, climates are largely temperate, and rainfall is usually sufficient to assure at least reasonable returns to rainfed cropping. There, irrigation has mainly been supplemental—important for the commercialization of agriculture and maintenance of farm incomes, but only rarely absolutely necessary for subsistence. In this region, irrigation (outside of Turkey) has suffered major reductions in area served and level of service. East of that line, involving parts of Armenia, Georgia and southern Russia and most of Azerbaijan and Central Asia, agriculture is impossible without irrigation, loss of which would deprive most of the population of their livelihoods, and indeed, even of drinking water supplies. In this eastern region, therefore, societies have made it their priority to keep hydraulic systems operating, though at rapidly diminishing levels of reliability. Most of what follows pertains to the western region of ECA, which had the benefit of choices in the matter.

Analysis/Methodology

Given the differing priorities and natural resources of the various countries in the region, a number of case studies were undertaken to identify suitable options for irrigation development in selected economies making the transition to a market-based system—Albania, Armenia, Bulgaria, Georgia, and Moldova. In all these countries, the existing irrigation infrastructure was examined, and a cost/benefit analysis was carried out to determine the best, most cost-effective methods for salvaging parts of their irrigation infrastructure. Finally, a national irrigation development strategy, on which the irrigation rehabilitation and development projects were based, was proposed.

Research Findings

Because few efforts targeted maintenance of the irrigation schemes during the first few years of the new era, pumping schemes, reservoirs, canals, and pipes deteriorated rapidly. Even so, at first, deterioration was
not the chief cause of stalling progress. Other constraints—availability of energy in Moldova, and stagnating land reforms in Bulgaria—were. In time, decaying infrastructure (including that of drainage systems) will become the main bottleneck to irrigated agriculture. In the meantime, if more energy becomes available, or if land reform becomes more successful, the deteriorating infrastructure would immediately become a limiting factor. Governments should therefore begin to focus on rehabilitating irrigation schemes.

Wherever land reform was completed, irrigation system management changed dramatically, because the new and small-scale farmers were made to operate large-scale irrigation systems—a task previously carried out by state farms or cooperatives. The typical cooperative may have once irrigated 600 to several thousand hectares; the new private farms irrigate only a few hectares, at most. In the absence of cooperative and government help, thus, many farmers have been obliged to cooperate with each other.

In Bulgaria operational requirements led to the establishment of indigenous Water User Associations (WUAs) similar to those in Western Europe or the USA. A Water User Association is a legal body of public right—much like a municipality—which may own assets such as irrigation infrastructure or equipment. A strong argument voiced against forming WUAs is the obligatory membership rule: all farmers must join the WUA when a majority of farmers have voted on its establishment. Such a legal setup is reminiscent of the forced participation of farmers in cooperatives in earlier times. Concerns such as these can be accommodated, but the process is complex: water from public infrastructure can be made available to WUAs, which may be permitted to on-sell water to nonmembers (if necessary, at a profit). But there would need to be legal requisites to accommodate concerns regarding servitude (or right-of-way) of the nonmember’s land. This is yet an unknown legal item in most Eastern European countries.

While WUAs vary in size (in eastern Germany about 80,000 hectares comprise one unit), it is preferable to start out with smaller canal units, on a total of 60 to 1,200 hectares. In Armenia and Albania 100-hectare units are seldom exceeded, while in Moldova, where land reform has generated privately owned cooperatives, private joint stock companies, or farmers’ associations, a WUA unit can be 500 hectares. In Georgia, it can go up to 1,000 hectares.
Results on the Ground

A new law on WUAs has led to the successful implementation of small WUAs in Albania within the framework of a World Bank-financed rehabilitation project. A follow-up project has been appraised. Laws have been drafted with Bank assistance also for Bulgaria, Moldova, Georgia, and Romania. WUA activities include:

- Bulgaria, where pilot activities financed by Bank-administered Trust Funds have covered several thousand hectares over the last four years;
- Moldova, where locally financed pilot activities are underway;
- Georgia, where the Food and Agricultural Organization (FAO) finances small-scale pilot activities (as a forerunner for a possible World Bank-financed investment project);
- Armenia, which has established WUAs on about 15,000 hectares through a World Bank-financed rehabilitation project; and
- The Kyrgyz Republic, which has recently reviewed its legal requirements for establishing WUAs as a prerequisite for a third Bank-financed investment project. In that country the first two water resource projects focused on rehabilitating major dams, canals, and flood damaged headworks of irrigation systems. WUA establishment is also envisaged in Bank-financed investment projects for Azerbaijan and Tajikistan.

Lessons Learned

It is important to plan carefully when establishing individual WUAs. WUA territories should be designed and “settled” in a phased manner (in the way that building plans are drawn up for expanding cities), and eventually federated to form bigger units, which can take over the current public infrastructure. A takeover or transfer of this sort should not be seen as a privatization measure or a gift of public goods to farmers. Rather, it should be considered as a transfer from one agency to another, with the same type of personnel and supervised by a governmental regulating agency, as required by law. Each WUA would be governed by its own registered by-laws. The chief difference between the operation of the cooperatives or state farms in command economies and that of a WUA today, is that farmers are allowed to organize water distribution according to their requirements.

WUAs also need to be carefully monitored and supervised, as self-sufficiency may take 10 to 15 years. When reviving the irrigation sub-sector in Eastern European countries, it should be remembered that many of the schemes were originally built not for economic efficiency, but to
maximize production. Even after modernization or a change in cropping patterns, many of the schemes may not run efficiently and, thus, may not meet financial expectations. Schemes with high pumping lifts belong in this category, as do those with excessive infrastructure maintenance costs. These should be abandoned in favor of systems that involve rainfed agriculture.

The methodology for deciding which land to maintain or abandon includes determining the incremental production expected from irrigation (in Moldova, they expect roughly US $400 per hectare). Once this is done, the true costs of irrigation—the costs of repairs, rehabilitation, operations and management—are estimated to determine the profit margin. Analyses such as these help shape future plans. In the case of Moldova, the analysis recommended that half of the irrigation schemes be abandoned. In Georgia, the results pointed to a focus on irrigation rehabilitation in eastern Georgia (see above), and on drainage in western part of that country.

**Conclusion**

Many of the irrigation systems in Eastern Europe and the former Soviet Union have been shut down because of problems related to organizational requirements, the supply of energy, land ownership, profitability, cost, agricultural marketing problems, and external and internal strife. In some countries the area that is currently irrigated is less than 20% of the original design capacity. Though these currently irrigated areas generally represent the most economically viable schemes, even these are often in urgent need of rehabilitation and organizational restructuring to keep them sustainable.

As public funds are limited, the financial participation of the end user in the rehabilitation and O & M costs should be made mandatory. This should be facilitated through the establishment of Water Users Associations, for which a specific legal framework is required. Finally, an accurate economic efficiency assessment should be undertaken for each scheme prior to any investment.
ALBANIA: Rural Development Project—the Rural Finance Component

Kathryn Funk

Background

Albania is a small mountainous country, with more than half of its 3.3 million people settled in rural areas. Following the collapse of communism in 1990-91, and the rapid privatization of agricultural cooperatives and state farmland, over 400,000 new family farms were created. Most of these farms had difficulty obtaining inputs, basic tools, and credit. Poverty was especially pervasive in hilly and mountainous areas, where farm size averaged only 0.7 hectares per family and infrastructure was nearly nonexistent. In early 1993, with the financial assistance of the World Bank, the Albanian government launched a rural poverty alleviation program that offered credit options (through village credit funds), and spurred employment opportunities and improved infrastructure services (through a community-based infrastructure works program). The program used a participatory approach to develop the different components. Project activities were designed and tested during the Rural Poverty Alleviation Pilot Project (Cr. 2461-ALB), and a foundation with legal and fiscal autonomy—the Rural Development Fund—was established to help implement the project.

The government expanded the rural credit and small infrastructure programs under the follow-up Rural Development Project (Cr. 2680-ALB) in May 1995. Because of its success in rural areas, the government transformed the Rural Development Fund (RDF) into the Albanian Development Fund (ADF), and expanded its microcredit and infrastructure works to selected urban areas under the Urban Works and Microenterprise Pilot Project (Cr. 2770-ALB) in December 1995.

The Rural Development Project, with an IDA credit of US $6 million, financed a core program to extend ADF activity for three years, and was co-financed by the French, Italian and Swiss governments, and the European Union. Additional funds for parallel projects were provided by the International Fund for Agricultural Development (IFAD), the Islamic Development Bank (Northeastern Districts Rural Development Project) and the European Union (Local Communities Development Program).
Objectives

The RDP aimed to: (a) promote small farm and off-farm activities; (b) help create a rural market economy; (c) strengthen basic rural infrastructure; (d) stimulate employment opportunities in rural areas; and (e) inject cash resources into rural households. Project components included rural works, small-scale credit, and studies and local government training.

Rural Works. This component supported rehabilitation of small infrastructure projects, such as dirt roads, irrigation systems, schools, health centers, and market facilities.

Small-Scale Credit. This component supported establishment of 135 village credit funds that would provide 12,000 small loans to farmers and other rural micro-entrepreneurs for various income-generating activities.

Promotion of Rural Activities. This component provided business and technical advice to 600 rural micro-entrepreneurs, and helped promote village animal health associations.

Studies and Local Government Training. This component sought to evaluate project impact, monitor and guide project activities, and help equip local government officials with the skills for promoting and sustaining local development through training and study tours.

Results on the Ground

The innovative rural credit component has proven particularly successful, largely attributable to the participation of the villagers. The loans not only developed on-and off-farm activities, but also promoted entrepreneurship and economic responsibility.

Component Methodology. A village credit fund (VCF)—a revolving account made available to a village for small loans—was deposited in the local branch of a bank (the Savings Bank) and managed by a village credit committee (VCC). The VCC determined credit allocations, defined collateral, and controlled the repayment of loans, while the Savings Bank kept accounts and handled the cash. Security was maximized by making loans to neighbors and potential creditors who knew each other and who provide social support for timely repayment. In the event of repayment defaults, future credits to the village could be stopped. The size of a Village Credit Fund depended on the population. On average, a VCF totals between US $20,000 and $30,000. Funds were typically delivered to the village in two or three tranches. The maximum loan, which increased
from US $500 to $1,000, was made for three years, and interest had to be
repaid once a year (at a minimum).

Results. In all, 16,000 loans were disbursed between 1992 and 1999.
By late 1999, 220 village credit funds were established in 11 districts of
Albania, with about 10,000 active loans amounting to about US $3.0
million. The ADF rural credit program has been virtually the only source
of rural finance in Albania; its at-risk portfolio is merely 1%.

The 1997 Crisis. While the March 1997 financial and civil crises
(that were triggered by the collapse of pyramid schemes) strained the
rural village credit fund program, the program continued to perform sat-
satisfactorily. Even during the height of the crisis, ADF credit officers
risked dangers while traveling to villages to maintain the repayment dis-
cipline. High repayment rates—a testimony to the strength of the local
ownership of the village credit fund system—continued throughout the
period.

Challenges Ahead

The Rural Credit Component is noteworthy because it was able to de-
velop a credit delivery mechanism based on local decision-making that
resulted in substantial subloan disbursements with negligible delinquen-
cies, despite a serious financial and civil crisis. However, the challenges
of reaching financial and institutional sustainability remain.

Interest Rates. Because Albania had experienced over 200% infla-
tion when the Rural Poverty Alleviation Pilot Project started in late 1992,
the loans were indexed to the US dollar. Starting in early 1995, there was
a successful transition to a lek-based interest rate, set initially at 10%,
with the expectation that it would be periodically adjusted. As the macro-
economic situation deteriorated in 1996, rising inflation led to negative
interest rates. Given the participatory nature of the VCF system (and be-
cause there was no automatic interest rate adjustment mechanism), the
ADF could not easily raise interest rates. In early 1997, the ADF carried
out an awareness-raising campaign to reach agreement on a market-based
rate and adjustment mechanisms, but the eruption of the financial and
civil crises led to a focus on maintaining repayment discipline rather than
increasing interest rates. Following the crisis, in late 1997, the ADF
raised interest rates to between 18% and 24% percent. In the absence of
an automatic interest rate-adjustment mechanism, however, the ADF's
rural credit program remains vulnerable to inflation.

Institutional Setting. The ADF started out as a small institution that
piloted micro-credit and infrastructure rehabilitation. While it proved
itself an effective institution for piloting and testing micro-credit, the
ADF did not provide the appropriate institutional environment for developing sustainable (self-financing) credit delivery. Thus, it became imperative to establish a specialized institution, with hard budget constraints and an emphasis on progressive sustainability for the rural credit program. The village credit fund program has established a sound basis for building a private savings and credit association network. The microcredit project (AL-51310) which was approved by the Board in June 1994 has established a privately owned Rural Foundation which will support the transformation of the Village Credit Funds into self-sustaining savings and credit associations with interest rates progressively moving toward market rates.

**Lessons Learned**

*Participatory Credit Delivery.* Borrowers (ultimate beneficiaries) should be involved in the design of the micro-credit delivery mechanism, and credit delivery should be piloted and adjusted periodically, to adapt to local conditions and traditions. An innovative credit delivery mechanism that is based on local responsibility and rooted in local tradition can yield positive results—“borrower ownership” of the micro-credit system, and high repayment rates.

*Resiliency of Micro-finance.* Because micro-finance relies on nontraditional forms of collateral and local traditions, it can overcome systemic weaknesses that impede traditional approaches to rural credit. In Albania, the information barrier is overcome by having loan decision-making effected at the village level, where there is absolute transparency. Peer pressure serves as a substitute for traditional collateral: borrowers are unlikely to default on loans—even during political and financial crises—for fear of ruining their reputations in their villages.

*Early Emphasis on Financial Sustainability.* From the outset, there should be a strong emphasis on sustainability. Establishing an automatic mechanism for interest rate adjustment; creating a rural credit department (as a separate cost center within the ADF) which generated its own financial statements; and implementing performance-based salaries for credit department staff would have helped achieve the desired objectives.

*Importance of the Institutional Environment.* While the ADF proved a convenient institution for piloting the rural credit program, the ADF environment impeded the rural credit program’s progress toward sustainability, and political interests now make the transformation to a private rural credit program difficult. Experience in Albania underlines the importance of using—from the outset, if possible—private institutions to channel microcredit.
Conclusion

The World Bank's Rural Development Project has helped Albania strengthen basic rural infrastructure, promote small farm and off-farm employment and inject cash resources into rural households, and create a viable market economy in rural areas. These objectives were achieved by establishing Village Credit Funds that offered small loans to farmers and other rural residents, and by providing training to local government officials, and technical advice to farmers and rural small businesses. The VCF model has built a strong foundation for a microcredit system. The follow-up Microcredit Project will build the Village Credit Funds program into a more sustainable Savings and Credit Association system.
ALBANIA: Irrigation Rehabilitation

Toru Konishi

Background

The Irrigation Rehabilitation project for Albania was prepared between 1992 and 1994, immediately following the collapse of the communist regime. At that stage, the country had made an almost instantaneous transition from an isolated repressive dictatorial communist state into a free market economy. The widespread destruction of state property that followed the collapse of the communist regime and the disintegration of almost all the existing institutions left the country socially and economically weakened. Land, all of which had hitherto been state owned, and managed by either state farms or co-operatives, had been privatized, so that about half the population had become private farmers with very small holdings, totaling about one hectare per family.

The international community viewed support for agriculture as one area in which investments could yield positive results for the economy. Only wheat and other low-value crops, such as beans, can be grown in Albania's winters (which receive some rainfall). The summers are long, hot, and dry: the higher value crops and perennials need irrigation to grow.

In the 1970s, Albania had rapidly developed its irrigation facilities, particularly in the coastal plains, where the topography is suitable, and the climate, dry. These irrigation facilities suffered reduced standards of maintenance as Albania's economy declined in the decade before the collapse of the communist regime, and were seriously damaged during the period of destruction of state property in 1991. Additionally, these systems were originally designed to serve the state farms and co-operatives, and thus, unsuitable—in physical or institutional terms—for serving the new small farms. The World Bank's Critical Imports Project had met some of the immediate needs of the sector, but continuing development of agriculture was considered dependent on rehabilitating the irrigation systems, and developing appropriate supporting institutions.

The Irrigation Rehabilitation project was prepared by the Food and Agriculture Association (FAO) cooperative program; preliminary activities were funded by a Japan Policy and Human Resource Development (PHRD) grant and project preparation fund. The project became effective in September of 1994, and cost US $45.7 million. Its financing can be broken down as follows: International Development Association (IDA), $10.0 million; the Kuwait Fund, $10.0 million; the Organization of Pe-
Objectives

The Irrigation Rehabilitation project was formulated as part of the overall framework for developing Albania’s agricultural sector, with the goals of increasing agricultural production and raising rural living standards in seven coastal districts in which irrigation was most extensive and necessary. These objectives were to be achieved through physical interventions, which involved rehabilitating 80,000 hectares of irrigation systems and 90,000 hectares of drainage systems; and institutional interventions, which included establishing Water Users Associations (WUAs) that would be responsible for managing tertiary canals. Additional project elements included staff training, studies, research and in support of the two main components.

Results on the Ground

The project was substantially completed in May 1999, within budget, two years ahead of schedule, having substantially exceeded all its objectives. In physical terms, the project exceeded its objectives by about 20%, having relied heavily on the emerging Albanian private construction sector for its implementation. The rehabilitation component was implemented by 270 small contracts (averaging less than US $250,000 each). When state organizations were found to be ineffective, for example in design, private sector services were sought.

At project initiation, the pace of institutional reform in Albania could not be forecast. The political willingness for reform extended institutional objectives well beyond original intentions. In its first year the project established 250 village-based WUAs, which were assigned management of the tertiary irrigation and drainage facilities in seven districts. Following an Albanian delegation visit to an international Participatory Irrigation Management Seminar in Turkey, organized by the World Bank Institute (WBI), the Albanian government agreed to extend the project's WUA program. The WUAs were consolidated into 180 hydraulic units, secondary canals and drains were transferred to these associations, and support for the training program was intensified. Following the collapse of the pyramid financial schemes in 1997 that exposed the inadequacy of the state-owned water enterprises, the government agreed that the project should begin to transfer responsibility of primary systems to federations of concerned WUAs on a pilot basis. Three such pilot projects involving
31 WUAs and 21,000 hectares of irrigation systems have been established.

The project has had a markedly beneficial impact on agricultural production and rural incomes. Initially, the social unrest in 1997 masked some of the results, but by 1998, when about 60% of the rehabilitation project had become operational for the irrigation season, and many farmers had learned to develop markets, the positive impact was fast becoming apparent. High-value irrigated summer crops have increased considerably (60% over 1994), leading to an estimated increase of $400-$600 in the annual income of a typical farm family. Increases such as these will continue as concomitant services and markets develop. The project also benefited rural areas, which exploded with employment opportunities arising from rehabilitation efforts.

In institutional terms, the project has had a profound impact, including the development of a fuller understanding of the responsibilities of individual farmers. Farmers now have a better sense of what their involvement in irrigation system management can accomplish. The project, which established participatory irrigation management in its project area, assumed responsibility for developing national policy. It can be seen as a catalyst for establishing WUAs throughout the country.

Finally, through its reliance on small national contractors and engineering consultants, the project contributed significantly to the emergence of a strong private sector in the construction industry.

**Lessons Learned**

*Trust between the project and farmers.* In communist times, there was a clear mistrust between Albanian farmers and the government. The project aimed to fight this legacy and regain the farmers' trust in government, first by rehabilitating damaged canals, and later, by gradually empowering farmers. In 1995, the project formalized WUAs' supervision of design and construction. For its part, the government offered WUAs sufficient financial autonomy so that they could determine irrigation charges by themselves.

*Extensive use of the private sector.* The project relies extensively on private sector initiatives—design, construction, and supervision—which demonstrates the cost-effectiveness of private sector services vis-a-vis those of the public sector. However, it should be noted that quality construction would not have been achieved without the constant Project Management Unit's supervision—and the determination to dismiss under-performing contractors.
Commitment of senior government officials. Disseminating the new concept of water user associations to farmers (who tend to be skeptical) required the involvement of senior officials. During the implementation of the project, the Minister of Agriculture often visited the WUA meetings himself, to assess members' concerns.

Future Challenges

While the project was generally successful, its legacy institutions now face several challenges:

- **Allocation of water.** This is becoming a problem in some WUAs, because of the rapid increase in demand for irrigation. WUAs are expected to play a larger role in coordinating water resource management by introducing volumetric water charges and night irrigation. In the meantime, the need to upgrade off-farm irrigation systems and improve on-farm irrigation techniques becomes more obvious in order to improve the current efficiency of irrigation.

- **Reform of state-owned water enterprises.** Many water enterprises are not fully able to perform their duties in maintaining primary irrigation systems and drainage facilities as a result of the civil unrest of 1997. Under the government's new strategy for the irrigation and drainage sector, these water enterprises will be consolidated into a new public institution focusing on drainage and river protection, and the entire irrigation responsibilities will be transferred to the water user associations and their federations.

- **Strengthening Water User Associations.** This remains the major task for the government. While 180 WUAs have been established so far, a quick survey indicated that only 20% of these are technically, financially, and administratively sound, although over half are on their way to self-sufficiency. WUAs vary in size, management capacity, crop patterns, and irrigation design; there is a clear need to provide tailor-made training to help ensure their success and sustainability.

The government of Albania is now considering a second irrigation rehabilitation project that intends to improve WUAs. Its major features will include:

- a demand-driven approach to rehabilitation to guarantee uptake;
- developing the legal framework for WUAs;
- better training, support, and supervision for long-term sustainability;
- institutional development in the irrigation and drainage subsector, to help provide a more effective operating environment;
• specific reforms in the drainage sector designed to lead to management and financial responsibility by the beneficiaries; and
• incorporation of technical improvements in the irrigation systems.

Conclusion
The Albanian Irrigation project was the first World Bank project in Albania following the collapse of the communist regime. As agriculture is the most important economic sector in Albania, rehabilitating the country's irrigation network was a critical component of the transition to a market-based economy. The project is being completed within budget, two years earlier than scheduled, having exceeded its objectives both in terms of its size and the "ripple effects" it has caused throughout the agricultural sector.
AZERBAIJAN: Farm Privatization

Thirumangalam Sampath

Background

Reforming and restructuring the agricultural sector in Azerbaijan is vital for improving the standard of living of the rural population, which constitutes nearly half the country’s total population. The agricultural sector claims an estimated 36% of the labor force, is responsible for 26% to 30% of the country’s GDP, and generates about 30% of total exports—from cotton, vegetables, and fruit. Increasing agricultural productivity is important, and will continue to be important, even if the depressed foreign exchange earnings from petroleum exports were to recover.

