

## 6 Conclusions

Rural areas are extremely diverse and the relationship between the management and use of land, and the development of rural economies is complex. Increased demand for environmentally farmland-based countryside amenities may, in some circumstances, result in conflict between farm and non-farm activities. Intensification and specialisation of rural land-management practices in environmentally-good land, in economically integrated rural areas, could be threatening to the provision of ecological services, although it could improve eco-efficiency (as it uses smaller amounts of chemical inputs per unit of output). On environmentally-sensitive land, on economically marginal remote rural areas, low input and production could contribute towards preserving the diversity of the cultural landscape, but they could also be adverse effects: neglect of land management; abandonment; and afforestation, with variable consequences for the provision of farmland-based environmental rural amenities.

In virtually all OECD countries there is a concern with farmland-use management, as farmland provides benefits that go far beyond its ability to produce food and fibre. Agriculture, as the largest user of rural land in OECD countries, not only serves as a source for economic returns, but also preserves habitats and biodiversity, provides a carbon sink and contributes to the conservation of water and soil resources. It also contributes to the preservation of open rural space and the maintenance of characteristic landscape features, which are largely responsible for the recreational value of agricultural land. Changes in land use and land cover are important driving forces in global as well as localised environmental change.

The preservation of an environmentally sustainable rural environment is a key ingredient in harnessing the long-term development potential of rural areas. The ecological balance and the scenic value of a landscape can make rural areas attractive for the establishment of enterprises, as places to live, and for the tourist and recreation businesses. The environmental and landscape assets generated through agricultural land management often have the characteristics of public goods, and as such policy measures are required to ensure delivery at socially desired levels.

Historically, the focus of agricultural policy has been on the level of production of commodities and the well-being of farm families. In this context, the farmland in itself has been a relatively minor policy issue. The current interest with farmland-use management appears to be driven to a considerable extent by the potential effects on the provision of environmental services associated with the management of farmland. While the food supply is noted as an issue, the main factors are typically the loss of green space, loss of wildlife habitat and loss of other non-market outputs.

The essential feature of this new policy environment is the increasing importance being given to the spatial dimension of agriculture. The question of where commodities are produced has now been added to existing policy concerns with what commodities are produced and how they are produced. In the concern with space, two key points stand out:

- The production and value of many of environmental services from agriculture is specific to particular farming practices in certain locations. Because these are largely non-tradable their value depends upon the local demand for those outputs.

- The conversion of farmland is also spatially determined. While the vast majority of farmland is very likely to remain in agriculture, there are two situations where the loss of farmland is concentrated. These are the urban fringe (where farmland is lost to urban uses) and the far fringe (where the returns from farming are marginal, due to a combination of remoteness and low productivity).

There is also a link between these two factors. It is typically the land that is most subject to conversion that provides the highest level of farmland-based environmental amenities. Thus, the loss of farmland at either fringe is significant, not because of lost commodity production, but mostly because of lost non-commodity production.

Given the concern with farmland conversion that is driven by economic forces, what are the possible policy responses? Two broad sets of policy seem most relevant: i) agricultural policy – if only because governments are concerned with the loss of farmland; and ii) land-use policy. Every country in the OECD employs both of these policies, but they tend to operate in a rather un-co-ordinated manner.

The lack of co-ordination stems from a number of factors. The first is a general lack of recognition that both types of policy can be used to manage farmland conversion. Second, the two policies are designed and operated by different departments of government, and, in many countries, at different levels of government. Third, there is only limited awareness that the range of influence that can be exerted by policy varies, depending on the spatial location of agriculture.

While there is a growing recognition that policy has different impacts on farm household incomes, there is less recognition that policy has different spatial impacts. The use of three spatial zones in the report is a gross simplification of the spatial distribution of agriculture across OECD countries, but even this level of abstraction is capable of showing how policy effects can vary with geography.

