THE STATE OF FOOD AND AGRICULTURE

2007

PAYING FARMERS FOR ENVIRONMENTAL SERVICES

- Can agriculture provide more environmental services?
- Should farmers be paid for helping the environment?
- Who benefits? Who would pay?
- How can effective payment mechanisms be designed?
- Can environmental payments be pro-poor?

World and regional overview

Statistical annex and CD-ROM

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Paying farmers for environmental services

Ecosystems sustain human life. They supply a range of services, including the provision of food in addition to environmental services such as climate change mitigation, enhanced water quality and quantity, and biodiversity preservation. Agricultural ecosystems are by far the largest managed ecosystems in the world.

Today, the provision of ecosystem services generally, and the subset of environmental services in particular, is being challenged as never before by the combined effects of expanding populations, rapid economic growth and greater global integration. In response, the search for ways to enhance environmental services is gaining attention from policy-makers as well as non-governmental and private decision-makers. A mechanism that has generated growing interest in recent years is direct payments to farmers to enhance the delivery of selected environmental services.

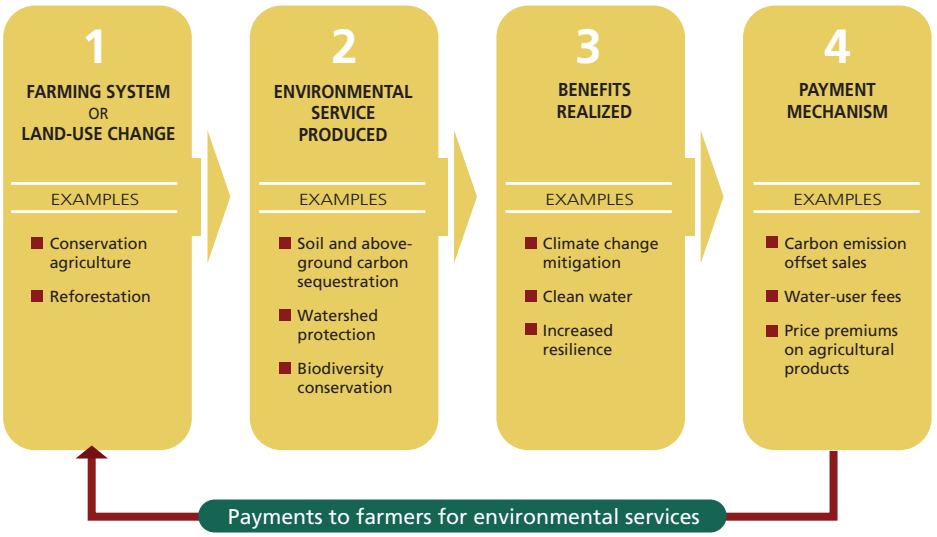
Agriculture's role in the provision of ecosystem services depends critically on the incentives available to farmers. Such incentives currently tend to favour the provision of conventional outputs such as food and fibre over that of environmental services that are generally produced jointly with them. Payment for Environmental Services (PES) programmes are an effort to "get the incentives right" by sending accurate signals to both providers and users that reflect the real social, environmental and economic benefits that environmental services deliver.

PES transactions refer to voluntary transactions where a service provider is paid by, or on behalf of, service beneficiaries for agricultural land, forest, coastal or marine management practices that are expected to result in continued or improved service provision beyond what would have been provided without the payment.

Main messages from the report

- **Demand for environmental services from agriculture will increase.** Two forces are generating a growth in demand for these services: a greater awareness of their value; and their increasing scarcity, arising from mounting pressures on the Earth's ecosystems.

Key elements in PES programme design



- **Agriculture can provide a better mix of ecosystem services to meet society's changing needs.** Farmers depend on, and generate, a wide range of ecosystem services. Their actions can enhance and degrade ecosystems. Through changes in land-use and production systems, agricultural producers can provide a better mix of ecosystem services, enhancing the provision of environmental services, to meet society's changing needs.
- **If farmers are to provide a better mix of ecosystem services, better incentives will be required. Payments for environmental services can help.** Farmers lack incentives to consider the impacts of their decisions on environmental services. Improved information and regulations can influence farmers' decisions in ways that enhance the environment – as can payments to farmers from those who benefit. The relative merits of the different approaches vary according to the different environmental services. Payment programmes range from highly competitive exchanges to public-sector programmes with strong equity objectives.
- **Cost-effective PES programmes require careful design based on the characteristics of the service and the biophysical and socio-economic context.** Programme design involves four main steps: identifying what should be paid for, who should be paid, how much should be paid and what payment mechanism(s) should be used. Getting the science right is crucial and requires a clear understanding of the biophysical relationships between farmers' actions and their environmental consequences, as well as the economic motives and constraints facing suppliers and beneficiaries of environmental services. Equally important are the institutional innovations needed to link suppliers and beneficiaries as well as an appropriate enabling environment.
- **Payments for environmental services are not primarily a poverty reduction tool, but the poor are likely to be affected and implications for them must be considered.** Payments can increase the incomes of farmers who produce environmental services. Other poor households may also benefit. However, the distribution of benefits depends on who produces the environmental services, and where. In some cases, payments may also have adverse impacts on poverty and food security, for example if they reduce agricultural employment or increase food prices. Nevertheless, PES programmes have been shown to be potentially accessible and beneficial to the poor if properly designed.