Traditionally, agricultural production was confined to collective and state farms. About half the total agricultural land (4.2 million hectares) is used for crop production. Three-quarters of this land depended on irrigation; the remainder was used for rain-fed agriculture and natural pastures. Since 1992, the Azerbaijani agricultural sector has undergone a major transition. Production declined by more than 30% immediately after independence, the use of agricultural inputs declined by 60% to 70%. Agricultural terms of trade deteriorated dramatically, and farm profitability had taken a downturn. To reverse these declining trends, the government of Azerbaijan took the initiative to restructure and privatize the agricultural sector, with the specific goal of having privatized 70% of the state and collective farms over the next few years. The Farm Privatization Project was designed to: (a) help the government develop and implement suitable guidelines, procedures and policies for privatization of farms; (b) design better farm privatization procedures; and (c) provide replicable models for privatization in the rest of the agricultural sector.

Objectives

The goal was to restructure six state and collective farms, transfer land and non-land assets into private ownership and provide post-privatization support to allow the new units to operate as independent entities. This post-privatization support included land titling, credit, creation of water user associations and improved infrastructure.

Description

Farm Privatization Support Services. This component provided essential support services for privatization at the national level and in the selected
raions, or administrative units of Barda, Lankaran, Selyan, Sharur Udjar, and Xachmas. It has two sub-components. The first sub-component included a land registration system sub-component designed to provide an accurate, cost-efficient system for mapping and recording ownership and other interests in land to serve as a basis for the creation of a land market. The second sub-component included support services aimed at providing guidance and services to farm members in the state and collective farms through the privatization process.

Post-Privatization Support for Farms. This component consisted of three sets of activities. The first was provides seasonal capital for funding the procurement of farm inputs, labor, fuel, machinery, transport, and marketing services on privatized farms by using farm land as collateral. The second helps finance privatized farm machinery and rehabilitation and realignment efforts of on-farm irrigation and drainage works and other farm structures. The third financed inter-farm infrastructure.

Features. The farm privatization process had many important features. It was:

- **Voluntary.** It was based on the farm members’ decision to reorganize.
- **Choice-driven.** Farm members were allowed to decide which activities to undertake, to determine how to manage their newly acquired farm assets, and to reconstitute themselves as individual farms, joint stock companies, holding companies, partnerships and lease holders. They also had the option to exit the project.
- ** Transparent.** Farmers were able to trade entitlements, organize enterprise structures and resolve disputes in an open environment. Farm members received information, advice and guidance to help them make informed decisions when privatizing and restructuring their farms.

Results on the Ground

Dismantling of the former state and collective farms. In this activity, a total of six former state and collective farms were dismantled: the land (along with land ownership certificates) was distributed to eligible farm members through a lottery system. A strong sense of private ownership has resulted, motivating new owners to maximize earnings from their newly acquired land.

Privatizing farm units. Land assets were transferred into private ownership with full immediate rights to engage in land transactions.

Titling. By the end of November 1998, 367,000 land ownership titles with clearly defined boundaries had been issued to private individuals,
families, or groups of individuals. By the end of 1999, about 750,000 land titles were expected, thus completing the privatization of all the former state and collective farms (a total of 1,745) in the nation.

Establishing WUAs. Each of the six former state and collective farms now has a WUA operated by the farmers themselves to manage all water related issues, including cost recovery of operations and maintenance (O&M) for irrigation infrastructure.

Provision of working capital to newly privatized units. To date, almost US $1 million has been disbursed, and the repayment rate is 99%.

Lessons Learned

A massive information campaign to farm workers informing them of their rights and opportunities and involving them in the restructuring process was a key success factor in this project. Strong political commitment from the top (in this case the President) was important for this program.

The lottery system was perceived as very fair and transparent approach for creating ownership and support.

Provision of credit and infrastructure (post-privatization) was critical to make the system operational after privatization.

Complete write off of old state and collective farm debts (which were not collectible in any case) was essential for the process to move forward.

Complementing the privatization with a titling and registration system, whereby the new owners could actually see their land rights legally specified on paper, generated added commitment from the farmers and instilled confidence in the process.

Conclusion

This project is one of the few cases of real land privatization in the CIS. The privatization process was made completely transparent with the assistance of the project. Land was distributed to all eligible beneficiaries according to a transparent lottery system. Farmers were allowed to express preferences for groups having contiguous plots with self-determined groups. Land plots were physically demarcated and titles were distributed and land certificates indicating borders with coordinates were registered. Full land rights were transferred, including the rights to plant any crop and the right to lease or sell the land. These new land rights immediately conferred a sense of ownership and led to significant increase in yields, despite continued difficulties obtaining key inputs and
credits, as well as in marketing output. The strong commitment of the government at all levels, from the President to local raion officials was particularly striking, a factor that has contributed to the success of the program.
BULGARIA: Agricultural Policy Notes

Henry Gordon

Background
During the communist period in Bulgaria, farms were consolidated into state production cooperatives and subsequently agro-industrial complexes. Only about 10 percent of the land remained in the control of private households, and private ownership of livestock was only a little more widespread. External trade was dominated by a monopoly-trading agency and tightly integrated into the CMEA.

In the early 1990s only limited economic reform occurred. General economic decline lowered domestic demand for food and agriculture products, while the breakup of the CMEA reduced agricultural exports, which had been a significant source of sector income. Crop prices remained low due to the combined effect of restrictive trade and price policies. Although a de-monopolization program broke up the production complexes into state-owned “commercial companies,” privatization nonetheless proceeded very slowly. In addition, holdovers from the old system also persisted in the form of holding companies under the Ministry of Agriculture, including a state grain marketing agency, a national seed organization, a national irrigation company, and others.

Land restitution was initiated in 1991, but was implemented slowly in subsequent years. Land allocations averaging two to three hectares were made to farm workers and claimants from the pre-war period. With the breakup of the agro-industrial complexes, livestock was also distributed to individual members. Since many of the new owners lacked the capacity to care for the livestock, a great number of animals were slaughtered or exported. This dramatically reduced herd size, even below the levels that might have been justified by the need for efficient consolidation within the sector.

The sectoral decline was exacerbated in 1996 and early 1997 by an economy-wide crisis, the main symptoms of which were hyperinflation and widespread bank failure. As a result of the economic collapse, the government fell and a new reformist coalition was elected in early 1997.

Data, Analysis and Methodology
In an effort to assist the new government in mapping an agricultural reform strategy, the rural development staff of World Bank’s Europe Central Asia Region (ECA) coordinated preparation of a series of papers
aimed at diagnosing the main policy and institutional impediments to agricultural growth. The immediate aim was to take stock of the agricultural policy regime as of mid-1997, and to evaluate its effects. Economic sector work papers were written on: (a) cereals and oilseeds; (b) land markets; (c) privatization of agriculture; (d) agricultural trade; (e) livestock production, marketing and trade; (f) agricultural inputs policies; and (g) rural finance. The papers were based on field work carried out in September, 1997. The work benefited from significant input by local consultants and government counterparts, some of whom were authors of papers. Complementary data collection activities included preparation of an agricultural data compendium, and survey on rural land markets carried out entirely by land specialists in the Ministry of Agriculture.

From this field work and the resulting papers, two page Agriculture Policy Notes on each subject were written. They were put into a color graphics format by the Bulgaria Country Unit, and edited to improve readability for laymen. The Resident Mission staff coordinated their printing and translation, and the notes were disseminated in both English and Bulgarian versions.

In January 1998, the findings of the policy analysis were presented and discussed in workshops held in Sofia and four towns near to major agricultural areas (Dobrich, Bourgas, Plovdiv). Participants included local farmers, rural entrepreneurs, local government officials, staff of municipal land commissions, and others identified during the initial fieldwork as having a potential stake in the reform process. All workshop participants were mailed the Notes in advance of the workshop to allow time to absorb the findings and messages, and to formulate comments.

Findings of the Research

The findings of the studies showed surprising weaknesses and gaps in the policy framework for agriculture, despite assurances by the Government that reform was in full swing and no further policy adjustments were required. Fundamentally, the Notes began a constructive dialogue which continues to this day.

Trade, Input Regulations: Despite early liberalization, the government continued to extensively use non-tariff measures, including export bans and import quotas. The regime was discretionary in its application, and highly unstable. For example, basic regulations governing licensing exemptions and bans were changed no less than 25 times from 1995 to 1997. As a result, private firms tended to regard any favorable policy change as temporary, hindering investment. Wheat and oilseeds markets were particularly hard hit by these interventions. Domestic seed regula-
tions restricted access for foreign varieties through imposition of overly long testing periods for seeds originating in other countries.

*Prices.* The contract price control system introduced in 1997 implicitly controlled profit margins in the marketing food chain, limiting market entry. This system required that processors report prices negotiated with retailers. The negotiated prices were compulsory for the retailer until renegotiations occurred. In the livestock sector the value added tax imposed a particular burden on smaller producers and processors, who could not claim VAT rebates.

*Privatization and Market Development.* By mid-1997, Bulgaria had privatized only about one quarter of total long-term assets in agriculture (using 1995 assets as a benchmark). Privatization was slowed down by non-price conditions, and restrictive covenants attached to sales agreements (e.g. conditions on mandatory retention of employees). The assets of Zarneni Hrani, the state grain agency, were only partially privatized, and its interventions hindered development of private grain markets. Finally, Bulgaria’s irrigation system assets remained in state hands, with little control by private voluntary farmers groups (water users associations) that had been developed with Bank assistance.

*Land reform.* Extensive field work revealed great uncertainty over ownership rights, due in part to continuing challenges to restitution allocations, as well as confusion over the status of local Land Commission rulings. This contributed, along with lack of a land registration system and poor market information, to underdevelopment of land markets. The land surveys showed, interestingly, that unofficial land leases were the fastest growing type of land transaction, but that these were risky and not enforceable. While land leasing was increasingly common, most was short term in nature.

*Finance.* The assessment found a fundamental problem in lack of collateral mechanisms for land and movable property, which limited incentives for bank lending to agriculture. The tenuous condition of the banking system after the 1996 collapse, along with ongoing bank privatization, added to the unwillingness of banks to lend to agriculture. While directed credit to agricultural through State Fund Agriculture was not high, much of the credit went to a limited number of beneficiaries.

**Results on the Ground**

Shortly after the 1998 workshops, the policy analysis and workshop feedback were used to develop a set of agreed reform and market building measures. These provided the basis for the Bulgarian Agriculture Sector Adjustment Loan (ASAL I), the first part of a two phase reform
program. Since 1998, and as a direct result of the sector analysis and Notes, agricultural policies and institutions have changed significantly. The reforms have deepened liberalization of the price and trade regime, accelerated privatization of agricultural enterprises and irrigation systems, largely completed restitution of farmland (with an increase in titling), and supported development of market and farm level institutions (e.g., a warehouse receipts system and water users associations). The Government has also taken steps to limit directed credit allocations, particularly for short-term credit, and to improve the targeting and efficiency of government directed credit schemes.

The Notes and workshops significantly advanced the policy dialogue with government and the private sector. The Ministry of Agriculture's understanding of market processes has improved markedly, and it has increasingly taken independent initiative to enable rather than suppress private markets. Two examples are its active involvement in development of a warehouse receipts system, and its role in the transfer of irrigation assets to water users association. While instances of policy regression have occurred, these have been limited and generally rectified through mutually agreed actions.

Lessons Learned

The experience reinforced the importance of actively identifying stakeholders in the private sector and civil society, especially in outlying areas. This was a research task in itself, because of the small-scale and largely informal nature of much private sector activity in Bulgaria (due in part due to tax avoidance). It is an ongoing task that requires sustained attention by Bank staff. A database of private sector contacts has been developed as a result of the first mission and subsequent workshop, and is updated periodically as the private sector evolves.

Private sector and local government contacts established during the early field work were critically important participants in workshops. The quality of workshop discussions was improved when participants included some of those who had been interviewed earlier, either individually or in groups. Distribution of Notes to workshop participants before the workshops probably also improved the discussions.

It was essential to hold most of the workshops outside Sofia, in towns located close to agricultural regions with differing agricultural potential (Plovdiv, Bourgas, Dobrich). They were highly appreciated by local farmers and officials, who knew of the Bank by reputation, but had never seen Bank staff before. It also gave Bank staff added exposure to Bulgarian agricultural conditions and problems. The workshops provided
important insights into the constraints faced by farmers, agro-processing enterprises, and markets, independent of the earlier field work that had been done.

The process of preparing for and participating in rural workshops is very time consuming both for HQ staff and extremely demanding for staff in the RM, who must deal with logistics of identifying participants, contacting them with descriptive information on the workshops, confirming their attendance, etc. The cost of holding four workshops, not including the preliminary field work mission or writing of policy notes, was about $10,000 (30 participants at each workshop). In some cases, costs can be lowered by using government venues as a substitute for commercial rented halls.

The reception and subsequent local demand for the short, attractive, readable notes was enthusiastic, even when readers did not agree with the findings or conclusions. It reinforced the view that local stakeholders often do not read longer Bank reports. However, the credibility of the notes rested on the substantial field work that went into preparing them, and the longer analytical papers on which the notes were based were requested by MOAF staff and others.

Conclusion

Like the studies for Turkey and Estonia, the approach used for the production of the Bulgaria policy notes served the dual purpose of building local capacity to collect and analyze agricultural economic data and to launch a dialogue with stakeholders over policy alternatives to reach commonly shared goals. The added value is found in the request from the Government for additional inputs into the policy debate in the form of a second set of analytical papers and workshops the area of rural finance. The process also helped inform the Bank's sectoral lending program and other agricultural sector activities in Bulgaria.
ESTONIA: Challenges of EU Accession

Alberto Valdes

Background

Since the initiation of economic reforms in 1991, agricultural output in Estonia has declined significantly, not only in absolute terms, but also relative to GDP and employment. Poverty is relatively greater in rural areas than urban. About one-quarter of all Estonians employed in agriculture and forestry are classified as poor (defined as having average expenditure levels that are 45% below the minimum pension), of these two-fifths are small farmers and three fifths, rural workers.

Agricultural policy in Estonia is being adjusted for consistency with the Common Agricultural Policy (CAP) of the EU. However, within the EU itself, several features of the current CAP are undergoing changes. These changes are the result of movements in world market prices, increasing pressure from the WTO and the expected impact of EU expansion. As a result of these changes support to the agricultural sector continues to decrease. These on-going revisions to the CAP should be considered by acceding countries in the design of their own support policies.

Research Findings

As a new entrant to the EU, Estonia will have to accept the full body of EU legislation and policies that exist at the time of its accession. However, agricultural policy in the EU continues to evolve beyond the fundamental changes of 1991 introduced in what was called the McSharry reform. The recent CAP reform proposal (Agenda 2000) envisages substantial cuts in the future on guaranteed minimum prices, together with a revamping of the EU rural development policy. Therefore, the current support policy under the CAP is not a good benchmark for acceding countries aiming to align their prices with those of the EU.

The analysis examined the impact on different variables (i.e., real producer income, government budget and consumer incomes) of different policy scenarios the Estonian government could follow in moving toward alignment with EU CAP policy. These possible policy scenarios were considered:

- (Scenario A) rapid alignment with current CAP policy (a substantial increase in support);


- (Scenario B) alignment with the proposed policies of the "Agenda 2000" (a more modest increase in support); and
- (Scenario C) maintenance of current low support policies until accession actually occurs.

If Estonia were to immediately adjust its policies to current CAP policies, there would be a substantial increase in producer income from the production of wheat, milk, beef, and barley. In contrast, producer income from pork, would suffer a substantial decline. If Estonia were to follow policies outlined in the Agenda 2000, increases in producer prices and income would be more moderate, and the negative effect on pork production would be less.

The effects of these different approaches for consumers' real incomes were examined for five product groups: bakery, potatoes, dairy, beef, and pork. The analysis found that the effect of introducing an EU market regime would not lead to a large reduction in average household real income, although consumer income would clearly decline.

Introducing CAP-like price support policies would have a negative net effect on the budget of about 600 million EEK and 443 million EEK, under scenarios (a) and (b) respectively, although this analysis excludes administrative costs and therefore underestimates the true fiscal cost. Thus, the fiscal costs of introducing CAP policies before accession are very high, particularly due to price supports for milk.

There are a number of other negative effects from early introduction of CAP policies. First, higher food prices would create upward pressures on urban wages. Second, higher farmgate prices would raise the price of raw material for the agro-processing industry, reducing competitiveness and the prospects for modernization and restructuring of this industry.

A successful accession cannot be achieved without considerable strengthening of the administrative structures and institutions. The administrative costs of implementing EU regulations in agriculture will be immense. EU enlargement will considerably increase the number of administrative staff and the cost of educating them in EU legislation.

**Impact**

There was an important capacity-building component to the exercise because a number of Estonian analysts were trained in this type of policy evaluation.

High level Estonian government officials, including the Minister of Agriculture, as well as private farmers and processors attended a two-day
While some movement of protection toward scenario B is likely, it will be done with a full understanding of the fiscal costs and the likely impacts on producers and consumers.

There is now an understanding of the importance of land restitution, privatization, and titling, if Estonia is going to remain competitive inside the EU.

Conclusion

Adjusting agricultural protection toward current EU CAP policy, or even toward EU policies under the Agenda 2000, would significantly increase producer incomes, but it would be very expensive for the budget and would have a negative impact on consumer incomes. Understanding these impacts, their direction and order of magnitude, has helped policy makers and other stakeholders better understand the costs and benefits of different choices.
LATVIA: Agricultural Development Project (FY94) and Rural Development Project (FY99)

Hoonae Kim

Background

The Agricultural Development Project (ADP) for US $25 million was approved in January 1994 at a time when the winds of economic and political change were sweeping across the rural landscape in Latvia. The last vestiges of the former state system were crumbling and a new rural economy was emerging, characterized by primarily smallholder agriculture and a rural population for the most part cut loose from the formal state sector. Unfortunately, the Government, which helped to foster this dramatic change, was unable to cope with the result. It lacked the knowledge, institutional capacity and human resources to nurture the emerging rural economy. ADP was designed to fill this gap and focused on agriculture, a major source of growth for the economy and the principal determinant of rural incomes. It provided support for privatization and restoration of private land ownership, development of a rural financial system, and creation of services for business development in order to promote a competitive agricultural sector. ADP was consistently rated “highly successful” during implementation and was closed in 1997.

The follow-up Rural Development Project (RDP) was approved in 1998 as a two-phase Adaptable Program Loan (APL). During the first phase, the Government is giving priority to strengthening institutional capacity for rural development policy formulation, stimulating the flows of commercial bank financing to rural areas, and advancing land reform. The second phase will further the policy and financial aspects and will expand into support for investment necessary to ensure compatibility of Latvia’s institutions and services with those of the European Union (EU).

Objectives

The two projects were designed to increase the efficiency and growth of rural enterprises, diversify sources of income and employment for rural populations, and support development of a self-sustaining system of rural finance. While the ADP focused primarily on revitalizing agriculture, the RDP aims to address broader rural issues beyond agriculture by laying the groundwork for improving income levels and raising the living standards of the rural population. It strives to achieve this primarily by: (a) promoting economic diversification and growth in rural areas; (b) providing credit and technical assistance to generate employment and in-
come-generating opportunities; (c), introducing participatory approaches to rural development to increase stakeholders' ownership and commitment; and (d) linking improved rural banking practices with rural business development service networks.

The RDP is also focused on helping prepare for Latvia's eventual membership in the EU. Local Action Groups (LAGs)—broad-based community action groups comprising political officials, teachers, and farmers—are being formed with the objective of preparing rural communities for the competition they will face from within the EU. The National Rural Development Program of Latvia (NRDP), which was developed during preparation of the RDP, calls for such an approach to rural development based on an "inclusive policy" of local community initiatives to support less developed areas. The RDP also includes a special credit line for small-scale rural entrepreneurs who have not had access to the formal banking system.

Results on the Ground

Agricultural Development Project. When the preparation of the ADP started in 1993, there were no commercial banks in Latvia which had the interest or the capacity to serve a large number of widely-dispersed small-scale private farmers. In order to fill this gap, a non-bank financial institution—the Agricultural Finance Company (AFC)—was established as a temporary measure. At the same time, because of the relatively small size of the country and the need to reduce fixed costs, mobile credit officers (MCOs) were created to serve all corners of Latvia. The MCO concept allowed frequent and regular interactions with clients for continuous monitoring and support. The concept of "a bank coming to the clients" also helped overcome the recurring problem lack of transportation faced by farmers. Such frequent interactions also helped increase both lending volume and repayment performances.

AFC was wholly government owned. Establishment of a public sector agency was justified at the time by the lack of interest among commercial private banks in rural lending. Eventually, consistent with a "sunset scenario" developed during appraisal, AFC was merged with a commercial bank—Latvia Mortgage and Landbank (MLB) in 1997. The MLB is also government owned but is expected to be privatized under the RDP.

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3 The project team initially recommended a partial share holding of AFC by farmers but the proposal was rejected by Bank management.
Overall, the ADP achieved its development objectives to revitalize and commercialize the Latvian agricultural sector. During four years of implementation, with only 42 staff (including 15 MCOs and 5 regional coordinators), AFC approved total of US $43 million for 2,860 sub-loans including refloors and the numbers continue to increase (the figure is now US $54 million for 4,052 subloans through continuous on-lending by MLB). The repayment performance remains high at around 93%. The loans, offered both in LAT and US $, are made at interest rates substantially positive in real terms.

The ADP financed critical investments which would not have been made without the project. Its two-pronged approach of helping the lending institution as well as clients to develop "bankable" projects contributed to rapid disbursement of the credit lines while maintaining high repayment rates. The project also established a rural financial system based on commercial lending terms and conditions that are now being adopted by other commercial banks. In essence it demonstrated to commercial banks that rural lending can be viable, and helped established discipline among end-borrowers and improved their understanding of terms and conditions of commercial lending. Moreover it contributed to strengthening rural economy by establishing land titling, and supported the development of functioning land market and the use of land as collateral. Finally, it strengthened extension services for agriculture and rural business development, created a cadre of lending staff, trained in rural lending, including loan appraisal, risk assessment, loan servicing and information services. In short, it established a model for rural finance projects elsewhere.

Rural Development Project. As with the ADP, the RDP provides credit to viable commercial farmers and rural entrepreneurs. In addition to a commercial credit line, the RDP includes a special credit line to provide targeted support to small-scale entrepreneurs who have not yet benefited from commercial credit to the sector. Through a combination of these schemes, the government of Latvia hopes to demonstrate that lending to rural enterprises can be profitable to banks.

