

## KEY ISSUES

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All three papers in Part VI discuss, and in some cases value, the benefits that result from agri-environmental policies (AEP). For instance, the social environmental benefits of the Canadian Shelterbelt Program exceed the cost, and in New Zealand, the potential economic gains to farmers resulting from the Sustainable Farming Fund exceed the funds provided. But we have learned that there are uncertainties with regard to the appropriate economic evaluation tools.

In this respect, evaluation of AEP should also consider the processes determining the linkages between policies, farm practices and environment. Such an approach requires a process-related analysis of partnerships, institutions, farmers' motivation and the impacts on the environment. AEP can influence these processes, and *vice versa*. These interrelationships should be explored when assessing AEP.

The paper from Australia shows that the creation of partnerships between government and non-governmental agencies at regional, state and national levels assists the collection of natural resource information and the assessment of programme effectiveness. It should be considered that local decision processes can actually result in environmentally-effective and economically-efficient changes to farming practices, provided the appropriate institutional conditions exist (such as voluntary co-operation between authorities and farmers).

The paper from New Zealand shows that high net benefits (cost-benefit ratios) resulting from such changes are crucial for the motivation of the partnership members. The Canadian experience demonstrated the significance of the farmers' interest to co-operate in partnerships due to the beneficial technology transfer they can expect. The benefits for farmers include the reduction of erosion, energy saving and a better economic position, while the benefits for society include reduction of greenhouse gases, and conservation of water resources, land and biota. But the Australian paper also noted that non-economic values, such as landcare ethics, can also play an important role.

In each of the three reports, subjects for further research are identified with regard to a more appropriate funding of environmental programmes. These include the improvement of database and reporting systems, and a more detailed investigation of the social benefits and costs of such programmes.

More discussion and research comparing the effectiveness and efficiency of regulations, payments, taxes and institutional measures is also required. Mandatory regulations are indispensable but their effectiveness may be improved by institutional arrangements that grant farmers and other local stakeholders more freedom for making their own decisions. Such arrangements include taxes, payments, advisory programmes and partnerships. However, taxes are usually not targeted to site-specific environmental problems, so their effectiveness is limited, *i.e.* a unit tax on pesticides or mineral fertilisers may be too "low" in some sites and too "high" in others, depending on the local conditions. This may be one of the main reasons why taxes are not extensively applied. They often

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lead to financial burdens for farmers, whereas their environmental impacts cannot be tuned sufficiently to site-specific problems.

In contrast, the implementation of regulations, *e.g.* limit values for pesticide contamination of waters, which may be facilitated by payments, can be targeted to local requirements. However, there are different types of payments. Agri-environmental programmes at EU or national level often consist of payment schemes that do not consider sufficiently the site-specific problems. The payments may be too “much” or too “little” in order to achieve the appropriate changes in farming. In the first case, funds are being wasted; in the second case, the cost-effectiveness of payments could be increased by enlarged funds.

The most effective and efficient payment schemes can result from contractual negotiations between farmer and authorities or other stakeholders, such as water suppliers. The content of such contracts (*i.e.* the commitments of farmers, the compensation payments and advisory programmes) are typically tuned to local requirements.

In Germany, there are many cases where authorities allow farmers to undertake certain contractually-fixed commitments in exchange for financial compensation from water suppliers, rather than comply with compulsory rules at the local level. These voluntarily-agreed commitments and compensation payments are far more effective than rules such as compulsory restrictions for manure spreading in mandatory water protection zones. In other cases, the authorities are reimbursing water suppliers for their costs of compensation and advisory programmes. These reimbursements are financed from the revenue of water abstraction charges.<sup>2</sup>

Subjects for future OECD work could include the following.

- Investigate the net benefits of agri-environmental policies (cost-benefit analysis, including non-economic values).
- Create a common methodology for the assessment of agri-environmental policies in terms of net benefits (based on national experiences).
- Explore the relative environmental effectiveness and economic efficiency of regulations, taxes, payments and voluntary agreements (based on national experiences).
- Investigate the processes determining the linkages between policies, farm practices and environment (*i.e.* process-related analysis of partnerships, institutions, farmers’ motivation and the impacts on the environment in OECD countries).

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2. More information, including around 50 case studies across the EU member states, can be found in the report of the EU research project “Co-operative agreements in agriculture as an instrument to improve the economic efficiency and economic effectiveness of the European Union water policy”, Contract No. ENV4-CT98-0782. The presentations and outcomes of the EU workshop related to this research project are available at [www.infu.uni-dortmund.de/Verweise](http://www.infu.uni-dortmund.de/Verweise). See also Brouwer, F., I. Heinz and T. Zabel (eds) (2003), *Governance of Water-related Conflicts in Agriculture: New Directions in Agri-environmental and Water Policies in the EU*, Kluwer Academic Publishers, Dordrecht, the Netherlands.

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