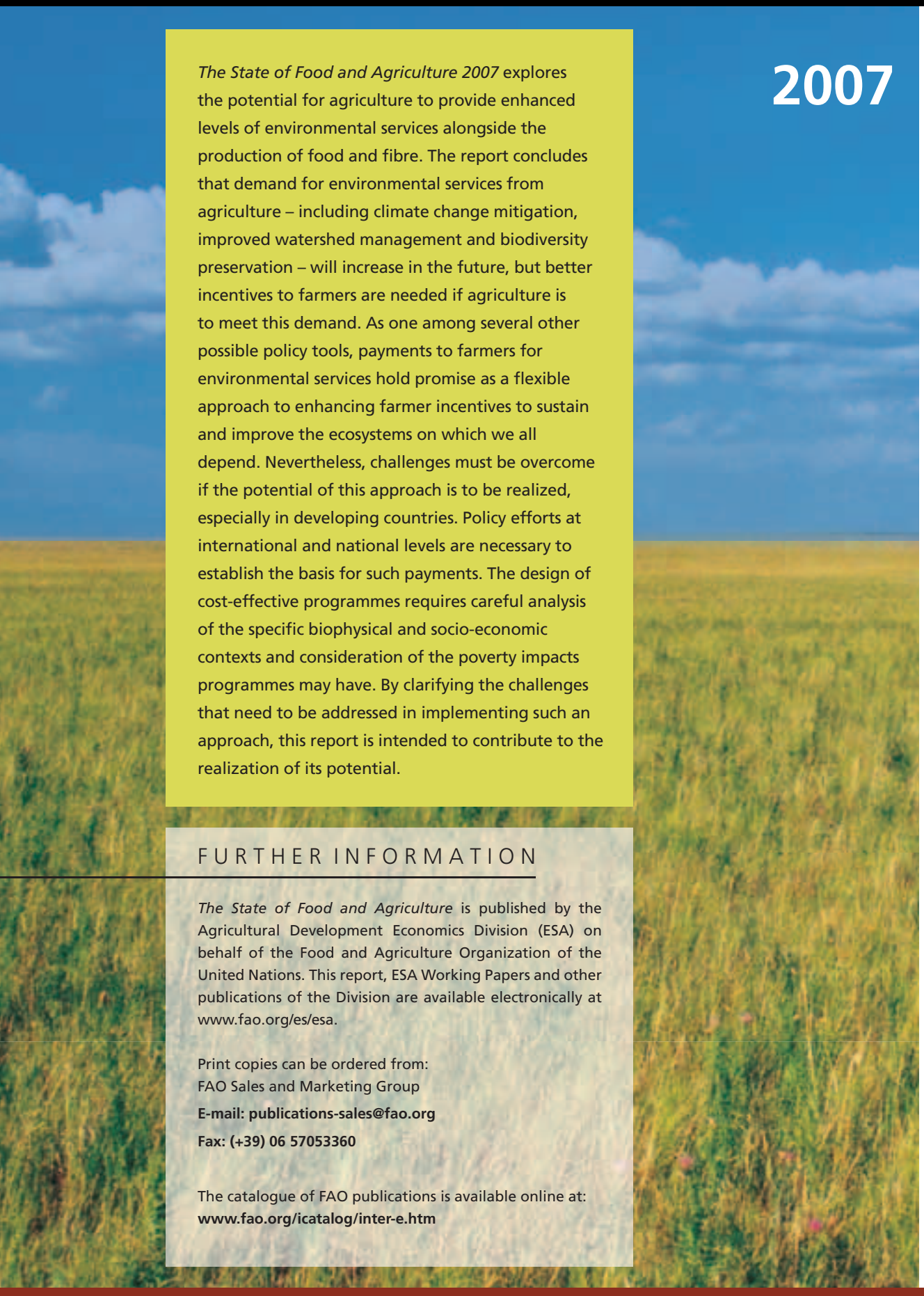
Developing mechanisms to implement this approach is challenging. This is a new area – the science is not always clear, the policy context is complex and budgetary resources are often a constraint, especially in poorer countries. Nevertheless, payments for environmental services can trigger creativity in finding innovative solutions to improve the management of agricultural and environmental resources, even in countries that are poor in budgetary resources but rich in potential supply of environmental services. When effectively designed, PES programmes can give both providers and users of environmental services more accurate indications of the consequences of their actions, so that the mix of ecosystem services provided matches more closely the true preferences of society.

World and regional review: a longer-term perspective

The State of Food and Agriculture 2007 contains a long-term overview of global food and agriculture, including data on agricultural production, food consumption, agricultural trade and food insecurity.

Statistical annex and CD-ROM

A statistical annex and CD-ROM provide country-level data for a range of key agricultural indicators.



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The State of Food and Agriculture 2007 explores the potential for agriculture to provide enhanced levels of environmental services alongside the production of food and fibre. The report concludes that demand for environmental services from agriculture – including climate change mitigation, improved watershed management and biodiversity preservation – will increase in the future, but better incentives to farmers are needed if agriculture is to meet this demand. As one among several other possible policy tools, payments to farmers for environmental services hold promise as a flexible approach to enhancing farmer incentives to sustain and improve the ecosystems on which we all depend. Nevertheless, challenges must be overcome if the potential of this approach is to be realized, especially in developing countries. Policy efforts at international and national levels are necessary to establish the basis for such payments. The design of cost-effective programmes requires careful analysis of the specific biophysical and socio-economic contexts and consideration of the poverty impacts programmes may have. By clarifying the challenges that need to be addressed in implementing such an approach, this report is intended to contribute to the realization of its potential.

FURTHER INFORMATION

The State of Food and Agriculture is published by the Agricultural Development Economics Division (ESA) on behalf of the Food and Agriculture Organization of the United Nations. This report, ESA Working Papers and other publications of the Division are available electronically at www.fao.org/es/esa.

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