The MLB, continues as a participating Bank under the RDP. A condition for moving to the second phase of the RDP requires Government to prepare a privatization plan for the MLB. In addition, two other private commercial banks are preparing to join the project. Overall, 450 sub-loans have been approved to date under the general commercial credit line. Repayment performance continues to be good.

The special credit line includes an innovative subsidy element aimed at consolidating previous ad hoc subsidies and transforming them into a
direct, more transparent and accountable subsidy program. Under the scheme, a subsidy is incorporated into loan repayments. Farmers and rural entrepreneurs are provided loans up to a maximum of Ls 2,000 (about $4,000 equivalent). Terms and conditions of the loans are the same as for commercial credit and the sub-loans are subject to the same evaluation of financial viability. The grant is payable in the form of a write-off of one-third of the principle only after two-thirds has been paid in full and on time. Eligible borrowers can borrow only once and must use the loan proceeds for investment purposes to generate income. The RDP, through the special credit line, is enabling loans in smaller amounts to be provided for rural borrowers and for lower income borrowers than would have occurred through the private sector alone. However, it is not intended for the poorest and the project does not pretended to be so. As of September 1999, about 400 small-scale loans have been made through the Special Window.

A number of accomplishments in the area of and reform are notable. More than 550,000 land units covering more than 65% of the total land area are registered in the Cadastre, representing about 40-fold increase since 1993. The national assets in land, property, and construction are already worth about 15% -20% of GDP, and are growing. A vibrant land market is emerging, with over 42,000 parcels having been bought and sold by 1998. Land is being consolidated through market transactions and the transfer of land ownership is more rapid and secure since the Land Book registers not only the ownership but also pledges and encumbrances. Finally, credit security has been enhanced through improved access to information on collateral, benefiting both lenders and borrowers. Donor-cofinanced technical assistance for land reform has been launched.

In June 1997 and again in October 1998, two leaders of LAGs in Latvia received a United Nations Award of Excellence for community-led development. Technical assistance for LAG business development is currently being prepared.

Another important achievement of the project has been to raise the awareness of rural issues beyond the traditional agricultural issues, and broaden ownership, and institutional responsibility for rural development, traditionally the realm of the Ministry of Agriculture, to other key ministries such as Economic Development, Environment, Finance and Regional Development.
Lessons Learned

Lessons from the Latvian projects could be applied to other transitional countries in the ECA region. The Kyrgyz Republic and Moldova have already adapted a similar model, which can be replicated elsewhere if certain basic conditions are met.

First and foremost, macro-economic stabilization and market liberalization are prerequisites for effective financial intervention, and these conditions were indeed met in Latvia. Four other key elements or a successful rural finance project are: (a) legally based property ownership; (b) a functional legal system; (c) functional financial institutions; and (d) a system for effective farm advice and business development support.

The main outcome and impact achieved by ADP and RDP to date were mainly the result of the focused objectives, a simple design, and a number of innovative features.

The successful outcome was also due to the Government’s strong commitment to the project and effective and committed project management team in Latvia and there always has been a strong sense of ownership for the projects by the country.

Creating a non-bank financial institution, the AFC, was controversial during project processing, but proved, at the end, to be the right choice for an institutional arrangement in a transitional economy. Being innovative and risk taking can lead to rewarding results, particularly in transitional countries where text-book prescriptions do not always work.

Technical assistance in strategic guidance, loan appraisal, risk assessment, other operations and procedures, which were backed up through a twinning arrangement with western banks, was critical for start-up institutions like AFC. In parallel to technical assistance to lenders, assistance should be provided to potential clients to increase the number of “bankable” projects.

Improving the collateral system is a prerequisite for a successful credit system.

Conclusions

The ADP made good progress in establishing the solid foundation for a sustainable rural financial system. Being innovative and taking risks can work, and can be rewarding, particularly in transitional countries. The RDP provides a strong base for continued rural services—both financial and technical assistance in equally focused areas. The increasing role of private commercial banks will help assure the sustainability and quality
level of services provided to rural populations. The Latvia model can be applied with country-specific modifications in other countries. Successful similar projects have been developed in the Kyrgyz Republic and Moldova. More are likely to follow.
MOLDOVA: Land Reform and Farm Restructuring

Csaba Csaki

Background

Agricultural reforms in the Republic of Moldova began in early 1991, six months before the breakup of the Soviet Union and the declaration of Moldova's independence. In addition to the basic tasks of land reform and restructuring of collective and state farms, the sectoral reform program included liberalization of agro-processing and trade, and the creation of a new institutional framework for agriculture.

The process of agriculture reform was initially characterized by a struggle between pro-reform and conservative forces, which delayed the implementation of a consistent reform program. This delay had negative effects on Moldova's economy since agriculture accounts for nearly one-half of the country's GDP. The pace of reform in the country accelerated significantly following the constitutional court's 1996 landmark decision to privatize and distribute land. By the end of 1997, the share of individually owned agricultural land rose to 21 percent (up from 12 percent in 1992), while the share of the state sector declined to 18 percent (down from 25 percent in 1992).

Despite the uncertain start and initial delay of reforms, Moldova has achieved significant progress in creating a privatized agriculture and food sector. Although the reform measures have not yet resulted in full sectoral recovery, improvements in the overall agricultural performance since 1997 have been noted.

Social Assessment

Because land reform is one of the major components of agricultural transition, it was the primary focus of this study. To review the status of land reform, the World Bank, in cooperation with the Moldovan Agricultural Restructuring Agency conducted a survey in the spring of 1997. The 2,000 respondents included private farmers, managers of large farm enterprises, and member-employees of large farms, in 28 of the country's 36 districts. The survey was carried out according to a uniform methodology developed by the Bank for monitoring activities in the former Soviet Union and East Central Europe.

The study produced an analytical assessment of changes in land ownership and farming structures and evaluated the impact of farm privatization on farm performance and rural incomes in Moldova.
Research Findings

Farm restructuring in Moldova has improved profitability (from crop and livestock production), and led to higher incomes for private farmers. These higher profits were achieved with the same level of physical yields (tons of output per hectare) as the old organizational structure, and without new capital investments. This implied that private farmers used resources (such as labor and purchased inputs) and marketed their products on the free market more efficiently than those in traditional collectives. Higher profits translated directly into higher family incomes: families of private farmers earned double the national average salary, while salaries of members of collective farms fell below the national average.

The observed personal welfare gap between the two groups of rural residents provided a clear incentive for peasants to leave collective farms and strike out on their own as independent private farmers.

Although many large-scale farms re-registered as joint stock societies, limited liability partnerships, or other organizational forms, they continue to operate in the traditional mode, without radical internal restructuring. Most of them retained a central management that controls the business functions. At that time, private initiative was minimal and accountability, poor. On the whole, the large farms, despite their new names, remain unproductive and continue to accumulate large losses. The downsizing of traditional large farms, which is in itself a positive feature, resulted not from planned restructuring, but from the departure of former members of collectives.

One of the most significant outcomes of agricultural transition is the indisputable right of individual shareholders to leave the collective (with their share of land and assets) to establish a private farm. The economic failure of collective farms provided the strongest impetus for the development of private farming in Moldova. The inability of the large farm enterprise to provide adequate income flows to families of member-employees was cited as the main motivation for establishing a private farm or for encouraging withdrawal from the collective farm. The situation in Moldovan agriculture is in striking contrast to that in other former Soviet republics, such as Russia and Ukraine, where economic policies allow the traditional large farm enterprises to muddle on without reaching an actual crisis, and where private farming is still stagnating.

The associations of private farmers provide examples of radically new organizational forms in Moldova. Many of these associations operate as service cooperatives of independent private producers. However, at the time of the survey, there were still only about two hundred such or-
ganizations in all of Moldova, and they represented only a small fraction of the country's agricultural sector.

In 1997, the transition from collective to individual agriculture in Moldova had not resulted in reversion to subsistence farming. The individual farm sector developed a strong commercial orientation. Nearly 80 percent of private farmers surveyed reported some revenue from sales of farm products—on average, they sold about 30 percent of their output. The growth of private farming was accompanied by the emergence of various market services, which include commercial private channels for sales of farm products and supply of farm inputs. Even the collective and other large corporate farms were moving away from exclusively using state procurement and processing services in favor of private traders.

**Lessons Learned**

In 1997, functioning markets for farm inputs and products have not yet fully emerged in Moldova, impeding successful operation of the new privatized agriculture. The financial sector was in disarray: few banks could issue mortgages, and initially few landowners were willing or able to offer their land as collateral. Development of functioning credit markets requires security of land tenure, legal title to land that can be used as collateral, and existence of land markets that provide an objective valuation of land. Fully functioning land markets, including the unconstrained purchase, leasing, and mortgage of land, will be necessary for Moldova to develop its potential for high-value agriculture consistent with its natural endowment.

Further constraints on access to land, most of which was still locked in large collectives, restricts the potential growth of family farming. In addition, the administrative procedures to establish a fully registered private farm are complex, despite some recent attempts at simplification, and serve as obstacles to progress.

**Conclusion**

The elimination of the state monopoly on land ownership was the most prominent outcome of agricultural reforms in the Republic of Moldova. The Republic succeeded in privatizing seventy-two percent of agricultural land by early 1998. However, private ownership does not necessarily mean individual ownership. Most of the privatized land remains in collective farms.

There has been a definite acceleration of the pace of reform since 1996. The number of exits from collective enterprises has increased, and the land holdings of private farms established outside the collectivist
framework has gone up more than by a factor of three in the last two years, reaching 8 percent of agricultural land.

An improved and supportive legal framework is in now in place. It simplifies, at least on paper, the registration process for private farms and allows for accelerated farm restructuring and land transactions. The main issue today is full implementation of the existing legal provisions. Some local authorities have not supported reform, and have sometimes obstructed or delayed the implementation of new regulations. Since farmers were not always aware of their rights and opportunities, information campaigns help guide farmers and also facilitated the implementation of the reforms. Land reform in Moldova has had positive effects on the families of private farmers, which were better off, and more optimistic about the future than their counterparts in collective farms. This was an encouraging sign for the future of Moldovan agriculture.
MOLDOVA: Rural Finance Project

Hoonae Kim

Background

Moldova is a small, densely settled country that relies heavily on agriculture. The Agriculture sector contributes about 42% of GDP and employs about half the total labor force. The country produces a variety of high value agricultural products including wine, fruit, and horticulture products. The government has taken decisive actions to: (a) stabilize the economy; (b) provide a supportive environment for the emerging private farming sector; and (c) advance land reform and farm restructuring. The number of private farmers is increasing rapidly. However, these newly emerging farmers and rural enterprises have difficulty obtaining loans from commercial banks due to the small size of the loans they request (with proportionately higher transaction costs) and the lack of fixed assets which can be used as collateral. Against this background, an IDA credit for the Rural Finance Project (RFP) amounting to US $5 million was approved in January 1998. The RFP has been designed as a Learning and Innovative Loan (LIL) to test new ideas and learn from the experiences for future operations. The RFP was one of the projects that received the World Bank’s Excellence Awards in 1999.

Objectives

The objectives of the Rural Finance Project are to develop and test a cooperative rural banking system that would efficiently provide financial services to small private farmers and rural entrepreneurs. In order to achieve these objectives, the project has established Savings and Credit Associations (SCAs) and training their members with assistance of the Moldova Microfinance Alliance (MMA), created a regulatory body for SCAs, strengthened the Rural Finance Corporation (RFC), and financed a rural credit line to SCAs. In conjunction with these components, the project is designed to create a self-sustaining microfinance system that can reduce the costs and risks of small-scale lending to rural populations. This is achieved through the activities of community-based organizations that screen loan applicants, ensure repayment, and mobilize rural savings.

Results on the Ground

A pilot program of the RFP started in December 1996 and by the end of 1997 the first set of seven SCAs were already created. The regulatory
framework including statutes, regulations, financial prudential rules, eligibility criteria for loans and for savings have been developed based on international experience, existing local legal framework and a participatory approach of the first village association.

The pilot results were modified and improved and the RFP was launched on May 1998. Since then, all legal and prudential regulations for SCA operations have been finalized, and against a target of 130 SCAs to be created by mid 1999. As of September 30, 1999 a total of 172 SCAs were established and operating. State Supervisory Body and Federations of SCAs have been established and started to receive critical institutional capacity building technical assistance (TA).

The IDA credit is onlent to SCAs through the Rural Finance Corporation (RFC), a non-banking financial institution. The RFC is fully farmer-owned and operates as a commercial entity with audited financial statements. In addition to the RFC, two private commercial banks have experimented with lending to SCAs, with one bank still holding outstanding loans to SCAs.

As of September 30, 1999, a total of about MDL 15.3 million (about US $1.4 million) was disbursed to over 152 SCAs with 9,800 members. An average loan amount per member in 1999 was about US $180, with loan amounts ranging from as low as US $50 to about US $400. All loans made to date are for working capital for up to one year, with a balloon repayment in one installment at maturity. The RFC receives IDA funds at a nominal rate of 30% and onlends to SCAs at around 35%. In addition, the RFC has received a subordinated loan (convertible to equity) from the government at zero interest. This is being considered as a development subsidy to build institutional capacity and train staff. The RFC has already achieved a net positive profit (after income taxes), and its lending is expected to nearly double in year 2000.

The repayment rate of SCAs in 1998 was 100%, and the performance in 1999 is expected to be equally good. In one case, some members experienced minor problems but a SCA have repaid the loans from its reserve fund.

Moldova Microfinance Alliance (MMA) was established with donor funds to create and train SCAs. Since its inception, the MMA has been the principal agency that created SCAs. In addition to the MMA and the RFC itself, a newly created Rural Development Center, and commercial banks are also involved in creation of SCAs. In limited cases, some villages created SCAs by themselves. The creation of SCAs from multiple sources re-emphasizes the need for a sound regulatory and supervisory institution. The State Supervisory Body (SSB) of SCAs has been desig-
nated to issue a license and also to regularly monitor SCA performance. The National Federation of SCAs has been created to voice and lobby for SCA interest. Both SCAs and the Federation need additional technical assistance; donor funds are being sought for this purpose.

One of the unexpected outcomes of the RFP to date is the voluntary participation by the Agroinbank and Fincombank. The latter discontinued its participation, but the Agroinbank remains an active lender to SCAs today. A donor has provided an exclusive partial guaranty to Agroinbank but not to RFC, resulting in an uneven operational environment for these lenders. This issue is being addressed at present.

The current financial state of the agricultural sector in Moldova is depressed, which partially explains the lack of savings by farmers. As a result, SCAs have not been able to attract savings nor to make medium term loans. However, more proactive efforts are needed to mobilize savings, if SCAs are to be self-sustaining in a long run. IDA, donors, and other international financial institutions are exploring various measures, such as deposit insurance and other incentives to mobilize savings.

Lessons Learned

- The Moldova RFP is a variation of group-lending models that the Bank group has used in other countries. Each model should be tailored to a country's specific socio-economic needs and cultural traditions.
- Community based borrowing can work but it takes substantial initial learning curves to overcome to establish prudent borrowing disciplines and to train members about individual and group responsibilities.
- A clear legal framework for group borrowing, institutional statue, prudential regulations are prerequisites for successful savings and credit operations. Also, it is imperative to establish an appropriate regulatory and supervisory body at the outset. This should not be left for project implementation.
- Group borrowing can be an attractive alternative for commercial banks to lend to small-scale clients to reduce transaction costs. Also, group borrowing based on social peer pressure can lead to high repayment rates, demonstrating that borrowers are willing and able to pay market rates.
- Establishment costs of SCAs are high; these are essentially a development activity which requires substantial grant financing for at least a few initial years before being able to achieve self-sufficiency. Savings mobilization will come only gradually and not until each
SCA has adequate capacity to manage the funds and there are sufficient safeguards for savings. SCAs require continuous training and should be continuously monitored and supervised.

- In a LIL operation like the RFP, in order to maximize the results and impact, borrowers, donors and the IDA should be as flexible as possible and coordinate their activities.

Conclusion

The macro-economic and financial crises in Russia have had a negative effect on Moldova’s financial markets, causing a 70% devaluation of the Moldovan Lei. But the RFC and SCAs both weathered the crisis relatively well. This is a direct consequence of prudent, risk adverse behaviors and built-in safeguards against default in the SCA system. The Moldovan experience demonstrates that, if well designed and implemented, group borrowing can be an effective way to deliver credit to small-scale borrowers. However mobilizing savings is more challenging and may require substantial efforts including additional measures such as a deposit insurance scheme. The group lending through SCAs can, and should, be done only at market rates which enables SCAs to offer attractive rates to encourage savings mobilization.
POLAND: Agriculture Wholesale Markets

Richard Lacroix

Background

Most wholesale marketplaces for perishable foodstuffs in Europe have been built by municipalities with their own funds. Using public funds was justified because these markets were seen as "common goods"—they supported farmers on the one hand, and were important for the supply of food to urban consumers on the other.

Today, conditions are different and the earlier justifications for subsidies no longer apply. The construction and financing of wholesale markets are influenced by three main factors. First, the traditional wholesale markets have been losing business steadily because of the increasing buying power of supermarkets and the organization of producers in marketing-related associations. These associations are the right size, and have the services and the products that allow for direct trade with supermarket chains. The decreasing importance of wholesale markets limits the earlier justifications for municipal involvement in their construction and operation through the extension of subsidies. The second factor that makes traditional municipal-based financing for wholesale markets less of an alternative is that local authorities (particularly in the emerging democracies) have many demands for improving their infrastructure, while the financial means at their disposal are limited. And third, the lack of familiarity with the concept of wholesale markets at the time—unknown in Poland during the communist administration—carried over into the emerging banking sector which, consequently was reluctant to finance these ventures and unaware of the potential revenue generation from this activity.

Objectives

Given the economics of the day, what justifies continued public, including World Bank, support for wholesale markets? The macro view is that increased marketing efficiency and market transparency will lead to an accelerated reduction of margins and transaction costs, which, in turn, would increase benefits to society as a whole. Moreover, formal wholesale markets provide an entry for imports, the quality and presentation of which has been shown to be a strong incentive for improving indigenous produce in emerging economies. This tends to have beneficial spin-off effects for support industries such as packaging,
printing, advertising and storage. Increased imports will expand the range and variety of products available to consumers, and may have a dampening effect on trading margins. Increased market transparency will facilitate the collection of information on prices, quality, availability, and product flows, which will improve overall market efficiency. Formal and organized wholesale markets help control the negative externalities of marketing activities—traffic congestion, pollution, waste disposal, and other inconveniences to neighboring residents. The concentration of wholesale activities in any one locale tends to benefit the entire vicinity by creating opportunities for services in: (a) banking; (b) customs clearance; (c) transport brokerage; (d) restaurants and cafeterias; (e) gasoline supply; and (f) vehicle repair and maintenance.

To cater to the legitimate needs for the service rendered by wholesale markets in Eastern Europe, a development strategy for a wholesale market should be based on the following considerations. It should: offer a wide range of services to remain competitive; serve as a center for handling, storage, trade, and distribution of perishables (including items from supermarket chains and major importers and exporters); be built, owned, and operated by an independent company; and be developed in stages, its growth responding to the demand for its services. In addition, local participation for financing a wholesale market should be maximized, in terms of equity and debt; and private involvement in its day-to-day management should be encouraged; and an institutional link forged with the municipality.

Results on the Ground

Any discussion of new wholesale markets in Poland should include a mention of the development of the first modern market in the city of Poznan, which was created in the early 1990s on the initiative of the association of local growers of fruit and vegetables. Having received material support from local and central government authorities, and seed capital and technical assistance from a private Swiss development foundation, this successful endeavor continues to expand, with recent additions for the meat, dairy, and fish trade. It can be argued that the market in Poznan successfully competes with the supermarket chains because it offers a broad range of services, providing for "one stop shopping" at the wholesale level. It should be noted that the considerations listed in the previous paragraph were all observed when this wholesale market was developed.

In late 1994, the Polish government decided that it would have to accelerate the development of marketing structures for agricultural products, including wholesale markets. One of the strong incentives to do
that was the realization, on the part of the Ministry of Finance, that some food prices were climbing to unreasonable heights, due to the lack of an efficient marketing system, and contributing to inflation. More efficient marketing channels, it was expected, would dampen trading margins, and slow down (if not reverse) food price increases, while helping farmers to obtain higher prices. In September 1994 the Ministry of Agriculture and Food Economy drew up a plan entitled, “Program of the Establishment of Wholesale Markets and Agricultural Commodity Exchange Network,” and the government turned to the World Bank and the European Bank for Reconstruction and Development (EBRD) for assistance with its program for creating wholesale markets. The World Bank was asked to focus on new markets in Gdansk, Lublin, Wroclaw and Katowice; the EBRD was asked to assist in the creation of a new market for Warsaw.

Two of the four markets developed under World Bank auspices are now close to completion in Lublin and Gdansk. (The market in Wroclaw has only recently tapped local commercial financing, while plans for a market in Katowice have been temporarily shelved.) The Gdansk market serves as an example of preparation for other markets. The Gdansk Wholesale Market Company, (or the Pomeranian Wholesale Agriculture Center—PWAC—as it’s called in English), was incorporated in June of 1995, the result of the efforts of the current PWAC president, Jacek Austen, and the regional development agency of Gdansk. Its founding capital, the equivalent of US $2.1 million, came from 60 sources, the majority shareholder being the Polish government’s holding company of all assets of the former state farms, which contributed 50 hectares at a prime location as its equity in kind. PWAC, thus, was created with its site firmly owned by the company. Further public support was demonstrated by cash equity contributions from two other entities. Prior to construction, and after three share issues, the company had acquired the equivalent of US $7 million in equity, more than half of which came from approximately 200 private entities and individuals, including a number of farmers and traders. What began as a public sector-owned undertaking, became private before it even opened. The debt part of financing came in the form of a construction loan from the World Bank (with a sovereign guarantee from the Polish government) denominated in Deutsche Marks. Construction started in December 1998, less than 3 years after the wholesale market company was formed.

Under the auspices of the UK-based Know How Fund, and in consultation with the World Bank, PWAC has received technical assistance as grants from a Polish/English consortium for all the engineering and financial planning aspects of the new market. Close collaboration with local authorities, notably with the municipality and the
governor, led to firm agreements for the supply of utilities and the construction of access roads. A Polish company carried out an environmental impact assessment which has proven to be an important part of project preparation in present-day Poland—it equipped the PWAC members with the necessary information to counter environment-related criticism against its construction plans, voiced when the municipal council of Gdansk was set to vote on the market’s construction.

**Lessons Learned**

There are several important lessons from the experience of setting up the Gdansk market. The structure of a limited-liability company under Polish corporate law was not well understood by either the management of the prospective wholesale market or the World Bank staff preparing the project, who later learned that Polish corporate law allows for “preferential shares.” These shares gave private shareholders five times the voting power of publicly held shares, and turned out to be a major incentive in attracting private investment.

