

# Integrating Environment into Agriculture and Forestry



**A**s part of its contribution to the Environment for Europe meeting in Belgrade in October 2007, the World Bank has undertaken a review of the Europe and Central Asia Region<sup>4</sup> with the objective of raising awareness among policy makers of the need to accelerate and enhance implementation of environmentally sustainable practices in the agricultural and forestry sectors in SEE and EECCA, and of providing recommendations for doing so. The process of incorporating considerations of environmental sustainability and resource conservation into sector policies, strategies, programs, and investments will be referred to as *integration* or *mainstreaming*.

Unless other references are cited, the review is based on an original set of 21 in-depth Country Reviews prepared by the study team with the support of local specialists in each country. This report represents Volume I of the study and provides a synthesis of major regional issues and trends, with broad recommendations for future directions and priorities. The Country Reviews are presented in full in Volume II. In addition to the local specialist inputs, the study benefited from World Bank country, sector, and project documents, other IFI documents, country publications, UNECE Country Environmental Profiles, and other accessible documents, as well as the advice of numerous World Bank staff working in the region. Field visits were made to selected countries to confirm information and fill knowledge gaps. Draft Country Reviews were reviewed by World Bank country teams. Advance copies of this volume plus executive summaries of the respective Country Reviews

were distributed to ministries responsible for environment, agriculture, and forestry in each subject country; comments received have been reflected in the text.

Agriculture and forestry continue to be very important for economic growth and poverty reduction in transition countries. The share of these sectors in national income is much higher in transition countries than in the West, representing on average 14 percent of GDP (compared to the OECD average of 2.2 percent), and an even higher 18 percent in EECCA (Csaki 2006). Agriculture and forestry are also the main sources of income in rural areas, where 35 percent of the population of transition countries still resides. In the least developed SEE and EECCA countries, the majority of the population—over 70 percent—still lives in rural areas and is employed in agriculture and forestry. Nearly all the transition countries have experienced healthy, sustained levels of growth since 2000, which has contributed to poverty reduction overall; nevertheless, rural residents face a significantly higher risk of poverty than urban residents and continue to make up the bulk of the

<sup>4</sup> The region includes nine countries of Southeastern Europe (SEE): Albania; Bosnia and Herzegovina; Bulgaria; Croatia; FYR Macedonia; Montenegro; Romania; Serbia; Turkey; plus Kosovo (which is a province of Serbia under autonomous administration of the UN consistent with UNSC 1244 and is treated as a separate entity for the purposes of the study); and the following twelve countries of Eastern Europe, Caucasus and Central Asia (EECCA): Armenia; Azerbaijan; Belarus; Georgia; Kazakhstan; Kyrgyz Republic; Moldova; Russian Federation; Tajikistan; Turkmenistan; Ukraine; and Uzbekistan.

poor—70 percent in EECCA and 62 percent in SEE (Alam et al. 2005).

Significant improvements in agriculture and forestry still have to take place in transition countries. Although production levels in these sectors have generally stabilized, the productivity gap between transition countries and OECD countries remains large. For example, cereal yields are less than half of the OECD average (Csaki et al. 2006). This productivity gap means there is significant potential for growth in the sectors through improvements in efficiency. But for agriculture and forestry, the sustainability of growth over time is particularly dependent on the sustainability of the resource base. Therefore, ensuring that these economic sectors achieve their potentials for growth and poverty reduction requires integrating environmental considerations into their management.

Agriculture and forestry policies, laws, and strategies that promote integration have improved, but more needs to be done on implementation. Regional countries have generally recognized that past agricultural and forestry practices have had adverse impacts on the environment and that action is needed to move towards longer-term

sustainability of production and conservation of natural resources. The importance of environmental protection is usually recognized in statements of environmental, agricultural, and forestry policy (and even in some state constitutions), and in the resulting strategies, action plans, and legislation. In most cases, National Environmental Action Plans (NEAPs) were adopted early in the transition period, through processes involving a range of stakeholders. In some countries, NEAPs have been updated or followed by detailed sectoral action plans and pilot projects (often with support from the Global Environmental Facility—GEF). In others, that remains to be done. Most countries have ratified the key international conventions on global and trans-border environmental issues. These actions indicate there is a high level of commitment to environmental sustainability in all regional countries.

Regional countries with greater capacity, more funding access, and adequate incentives are following through on their policy commitments with programs and projects that promote more sustainable production. Kazakhstan (see Box 1) has undertaken a broad range of initiatives in both agriculture and forestry. Serbia is

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### Box 1: Kazakhstan Shows the Way