In general, recalling the specific results of the previous parts of the report, the following broad conclusions may be drawn:

- Farmland conversion to non-agricultural uses is largely an issue at the urban fringe and the extensive margin, where the economic returns from farming are inadequate to maintain land in agriculture. For the majority of farmland, found in the agricultural zone, the amount of land at risk of leaving agriculture is relatively small. In the agricultural core zone, the main cause of loss is land at the Ricardian margin. This land may be idled by farm operators, but it is typically not sold and can be returned to farming should economic conditions warrant this.
- A potentially key aspect of farmland conversion in the two margins is the amenity and wildlife benefit associated with the provision of environmental services from agriculture. Because these outputs are valued by society, but the farmer receives no remuneration, there is a wedge between the returns to the farmer from maintaining land in agriculture and converting it. If society compensates farmers for the social value of environmental services this can keep some of the land at risk of conversion in farming.
- In the urban fringe, the opportunity costs of farmland can be high. This makes spatially un-targeted agricultural policy and those forms of land-use policy that use payments, exceedingly expensive instruments. In response, the common practice has been the use of the regulatory power of government to prevent farmland conversion. This clearly imposes a cost on farmers when compared to a *laissez faire* regime.
- At the extensive margin, the use of financial incentives can maintain land in production, because alternative uses of land generate very little revenue. At this zone, the problem may well be limited returns to labour and capital, rather than limited returns to land. Land-use policy is largely impotent at the far fringe because it acts mainly to block changes to higher-value uses. While some forms agricultural policy can be effective, traditional payments to commodity production have limited effectiveness because the level of commodity production per farm is typically small.

- By its nature, agricultural policy has largely focused on the agricultural core zone. It is within this zone that the standard assumption of a fixed stock of land is most valid. The result has been a set of policies that provide incentives for farmers to alter the mix of commodities they produce and the management practices they adopt. Within the zone, the opportunity cost of farmland is low, which implies that conversion is not an issue.

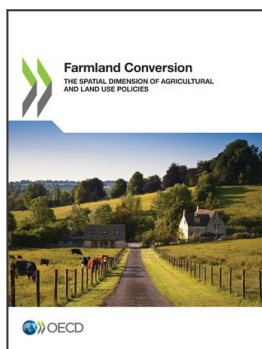
Given this situation, how should the policy concern best address the issue of farmland loss at the two margins? It is clear that broadly applied policies are not the answer. If the majority of farmland is not at risk of conversion, a general programme will be inefficient. This means that separate policies need to be defined for the two margins. At the urban fringe, the interaction between urban policy and rural policy (including agricultural policy) has to be considered. The motivation for restricting farmland conversion mainly stems from urban development rather than from related with farming. This means that better co-ordination between urban policy and agricultural policy is important. In terms of policy, it would seem that the current application of land-use regulations will continue to be the dominant way for society in OECD countries to manage farmland conversion.

At the extensive margin, the central issue is the value society places on maintaining a managed environment. Habitat change can have important ecological consequences, but not all habitats are equally important. If farm policy continues to evolve in a way that includes increased support for environmental services from agriculture, then there is an obvious mechanism for maintaining farmland. Whether similar ecological benefits could be maintained using another policy instrument at a lower cost is, of course, an issue that should be addressed.

A large impediment to undertaking this type of targeted programming is the current lack of information. The OECD and many member countries have invested considerable time and resources to develop a rural typology, and have collected a variety of rural indicators. However, the indicator set is remarkably weak in its coverage of agriculture. This inability to provide strong spatially defined statistics for agriculture by degree of rurality is symptomatic of the current focus of agricultural data. Because there has been little interest in the spatial distribution of agriculture in the past, little effort has been made to assemble this type of data.<sup>10</sup>

Finally, it is important to recognise that the removal of land from agricultural uses may result in a new use of farmland (e.g. for forest, parks, etc.) which could enhance social welfare. This could occur if the new use of farmland leads to more benefits than are lost from the reduction in commodity and non-commodity production. In particular, it is important to distinguish where farmland is being lost and what it is being used for.

This requires a clear definition of the quantity and quality of public goods provided through agricultural land management in different types of rural areas that should be supported through agri-environmental policy, including programmes to protect farmland from conversion to non-agricultural uses. It is paramount that the selection of a particular policy approach should be based on efficiency considerations. Overall, the contribution – particularly in quantitative terms – of farmland-based environmental services to the development of rural areas, including the development of sectors such as rural tourism warrants further empirical analysis.



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