Promoting the World Bank’s involvement and confidence in the viability of the project was also very useful in attracting private capital. Investor confidence in the project, in turn, contributed to a smooth privatization process.

Other lessons include the following:

- a dynamic, knowledgeable, and credible person should lead the effort;
- collaboration with, and support from, local authorities is a necessary condition for success;
- the market company should acquire the site outright in the early stages of preparation;
- a sustained public relations effort is required to attract investors and to create public acceptance for the development; and
- an environmental impact assessment should be conducted, and pollution mitigation measures included in the project’s design and investment.

**Summary**

Wholesale markets for perishables have a definite role in the contemporary trade of fruit and vegetables—provided they offer a wide range of services that transcend the traditional role of wholesaling alone. The current diverse nature of wholesale marketing has eliminated the
wholesale market as a "public need" and, thus, has obviated the justification to subsidize either investment or the operation of these facilities. However, if it is structured well, a modern wholesale market can be a profitable venture that will attract private equity.
RUSSIA: Transforming the Agricultural Research System

Mohinder Mudahar

Background

Reforming agriculture is a crucial step in Russia’s successful transition to a market economy. The long-term productivity of Russian agriculture will be determined, to a large extent, by the capacity of the Russian agricultural research system (public and private) to respond to emerging problems and opportunities. However, Russia’s agricultural research system is seriously at risk and Russia could lose its rich store of knowledge, germplasm, data, and know-how. Despite the urgency of problems related to policy reform, and the need to develop managerial and technical capacity throughout the agro-industrial complex, it has proven difficult to build a case for strengthening agricultural research in Russia—an admittedly long-term project. Over the past five years there have been numerous proposals to transform this system, but these have resulted in little action. In a sense, this is a collective failure of the central government, oblast and municipal governments, the Russian scientific establishment, and the international community.

Russia has an extensive network of over 300 agricultural research institutes and academies, 235 of which are managed by the Russian Academy of Agricultural Sciences (RAAS), and 71, by the Ministry of Agriculture and Food (MOAF). The national agricultural research system in Russia was designed to meet predetermined production targets for individual crop and livestock commodities, and is unsuitable for the emerging market-based private agriculture system.

With the introduction of economic reforms to reduce the budget deficit and achieve macro-economic stability, funding for agricultural research was substantially reduced, stalling research. Understandably, scientists sought better paying jobs elsewhere, and research farms came to be used primarily for agricultural production, to meet the needs of the staff rather than further research. Capital and operational budgets declined, causing irreparable damage to Russia’s capacity to generate, adapt, and transfer appropriate agricultural technology. The public sector’s capacity to undertake agricultural research needs to be supplemented by the private sector, and efforts must also be made by the public sector to recover part of the cost of current state-sponsored research.
The World Bank Discussion Paper, "Transforming Agricultural Research Systems in Transition Economies: The Case of Russia," recommends redefining the roles and responsibilities for agricultural research, and suggests ways to make the system efficient, sustainable and appropriate for private agriculture.

**Recommendations**

Russia must overhaul its policy of benign neglect toward its deteriorating agricultural knowledge system, in favor of active engagement in reorienting and restructuring its institutions to meet the new demands of a market economy. The international scientific and donor communities, for their part, should take steps to provide targeted assistance to Russian scientists, public officials, and agricultural leaders to help restructure and refocus Russia's agricultural research system.

*Transform the agricultural research system.* To serve private agriculture in a market economy, the agricultural research system must be made sustainable, efficient, demand driven, decentralized, and accountable to key stakeholders. It must also be integrated with the higher education system, knowledge transfer, and the world scientific community. At present, there is little agricultural knowledge transfer, and the knowledge (particularly information on prices, markets, technology, and reforms) itself is often insufficient for producers, traders, advisors, administrators, and policymakers who need to adjust to the emerging market-based agricultural system.

*Provide adequate financial support.* Current budgetary support is too low to adequately finance and sustain even the most critical research programs designed to improve agricultural productivity.

*Decentralize information services.* In the past, information services for agricultural producers were centralized. This system resulted in the development of a large number of narrowly focused specialists who advised managers of state and collective farms. This knowledge was supplemented by research and field applications. Most of the research results were introduced through directives. There were few incentives to promote new innovations. While this system worked reasonably well with a limited number of clients (about 25,000 state and collective farms), it is not adequate to meet the needs of the increasing numbers of private farmers (280,000), restructured farm enterprises (50,000), and household plot holders (40 million) that have already been established in Russia.

The institutional structure for agricultural in Russia is complex. The new Constitution has decentralized much power from the federal to the oblast authorities, but the division of responsibilities and roles, and of
fiscal resources, has not yet been clearly defined. In addition to the MOAF and agricultural departments, a large number of other agencies that deal with different aspects of the agricultural sector are gradually being reorganized to meet the needs of a private sector-dominated market economy. However, the slow pace of this institutional change remains a major barrier to adjustment.

The agricultural knowledge system consists of agricultural research, education, training, and technology transfer. It needs to be fully integrated if it is to be responsive, efficient, and cost effective. While the agricultural knowledge system in Russia is gradually adjusting to policy reforms, serious problems remain in its organization and funding. These need to be addressed with a sense of urgency and in the context of reforming the agricultural sector. In restructuring the system, the focus should be on promoting efficient economic policies, and building much-needed institutional infrastructure to support private agriculture based on market principles.

The national agricultural research system in Russia needs to: (a) restructure, rehabilitate, decentralize, and consolidate the system to make it sustainable and efficient; (b) re-orient the system to make it serve private agriculture based on market principles; (c) adopt socio-economic, ecological, and business criteria in planning, priority setting, monitoring, and evaluating agricultural research; (d) develop and strengthen linkages between researchers and users, and among research, teaching, and knowledge transfer activities; and, (e) facilitate increased investment in agricultural research and development, both public and private.

A World Bank-financed Agricultural Reform Implementation Support (ARIS) project supports the establishment of Farm Information and Advisory Service (FIAS) centers in the main agricultural regions of the country. These centers provide timely, reliable, user-friendly, and practical information (agronomic, technical, management, business, legal, and environmental) to newly emerging private farmers, restructured farm enterprises, and agrobusiness enterprises, to help them make informed decisions in a market environment. This approach uses information already available in an extensive network of agricultural research institutes, agrochemical testing stations, land databanks, academies, and universities, and it capitalizes on Russia's highly skilled and literate workforce. The FIAS centers, which will be located at the rayon and oblast levels, will be supported by a network of regional and federal training centers and the agricultural research system.

The ARIS project also supports the establishment of a national network of Market Information System (MIS) centers that are designed to
collect, process, and disseminate relevant, timely, and reliable market and price information to farmers, traders, and policymakers. Access to such market information is crucial for the successful functioning of the emerging market economy since it increases market transparency, transmits incentives and opportunities for agricultural producers, improves producers' bargaining positions, stimulates competition among traders, expands producers' and consumers' choices, and facilitates rational decision-making.

**Lessons Learned**

The long-term nature of agricultural research should not be used as a justification for inaction or for assigning it a low priority in public investment. Most agricultural research can be viewed as a public good and, thus, merits some public funding. Evidence from around the world suggests high rates of return (between 40% to 80%) on investments in agricultural research—but these can only be realized if sound agricultural and economic policies are established. Russia has enormous potential to expand agricultural production and exports. This potential will never be realized, however, unless Russian agriculture becomes efficient and competitive. Agricultural technology generation and its application at the farm level are essential to improving the productivity of Russian agriculture and its competitiveness in world markets.

The agricultural research institutions under the Ministry of Agriculture and Food, including institutions under RAAS, need to be restructured to make them more responsive and relevant to the needs of an emerging agriculture dominated by the private sector and driven by market forces.

Clearly, there is a need to accelerate the establishment of FIAS and MIS centers and to make the information from these centers available to producers, traders, and policymakers. These centers need to be supplemented by the establishment of a national center for monitoring progress in agricultural reforms and conducting analysis on critical agricultural policy issues. The federal training center (being established under the ARIS project) should also be used to train personnel of federal ministries, regional departments, and other agencies involved in the agricultural adjustment and in efforts to improve productivity, profitability, and sustainability of the agricultural sector.

The process of institutional change needs to be accelerated. Old departments and agencies that were designed to meet the needs of centralized agriculture should be abolished and replaced by well-equipped departments and agencies that meet the needs of private agriculture based
on market principles. A first step is to develop an action plan to reorganize the institutions that serve agriculture, with a focus on the agricultural knowledge system. Implementation of such an action plan would improve the public sector's capacity to provide appropriate new services to agriculture in a timely and cost-effective manner.

Conclusion

Russia needs a complete overhaul of its national agricultural research system. This will require fundamental changes in decision-making, priorities, incentive systems, cost effectiveness, revenue generation through cost recovery, and accountability to stakeholders. These changes are long-term, and a national agricultural research strategy should be developed to rationalize the structure, organization, management, and financing of the scientific research system in agriculture at the federal and regional levels. This will help make the system sustainable and responsive to market conditions and the needs of new stakeholders.
TURKEY: Agricultural Policy Notes

John Nash

Background

Weaknesses in Turkey’s agricultural policy framework—the price support system, associated trade policies, subsidies for input use, and credit subsidies—have the effect of creating distortions in economic incentives and have a negative impact on the fiscal deficit and associated macro-economic variables. In addition to other shortcomings, these policies also serve as barriers to Turkey’s integration into the EU economy.

While previous governments have recognized some of the problems created by these policies, reform has proven difficult. Support policies have traditionally been used by politicians as “goodies” to buy political allegiance, but subsidies and supports are captured mainly by large farmers: the Turkish Treasury estimates that only 10 percent of the benefits reach the intended recipients—poor, small farmers. Problems with the subsidy system were addressed in the World Bank’s Agricultural Structural Adjustment Loan (ASAL) to Turkey in the early 1980s, but the recommended reforms were either not carried out, or reversed at a later date. It was not until 1997 that the new government agreed to the terms of a World Bank strategy to get the reform agenda back on track.

Methodology/Approach

The Bank focused its efforts on producing short, action-oriented policy notes addressing areas of greatest concern. These notes were intended to document the importance of reform and to suggest a strategy that would be practical, consistent with international best practice, and politically acceptable. These notes also outlined ways in which the World Bank could help support the recommendations.

Bank specialists studied each support policy area and made recommendations for phasing out the current subsidies and replacing them with a support system for farmers that was de-coupled from production levels. This exercise was neither as broadly focused nor as data-intensive as standard World Bank sector work. Rather, it was an action-oriented plan, aimed explicitly at the client. The policy notes fully supported the Bank’s sectoral strategy outlined in the Country Assistance Strategy, which recommended:
continued lending only to small operations that had a direct impact on rural poverty and subsectors in which the policy framework was supportive; and

- carrying out sector work to demonstrate the high costs of the current policies and help the government find acceptable alternatives.

Policy Results on the Ground

During the initial exercise and in subsequent discussions, the government expressed definite interest in a project to implement the farmer registry which had been recommended by the Notes and to undertake a regional pilot program to eliminate some of the subsidies and substitute direct income support. In January 1999, the Turkish government prepared a project concept paper, the design of which is currently under discussion.

The policy notes were discussed extensively with the government and then presented in a public forum—a one-day workshop in November 1998, in which World Bank staff, Turkish government officials, and representatives of the Farmers’ Union participated. While there was some good discussion and considerable convergence of views, the level of government participation was not high enough to generate widespread media coverage, public debate, or concrete policy decisions. The government and the Bank subsequently cosponsored a follow-up workshop in February 1999 for high-profile ministers and the deputy Prime Minister, which was widely attended and focused the attention of key policy-makers on a new approach to these issues. This event had extensive media coverage. Several regional workshops are currently under discussion to generate grassroots support for the reform program.

Lessons Learned

It is critical that the Bank expand its policy dialogue within the government to include not only the Ministry of Agriculture, but also other agencies with a broader mandate, such as the Ministries of Finance and the Economy. The reasons are simple: first, many of the main policy issues—reducing or eliminating subsidies and support prices, and restructuring and privatizing state-owned enterprises—are not exclusively the responsibility of the Ministry of Agriculture. Second, reforms that are expected to generate immediate budgetary savings may cause some large farmers to be worse off. As these farmers typically have political clout, they are likely to pressure the Ministry of Agriculture to oppose reforms and fight any changes in support mechanisms that render farmers vulnerable. The key economic ministries
are important constituencies for such initiatives and can provide significant impetus for action in these areas.

It is also necessary to work with private sector representatives (and through direct discourse with the public) to convince the agricultural community that interests are not threatened. As a result of public discussion and education through the policy workshops, the farmers' union—the main private sector organization for farmers—has reduced its opposition to the principle of substituting direct income support for subsidies.

The Bank should work closely with the International Monetary Fund (IMF) on important agricultural policy issues. The IMF often focuses on short-term expenditure-reducing measures. Good coordination with the Fund can have important benefits. First, it can include key reforms as structural benchmarks in its programs. Second, it is another important constituency for budget saving measures which are likely to be resisted by important agricultural interests.

It is important to demonstrate to policymakers and farmers that changes in the way subsidies are administered do not necessarily imply that all forms of support to farmers will be eliminated. While the policy notes suggest a number of changes in subsidy programs, including a reduction in overall levels, the fact that alternative support strategies will continue makes the package politically palatable.

**Conclusion**

It is clear from this exercise that the process is as important as the final product. Under Turkey's current period of political instability, it is unlikely that any major new reforms will be carried out. Thus, the strategy of the World Bank and the reform-minded elements in the current caretaker government was to focus on the dissemination effort and the pilot project until after the elections April 1999. Now that a new government is in place, the policy dialogue has begun again in earnest in the context of a comprehensive stabilization and structural reform program that could be supported by the IMF and the World Bank.
TURKEY: Direct Subsidy Program

John Nash

Background

A direct subsidy (or direct income support) program which provides a specified sum of money to farmers can be used as full or partial compensation for eliminating or reducing other subsidies such as rebates, lower than market prices for inputs, concessional credit rates and higher than market prices for the products that farmers sell. This type of program is critical for preventing rapid, socially disruptive displacement of people from rural areas that might occur when support prices and input subsidies to agriculture are eliminated abruptly. Direct income support payments are used in the United States, Mexico, Romania, and the EU, to provide some support for farmers in the wake of vanishing input subsidies and support prices, in conjunction with international commitments (WTO, NAFTA), with a view toward improving economic efficiency.

The advantages of substituting a direct subsidy program for other subsidies, (such as input subsidies, high output support prices, or deficiency payments) include the following:

- increased efficiency of resources devoted to agriculture;
- reduction in the prices of some products to consumers;
- better budget planning and execution, which yields the added benefit of working the fiscal costs into a pre-determined budget envelope;
- better predictability of income for farmers (furthermore, when payments are predictable, they can be pledged as collateral for loans);
- better distribution of government support to farmers most in need of assistance;
- direct payments can target small or poor farmers who devote a large part of their production for family consumption (and so do not benefit much from high support prices); and
- low distribution cost.

Introducing a direct subsidy program first requires decisive political action and commitment that ensure that the program is well understood by all parties—farmers, input suppliers, and the public, and its rules should clearly state the program’s purpose, duration, financing resources, and coverage. Second, there must be institutional capacity to implement it; there must be proper design and preparation and sophisticated information systems for smooth implementation. Third, the logistical
system must be capable of transferring money to a large number of beneficiaries all around the country. Finally, the direct subsidy program should have a reliable Registry of Beneficiaries. Most registries in Turkey are partial (they do not cover all farmers). However, Turkey at least has a tradition of record keeping, surveying and recording detailed farmer data.

**Objectives for a Subsidy System in Turkey**

*Program objective.* The goal of the program is to compensate farmers temporarily for the elimination of input subsidies and output price support programs, so as to give them time to adjust to market prices.

*Size of the program.* The size of any program depends on the subsidy amounts spent under the old subsidy programs (since the new program should provide an amount that would be more than trivial compensation for the reduction in amount received under the old system), the number of farmers affected by the new liberalization policies, and the way in which subsidy amounts are to be calculated and administered to farmers.

*Duration.* The program should be temporary (three to four years), while farmers adjust to world markets in inputs and outputs. Any support after this period should be strictly targeted to the poor and integrated into the general social safety net system. The duration of the program's phase-out schedule should be announced at the outset. One way to phase in a targeted direct support system while input subsidies and support price schemes are being phased out is to de-couple input subsidies from current use of inputs and reduce the overall subsidy amounts. (This could be called the “input subsidy compensation program”). In a second phase, these direct payments can be reduced and support price schemes for commodities replaced by a low floor price scheme for one or two critical products.

The direct payment scheme should be synchronized with this phaseout of the old system. Small at first, the direct payments would increase as the payments under the input subsidy compensation program are phased out. Such a gradual approach will offer some financial protection to farmers in the event of any start-up problems with the direct payment scheme. At the end of this phase, farmers will receive no payments under the old input subsidy or price supports. They will be expected to pay market prices for their inputs and will receive market prices for their products.

At the end of this second phase, all support payments from the government will be based on land usage or ownership (direct payments). The payments an individual farmer could receive would be capped at
some relatively high level. In the third phase, these caps can be gradually reduced to target the direct income payments, or farmers can be integrated into the general social safety net system while the direct support system is phased out entirely.

The basis of payment. The subsidy amount can be calculated in many ways. One way that is used in the U.S., where the support price system has been eliminated, is to base the amount of a farmer’s subsidy on the difference between a target price and the market price of the product (measured as the national average of prices in first five months of the crop year), multiplied by the product amount sold in the market by that farmer in some base period (the last five years). It is important that the basis of the payments should not be the current year’s production, so that it does not influence current production decisions.

Another method is to base payments on the size of the agricultural land owned (or leased) by farmers. A subsidy payment is established per hectare of land, independently of the kind of crop produced, or the farmer’s production quantity. This method decouples subsidies from production decisions completely. The advantages of using this method (as compared to that used in the U.S.) include the following:

- a budget can be decided beforehand;
- small farmers (who benefit less from output price supports because they market a smaller share of their crop) can get more a higher payment than they would if the amount were based on past production; and
- the system is much easier to implement. Although a registry of farmers is needed, only limited information is required.

In the case of Turkey, the use of cultivated land as the basis for subsidy payments has three important additional advantages. First, according to the Agricultural Census, the amount of cultivated land has been relatively stable since the 1960s. Second, the distribution of land ownership is more equal than the distribution of agricultural and non-agricultural incomes. Third, the distribution of land ownership is most probably more equal than the distribution of existing price support and input subsidies to farmers. The implication of these last two points is that the relative position of poor farmers, who benefit little from the current system and have little off-farm income, will be improved by the direct income payments relative to input or output subsidies. The reason for this is that small farmers use a disproportionately small share of the subsidized inputs and market a small share of their production. In doing so, they benefit even less from the input subsidies and output price supports than their farm size would suggest.
The Notes suggest using land as a basis for determining direct subsidy payments. As a consequence, a number of related issues need to be addressed: the subdivision of land holdings, the registration of cultivated land, and the determination of the direct beneficiary.

Subdivision of land holdings. If the subsidy program puts a limit on the number of hectares which can serve as the basis for subsidy allocation, there will be a strong incentive to subdivide land plots. One way to prevent this from happening, is to build the Registry of Farmers before the program is announced.

Determining the direct beneficiary. Determining whom the beneficiary will be—the owner, renter, or sharecropper—is a tall order. Each potential beneficiary group may erroneously believe that it will benefit from the program only if its members are the direct recipients of the payments, resulting in pressure from each one to design the program accordingly. Basic economic theory as well as evidence from price support programs all over the world show that the benefits of any payment program (including price support programs) go eventually to land owners, even if the direct recipients of the payments are renters or share-croppers. The reason is that land supply is limited, which means that landowners can charge rent that is proportional to the profitability of using the land. So, in countries where there are support prices, the higher the support prices, the higher the rent. The same would be true of direct income payments that are connected to the land.

Restrictions on land use. Some of the direct support programs in Turkey currently have a limited list of crops that may be grown by farmers participating in the program. If a farmer chooses to grow crops not on the list, or decides not to cultivate farmland, using it, instead, for other purposes, the farmer may lose eligibility status for receiving support payments. This is not recommended for the program in Turkey. When there are no such restrictions, land is used according to the country’s comparative advantage and international prices; expensive monitoring systems are not necessary for overseeing land use restrictions; and future support payments can be pledged as collateral for credit. The first two reasons are important considerations for the government, and the third is a big advantage for farmers.

Targeting the program. One of the substantial advantages of a direct support program is that it can be targeted to farmers who are most in need. In the long term, this can be achieved by integrating the program with the general welfare system, so poor farmers receive the same payments as the poor in other sectors. In the short term, this objective can be achieved by placing an upper limit on the hectares eligible for support
payments or the amount of payment to an individual farmer. Since it may be politically difficult to move to a system that specifically targets the poorest farmers, the phased-out approach described above is strongly recommended.

Establishing a pilot income support program. Ideally, a national farm income support program should be started for all farmers simultaneously, accompanied by the elimination of input subsidies and support prices (so as not to introduce distortions among crops and land uses). In the event that is not politically feasible to implement a full-scale nationwide direct support program immediately, a pilot program in a major crop can be implemented while other programs are being put in place. The pilot project offers the advantage of testing logistical design details before a national program is implemented.

Conclusion

Good program preparation and design are crucial to the success of any program. The Notes recommended that a high-level technical task force (four or five people from the Ministry of Agriculture, MARA, and the Ministries of Finance and the Treasury) be appointed to undertake program preparation and design activities. Based on the experience in other countries, the program (and farmers’ registry) could be prepared within a year (although it may be prudent to allow for some flexibility with regard to time).
EUROPE AND CENTRAL ASIA REGION:
Transition Toward a Healthier Environment—
Environmental Issues and Challenges in the NIS

Konrad Von Ritter

Background

In 1993 the “Environment for Europe” conference environment ministers from across Europe convened to endorse an Environmental Action Program for Central and Eastern Europe that also included several of the Newly Independent States (NIS). The action program identified the region’s top environmental problems and laid out realistic, cost-effective solutions, but focused primarily on Central and Eastern Europe. This paper “Transition Toward a Healthier Environment” was an input from the World Bank for the fourth Pan-European Conference of Environment Ministers held in Aarhus, Denmark in June of 1998. This conference was the fourth in a series of Ministerial conferences which are the chief decision making bodies for the Environment for Europe process.