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Kazakhstan has a broad policy of economic diversification and is emerging as a regional leader based on its efforts to incorporate environmental concerns and sustainable resource management into a diverse array of agricultural and forestry programs. For example, the *Syr Darya and Northern Aral Sea Project* (World Bank/Government, 2001–2008) aims to increase irrigated agriculture and fish production, restore the Northern Aral Sea, and improve environmental conditions in the Syr Darya delta. The sea is already showing improvement: water flow into the delta has increased, several freshwater fish species have returned, and fish harvests are increasing. A second project is being prepared that will be funded mainly by the government. The *Drylands Management Project* (World Bank/GEF/Government, 2003–2009) addresses dryland degradation due to unsustainable cultivation practices. The project has replaced cereal production on marginal drylands with traditional livestock grazing, restored grasslands, and improved the capacity of local institutes. The *Forest Protection and Reforestation Project* (World Bank/GEF/Government, 2006–2012) aims to ensure cost-effective and sustainable environmental rehabilitation and management of drylands and rangelands, with a focus on pine forests, the dry bed of the Aral Sea, and semi-arid rangelands. The *Agricultural Competitiveness Project* (World Bank/Government, 2005–2010) seeks to promote agricultural productivity by improving the quality and safety of farm products, enhancing access to information, and harmonizing standards. The food safety and quality certification component will have a direct positive impact on the environment. The *Zhasyl Yel (Green Country) Program* (2005–2007), initiated and financed by the government, aims to fulfill Kazakhstan's obligations under the Convention on Biological Diversity and the Aarhus Convention through forest conservation and reforestation, and by increasing public awareness and participation. The program has improved media coverage of conservation measures; it is also promoting active youth participation in tree planting nationwide.

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harmonizing its legislation with that of the EU and beginning to use strategic environmental assessment. It is also undertaking research and extension programs in nutrient management, pest management, organic farming, and other areas. Countries with lower institutional and financial capacity are also making progress, albeit at a slower pace and on a narrower range of issues. Moldova has been a pioneer in the use of carbon finance for reforestation (see Box 2), as well as in nutrient management, organic farming, and legislation harmonization. Albania has made great strides in the improvement of irrigation systems, introducing user organizations more extensively than elsewhere in the region. It has adopted a similar approach in forestry.

Nevertheless, decision makers and the general public are not yet fully aware of the importance of integrating environment into agriculture and forestry. At the government level, ministries of the environment have an essential role to play in analyzing and providing information on environmental issues (including their potential impact on human health, economic productivity, the natural environment, and the global commons) and in reaching out to sectoral ministries to ensure sustainability concerns are given proper recognition in their programs. But ministries of economy and finance also need to be made aware of the longer-term economic consequences of

neglecting environmental concerns. Moreover, experience in many countries shows that little will be done on environmental protection unless the public is well informed on the issues and presses the government to action.

Environmental integration is better in SEE countries than in EECCA and more advanced in forestry than in agriculture. The EU is clearly a powerful driver for change in its new member states, in countries on the path to accession, and in some that are not. However, some transition countries that became EU members have shown that increasing production and supporting farm incomes are higher priorities for them than environmental sustainability. When given the choice, they often prefer to shift funds from environmental activities under Pillar 2 of the Common Agricultural Policy (CAP) to income supports under Pillar 1. In the forestry sub-sector, there is a tradition of resource conservation that is being reinstated following the dislocations of transition. Agriculture, however, is faced with a more complex and less tractable set of issues.

There is a lack of capacity in virtually all transition countries. While limited funding is the most obvious example, all countries face shortages of skilled staff. Moreover, they need to continue the slow process of institutional change to support new policies on integrating environment into agriculture and forestry. There is also a lack of ca-

## Box 2: Carbon Finance in Moldova

Moldova is successfully taking the lead in mainstreaming environmental considerations into afforestation to contribute to carbon sequestration and reduction of greenhouse gas emissions. The *Soil Conservation Project* (World Bank Prototype Carbon Fund/Government/Japan, 2004–2007) addresses the link between afforestation efforts and protection of forest ecosystem diversity, as well as agricultural land degradation, while contributing to carbon sequestration. The project has restored nearly 20,000 ha of degraded agricultural lands to productive uses for rural communities and has established community-based management. A follow-up project includes the planting of new forests on 33,000 ha, of which approximately 6,000 ha were granted carbon finance eligibility. Further stages of development are planned. The *Agricultural Pollution Control Project* (World Bank/GEF/Government, 2004–2009) includes afforestation efforts and the creation of buffer zones along the Dniestr River. Grants are provided to entrepreneurs and businesses for investing in environmentally sustainable agricultural practices, including agro-forestry, planting of buffer strips, wetland restoration, monitoring of soil and water quality, and assessing environmental impacts.

capacity to evaluate the economic costs and benefits of environmental issues in these sectors. Because of such constraints, even new EU member states find it difficult to spend EU funds for sustainable agriculture in a timely manner, and to demonstrate the impact of those expenditures.

Positive incentives for environmentally friendly behavior need to be enhanced, while negative incentives should be curtailed. Tax and subsidy programs must work together to promote sustainability. Trade opportunities with the West combined with rigorous environmental standards

have tremendous potential for creating positive incentives, particularly for non-EU countries. Creating the right incentives also requires integrating sound economic analysis into agricultural and forestry policy-making.

Successful pilot projects need to be scaled up and experience exchanged among countries of the region. By now, there are numerous examples of good practices—many of which are cited below—but mechanisms for implementing these pilots on a national level and transferring this knowledge between countries need strengthening.