

Building on Success

Progress on integration can be accelerated by scaling up successful pilot initiatives and disseminating good practices. The study has found several areas where sustainable practices have been successfully introduced on a small scale through a pilot project (often with GEF support) and where the next step is to scale up such initiatives. For example, promising results have been obtained in manure/nutrient management in the Baltic and Danube-Black Sea areas (with support from GEF, Sweden, and others) specifically in Russia, Turkey, Romania, Bulgaria, Serbia, Moldova, and Georgia. Following the examples of Poland and Romania, these countries could turn pilot projects into national programs and begin to make serious inroads into the problem of eutrophication, with its damaging impact on water quality. In Kazakhstan, the virgin lands program of the 1950s introduced grain cultivation into semi-arid land, previously used for grazing, with serious environmental consequences. A World Bank/GEF project is succeeding in reversing that process, and the Kazakh government has expressed interest in scaling up the project to the national level (see Box 1).

Integrated pest management is another case in point. While IPM is generally regarded as a much more sustainable alternative to the blanket use of chemical pesticides, most regional countries have applied it only on specialized crops (such as fruit or greenhouse production) or organic produce. It is now time to apply that experience to other crops and on broader expanses, perhaps following Uzbekistan's success in using IPM on 90 percent of its cotton production.

Minimum tillage is a proven technique that minimizes soil erosion, but requires specialized farm equipment and adaptive research to meet local conditions. Pilot results in Kazakhstan look promising, but less so in Georgia. However, governments should be prepared to continue experimentation in this important area.

A major challenge when scaling up is to maintain momentum after donor funding ceases. In the area of nutrient management, Poland provides a good example of a successful World Bank-financed operation for manure management that was followed by a national program established with EU support. Romania is planning to follow a similar course. Successful scaling up involves several elements:

- pilot project results well documented in environmental, economic, and social terms;
- building government ownership of the innovation;
- dissemination of technical information and results;
- institution building to support a larger program;
- streamlining of project models to improve cost-effectiveness; and
- step-by-step rather than wholesale expansion.

Regional knowledge sharing should be increased. As the region presents a wide diversity of conditions and experiences, but also a degree of commonality through culture and history, much can be gained when regional countries learn from

Box 10: Money from Manure in Georgia

Biodigestors installed in western Georgia have proven a recent success, with considerable potential for scaling up. Between 2001 and 2007, under the Agricultural Research, Extension, and Training (ARET) Project, the World Bank financed the installation and maintenance of 272 biodigestors in 56 villages. Other donors funded 80 units, and the Adjara Region government has also contributed. A biodigestor is a simple device for the collection, storage, and processing of manure that the farmer can easily install and use for producing biogas (methane) for cooking and biomass to improve soil structure and replace mineral fertilizers. Methane is a potent greenhouse gas that would otherwise escape into the atmosphere. The biodigestor can be sized to fit very small livestock operations of 3 to 10 cows.

Careful monitoring of the ARET project is revealing significant benefits, including the annual production of 180–200,000 m³ of methane, which replaced about 2,000 m³ of fuelwood, often the result of unregulated cutting and deforestation.²⁴ Though significant, reductions in carbon emissions have not yet been quantified. Finally, between 2002 and 2007, annual savings of about 200 lari (82 Euros) per farmer were recorded on purchases of mineral fertilizers that have now been replaced by organic fertilizer produced on farm from manure and other waste; the cost of firewood and liquid gas consumption was reduced by 600 lari (247 Euros) over the same period of time.

each other.²⁵ Regional organizations, such as the EU, UNECE, and OECD, could take the lead in strengthening the means to disseminate such knowledge. New EU member countries might have a special role to play in information sharing. While learning will often be from “west” to “east”, there are important exceptions. For example, Uzbekistan and Turkmenistan make the most widespread use of IPM, Kazakhstan is pioneering rangeland management, and Georgia is showing success with biodigestors (see Box 10) and food safety. Countries and donors might consider holding regular forums for exchanging experiences, particularly at the sub-regional level. A useful model might be the Mediterranean Environmental Technical Assistance Program (METAP), which has specialized in knowledge transfer through numerous regional workshops. Subjects of interest might include:

- soil erosion;
- nutrient management;
- pest management, including IPM and the disposal of outdated pesticide stocks;
- salinity control;
- food safety;
- organic farming;
- illegal logging; and
- sustainable forest management, including community participation.

²⁴ On average, a typical 6 m³ biodigestor can produce 700–800 m³, or 14–20 tons, of biomass per farm annually; the consumption of fuelwood was halved, from 15 to 7 m³ per year.

²⁵ A series of sub-regional workshops is planned for the dissemination of this report.