Approach to the Study

The economic downturn, which accompanied the region’s economic transition, has resulted in a temporary decline in industrial pollution. With their rich natural resources and highly skilled labor forces, the NIS countries are struggling to create a fragile economic recovery. Thus, the key challenge is to strengthen environmental management now, in order to ensure that future growth is environmentally sustainable. The alternative—economic growth now and clean up later—may appear in the short-term to be more expedient, but it is far too costly in the long-term, both environmentally and financially.

Economic reforms can benefit the environment, and they are even more helpful when backed by strong environmental institutions and innovative environmental financing mechanisms. Liberalization, restructuring, and foreign investment can help correct perverse incentives and accelerate the adoption of modern, cleaner technologies. However, market incentives by themselves do not ensure environmentally sustainable growth. Strict monitoring and enforcement of environmental regulations are also needed. Compliance will require substantial investments to provide the NIS countries with comprehensive strategies to mobilize resources for the environment.
Countries in the NIS have demonstrated their willingness to address environmental concerns by developing National Environmental Action Plans (NEAPs). Moving from the plan to concrete action, however, will require a broad commitment not only from environmental agencies, but also from economic ministries, private actors and the general public. Foreign assistance can play a crucial role in building commitment, formulating strategies, and implementing plans. Thus the current decline in foreign assistance must be reversed, and additional private resources must be leveraged.

Since resources available for environmental improvements in the newly independent states are limited, cost-effective strategies that focus on protecting public health and preventing irreversible biodiversity losses are needed. Immediate priorities include increasing access to safe drinking water and addressing the most severe industrial pollution and waste contamination hot spots. Low-cost, high-impact measures such as reducing particulate air pollution and improving maintenance of water utilities are among the suggested first steps. During the next few years institutional reforms should focus on making all sectors of the economy environmentally sustainable—preferably by using market-based instruments that control pollution and ensure sustainable natural resource use.

Over the medium and long-term, improving economic conditions and rising incomes in the NIS countries should allow increased investment in environment protection. Priorities will include rehabilitating and expanding water supply infrastructure, improving environmental services, continuing hazardous waste cleanup, and encouraging the private sector to play a larger role in environmental management.

**Research Findings**

The diversity of environmental problems in the NIS stems from the development patterns of the 12 countries and from the variations in topography, geology, and climate in the region. Western areas (Belarus, Moldova, European Russia, and Ukraine) and the Caucasian republics (Armenia, Azerbaijan, and Georgia) exhibit development patterns similar to that of Central and Eastern Europe, with highly urbanized populations, heavy localized ambient air pollution from stationary and mobile sources, and water pollution problems resulting from large volumes of municipal and industrial waste. Central Asia, including Kazakhstan, the Kyrgyz Republic, Asian Russia, Tajikistan, Turkmenistan, and Uzbekistan, is less densely populated, with economies driven by natural resource extraction, related industries, and irrigated agriculture. In these
countries scarce water supplies (especially in rural areas), deteriorating municipal infrastructure, and heavy industrial pollution make water-related environmental problems a top priority.

All the NIS countries share a past of centrally planned economic development and face the current challenge of transition to a market economy. In the past the populations of these states enjoyed health standards higher than those in countries with comparable per capita incomes thanks to high literacy, good public health infrastructure, and well-developed municipal infrastructure and services. However all these advantages are rapidly eroding. Some environmental problems in the NIS, such as low-quality drinking water and the outbreaks of infectious disease that result from it, are more typical of developing countries. Thus, it is essential that existing services and infrastructures be rehabilitated and improved. In terms of public policy implications, the approach to funding public utilities needs to focus on the provision of affordable basic services.

Though there are similarities, environmental issues in the NIS are qualitatively and quantitatively different from those in Central and Eastern Europe. For example, the adverse health effects of inadequate drinking water and extensive air pollution are more severe in the CIS. Both problems occur throughout the region, but in western areas the health costs of air pollution are higher than the costs of inadequate water supply. The opposite is true in Central Asia and the Caucasus.

Children are particularly vulnerable to deteriorating environmental conditions. High infant mortality—especially in Central Asia—appears to be linked to the poor quality and limited supply of safe water, and to a weakened public health system. Widespread water scarcity, crumbling water distribution networks, and contaminated surface and groundwater are the main causes of the unsafe supply.

Polluted air has damaged human health for most of the NIS's urban, industrial population. Most air pollution is emitted by stationary sources. Pollution from mobile sources is also becoming a problem, although it has reached the levels found in Central and Eastern Europe in only a few cities.

Besides hurting human health, industrial, air, and water pollution have caused significant and costly damage to forests, fisheries, and other biological resources. In addition, ill-conceived sector policies and poorly enforced regulations have led to overexploited natural resources and unsustainable land use.
The NIS countries have a unique opportunity to implement the necessary policies, institutional changes, and financing mechanisms to ensure that economic growth is environmentally sustainable. A prompt and concerted response from donors and international financial institutions would promote a transition toward a healthier environment. Moreover, a strong response would contribute to the long-term goal of achieving convergence in environmental policies and conditions in the region.

**Recommendations**

Over the next few years economic recovery will be the overriding development objective in the NIS. Economic restructuring will continue, and outdated industries and sectors will be dismantled. Because limited resources will be available for environmental management, efforts must focus on top priorities, especially the following:

- making immediate environmental improvements in severely damaged/polluted areas to prevent further environmental catastrophes;
- building the foundations for sustainable economic growth with minimal impact on the environment; and
- implementing low-cost, high-impact measures to safeguard the health of the human and plant and animal populations.

In the medium term, most NIS states will register economic growth and receive higher levels of foreign direct investment. Along with the highly skilled labor force in these countries, growth will be fueled by natural resource exploitation, including slowly modernizing oil production. This will permit higher environmental investments and further improvements in environmental quality.

Expansion of water supply and sanitation systems will become relatively more affordable over the next several years. Better sewage collection may take priority over wastewater treatment because of its higher health benefits. Introduction of more stringent standards and stricter enforcement could induce further pollution abatement by industries especially hazardous waste-generating operations such as mining and oil exploration.

Implementation of innovative economic instruments such as pollution charges and public disclosure of environmental performance, should be a priority action for NIS governments. In addition, further expansion of institutional capacity for environmental management can be achieved by increasing the participation of businesses and by opening environmental services to private participation. It will also be important to channel efforts to emerging problems that can be averted at an early
Such measures should immediately include introducing sustainable land use patterns to reverse biodiversity losses and the phasing out of leaded gasoline.

Once the NIS countries have implemented basic environmental institutional infrastructure, completed essential economic reforms, and alleviated immediate environmental health risks, attention can shift toward achieving the ambitious long-term goal of converging environmental policies and conditions with the rest of the European region. This will require increased efforts and major investments in expanding the coverage and improving the quality of water supply in rural and urban areas and in expanding sewerage systems in urban areas. Further challenges include the introduction of effective air pollution management required by the growing number of vehicles in urban areas and the integration of sustainable land use practices into sector policies.

**Impact of the Study**

- Increased attention was being paid to water in the client countries in addition to air pollution. The report brought out differences between countries which dictated different priorities among them water quality.
- The October 2000 Environmental Ministers Meeting on Water has explicit reference to this report among other works.
- The Transition Report was not a Bank study. It was prepared as an input to an event involving donors and policymakers and sought to leverage internal Bank knowledge to mobilize other external actors. This methodology is being continued with an environmental valuation study currently being conducted.

**Lessons Learned**

The process of producing the report was two and a half months of concentrated work. The strict deadline—triggered by client demand—made meeting the deadline imperative.

The study was done with adequate funding and important investments were made in an editor and in the presentation which was important for this audience to distinguish it from other Bank reports. Of particular importance in clearly communicating a message to policymakers was the executive summary and the captions.
Conclusion

The general priorities for the countries of this region must be tailored to specific needs emerging from national or regional action plans. The conclusions are based on general principles of cost-effectiveness, with an emphasis on protecting public health. But decision makers in the NIS often must consider other factors and constraints—such as the effects environmental actions will have on workers or the lack of political support for unpopular measures, such as raising tariffs for urban environmental services. Therefore the implementation of good environmental policies will largely depend on the ability of the government to generate broad public awareness of and support for environmental goals.

The "Transition" report itself demonstrated how a coordinated, concerted effort could meet client demand to focus policy makers attention on a set of pressing environmental issues. The leveraging of Bank knowledge to mobilize external support to establish consultative processes and implement policies is being replicated in other sector work in the Europe Central Asia region.
BULGARIA: Environmental Liabilities Project

Adriana Damianova

Background

Bulgaria has embarked on an ambitious privatization program, which is challenged by large environmental liabilities in addition to the indebtedness of private companies. The Environmental Strategy Update was approved by the government of Bulgaria in 1994 and subsequently became the government standard for improving environmental management. The World Bank’s assistance was sought to help the privatization process by address these liabilities.

Reducing the environmental hazards caused by past pollution and unsafe environmental management practices at the MDK Copper Smelter was one objective. Another objective was to facilitate private investment in the company by Union Miniere (UM), a Belgian Multinational and a world producer and leader in non-ferrous metallurgy.

UM had the know-how and expertise to reduce the environmental impact of metal processing operations according to international standards and safely deposit hazardous waste material. Working with UM and Hatch (a Canadian Environmental audit company), was the key to achieving improvements in the environmental performance of the smelter. This pilot project was envisaged to become a model for addressing past environmental damages and environmental liabilities in the process of privatization in future privatization deals.

The MDK Pridop Copper Smelter

MDK Pridop Copper Smelter Complex was one of the worst polluters in Bulgaria. Its emissions of heavy metals and other substances have caused serious contamination of water resources, land, and the ambient air near the plant. The unsafe storage and management of hazardous waste have posed critical environmental hazards, exposed workers to unsafe concentrations of toxic substances, and created high occupational health risks.

In 1997, the majority ownership of the company was obtained by Union Miniere. Environmental issues became an important part of the bidding and negotiations process. The government of Bulgaria took responsibility for environmental hazards caused by past operations of the plant, while the new investor committed itself to gradually bringing the
BULGARIA: ENVIRONMENTAL LIABILITIES PROJECT

company into compliance with Bulgarian and international environmental regulations over a four-year period.

While the government took responsibility for past environmental damages, it was agreed that the new owners would handle actual implementation of the clean up. The new owner of the plant was committed to the implementation of an emergency clean-up program (to be financed by the government through its National EcoTrust Fund) and a remediation program of past damages (financed by a World Bank loan to the government of Bulgaria). According to the sales agreement, the company will improve its environmental management and invest in cleaner process technologies, pollution abatement, and gradually achieve full compliance with Bulgarian environmental standards. The pilot project was developed to address this issue for a particular enterprise.

Major Environmental Issues

Gas and Dust Emissions. The major source of this contamination was an uncovered heap of slag tailings, which released a fine particulate of fayalite dust into the air. Inadequate dust removal and sulfur dioxide processing from gas emissions added to the problem. Gas and dust emissions can contaminate local soil and threaten agricultural production and the regional ecology.

Water Pollution. Generally, water pollution damage from smelters is caused by drainage water. Groundwater pollution is caused by rainwater dissolution of metals and salts from solid waste materials stored in the open air the interior of the plant, and the general vicinity of the plant. Processing wastewater that is usually treated before it is re-circulated or discharged reduces contamination levels. For a number years, contaminated drainage and insufficiently treated water in MDK leaked into the Pirdopska and Zlatitsa Rivers, posing severe health risks to the local pollution.

Solid Waste. Solid waste is perhaps the single greatest problem facing UM and the government of Bulgaria. The following is a list of the major problems that need to be effectively addressed for limiting current hazards and mitigating past damages:

- A six-hectare settling pond (known as the blue lagoon) that collected sedimentation from treated process waters, was found to contain arsenic gypsum slime in near liquid form. The unstable perimeter dam and lack of an alternative area for discarding waste had exacerbated pollution.
• A heap of approximately 7 million metric tons of slag from an old smelter located near the plant needed immediate attention. The damage covered 30 hectares.
• Two and a half million tons of slag tailings deposited in a 1-hectare pond need to be dealt with.

Objectives

An investment project was designed to facilitate privatization and to help the government withstand the liabilities arising from past damages. The Bulgarian Environmental Impact Assessment Regulation is broadly harmonized with western environmental requirements. The municipalities and residents of Pirdop and Zlatitsa were extensively consulted about the project’s scope and objectives. Formal public meetings were organized with the participation of the public, NGOs, and the media.

There were two components to the project: Emergency Clean-up Program of Immediate Environmental Hazards, and Remediation of Past Damages, estimated to cost a total of US $25 million.

Emergency clean up of immediate environmental hazards. The emergency clean-up component was designed to respond to a critical environmental hazard at the enterprise MDK. The “blue lagoon,” which had been used to store semi-liquid wastes from the acid plant and was heavily contaminated with arsenic and other heavy metals. At the project’s inception, the lagoon was leaking and threatened to overflow or break the dam, discharging lagoon wastes into rivers flowing into the Topolnitsa reservoir, the main source of drinking water for Plovdiv and other large towns in the Maritsa valley. The emergency component was to stabilize the dam (to prevent accidental discharges before the lagoon was permanently closed), create a temporary waste disposal facility, and change the effluent treatment process.

Remediation of Past Damages. The activities associated with this component were:
• Disposing of solid waste;
• Addressing soil (and materials) contaminated by past pollution;
• Providing a permanent solution to the existing sludge settling pond;
• Ameliorating the fayalite slag tailings storage facility;
• Reinforcing the residue storage area; and
• Rehabilitating the old slag dump.
Results on the Ground

The project facilitated the sale of majority ownership of MDK to a strategic investor. Additional private investments agreed as part of the privatization deal were expected to: improve the environmental performance of the company and to bring it into compliance with international and Bulgarian environmental standards on the one hand, and improve the company’s financial performance, efficiency and profitability on the other.

The Bank advised the government to decide the amount of liability it would cover, based on an Environmental Impact Assessment and additional valuation of remediation cost by an independent consultant. The government arrived at a deal that was integrated as part of the sales mechanism. The mechanism of the privatization deal included provisions for depositing a sum equivalent of the total remediation cost from the privatization proceeds in an escrow account. The loan funds reimburse the budget for the funds withdrawn from the escrow account for the remediation of the past damages.

Lessons Learned

The Environment Remediation Pilot Project provided assistance in the assessment of environmental risks, agreements on environmental compliance and remediation activities. Several lessons emerge from this operation including the importance of:

- Clear legal liability for past environmental damage is essential.
- Detailed information about environmental liabilities of enterprises under privatization and the introduction of clear environmental requirements in the privatization bidding documents;
- Involving environmental institutions and stakeholders early in the privatization process;
- Including legally binding environmental agreements in the sales agreements for polluting enterprises; and
- Strengthening the post-privatization oversight.

The project implementation set-up includes an implementation agreement between the government and the private investor for carrying out project specific activities. At the initial implementation stage, some tension occurred between the investor and the government because of slow project implementation. Pressure came also from local communities in Pirdop and Zlatitza to accelerate clean-up activities. Standard Bank procurement rules for the supply of goods and works were used, which led to significant delays that tended to erode the investor’s motivation. In
addition, the private sector has little or no experience in implementing Bank—funded projects. This resulted in a slower-than-anticipated utilization of the public resources committed for environmental remediation.

The Bank continues to provide support to the environmental agenda and the structural reform program in the enterprise sector of Bulgaria. The mechanism designed under the pilot project appears to be a successful way to deal with environmental liabilities inherited from the past. It also seizes the opportunity during the privatization process to establish environmental compliance and improve the performance of polluting industries.

**Conclusion**

The MDK Pilot Project demonstrates a successful approach to promoting privatization and simultaneously addressing past and future environmental problems. It demonstrates how to make an enterprise attractive to foreign investors. The innovative use of escrow funds to finance clean-up activities helped to establish the government’s credibility and materialize its recognition of legal obligations with regard to historical pollution. Now, the follow-up Environment and Privatization Support Loan (EPSL) is being designed to establish policy and regulatory bases for replicating this experience on a larger scale. At the same time, EPSL can be monitored, is workable, and is a slow disbursing adjustment operation to be phased in tranches. These features will make it easier for the private sector to implement.
ESTONIA: Haapsalu Bay/Matsalu Nature Preserve

Inesis Kiskis

Background

There are five places in the Baltic Republics where projects are funding capacity building for wastewater treatment facilities: Klapeida, Siaulai in Lithuania, Leipaja and Daugavpilis in Latvia, and Haapsalu/Matsula in Estonia. All except the project in Daugavpilis, have included an environmental management component.

Estonia is a party to a number of international environmental conventions and treaties. It has signed the “Convention on the Protection of the Marine Environment” (Helsinki Convention), which obliges the Estonian government to undertake concrete actions to reduce marine pollution from land-based sources and to implement a range of recommendations on various environmental matters developed by the Helsinki Commission (HELCOM). The government has also been involved in the Task Force responsible for implementing the Baltic Sea Joint Comprehensive Environmental Action Program (JCP).

A new National Environmental Action Plan (NEAP), prepared with support from the European Union, identified several important areas for policy reform including:

- Incorporating environmental considerations into the development of key sectors such as industry and agriculture;
- Continued development of the environmental taxation system and the Estonian Environmental Fund for financing environmental measures;
- Introduction of a framework for legislative and regulatory mechanisms;
- Promoting public awareness and participation in the environmental decision making process; and
- Decentralizing environmental and resource management responsibilities to municipal and local governments.

An important aspect of the Baltic Sea initiative was European Union accession. Complying with the environmental regulations of the EU are major concerns for the governments in the Baltics.
The Institutional Setting

The Ministry of the Environment, the Forest Board and the Fisheries Boards are responsible for legislation, information systems, regulation and control. In addition, 19 County Environmental Departments (CEDs) represent 14 counties and five of the larger municipalities, among them Haapsalu, are considered divisions of local government. The CEDs are responsible for issuing permits, imposing and collecting pollution fines from factories, and administering the local environmental budgets accumulating from these charges.


The Bank’s Role

The Bank’s strategy boosts the country’s efforts to accelerate structural reforms and to support efficient investments in high-priority sectors to facilitate a return to economic growth. High-priority sectors include infrastructure rehabilitation, development, and investments in environmental services. Clearly, improving the quality of drinking water will address many health concerns.

The project was financed for a total of US $17 million with only $2 million from the World Bank, which was designated the implementing agency. There was also significant support from Sweden and Finland.

Objectives

Initially, the government planned to use loans to build big wastewater treatment plants, not institutions. The World Bank tried to shift the focus from end of pipe pollution (emissions and/or discharges), to beginning of pipe issues (controlling sources and/or preventative measures). This was new to countries in the region.

The main objectives of the project were to: (a) introduce the concepts of affordability and sustainability of environmental investments; (b) improve water quality in the Baltic Sea and the rivers that flow into the Baltic; and (c) focus on preventive, rather than end-of-pipe, approaches to reducing pollution. A further objective was to improve the management of municipally owned wastewater treatment companies.
Results on the Ground

A major achievement of this project was in corporate governance, where the Board of Directors is now separate from the executive side of the joint stock company. The roles of the shareholders, the Board, and management have been delineated and clarified.

Pollution was reduced at point sources in the small towns covered by satellite facilities as well as from the City of Haapsalu. Water usage in Haapsalu has also decreased. Now a more conservative approach to forecasting water usage is required.

Lessons Learned

Governments need to think in terms of affordability when designing environmental investments. Tariff increases must be linked to this concept of affordability. There must be an integrated holistic view of the water treatment process which encompasses activities ranging from instituting preventive measures to treating end-of-pipe discharges.

It is important to set realistic financial targets. Initially operating and working ratios were set too high. Later the operating margin was used because it more accurately reflected cash flows and excluded the significant depreciation costs.

Affordable environmental targets are also important. The government initially wanted large investments. They learned that they needed to move ahead in small increments.

During project preparation, the operating and working ratios were set too high, and none of the companies could meet these standards. The operating margin was adopted as an indicator because it more accurately reflected cash flows and excluded the significant depreciation costs.

A twinning concept was adopted to match Baltic and Nordic companies. This approach was to provide hands-on training and illustrate good practices in strategic planning. The development of technical skills was greeted with great enthusiasm, but the Nordic partners needed the same introduction to corporate planning as their Baltic counterparts because their utilities were subsidized by the State, which hindered the companies' profitability. In this sense, the twinning exercise benefited both the Nordic and the Baltic participants.

Conclusion

Some Ministries of the Environment, with responsibility for clean water, have little concern as to the costs of proposed solutions. Because munici-
palities own the water companies, there is greater cost consciousness in municipal-implementing agencies. The most difficult parts of the five projects are strategic planning and cost controls. Cost controls, in particular, are susceptible to political resistance to a tariff increase (which tends to increase delays). Although in Haapsalu there is a 98% collection rate of tariffs, depreciation (of plants and equipment) undermines the earnings from tariffs. Modifying the tariff structure unfortunately entails politically sensitive issues that can hinder long-term sustainability. There is also a need to forecast consumer demand response.
KAZAKHSTAN: National Environment Action Plan

Piotr Krzyzanowski

Background

The development of the NEAP in Kazakhstan started in early 1997 following an order issued by the Ministry of Environment. An inter-ministerial Steering Committee was established as an advisory body and the NEAP Center was created under the Steering Committee to coordinate the preparation of the NEAP. At the same time, the involvement of the World Bank leveraged the support of the UNDP, EU-TACIS, HIID and the Governments of Austria, Italy and Germany.

The preparation of the NEAP involved a nationwide process of consultation in which over 2,000 stakeholders participated to define the most pressing environmental problems and prioritize them to specific project levels. The Kazakhstani experts were trained by international consultants in the internationally accepted methodological approaches for priority setting and project planning. Multidisciplinary teams of local experts analyzed the environmental issues within their physical, sectoral, and institutional contexts with assistance from international consultants, and carried out discussions on environmental priorities. The process followed extensive consultations with the public and involvement of the sector ministries and oblast administrations. Experts from different ministries (environment, agriculture, energy, industry, transportation, economy, agency for strategic planning and reform) and oblasts and all key stakeholders were given an opportunity to select their own representatives for participation in the process. Information about the NEAP and its development was widely disseminated through the general media and the NEAP Center’s own website on the internet (www.neapsd.kz).

Objectives

The objectives of the NEAP were to identify priority environmental problems and the most cost-effective actions for dealing with them and help develop a comprehensive national environmental strategy for the country through an open and participatory process. The process was intended to assist the Government in integrating environmental considerations into its program of macroeconomic reform and restructuring as well as guide World Bank development assistance and other donor support for high priority environmental investments.
Findings

The following major environmental priorities were identified by the NEAP: soil and water contamination, caused by runoff of toxic and hazardous waste from heavy industries, including oil and mineral extraction; rapid depletion of land fertility and pollution of surface and ground water resources, resulting from inappropriate agriculture policies and practices since the 1960s, including those relating to the use of fertilizer and pesticides; loss of forests resources and bio-diversity brought about by the uncontrolled felling of trees; air pollution caused by point and non-point sources of emissions including energy, industry and transport sectors; and a series of environmental disasters produced by nuclear testing and unregulated disposal of hazardous waste.

