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**PUBLIC GOODS AND EXTERNALITIES:
NEW DIRECTION FOR CAP IN THE POST 2013 PERIOD**

*DOBRA PUBLICZNE I EFEKTY ZEWNETRZNE
– NOWY KIERUNEK ROZWOJU WPR PO 2013 ROKU*

Key words: Common Agricultural Policies, public goods, EU policy after the year 2013
Słowa kluczowe: wspólna polityka rolna, dobra publiczne, polityka UE po 2013 roku

Abstract. The CAP is in an important reform phase. In this process will be reorganized the principles and functioning, so will be by the argumentation even importer the common interest and the public goods. In this process must be focus on some challenges by the provision of environmental public goods.

Introduction

The Common Agricultural Policy (CAP) is one of the most important common policies of the European Union. Actually it was. In spite of significant reforms, which have been made in recent years (in 2003 and in 2008), to modernize the sector and make it more market-oriented, the CAP will be the tool to make Europe sustainable and to ensure the prosperity. The next strategy, until 2020 offers a new perspective: through its response to the new economic, social, environmental, climate-related challenges facing the society, the CAP can contribute more to developing, sustainable growth. The debate is launched relates to the CAP's future objectives and the financing, but in the focus is the CAP's role in the EU' public goods.

Present agricultural conditions

The European agriculture is an important sector of the economy and at the same time provides essential public goods by maintaining natural resources and cultural landscapes, a precondition for all human activities in rural areas. It is important also because agriculture provides the main land cover in the EU, occupying 47% of the entire territory of the European Union. Across the EU there are 14.5 mln agricultural holdings, generating over 355 bln EUR in production; whereas most of the EU farms can be found in the EU-12, whilst most of the agricultural area remains in the EU-15 with more than 70% of agricultural land. There are currently 13.6 mln people employed directly in the agricultural, forestry and fishery sectors, with an additional 5 mln people working in the agri-food industry, where the EU is the world's largest producer of food and beverages; whereas this represents 8.6% of total EU employment and accounts for 4% of the EU's GDP. But many critical points are focusing on the weaknesses of the CAP, on problems which need to solve. Some of these are relevant in the case for the common interested public goods also [Baranyai 2008]:

- agri-environmental indicators show an important potential for the agricultural sector in the effort to mitigate the effects of climate change, particularly with regard to carbon sequestration and the production of renewable energy; whereas agricultural activity is essential for the preservation of biodiversity, water management and combating soil erosion and can be a key factor in addressing climate change,
- greenhouse gas emissions caused by agricultural activity (including rearing of livestock) decreased by 20% between years 1990 and 2007 in the 27 Member States; whereas the proportion of these emissions produced by agriculture dropped from 11% in 1990 to 9.3% in the year 2007, inter alia as a result of more effective use of fertilisers and liquid manure the recent structural reforms of the CAP and the gradual implementation of agricultural and environmental initiatives,

- the economic crisis has had a serious negative effect on agriculture, with farm income decreasing by 12.2% on average between the years 2008 and 2009 and unemployment in rural areas increasing in the last year; whereas as a direct effect of the economic crisis, consumption in Europe decreased on average by 10.55% between the years 2008 and 2009, and in some Member States this reduction exceeded 20%; whereas other effects of the economic crisis have been a lack of access to credit for farmers and a strain on the public finances of the Member States, weakening their ability to provide co-financing.
- the share of CAP expenditure in the EU budget has steadily decreased from nearly 75% in 1985 to a projected 39.3% in the year 2013; whereas this represents less than 0.45% of the EU's GDP; whereas the decline in budgetary expenditure on market measures is even more significant – from 74% of all CAP expenditure in 1992 to less than 10% at present; whereas CAP expenditure has constantly moved away from market support and export subsidies to decoupled payments and rural development [Draft Report... 2010].

The Common Agricultural Policy (CAP) of the EU aims at responding to the public demand for a sustainable agricultural sector in Europe by enhancing the competitiveness of the agricultural sector, ensuring sufficient and secure food supply, preserving the environment and the countryside while providing for a fair standard of living for the agricultural community.