The environmental problems, though widespread throughout the country, are particularly acute in six oblasts, which have been characterized as hotspots. These include the oblasts of Atyrau, Kzylorda, South Kazakhstan, Karaganda, East Kazakhstan, and Pavlodar. Based on the combination of severity and sources of pollution, the oblasts have been grouped into three zones—Zones A, B and C—which constitute areas for priority action. Zone A covers the western part of Kazakhstan and, in particular, the Caspian Sea and its coastal areas, where environmental degradation is primarily the result of activities related to the oil-industry; Zone B, which includes the Nura-Ishim basin and covers also the Irysh river basin in the northeastern part of Kazakhstan, is industrially the most developed part of the country and suffers wide scale environmental degradation from the mining, metallurgy and energy sectors; and Zone C, in southern Kazakhstan, is where environmental damage is caused mainly by agricultural activity (see Figure 1).

Figure 1: Kazakhstan: Environmental "Hotspot" Areas
To address the priority environmental problems, a comprehensive action plan was prepared which identifies 28 short term investment projects to remediate the most urgent problems, together with long term measures for building an appropriate policy and institutional environment in which the benefits from these investments can be sustained. Implementation of the action plan would reverse the environmental degradation trends and remove constraints imposed by environment and natural resources on the overall economic and social development of the country.

In general, the NEAP has brought out the following major findings concerning the environment sector in Kazakhstan:

- The environmental priorities target the same areas and sectors as the economic development priorities outlined in the Government Agenda 2030;
- both focus on oblasts within three geographical zones flagged by the NEAP as areas of severe environmental degradation;
- environmental conditions in these zones have already deteriorated to levels that are likely to impede future economic growth; therefore, the selected priority projects will not only improve the environment but also support the social and economic development of the targeted zones;
- the selected projects focus primarily on problems that were created in the past and reflect poor managerial practices and lack of financing for environmental protection.

In implementing the recommendations of the NEAP, the Government is seeking assistance from the international community to help defray the clean up costs while at the same time focusing on policy reform and institutional development, and establishing a system of generating internal resources for financing the recurring costs of environmental protection.

**Impact of the NEAP Process**

The development of the NEAP has resulted in a comprehensive environmental strategy for Kazakhstan and enhanced in-country capacity in environmental analysis and planning. There is increased awareness and understanding of environmental issues among the public and the policy makers, especially of the fact that the environment could impose significant constraints on the country’s economic development.

Environment, as a result, is high on the government’s agenda and several investments identified by the NEAP have been included in the
public investment program for the year 2000. The highest level water and environmental management institutions in the country have subsequently forged a partnership and agreed to work jointly in the management of water resources. These developments have strengthened the donor community's perception about the government's commitment to environment and increased the opportunities for international assistance in the implementation of the NEAP.

The recommendations of the NEAP are fully endorsed and owned by the government and the highest level authorities in the country are committed to implementing the NEAP. Two national priority setting workshops and numerous local workshops were held during the preparation of the NEAP, with participants from the Working Groups, the Government, international organizations, and NGOs. The findings of the NEAP were presented to the international community at a Donors Conference organized in Almaty by the Ministry of Ecology and Natural Resources (MENR). The Conference was attended by nearly 200 participants from international organizations and donor governments, private companies, and local agencies, academic institutes, Oblast representatives, and NGOs. The Conference effectively provided a first assessment of donor interest and was successful in generating a pre-commitment of grant funds of about US$8 million to proceed with the technical feasibility and engineering studies for many of the proposed projects.

The most immediate impact of the NEAP is the government's interest and commitment in implementing on a priority basis the set of projects identified for northeastern Kazakhstan (Zone B). Following a request from the government, the Bank is preparing projects to address the complex issues of water resources, water supply, and environmental pollution in the Nura-Ishim river basin. The implementation of these projects is expected to bring about fundamental changes in the outlook and practices of the water and environmental management institutions that would ultimately serve as a model for other regions in the country.

Lessons Learned

- A balance is required between in-country preparation and donor involvement. The NEAP no doubt has to be prepared by the country, however quality control is necessary from time to time in order to ensure that the process will move in the right direction. In the Kazakhstan NEAP it was found that the urge to see quick results on the ground was often driving the local stakeholders to place more emphasis on short-term investment projects. The international donors had to play a subtle role in steering the process by arguing also for a
long term strategy identifying key reforms in the environmental management system.

- **Mainstreaming human resources into the environmental sectors should be a priority.** The NEAP process is an effective instrument to develop the local human resources in the environment sector. The process attracts technical experts to join the effort and allows for transfer of know how from international experts to the local communities and institutions dealing with environmental issues. If the NEAP is not followed up with concrete actions in terms of investments, policy and institutional reforms, these efforts to build capacity would be simply wasted. Maintaining the momentum of the NEAP after completion and continued involvement of the experts in the implementation process allows mainstreaming of the human resources into the various sectors—such as the decision making body, the private sector, the environmental management institutions, research and academics etc.

- **Ensure Long Term Commitment from Donors.** The NEAP process should be designed in such a way to involve as many donors as possible from the beginning, so that there is a long-term commitment and interest developed during the process. Also the involvement of donors should not only be in terms of providing financing, but also to provide experts from their home countries with specialized knowledge in key areas. The seminars on the results of the NEAP and the information maintained on the NEAP WEB page was invaluable in keeping donors and the international community informed and involved in the process.

- **Local Environmental Action Plans (LEAPs) can be very useful in making the NEAP operational.** Focusing on specific regions within the country made the NEAP more real by providing local information which allowed formulation of well targeted strategies. Without the LEAPs, the Kazakhstan NEAP would have resulted in generalized approaches to a range of environmental problems. The LEAPs also ensured participation at the grass roots level and allowed specific investments to be identified.

- **Leveraging the Power of Local Knowledge.** The NEAP process relied heavily on knowledge of local scientists and communities for identifying and prioritizing the most acute environmental problems. The international consultants found tremendous scientific knowledge, data and highly sophisticated thinking on the part of the local people. Leveraging this local knowledge base has made the NEAP rich and comprehensive.

- **Ownership and Participatory Approach.** The participatory approach used to bring out the local knowledge and prioritize the hundreds of
identified problems was also a powerful instrument in the process. The public debate and small working groups played an important part in energizing the participants but also in generating true commitment, particularly on the part of local politicians and scientists, to seek solutions to the problems identified by the NEAP. It has resulted in public officials seeking assistance from bilateral donors and foreign private enterprises. Also the participation of various parts of the society appears to have influenced the prioritization process. The projects that remained on the list at the end were not only the ones that were considered to be most harmful environmentally, but also those that have the greatest negative economic and health impacts.

Conclusion

Kazakhstan is the largest country in the region to have prepared a NEAP and it may be concluded that the process has been a highly successful one. Kazakhstan is now a reliable partner for bilateral aid agencies with clearly defined objectives in the environment and natural resources sectors. The country has developed valuable human resources in these fields and is a focal point for environmental activities in Central Asia.
POLAND: Reducing the Costs of Complying with EU Environmental Legislation

Julia Bucknall

Background

The EU has a range of environmental directives that mandate a series of expensive investments for the public and private sectors of Central European countries planning to join the Union. These investments can be phased in strategically to maximize local benefits in the early stages of the investment program. The World Bank studied the investments that would be required for both the public and private sectors, placing particular emphasis on reducing costs and phasing-in investments.

Specifically, the Bank wanted to:

- Highlight the issues that Poland would likely face when implementing the requirements for EU accession;
- Estimate the total cost of public sector compliance in key sectors, and outline the possible options for reducing these costs; and
- Assess where the burden of those costs was likely to fall, and devise a plan for financing options.

Research Findings

To comply with all the environmental rules, the Polish will have to invest a total of at least US $22 billion, and if the EU chooses to tighten its rules, these costs could double. Allowing for operation and maintenance costs, and discounting the investments over their expected life, Poland will spend between $6 and $13 billion a year for 15 years. This is between 3% and 6% of projected GDP in 2010, and is the equivalent of each person in Poland spending between $160 and $350 every year to meet the new standards. These figures are in addition to the considerable sums Poland is already investing in environmental protection. They are consistent with other estimates for Poland, estimates for other accession countries, and the amounts that the current member states are spending to comply with the same directives.

Even if the European Commission makes substantial financial contributions toward capital costs, the high costs of operation and maintenance will have to be financed through increases in the prices of water, electricity, household heating, and waste disposal. If the EU tightens the rules and interprets them strictly, the increases in these
environmental services are likely to be greater than those in household incomes for almost everyone in Poland.

Unless effective policies are established, the increases will hit the poor disproportionately hard, because the poorer segments of the population tend to spend more of their income on utilities than richer groups. In a low-cost scenario, the poorest groups of Polish households could face a doubling of total household expenditure allocated for environmental services—from 7% to 15% in rural areas—and substantial increases—from 14% to 19% in urban areas. In a high-cost scenario, too, utility expenses will outpace average increases in household income, and the effects of these increases will also be distributed unevenly. For the bottom 40% of these households, the proportions of total expenditure allocated to environmental utilities will rise from 7% to 12% in rural areas and from 9% to 16% in urban areas. These figures are very high by international standards.

**Figure 1. Capital Costs of Compliance: US$31 billion**

**Liberal Interpretation of Rules**

<table>
<thead>
<tr>
<th>Service</th>
<th>Cost Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sewage treatment</td>
<td>36%</td>
</tr>
<tr>
<td>Sewers</td>
<td>21%</td>
</tr>
<tr>
<td>Urban air</td>
<td>20%</td>
</tr>
<tr>
<td>Nitrates</td>
<td>12%</td>
</tr>
<tr>
<td>Drinking water</td>
<td>10%</td>
</tr>
<tr>
<td>Waste</td>
<td>8%</td>
</tr>
<tr>
<td>Long-range air</td>
<td>5%</td>
</tr>
</tbody>
</table>

**Policy Recommendations**

Municipalities must be willing to charge the public to pay the full cost of the services that companies are expected to provide. Most of the investment required for improvements in water supply, sewage, solid waste, local air pollution—fall within the areas of responsibility of the municipalities. They face difficulties in borrowing funds for these purposes, as Polish municipalities are in the process of learning how to use financial markets. Their ability to borrow is also constrained by a requirement that debt service should not exceed 15% of a municipality budget and they are not allowed to use municipal revenues as collateral. Most investment has to be financed out of current revenue or grants from
higher level governments and preferential credits. This makes the municipal budget "operational," focusing on short term goals and discourages long-term strategic planning.

For urban air pollution, it is essential that households which currently rely on coal for heating should either switch to smokeless fuel or convert to gas or district heating. Policies designed to achieve these objectives, particularly if they take the form of price increases are likely to affect households in most income groups. The additional costs of burning smokeless fuel rather than regular coal or coke will probably not be too large a penalty for households in the bottom 40% of the income distribution. Resistance will be greatest among households in the top half of the income distribution. This suggests a differentiated strategy under which all households are required to use smokeless fuels rather than coal or coke, but richer households are encouraged—or even given incentives—to replace their coal stoves and boilers with gas or district heating.

It is essential that water utilities should set their charges at a level that covers the full costs of providing water and sanitation services, which is not the case for many companies at present. It is important to ensure that utilities start covering their operating costs and that investment plans take into account likely behavioral shifts in response to those prices. The cost of private capital is usually more than the cost of municipal borrowing. There are large economies of scale in building and operating water infrastructure. Private companies will maximize their operational efficiencies by taking advantage of economies of scale. Almost all municipal companies are much too small to do this.

Waste collection and disposal is a sphere where the greater efficiency of the private sector has already been demonstrated. A frequent arrangement is to rely on a partnership between one or a group of municipalities and a private operator. The public sector may take responsibility for identifying and even developing new facilities but brings in the private sector to manage all of the operations as well as provide most of the finance required.

Impact of the Study

This study has been widely read and discussed at workshops and seminars in Warsaw, Brussels, and at the OECD in Paris. The Ministry of Finance, the Committee on European Integration and the Ministry of Environment have all used it in their policy deliberations. More importantly, because the team used Polish experts to undertake the analysis, updating it to incorporate new data, as well as specialists from
others in the region, many policy makers and advisors seem to agree with the basic approach and assumptions of the study.

This study is not unique in proposing that applicant countries should phase investments based on their local environmental benefits. The study did, however, promote the approach actively, and probably contributed to its broad acceptance. Several investment plans, including some from the Bank, have been influenced by the strategic considerations outlined in this work.

**Lessons Learned**

- **Accession involves significant investment costs.** Poland will have to make substantial investments for both the public and private sectors in order to comply with the EU’s environmental regulations.
- **Many EU directives entail major institutional changes and heavy investment in certain industries.** Some EU directives establish procedures for achieving set environmental goals, requiring member states to monitor environmental quality, report on gathered data, issue permits for specific, and enforce environmental laws.
- **Heavy investments in the energy sector, can be reduced by nearly 30%, if a least cost plan—a plan that invests in sulfur emissions reduction to comply with the second sulfur protocol and the Large Combustion Plant Directive of the EU—is used.** Currently, the industrial and power sectors are each responsible for about half the country’s sulfur emissions; these statistics are expected to remain the same.
- **Certain Polish cities will face difficult choices in reducing local air pollution as many of the cities do not meet ambient air quality standards.** The choices will be tough, because the problems are generated by a large number of small sources—transport and small boilers for domestic heating, for example. Household boilers alone are responsible for 80 percent of exposure to harmful particles in the city of Katowice. The cheapest ways to improve air quality in Katowice is to install dust controls on industrial boilers and then require households to burn smokeless fuel. In the long term, the best policy would be to encourage, or require, households to switch to gas heating.
- **Planning a phased transition toward full compliance over a long period will be particularly important in the water sector.** Requirements in the water sector dwarf those in the other sectors, as they represent more than half the total costs. Because of the scale of the construction necessary, full compliance by the date of accession is unlikely, even if unlimited resources were available. Poland will therefore need to negotiate as long a transition period as possible,
and would be well advised to establish easy to monitor interim targets in its plan.

Conclusion

Poland faces many changes as it adapts to the requirements of the European Union. Few areas, however, require as much public investment as the environmental sector. To comply with all the EU’s environmental rules, Poland’s different levels of government will have to spend an estimated $31 billion over the next fifteen years. If the rules tighten (as predicted), and if all the requirements are strictly interpreted, these costs could rise to $57 billion. Most of the investments would be in water supply, wastewater collection and treatment, solid waste disposal and reduce air pollution. The price of these services will have to rise in order to accommodate investments and the operating costs of improvements. Poland will need to devise ways to ensure that these price rises do not pose a disproportionate burden on low-income households.

Poland will need to plan a careful strategy to comply with the EU’s rules, with an eye toward reducing costs. But first, Poland and the EU need to agree on a compliance plan and iron out its details, well in advance of accession.
POLAND: Rural Environment Protection Project

Julia Bucknall

Background

The Helsinki Commission has identified organic pollution from agriculture as one of the highest priorities to improving the quality of the Baltic Sea, and Poland has a commitment to reducing organic pollution under the Helsinki Convention. The Rural Environmental Protection Project seeks to reduce the amount of organic pollution from agriculture that enters the Baltic Sea. This means developing a code of good agricultural practices and ensuring that farmers in sensitive areas follow this code. In practice it means that livestock producers must store animal manure and slurry in a sealed tank for at least six months a year, when it is not safe to spread it on the land. An EU directive will also soon oblige Polish farmers to adopt these processes.

Approach to Project Preparation

The Rural Environmental Protection Project began when the Ministry of Agriculture approached the Bank. Two successful pilot projects to promote environmentally sensitive agriculture had just finished, and the Ministry wanted to be able to scale up the pilots into a larger program. The Bank believed that a project of this type would fit both with the Polish environmental strategy and with the CAS environmental objectives, so it put together a small team to investigate a potential project. This team worked closely with the Ministry of Agriculture and with the Ministry of Environment and the National Fund for Environmental Protection and Water Management (NFEP), as well as with farmers in the pilot areas. The team developed a concept, modeled social funds, that would offer eligible farmers a range of options for environmental infrastructure and equipment. The project would work through local agricultural organizations (including extension agents) to incorporate environmental practices into the regular farming practices. The team investigated the option of providing the farm investments through small credit schemes, and found that this was unlikely to be feasible. The team therefore decided to base the project on providing the infrastructure and equipment to the farmers, but requiring farmer contributions of cash and labor.

The Ministry of Finance (MOF), however, was less keen to use central budget resources to subsidize farm environmental investments.
This is quite understandable—no borrower has to date taken an IBRD loan exclusively for reducing pollution from agriculture. The MOF therefore asked the Bank to investigate working with the National Fund for Environmental Protection (NFEP) to borrow the money from IBRD and to be responsible for implementing the project. The NFEP was very keen to extend its activities to rural areas and agreed to work with the Bank. So the team shifted borrowers mid-way through project preparation. Given that the Ministry of Finance was reluctant to borrow money which it would then pass on as grants to farmers, and given the potential benefits of this project to water quality in the Baltic Sea, plus potential for replication elsewhere, the Bank also approached the GEF for grant co-financing. The team then worked with NFEP to develop a project that would be funded by an IBRD loan ($2.5 million), a GEF grant ($3 million) and co-financed by grants from the Nordic Environmental Finance Corporation ($1 million) and by the EU pre-accession funds ($3.7 million). It will have contributions from the government, the NFEP and the beneficiaries of $6.2 million, bringing the total project costs to $16.4 million.

Objectives

The project’s objective is to increase the prevalence of environmentally responsible practices among eligible farms in three target areas. The project will help farmers develop environmentally responsible farm management plans and will fund the related environmental investments as well as farm equipment. While the farmers will receive some benefits from the practices and investments, most of the benefits will come from improved environmental quality of Polish surface and groundwater and the Baltic Sea. The project has two components.

Component 1—Farm Environmental Improvements. This consists of environmental advice to eligible farmers and financial support for recommended farm investments and equipment. The component will consider options for cropping, tilling, manure spreading and fertilizer application practices, as well as investments in manure storage, silage storage, buffer strips, constructed wetlands, and other practices.

Component 2—Outreach and Management. This component will include: a) a public awareness program on issues concerning environmental management and pollution control in agriculture; b) monitoring (environmental, economic and social); c) a strategy for replicating the project; and d) funds for project management and training.

The team has based project preparation on several principles:
Demand-Driven, Flexible Approach. The project is modeled on the approach taken by social investment funds, which are flexible funding mechanisms that respond to requests from communities or local groups. Thus the project will respond to demands from eligible farmers for support, rather than targeting specific farms or farmers. It will be flexible, so that project design can be adapted during implementation according to feedback from beneficiaries and local communities, involving farmers and farmers’ representatives in the decision-making processes. The project is a learning and innovation loan (LIL), which emphasizes flexibility, testing and learning with the aim of expanding the project into a larger program in the future. The Government and the National Fund for Environmental Protection and Water Management (NFEP) intend to expand the activities funded under this project into a nationwide program.

This project will test the mechanisms for scaling demonstration activities up into a comprehensive program. It will also test the beneficiaries’ willingness to pay for services and investments to improve their agricultural management practices. The financial and economic impact of the adoption of new farming and other agricultural practices will be closely monitored and results will feed back into the program design. The NFEP, the Bank and the co-financiers will consider this LIL successful if the NFEP has a functioning system in place to expand the project up into a national program.

Extensive Field Testing. This project is based on several years’ experience from pilot project operations. Some of these originated and were financed in Poland, while others have international sponsors. They have taken place in several parts of the country with a number of institutional counterparts. The most successful of these found that farm environmental infrastructure (facilities for storing liquid animal waste) were technically effective when specialized contractors were used, and that they were popular with farmers, who used and maintained the facilities well. The pilot projects focused on testing efficacy of the technologies in the context of Polish farming and did not fully evaluate the economic impact on the farmer nor did they try to establish an administrative system for scaling up such support. The earlier experience did, however, find that farmers were willing to contribute a limited amount to the costs of the infrastructure, principally through in-kind contributions. The proposed levels of subsidy in this project are therefore based on these earlier experiences.
Key Performance Indicators in the project include:

- Increased awareness of environmental issues related to agriculture among farmers and communities outside the project areas.
- High satisfaction rate among participating farmers.
- High percentage of participating farmers implementing the farm management plan properly, two years after joining the project.
- High percentage of participating farmers aware of the financial benefits to them of adopting environmentally responsible practices.

Project Benefits

National and international benefits of the project include:

- Demonstration of an effective mechanism for channeling investment for environmental protection in rural areas.
- Quantification and demonstration of benefits to farmers of integrating environmental concerns into their activities.
- Reduction of nitrates reaching Poland's water bodies from approximately 1000 farms, with long-term improved quality of local streams, lakes and ultimately rivers, coastal lagoons and the Baltic Sea.
- Progress toward meeting Poland's water quality targets, its obligations under the Helsinki Convention, and compliance with EU directives.

Benefits to participating farms include the following:

- Farms investing in manure storage can use the manure as fertilizer and thus could save $150-200 per year on chemical fertilizer.
- Farmers may also see productivity improvements from better cropping, tilling and fertilizer application practices.
- Better storage of animal wastes will reduce odor and inconvenience and improve hygienic conditions on participating farms.
- Soil erosion on stream banks will be reduced in farms that invest in riparian buffer strips.
- Eventual reduction of nitrates in groundwater will help to protect health of farm families that drink from shallow wells.

The target populations for this initial activity are families and rural communities in three areas around Elblag, Torun and Ostroleka/Lomza. These areas were chosen because they are sensitive to nitrate pollution, representative of different farm and soil types in Poland, and are well distributed within the country. They were also chosen because they have all been the sites of successful past demonstration projects and because
their local governments expressed strong interest in participating in and contributing to the project. Elblag borders the Vistula Lagoon, which is shared by Poland and Russia and is a highly sensitive international water body. Because of the administrative reforms underway in Poland at the time of preparation, it was agreed at appraisal that the project staff would negotiate with the local administrations on exactly which municipalities (gminas) would be included at the start of the project in each local area.

In the light of implementation experience, and particularly given ongoing changes to local government structures, it may be necessary or desirable to move the project activities to other areas. In any case no more than three areas will be active at any one time.

It is very important to integrate project technical assistance and management activities into existing institutional structures, such as agricultural extension services, environmental monitoring, etc. Doing so increases the project’s risk, because the project will have less control over the staff who will be implementing it. But the team considers this risk to be worth taking because it will increase the chances of the project activities being continued and extended after the project is completed either by Polish authorities or through a follow-on Bank project.

Given that the Bank has not funded activities such as these before, the project places heavy emphasis on monitoring and evaluation. The project aims at changing the behavior of a large number of actors, so the project relies heavily on feedback from a social assessment. Farmers need to know the benefits to them of adopting environmental practices, if they are to make these investments with their own resources in the future. The project therefore will finance detailed economic analysis to begin to quantify these benefits to the farmer.

**Lessons from Past Bank Projects**

Key lessons learned from agricultural and environmental projects in Poland, as well as regional initiatives to protect the Baltic Sea include:

- The need for a long-term commitment to address agriculture and environment issues through phased programs of interventions and a broad-based partnership.
- The need to work directly with farmers to encourage them to think of themselves as environmental managers at the farm level.
- The importance of calculating and disseminating the benefits of improved environmental management in rural areas at local and national levels in order to sustain the high capacity of local and national Government officials for innovation and effective management.
• The importance of adequate counterpart training and specialized support for procurement, disbursement and supervision.
• The benefits from working within the existing policy environment rather than using the project to push for major policy reforms.
• The importance of agreeing in advance on clear, flexible approaches to administrative procedures such as procurement and disbursement.
• The benefits of establishing a framework for project management in the form of an Operational Handbook which can be updated on the basis of implementation experience.
• The benefits in project quality associated with careful attention during the early phases of innovative projects to the provision of specialized support for implementation activities.

Lessons from the Project Preparation Process
The team found the following to be essential during the course of project preparation:
• Basing the project on sound technical experience with past pilot activities.
• Working with beneficiaries of past pilot activities and local governments to show extensive local support and strong demand for follow-on activities.
• Working closely throughout preparation with all related ministries. For example, including the Ministry of Environment and the NFEP in early field visits and identification missions made it possible to switch borrower at a late stage in project preparation.
• Blending loan money with considerable grant financing from various sources. Only 15% of the project is financed by loan funds, yet the government demonstrated its commitment to the project by being prepared to take a loan, which made it easier to obtain grants.
• Having several sources of funding made preparation harder for the Bank team, but did substantially increase the support for the activity from several different sources, such as the European Commission and the Nordic environment ministries.

Conclusion
This is the first IBRD loan dedicated to reducing pollution from agriculture. The Polish government and related institutions are committed to improving environmental conditions, meeting their international obligations. They also have high capacity to implement complex projects. This however was a risky project as there is little past experience with these activities on a large scale.
This project shows the benefits of developing long term relations with a range of partners. The analytical groundwork comes in part from a decade long involvement with the Helsinki Commission for protection of the Baltic Sea. The technical basis comes from two pilots funded by U.S. Agency for International Development and by European Union, which the Bank had been following throughout implementation. Relations with the National Fund for Environmental Protection at the early stages of the project were considerably helped because the same staff worked on this project as had worked on an earlier environment project which NFEP had implemented.
Background

The Danube Delta, one of Europe’s last and largest natural wetlands, covers 564,000 hectares (ha), 122,000 within Ukraine and 442,000 in Romania. The reed beds, riparian forests, dunes and the open waters of the maze of tributaries of the Danube River provide critical wintering and feeding habitat for many threatened species. Danube Delta wetlands provide critical wintering and feeding habitat for over a million waterbirds migrating through the northwest shelf of the Black Sea along various Eurasian-African flyways. The delta’s aquatic and marine habitats support 75 species of resident and migratory fish, a third of which have traditionally been commercially harvested. The delta ecosystem also plays a role in environmental management of a major international water by acting as a biological filtering system for water flowing from the Danube river system into the Black Sea.

The delta ecosystem has been a source of subsistence and income to human populations for over 500 years. Over the last 50 years, fish harvests have significantly declined. The causes of these declines are thought to be habitat loss and degradation as a result of large scale hydrological works (dams, dikes, etc.), changes in Black Sea ecology as a result of its eutrophication, and unsustainable practices such as overfishing.

While the effects of habitat loss, disturbance, and pollution have yet to be fully assessed, large areas of the delta remain intact, and provide a nucleus from which delta ecosystems and wildlife populations can be rehabilitated. The Romanian part of the Danube Delta was declared a biosphere reserve in 1990. A small reserve had been established on the Ukrainian side in 1981, followed in 1998 by establishment of the Ukrainian Danube Biosphere Reserve with the assistance of the GEF project.

Objectives

The objectives of the GEF financed Danube Delta Biodiversity projects in Romania and Ukraine are to protect and enhance the Danube Delta ecosystem and conserve its biodiversity through the following activities:
Strengthening Reserve Authorities. The projects strengthened the reserves through professional development and training of staff, improvements in infrastructure, and provision of equipment. Virtually all levels of staff received training, and where possible (wetlands management and warden), the staff from the Romanian and Ukrainian reserves participated jointly.

Ecological monitoring. This component helps survey, map, and monitor the status of delta ecosystems, and identify threatened species. Data are analyzed with the aid of a geographical information system (GIS), which was established by the project. The GIS facility promoted a collaborative exchange between the DDBRA and Ukrainian authorities, gradually extending its monitoring and mapping reach to the Ukrainian part of the delta. The GIS center has since undertaken ecosystem mapping and analysis to support conservation of wetland habitats throughout Romania.

Wetlands Restoration. Agricultural and aquacultural polders are being restored to natural wetland habitat. These activities have been achieved with spectacular success under the Romanian project. In Ukraine, where modern wetlands management practices were introduced under the project, the emphasis was on technical studies and management planning. The Romanian project also supported conservation and rehabilitation programs for threatened species such as Danubian sturgeon species, whose populations have been decimated by over-fishing and habitat loss. After identifying threats, the project will develop and implement a regional conservation management plan for sturgeon populations. This study was carried out with partner institutions in Bulgaria, Romania, Serbia, and Ukraine.

Small Grant Programs. Both projects contained highly effective small grants programs. The Romanian project financed initiatives by local communities to link economic benefits with sustainable management of delta resources, such as by establishing a private fishermen association, handicrafts production from reeds and willows, cultivation of indigenous medicinal herbs, and ecotourism. The Ukrainian project financed a training program for NGOs designed to improve business skills and to improve knowledge of approaches to wetland conservation and the role of environmental education in these. Following this, a small grants program financed projects to raise awareness and understanding of environmental issues in the project region.

Public awareness. The need to develop specific information packages for key target groups, which include local and national
stakeholders in both the public and private sectors is gradually taking shape. The DDBRA works with local and international experts to identify target groups and develop an awareness strategy that will support sustainable conservation of the delta’s biodiversity. The DDBRA also invests in strengthening staff skills in media and communications.

**Impact on the Ground**

The projects have improved the protection and use of the Danube Delta ecosystem and elevated the participation of local communities in achieving this. The project also improved cooperation between Romania and Ukraine, and their collaboration with other European organizations engaged in coastal management and nature conservation.

**Strengthening of the Warden’s Department.** In Romania DDBRA made good progress in improving project management. Significant strengthening of the wardens’ department occurred. A training coordinator was appointed, 54 wardens received advanced training, district specific manuals were prepared and distributed. Thirteen wardens will receive training at Dunaiksy Plavny Authority in the Ukrainian portion of the Delta.

**Monitoring.** In Romania the Delta species red list and a list of species of ecological importance was published in September 19999. GIS systems were introduced and training was provided through financing by the Dutch General Directorate for Water Resources Management (RIZA). In Ukraine extensive training for the wardens was undertaken successfully.

**Local Investment.** In Ukraine the project financed the construction of a public dock and the restoration of canals though at a lower cost than originally envisioned. These investments had the intended effect of demonstrating DPA’s interest in working for the benefit of the local community as well as for biodiversity conservation. In Romania the implementation of activities of the eco-tourism and fishermen’s associations is pending clarification of contractual arrangements between DDBRA, DRI and the fishermen and eco-tourism associations. Overall public awareness has increased.

**Wetlands Restoration.** In the Ukraine, the flood plain of the delta between Kilia and Vilkovo are largely enclosed by dikes and converted to agricultural uses, including fish ponds, pasture and croplands. The hydrology of the plavni is entirely regulated and is affected by agricultural runoff from surrounding farmlands. In Romania, in Ukraine, the general hydrological model of the Delta’s main river channels and eutrophication has been developed and accepted.
Lessons Learned

- Well-planned public education and awareness activities are needed early in the project to get the public involved in a meaningful way.
- Building a constituency of supporters/allies among a broad range of stakeholders, including all levels of the institution managing the protected area;
- A communication and public awareness strategy, targeting key stakeholders (including protected area communities, concerned institutions and interest groups at the national and international level) is essential to build necessary support for project objectives and activities;
- A clear linkage between research and management, with research activities geared toward responding to the needs of management;
- Systems that monitor the progress and impact of each project activity; and
- There is a need for projects such as these to design and implement, to the extent feasible, an adequate staff incentive and compensation package.
- The creation of a biosphere reserve should be undertaken in phases to allow the administration and local communities opportunity to understand and adequately plan for its added financial and managerial responsibilities.
- If the protected areas administration is to work effectively with local communities, technical studies to guide sustainable use of reserve resources (e.g., hunting and fishing) should be undertaken early in project implementation, in collaboration with local users and linked to public education activities.
- Continuity in supervision responsibility contributes greatly to the relationship between the Bank and its client.

Conclusion

The Danube Delta Biodiversity Project has demonstrated the feasibility of public participation in government efforts to protect and restore endangered ecosystems. The most notable areas of progress are the data collection and species monitoring activities, which have built an important foundation for sustainable natural resource management. Public awareness continues to be a major challenge to the DDBRA and DRI, and is the essential complement to the institution building that has already taken place.
ROMANIA: Stakeholder Consultations for Biodiversity Conservation Management and Forestry Sector Work

John Fraser Stewart

Background

This note summarizes participatory phases in the identification, preparation and pre-appraisal of the GEF financed Romania Biodiversity Conservation Management Project, and in related sector work that led to development of a strategy for reform of the Romanian forestry sector. It suggests that the same approach can be used to build local ownership of project design and sector strategy, and to provide more strategic focus to analytical work undertaken by consultants as part of project preparation. The experience also advocates that it is possible to save time and resources by negotiating projects in the field with the use of video conferencing.

Project Identification

The Government of Romania requested the World Bank’s assistance in accessing a GEF grant for a biodiversity conservation project in 1994. Since participatory preparation of a National Biodiversity Conservation Strategy and Action Plan (BSAP) is a prerequisite for eligibility for this grant, the task team identified and worked with concerned stakeholders from the public sector and the academic and NGO communities over a period of ten months in order to assist them develop the Romania BSAP. This was the first time that all stakeholders had worked together in structured process which uncovered both commonalities and conflicts of interests between government agencies with jurisdiction over biodiversity. Priorities identified in the BSAP, led to development of the concept for the biodiversity project, which is focused on building the capacity for establishing a strategic and effective system of protected areas, with particular emphasis on forest and alpine ecosystems of the Carpathian chain.

Preparation

Following the traditional Bank procedure, preparation work was undertaken by consultants contracted by Government with the assistance of a GEF grant made available by the Bank. The Bank assisted Government with development of terms of reference and ensured that procurement of the consultant followed Bank guidelines, whereby Government selected
consultant firm of their choice with the use of agreed criteria. Supervision of the consultant contract was, however, seriously impaired by several changes in leadership of the client ministry and, in this atmosphere of uncertain leadership and allegiance, by perceived conflict of interest between the different departments responsible for supervising the contract. The consultant team proved unable to work effectively with these different national level stakeholders and, consequently, preparation was stalled (from a scheduled eight months to almost two years), but proceeded in isolation from these key stakeholders. This resulted in development of a preparation report that did not have local ownership or acceptance or a clear rationale for the activities it proposed.

Pre-appraisal

As the consultant firm neared completion of their report, the Bank team prepared to step in and assist key counterparts to develop their own project. In the first instance, this entailed working with the ministry to identify and appoint a core Project Preparation Team (PPT) of counterparts who would be responsible for preparing the project. The Bank insisted that the PPT should be composed of prospective managers from each of the projects three demonstration sites and the project implementation unit, and that they should be motivated, competent and empowered to contribute to project design. The PPT was briefed by the Bank task leader about the overall goal of the project and asked to review and research the issues impacting their respective sites and assess the actions needed to address them prior to pre-appraisal. The consultant report provided one source of background information, and the Bank provided examples of the analysis and documentation prepared for similar initiatives elsewhere in the world.

Two months later, the counterpart and Bank teams gathered for the pre-appraisal mission. The Bank team included a facilitator experienced in systemic development techniques and the principals of project costing, and a national facilitator/sector specialist. With the assistance of the national facilitator, the workshop was conducted in Romanian language. The systemic approach is the opposite of prepositional development, whereby the lending agency identifies and proposes solutions which are then presented to the client. Systemic development seeks to create the appropriate learning environment for client and stakeholders to work together to agree on: (a) the symptoms of the problems that need to be addressed to achieve the development objective; (b) the underlying causes of these symptoms; (c) the desired changes that a project of the scale envisaged could be expected to bring about, and hence; and (d) project components and sub-components Development of this rational
and identification of components and sub-components took a period of five days. The combined client Bank pre-appraisal team worked together for a further two weeks to develop the sequence and cost of the detailed activities for all project sites (cost tables), the log frame and detailed project description. On completion of the mission, the client team presented their own project design to their ministry and to the Ministry of Finance.

Key features of this successful experience include:

**Prior to pre-appraisal:**

- Formation and empowerment of a client project preparation team (PPT). Development of clear terms of reference for the PPT to assist them to prepare appropriately for pre-appraisal.

**During pre-appraisal:**

- Use a professional facilitator and a systemic development approach to assist the PPT to develop their own project rationale.
- Develop a working environment that fosters creative development of ideas and banishes positional argument.
- Assist the PPT to develop their own project rationale by assisting them to catalogue symptoms; underlying causes; desired changes, and project components.
- Use the rationale as a reference when developing detailed project design and costs, whereby all project activities must map back and address symptoms identified in the agreed rationale.

Use of this technique allowed for appraisal to take place only two months after pre-appraisal. Since the design had been prepared by the client there were no requirements for adjustments in project components and it was possible to negotiate the project in the field immediately following appraisal, and for negotiations to be completed in record time of under three hours. The use of video conference allowed for efficiency and reduced cost of bringing additional Bank staff to the country.

**Popularity and further application of this participatory technique**

Client counterparts were sufficiently enthusiastic about the results achieved with the use of the systemic facilitation technique that Government requested the approach be used to assist in developing consensus and a shared vision among key stakeholders for reform of the forestry sector. This goal was successfully achieved using the following four stages:
In collaboration with sector stakeholders, consultants undertook analytical work to characterize the key issues facing the sector, and developed a report. The report was circulated among key sector stakeholders as a discussion paper.

Key stakeholders (Government, private sector, academic and NGO) were called to a series of one day consultation workshops at three different County level locations and at the national level. Feedback on major issues and possible solutions were incorporated in the consultants report.

Using the systemic facilitation technique, a group of 12 national level policy/decision makers (public and private sector) were assisted over a period of two days to develop their own vision for the future of the forestry sector, together with a short, medium and long term strategy to achieve this goal.

Using the same facilitation technique a similar sized group of technical level stakeholders (public and private sector) were assisted over a period of five days to develop the rationale (including symptoms, causes, desired changes, and possible project components) for actions needed to implement the national strategy.

The consultants report, vision statement, strategy and rationale were used as the basis for preparation of a Sector Note used to alert Bank management of priorities and opportunities to assist in reforming the sector. A project that will implement the strategy is now under preparation.

The same systemic facilitation technique has, subsequently, been successfully used to prepare a second biodiversity conservation/natural resource management project in Turkey, and is recommended for use in preparation of similar projects where different stakeholders have no history of working together and little experience of strategic design of targeted development projects. The following is a suggested phased approach for implementing a preparation grant, which incorporates use of the systemic technique mid-way through the preparation process in order to guide preparation consultants to provide outputs that are locally owned and appraisable by the Bank team:

- **Phase one:** A lump sum contract (no more than $100,000 and 2-3 months), should be awarded under internationally competitive bidding procedures to a company to prepare a report systematically describing and analyzing key sector issues that the project needs to address. In the case of a biodiversity project this would include the status of biodiversity, geographical priorities, impacts, causes, institutional arrangements, social and economic assessments etc. This
Phase two: Participatory, systemic development of the project rationale. Since this skill is new and rare, a Bank supervised professional is needed to facilitate this phase over the course of a 5-7 day participatory workshop involving a the national PPT (i.e., a total of 5-15 people derived from each key institution that will be involved/implicated in project implementation together with 1-2 Bank staff, including the team leader/sector specialist and operations analyst). This should be undertaken with the assistance of a carefully selected and briefed facilitator, who is familiar with systemic development theory and practice. The rationale that is derived from this process will provide the logic and foundation for project design, including the major project components.

Phase three: A second lump sum contract, competitively awarded (internationally) to a company to develop (in a participatory manner with the involvement of the PPT) the project components into sub-components and a sequence of detailed activities, including terms of reference for any major contracts to be implemented under the project (e.g., participatory institutional needs assessment and action plan for reform, including training and work plans; development of a strategy and action plan for a prioritized and targeted national public awareness program; participation plan etc.). This will provide detailed project design that can be reviewed and, ultimately, captured during pre-appraisal.

Phase four: A pre-appraisal mission that will entail a 3-5 day workshop, including the PPT, Bank task leader and an operations analyst experienced in project costing and logic, to detail project costs and finalize implementation arrangements.

Lessons Learned

• Global Environment Facility Projects can and should lead to dialogue with the Government about larger sector issues.

• Large Government executed preparation contracts do not necessarily result in Government buy-in or an appraisable project.

• Establishment and empowerment of a counterpart project preparation team, and use of a professionally facilitated systemic process, can assist counterparts to prepare their own project and assure buy-in and development of a sound project rationale.

• Negotiating projects the field saves time and money provided certain criteria are met.
• Sector work can be designed to produce operational outputs through involving the client and use of systemic facilitation techniques developed for project preparation.
• Clearly articulated results of analytical work and or stakeholder consultations can allow for more effective communication with the Ministry of Finance about the importance and opportunities for addressing natural resource management issues.

Conclusion
If the preappraisal process is un-bundled like this and the systemic approach is used, a better project design will result. For a project of this nature, do not give phases one through three to the same consultant. Experience suggests this is more than most consultant firms are able to handle, and the systemic construction of rationale is a rare (but essential) skill that needs to be applied to guide the second half of preparation.
RUSSIA: Environmental Management

Konrad Von Ritter

Background
A part of the Environmental Framework Program for Russia, the Russia Environmental Management Project was prepared in 1994 at the request of the government of Russia, which recognized that the new economic and political realities of economic transition and market reforms mandated an adequate for pollution abatement and nature protection. Russia inherited an economic structure and obsolete technologies from central planning that encouraged pollution and inefficient resource use. The capital requirements for addressing the large stock of accumulated environmental liabilities and for launching mitigation measures in the most severely affected areas were high by international standards. Thus, it was imperative to set priorities carefully and develop strategies that would allow these priorities to be addressed over time in a cost-effective way. Providing enterprises a source of medium-term financing to implement pollution-mitigation measures was equally important.

Objectives
The project seeks to:

- Strengthen and streamline federal and regional structures for environmental and natural resource management;
- Improve federal and regional environmental policy and strategy formulation and implementation;
- Upgrade environmental and natural resources management systems;
- Assist in the financing of economically viable, high-priority resource recovery/pollution abatement projects; and
- Facilitate the flow of donor funds and resources to the environmental protection sector.

The first four components consist of technical assistance activities, which focus on environmental management and institutional strengthening at the federal and regional levels in three pilot regions: the Upper Volga (including four oblasts—Yaroslavl, Kostroma, Vologda, and Ivanovo), the Urals (including three oblasts: Perm, Chelyabinsk, and Sverdlovsk), and the North Caucasus (including the Rostov oblast).

Activities under the Policy and Regulatory Support component provide the integrating framework of the Environmental Management Proj-
ect (EMP). At the federal level, this includes contributions to: legislative and strategic documents for developing the legal and regulatory framework for environmental protection and natural resource utilization; assess the state of the environment and recommend priority actions; and prepare and disseminate methodological documents for the implementation of federal environmental policies. The activities at the regional level concentrate on developing and implementing regional Environmental Action Plans for the Urals and Upper Volga regions. Finally, sector-specific activities include the preparation and implementation of sectoral Environmental Action Plans for four sectors with a significant adverse impact on the environment: ferrous and non-ferrous metallurgy, basic chemicals and the oil extraction.

The Environmental Epidemiology component provides the basis for setting environmental priorities at both the federal and the regional levels. Tasks under this component aim to improve the existing system for generating, collecting, managing, and analyzing data on health and environmental conditions to ensure that priority is given to those environmental protection activities that would achieve the best feasible reductions in mortality and morbidity rates linked to environmental causes.

The Water Quality Management component supports primarily regional-level activities for the design of an integrated planning and regulatory reform program aimed at improving drinking water supplies, developing a prioritized investment program, addressing key sectoral policy issues, and improving regional interagency management.

The Hazardous Waste Management component aims to strengthen the institutional system for managing hazardous waste according to well-established “cradle-to-grave” principles, by developing a comprehensive capability to collect, classify, document, analyze, and report data related to the nature, quantity, and disposal of industrial and other hazardous waste.

The National Pollution Abatement Facility was originally designed to help finance a portion of the investment costs of commercially viable resource recovery/pollution abatement projects with an identifiable and secure stream of earnings that could be used for loan repayment. This rather strict eligibility definition, as well as the on-lending arrangements involving the Ministry of Finance, (MinFin) proved unfeasible under the changing financial and macroeconomic circumstances in Russia (see details in “Results” section). The NPAF was restructured during the 1999 mid-term review to include on-lending through regional governments (subfederal units, such as oblasts), and commercial banks for high-priority environmental investment projects in enterprises. In the future,
the Government may also consider financing from this loan urgent environmental public investments aimed at reducing serious imminent threats to human health and the environment.

The Center for Project Preparation and Implementation (CPPI) was established as a separate noncommercial legal entity under the Ministry of Environment and Natural Resources (now known as the State Committee for Environmental Protection) to:

- Provide project management and coordination;
- Facilitate training and dissemination activities;
- Coordinate technical assistance from TA components to the NPAF for project feasibility studies and appraisal; and
- Mobilize funding resources.

The CPPI currently acts on behalf of the State Committee for Environmental Protection, the Federal Forestry Service, and the Ministry of Natural Resources. CPPI is responsible for implementing the EMP loan, Swiss Grants to subsidize NPAF credits, two Global Environmental Facility (GEF) grants to phase out the consumption and production of Ozone Depleting Substances, and a GEF grant to protect Biodiversity in Russia.

Results on the Ground

The capacity building and environmental management strengthening activities at the regional level either meet, or exceed, projected impact. At the federal level, the institutional impact has been smaller, but regional activities, by and large, have been successful in institutionalizing their products within sub-national agencies. During the implementation period of the project, the Ministry of the Environment was downgraded to a State Committee for Environmental Protection. Given the limited resources of the EMP, the goal of streamlining the Russian federal institutional structures was perhaps ambitious to start with. The continuing economic decline and financial crisis made matters worse, thwarting possible achievements of positive effects.

The NPAF

Originally, the EMP loan was designed to finance win-win environmental investments in enterprises. This was a window of opportunity where the client government was interested in funding high impact low cost projects (or where cost recovery was feasible). The investments would benefit the regulators, the public and the regulated industries. This focus was based on the assumption of a wide variety of cost-effective
investment opportunities. It was this felt that priority should be given to
win-win projects before financing less cost-effective end-of pipe (miti-
gation) pollution control investments. The NPAF was to provide access
to credit with medium-term maturity and a small interest rate subsidy to
offset risks related to the introduction of new, more environmentally
friendly technologies.

The government decided to channel loan proceeds directly through
the Ministry of Finance (MinFin) via sub-loan agreements between the
Ministry of Finance and the sub-borrower. NPAF was responsible for
technical appraisal and implementation support, and carried out 47 proj-
et studies. Of these, it developed a portfolio of 13 appraised subprojects,
which were approved by the NPAF supervisory board and approved by
the World Bank. However, the MinFin signed sub-loan agreements with
only three subprojects. Concerns regarding the financial viability of pro-
posed sub-borrowers, outstanding tax-debts of enterprises, and lack of
administrative capacity to manage enterprise sub-loans have led the
MinFin to stop signing any further sub-loans agreements since 1997.

Drawing from these lessons, the 1999 mid-term review of the Project
revised the win-win eligibility criteria and proposed alternative on-
lending mechanisms which are now being incorporated in an amended
loan agreement.

Lessons Learned

Ownership of the project by non-environmental ministries is crucial.
While the Ministry (State Committee) of Environment may be the main
implementing agency of environmental projects, the Ministries of Fi-
nance, Economy, Energy, and Natural Resources should be regarded as
equal stakeholders and equally important clients. Representatives (at the
decision-maker level) from these ministries have to be involved in dis-
cussions about the project from the preparation phase and kept abreast of
developments and achievements throughout the implementation phase.
Networking with these ministries should be an important part of the Proj-
et Implementation Unit’s (PIU) work.

Mainstreaming the Environment. Interagency coordination efforts
will ensure not only support for the particular project, but will also
gradually educate officials of these ministries about the potential envi-
nmental impacts of decisions and policies formulated by their agencies.
Ultimately, an effort to build commitment for a specific project will gen-
erate external benefits, by enhancing the process of mainstreaming envi-
nronment. A cadre of environmental experts was developed in CPPI. Al-
though there is question whether they will remain in the State Committee
after the EMP closes, or will work outside the public sector, an enormous capacity building effort has been achieved for Russia.

Capacity building efforts work best at the regional level. In Russia, activities at the regional level have, in general, been more successful than at the federal or sectoral levels. This is particularly true for interagency cooperation. The support of regional authorities, their readiness to cooperate, and a greater level of flexibility are among the reasons for greater successes at the regional level. Lessons learned at the regional level can be replicated in other regions and at the federal level. E.g. findings from the Epidemiology Component in the Urals has found its way in federal regulations.

Enhance sustainability of results by institutionalizing results. A good example is the computerized registration system for hazardous wastes developed under the Water Quality and Hazardous Waste Management Component, which is now installed in the State Committee of Environmental Protection.

Focus increases effectiveness. Components focused by design on a specific aspect of environmental management—epidemiology, water resources, or hazardous waste—have performed better than the larger component that deals with general issues of policy and regulatory work. There needs to be a countervailing force that ensures coordination between different project components.

Win-Win investment opportunities are rare. Given the tremendous inefficiencies in energy and input utilization and the poor state of enterprise management, one might expect an abundance of low-cost, high-impact opportunities waiting to get catalyst financing. It turns out that these assumptions were too optimistic given the economic realities in a transition economy such as the Russian Federation.

Conclusion

The Environmental Management Project demonstrated a number of modern environmental management practices and also provided helpful lessons concerning on-lending mechanisms for environmental investments. The capacity building activities at the regional level were the most successful parts of the program. Regional level decision makers and agencies play important roles in first demonstrating the viability of concepts through pilots. On the on-lending side, a clear result has been that the role of the Ministry of Finance as financial policy maker is incompatible with the role of a lender to enterprises. Onlending through regional authorities or commercial banks is the more appropriate approach.
Background

Although Turkey is self-sufficient in agricultural production and is, in fact, a considerable net exporter, it has shown uneven agricultural performance in its poorest 17 eastern provinces, which suffer from high-level soil erosion and deforestation. In 1990, the government of Turkey requested World Bank assistance for the poorer provinces in the areas of forestry, range management, and extension and research services. Initially, because the scope was too broad for the project to be implemented efficiently in all 17 provinces, the project targeted only three—Elazig, Malatya, and Adiyaman—located in the middle catchment of the upper watershed of the Euphrates river. These three provinces were chosen not only for logistical reasons, but also because their government officials were most ready to work with local communities to address pressing natural resource problems.

Watershed development is a continuous process in which the main rehabilitation phase is followed by a maintenance and management phase to ensure that the improvements are sustained, and productivity growth keeps pace with the population’s needs for income and employment. The World Bank’s experience with watershed rehabilitation at the time the project was initiated was limited to the Philippines Watershed Management and Erosion Control Project (Loan 1980-PH, August 1980) and the India Kandi Watershed and Area Development Project (Loan 1897-IN, September 1980). The Philippines project emphasized the need for understanding existing legislation, simplifying organizational arrangements, establishing a reasonable time frame for project implementation, and securing the participation of local communities. The India project stressed reducing man-induced environmental degradation in the upper watersheds, and the fact that the project would serve as a starting point for other watershed management projects in that country.

Objectives

The objectives of the project, approved in 1993 with a loan of US $77 million, were to restore sustainable livelihoods for rural communities in degraded watersheds in three provinces in Eastern Turkey. The project had two innovations:
Provincial rural development agencies of Ministries of Agriculture, Forestry and General Directorate of Rural Affairs that previously had worked separately with local communities, now worked together to plan and implement micro-catchment rehabilitation plans;

Where previously agencies had undertaken technical innovations for local communities, they now worked with local communities. They used participatory approaches to plan and implement activities to restore sustainable range, forest and farming activities in micro catchments (MCs), conserving soil and vegetation and at the same time increasing productivity and incomes for poor rural communities.

The leading implementation agencies for the project include the General Directorate for Agricultural Production and Development (TUGEM) within Ministry of Agriculture, General Directorate of Afforestation and Erosion Control (AGM) within Ministry of Forestry, the General Directorate of Rural Services (KHGM) under one of the State Ministries. AGM is the lead agency for the project.

The Participatory Process

The Project foresaw the participation of the villagers in the watershed area. The interactive approach of the Project depends on the ability of the villagers to first identify problems which the Project can supply a solution, and then respond positively to the options. A series of meetings were conducted which examined the use of natural resources and agricultural production in an MC, and the problems in natural resource management were identified. Communities then chose from a "menu" of options, which comprised various treatments (some of which are conditional on, and must be adopted in, association with another). This is to encourage the adoption of, and participation in, both long-term and short-term measures; long term benefits (forestry, range, conservation activities) with less immediate appeal, along with the high yielding treatments with short and medium-term benefits (irrigated crops, fallow reduction, horticultural crops, medicinal /aromatic crops, forages etc). The next step is to develop a package of measures suitable for local conditions and needs. To encourage the adoption of the treatments which have only long-term benefits or only short-term liabilities, the Project financed the initial investment and establishment phase of the supporting activities. Once the participatory MC plans were prepared, members of the community also participated in project implementation, and contributed to the costs. With the expansion of the project there are now 79 MCs planned and under implementation in 11 provinces, with a total area of about 600,000 ha, 300 villages, and a population of 200,000 people.
Results on the Ground

A well-designed and functioning monitoring and evaluation system (M&E) is essential for the project particularly if it is to serve as a model for future replication in Turkey or in other countries. Improved M&E requires that the project management staff pay meticulous and continuous attention in evaluating the public (resource management) and private returns to investment, which offer more stable and increased incomes in order to better understand interactions among them, and fine tune project design on a long-term basis. The project has a solid system which provides a very good base for evaluating the cost and physical progress. The routines and the systems developed by the project are all finally up and running.

The General Directorate for Production and Development (TUGEM), which has already developed capacity through the Bank-supported Agricultural Extension and Applied Research Projects, designed a baseline survey in the MCs in consultation with AGM and KHGM to monitor and explain the response (adoption) rates of the MC communities, and measure project impact in terms of resource management improvements and yields, and income changes resulting from the adoption of the various treatments. The results have been compiled in a report which has recently been issued.

In May 1998, the project started to monitor the vegetation cover in sample microcatchments by using remote sensing/GIS methods. The first phase of the analysis of the project impact through remote sensing of satellite images from 1992 and 1998 has been completed. The results indicate improvements of vegetation cover in the MC areas affected by project activities, but it also shows that a longer period between the activity and the monitoring is needed to really see the full impact. KHGM installed stream gauging stations in five new MCs in Adiyaman, Elazig, Malatya, Adana and Kahramanmaras and sediment measurements are being recorded routinely.

Farmer Study Tours. With the help of TUGEM, provincial extension staff organized study tours to other parts of the country to expose MC farmers to best practice scenarios of private companies, commercial farms, research institutes, and state farms. Farmers from new MCs were also given the opportunity to visit the old MCs and interact with the farmers. To date, around 200 farmers benefited from these tours and the participants played a very important role in creating awareness in the new MCs and facilitating the participation process.

Range management. There are already indications of some success in the rangeland component, including reduction in the number of grazing
animals, substantial increase in fodder trees, increasing adaption of dry land and irrigated forages and a shift to stall feeding. However, success for the planned rangeland management related package has been fairly low, which is large extent due to the insufficient research data on range improvement.

Public awareness and community training. After consultations with two environmental NGOs it was decided that the services of retired teachers should be sought out to promote public awareness and community training in selected MCs. This initiative, slated for December 1999, is cost effective and draws on local knowledge.

In June 1999, an exercise was carried out with these agencies to outline the benefits that have already taken place, and highlight others that could result if progress continues.

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<td>Better rural employment</td>
<td>Provision of rural employment</td>
<td>Increased environmental awareness</td>
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<td>Better interagency cooperation</td>
<td>Reduced rural out migration</td>
<td>Increased rural income</td>
<td>Better land use and soil conservation</td>
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<tr>
<td>Increased respect from clients and peers</td>
<td>Beneficiaries more aware and open to innovation</td>
<td>Increased work efficiency</td>
<td>Greater agricultural diversification</td>
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</table>

Lessons Learned

The project, and the approach it piloted, have been so successful that the project has now been extended to eleven provinces in Eastern and Southern Turkey. Below are some "ingredients" for success:

• Involvement of local communities and local administrations in project design from the start. The project functions on the basic principle that the villagers must endorse afforestation and rangeland rehabilitation activities. If a community rejects the proposed interventions, the project is not implemented in that village (and agencies are well aware of this fact). The project offers alternative income-generating opportunities to villagers i.e. production of horticultural crops, forages to support stall feeding, aromatic/medicinal plants with export
opportunities, beekeeping, and vegetable production under plastic. To date around 200,000 people overall benefit from these activities.

- **Using a flexible approach to project design, with an annual cycle of preparing, approving and implementing micro-catchment rehabilitation plan.** New project activities are added all the time based on farmer demand, which adds to the dynamism of the project. There is no target given by the central level for the project activities instead, the targets are established by the local people in collaboration with the provincial project staff. These targets are recorded in the participatory MC plans, which are implemented by the community and the provincial staff. However, patience is necessary to adapt to the administrative culture where a majority of the procurement for the localities and accounts are centrally administered, even though the decision making and implementation process is decentralized to MCs. In 1997, some responsibility for procurement was also transferred to provinces (for goods up to US $5,000).

- **Adapting design and implementation to existing technologies and existing local implementation capacities.** Technical solutions had already been tested in Turkey, and the project had almost no foreign and little local technical assistance. It was implemented directly by existing local administrations.

- **Replicability of the approach and sharing experiences in the countryside.** Natural resources in Mersin and Antalya are used in ways that fit the needs of the communities of the Toros Mountains. Seasonal roving livestock production creates varying problems on rangelands and forests that exist at different altitudes. This system of using natural resources is very different from that used in the first group of provinces, which offers valuable lessons for the Project and the areas similar to Mersin and Antalya.

- **Working within the system of existing administrative and budgetary constraints.** Although project staff in all the provinces have demonstrated their ownership of the project, there are marked differences among the provinces in terms of cooperation and collaboration among agencies (i.e., with the exception of Mersin, in the third group of provinces, provincial staffs fall short in their efforts to carry out all project activities jointly). Although the AGM in the Ministry of Forestry is the designated coordinating agency, other agencies are urged to make effort to initiate collaborative actions.

- **Boosting Sustainability.** People who use MC rangelands (yayla), but are settled outside MC villages should be included in the Farmer-centered Problem Census Problem Solving process. Not doing so risks failure in the sustainability of rehabilitation efforts.
• Providing feedback to local communities and administrations. One of the important success factors was that task team leaders were committed to the success of the project and were not afraid to point out problems with implementation.

• Continuity of the project teams. Although, there were several changes in the ministries due to the elections, there has been a fair degree of continuity among government staff at all levels. The ones who were replaced were appointed to the new provinces. On the Bank side, despite many management and task team leadership changes, there has been considerable teamwork and high quality and continuity in the Bank’s input. There was an unusually high degree of overlap among Bank missions. This has contributed substantially to the mutual trust between the national staff and the Bank, which created a team spirit.

Conclusion

The Eastern Anatolia Project has yielded a number of unquantifiable and unanticipated positive results that extend well beyond the realm of targeted benefits. The approach fostered a convergence of the interests of government agencies and local communities and by addressing agricultural productivity issues within the context of implementing forestry and soil conservation measures appropriate to local conditions. The original loan closing date is September 2000, however the process has been initiated to extend it until the end of FY2002 to rehabilitate more MCs in 11 provinces by utilizing the savings.
UKRAINE: Transcarpathian Biodiversity

Phillip Brylski

Background

The Carpathian Mountains arch 1,500 km through Central and Eastern Europe, creating a species-rich biological corridor of over 300,000 square km that links the forest biomes of the Austrian Alps and the Balkan ranges. Located in the heart of Europe, the Carpathians form the headwaters of the rivers feeding the Baltic and Black seas watersheds, and are home to more than 20 million people. The Transcarpathian range, which covers the border of Poland, the Slovak Republic, and Ukraine, contains some of the largest tracts of old growth beech forest in Europe.

In September 1991, the Environment Ministers of Poland, the Slovak Republic, and Ukraine signed a declaration to conserve the valuable ecosystems and biodiversity of the Carpathian Mountains. The agreement sought to:

- promote cooperative scientific research and management for protecting and restoring the Eastern Carpathian ecosystems; and
- harmonize monitoring and management of the forest ecosystem shared by the three countries.

The agreement provides for the protection of 90,000 hectares as an International Biosphere Reserve (IBR) to be demarcated according to legislation in each country and according to UNESCO biosphere reserve principles. Ukraine has designated a part of the East Carpathians as the Carpathian Biosphere Reserve (CBR) under the UNESCO Man and the Biosphere Program.

The CBR has a total area of 38,930 hectares consisting of three zones: reserve (21,879 hectares), buffer (8,949 hectares), and conservative nature management (8,071 hectares). The reserve zone contains the Stuzica scenic reserve—Ukraine's first protected area, created in 1932—and four separate alpine or forest areas: the Khust massif, the Ugolsko-Shyurokoluy Lansky Massif, the Chonogirsky massif and the Maramorsky massif.

The Transcarpathian Biodiversity Protection Project (for which the Global Environmental Facility invested US $600,000) was an add-on to the GEF Slovak Republic Biodiversity Protection Project ($2.3 million). It consists of five components:
The Biodiversity Protection Program. This component of the project helps develop the information, mechanisms, and skills needed to manage the forest fragments of the CBR. Some of the activities include: flora and fauna inventory; a genetic and species studies and systems extinction model; coordinated planning for the development of a national policy on easements and land use; and the development of a conservation biology curriculum.

The Management Resources Program. This component focuses on the establishment of a Geographic Information system (GIS) to be used in planning and monitoring the CBR, the provision of transport and communications for enforcement protection and management and assistance with demonstration activities.

The Public Education and Awareness program. This component includes media relations, community information and extension, interpretation, environmental education, and publications.

The Training Program. The focus of this program is on database management computing, and professional development. The latter serves the purpose of managing public participation, group dynamics, and small business planning and management—skills that are not now widespread.

The Management Program. This component assists the implementing office in the Department of Protected Areas in the Ministry of the Environment.

The project was the first GEF—and World Bank-assisted project in Ukraine, and one of five Bank-managed GEF projects in the region that provided assistance in conserving forest biodiversity to countries making the transition from centrally planned to market economies. All five projects were designed to improve the management and the protection of transboundary forest ecosystems through international collaboration.

Objectives

The project’s goals were to: incorporate this small Ukrainian GEF project as an add-on to the proposed Slovakia Biodiversity Protection project; support Ukraine’s efforts to protect habitat fragments, prevent the loss of species, and improve habitat management in the Carpathian Mountains; and develop and implement legal, institutional, and administrative interventions to achieve long-term protection of specified areas in Ukraine, in collaboration with parallel GEF projects in the Carpathian forests of Poland and the Slovak Republic.
Impact on the Ground

The project had two main impacts. First, it extended protection and improved management to key old growth forests in the eastern Carpathian Mountains at an efficient price. Second, it helped the reserve adapt to the new challenges of a market economy by promoting nature-based tourism opportunities (see also the reserve's web page at www.cbr.itgo.com).

The project also:

- promoted local participation in reserve management.
- provided specific recommendations for targeting an additional 20,000-30,000 hectares for sustainable forest management over a period of five years.
- resulted in the identification of a number of new species and detection of many species not previously known to exist in the Ukrainian Carpathians. Its published results now provide a baseline for biodiversity protection and management in the region for years to come.
- financed the preparation of educational brochures, booklets, and popular and scientific articles, and improvements in the educational museum at CBR headquarters.

Lessons Learned

- Projects such as this should include a component on the role of development communication in reserve management. Public relations activities would have improved the flow of information between local communities and the reserve management.
- The applied research component should have been designed to have greater direct application to the management problems of the reserve, including the social and economic conditions of the support zones. Greater attention needs to be paid to integrating the project's results with policies related to forestry and tax incentives for sustainable forest management.
- Although it is appropriate to target large groups for some professional development and training activities, some of these activities would have a greater impact if fewer people received more intensive, longer-term training.

From the Bank's perspective, biodiversity and natural resources management projects in countries in transition should seek to improve the project's replicability by integrating the results into policy frameworks at local, regional, and national levels of government. As in other GEF biodiversity projects in the region, a "needs assessment" of the Project Management Unit (PMU) early in implementation would have
identified the need for training in office management and business skills. Such training could have reduced early delays in implementation and permitted more time for substantive work to be done.

Conclusion

The project was the Bank’s first project in Ukraine, and contributed to the development of a balanced portfolio of Bank-managed environment projects in Ukraine. None of these projects are related directly to the Transcarpathian Biodiversity Protection project.

Work in the project’s region continues on several fronts. The CBR staff are building inventory, conducting applied research, and engaging in local consultations to define the protected and economic zones of the expanded reserve, in accordance with Ukrainian regulations. The applied research activities financed by the project have identified a number of management actions that are now under implementation. Notable among these is the use of the GIS to assist in further landscape level planning that links the protected areas of the Eastern Carpathian Mountains. The Borrower is currently developing a proposal for a follow-up GEF project that would further improve forest management and biodiversity protection in the transboundary forests of the Carpathian countries.
### APPENDIX

**Selected Active and Completed Projects**  
**Rural and Environment Sectors**  
**Europe Central Asia Region**  
**Fiscal years 1998-2000**

<table>
<thead>
<tr>
<th>Country</th>
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<tbody>
<tr>
<td>Albania</td>
<td>AGRIC.SECTOR ASSESSMENT</td>
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<td>LAKE SEVAN VALUATION</td>
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<td>CAP. BUILDING ENV</td>
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Yugoslav Republic of Macedonia, former Yugoslav Republic of

- AG. SECTOR REVIEW

Moldova

- FARM STUDY

Poland

- ESW AGRICULT—POLAND
- N. POLAND REG. DEV.
- NORTH.POLAND SEMINAR
- LEAST COST COMPLIANCE
- AGRICULTURE 2000
- RURAL MARKETS SURVEY
- FACTOR MARKETS IN AGRICULTURE

Romania

- LEADED GAS PHASE-OUT
- FORESTRY SECTOR NOTE
- RURAL FINANCE REVIEW
- GLOBAL CARBON INITIATIVE.

Russian Federation

- RUSSIA FORESTRY SECTOR
- GLOBAL CARBON INITIATIVE
- ENVIRONMENT STRATEGY
- NISHNY PILOT
- ENERGY ENV. REVIEW
- ODS PROD. SHUTDOWN
- VOLGA BASIN MGMT.
- CARBON TRADING
- INDUSTRIAL POLLUTION

Slovak Republic

- WAREHOUSE RECEIPTS
- CARBON EMMIS. REDUC.

Tajikistan

- LAKE SAREZ MITIGATION TA

Turkey

- NEAP
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<td>Turkey</td>
<td>NEAP IMPLEMENTATION</td>
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This collection of notes covers some of the World Bank analytical and advisory activities and projects in rural development, natural resources management, and environmental management in Eastern Europe, the Commonwealth of Independent States, and Turkey. Each of the notes synthesizes interviews with task teams and sector managers, Bank reports, and other project documents. These observations from the field and lessons from experience are documented to inform future development projects and activities in these sectors confronting similar issues.

The activities discussed in rural development span the areas of agricultural research, agricultural trade policy, European Union integration, land reform and privatization, and rural finance. The topics in natural resources management and the environment include biodiversity protection and conservation, compliance with future environmental regulations, environmental health, forestry, pollution management, and river basin and watershed management. Some common themes are the importance of institutional strengthening, client commitment, and community participation in project design and implementation.