The CAP has undergone fundamental reforms over time, which demonstrates its proven capacity to respond to changing economic conditions as well as societal expectations and demands. In this process, the CAP has moved to a policy putting emphasis on market orientation and competitiveness, income

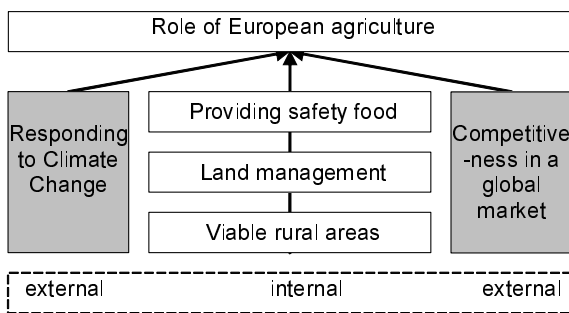


Figure 1. Role of the European Agriculture
Source: own illustration.

support, environment, and the development of rural areas. In these processes have been cleared some internal roles of the European Agriculture: to providing safety food, to managing the countryside and to creating and contributing the viable rural areas. Beside these elements should the CAP handle with the global market management (move to market orientation and less protection) and with the climate change (through the increasing frequency and severity of extreme weather events and through changes in the availability of water).

Public goods

Also called collective goods. These are a very special class of goods which cannot practically be withheld from one individual consumer without withholding them from all (the „nonexcludability criterion”) and for which the marginal cost of an additional person consuming them, once they have been produced, is zero (the „nonrivalrous consumption” criterion) [Johnson 2005].

Non-excludable characteristic is if the good is available to one person, others cannot be excluded from the benefits it confers and the other non-rival attribute is if the good is consumed by one person it does not reduce. In reality, these characteristics of non-excludability and non-rivalry may be exhibited to almost any degree, and indeed pure public goods are rare. This is because the potential sometimes exists to exclude – often at considerable cost – people who do not contribute to covering the costs associated with the provision of a particular public good, and certain public goods, such as popular cultural landscapes, can become congested, leading to a loss of enjoyment [Varghese 2009].

In the scientific literature, Cornes and Sandler [1996] have argued that a shortfall in the provision of public goods, such as clean water, biodiversity and a stable climate, compared to the scale of public demand, underpins the case for public intervention. The reason for this under-provision is because public goods are not supplied satisfactorily through the market and without a functioning allocation mechanism. The provision of public goods will remain below the level desired by society. This rationale for public intervention underpins a number of sectors or realms of public policy, such as the provision of basic health services, and law and order.

In certain respects, agriculture is like other economic sectors, with a large number of producers participating in a range of markets, such as those for food and raw materials for energy and industrial sector. In other aspects, it has certain characteristics, which means that the potential for

the provision of public goods in the field of the environment is widespread in this sector:

- there is a high level of contact with the environment by the production and by land management as shape cultural landscapes, improve the quality of water and soils, and the survival of wild species,
- agricultural production is spatially diffuse and occupies a large share of the European land area, leading to an appreciation on the part of the wider public of the close association between farming and the European countryside.

Public goods provided through European agriculture can take the form of physical entities – such as cultural landscapes or a specific habitat – or the form of services – such as resilience to flooding or fire. These stem from the interaction of farming practices, both past and present, with the natural world, biophysical conditions, and socio-cultural processes. In many regions of Europe, a range of second order economic and social effects depend on the existence of these public goods. The ecological integrity and attractiveness of rural areas are important contributors to feelings of social well-being and cultural identity, as well as underpinning economic activities such as tourism, recreation, and marketing of locally distinctive products.

Although public goods are often discussed in terms of desired outcomes, a good in a strict economic sense refers to a physical entity or service that is subject to an economic transaction. This specification is useful, as it distinguishes public goods from those by-products of certain agricultural activities which are beneficial, and which may well have public goods characteristics, but which do not require any financial support to ensure their delivery. However, for those cases where an allocation of resources is required to support the provision of the public good, the farmer needs an incentive to do so, and thus an economic transaction is required.

Under the conditions of a free market, private goods are supplied through market interactions, with supply and demand coordinated via a decentralized pricing mechanism. If there is a decline in supply or an increase in demand, the price tends to rise, and if demand declines or supply increases, prices tend to drop. The efficient functioning of this allocation mechanism is predicated on the ability of consumers to articulate demand for a given private good through their purchasing power, to verify their satisfaction after its consumption, and for suppliers to organise their factors of production in a way that allows them to respond to demand and to levy a charge for their product. This means that markets are efficient where there are defined property rights, low transaction costs and complete information.

Market mechanisms, however, do not function for the provision of goods with a high degree of publicness¹. A market cannot function as an allocation mechanism between suppliers and consumers in cases where consumers cannot be excluded from consuming the good and therefore have no incentive to pay for it. These circumstances are likely to lead to ‘free-rider’ behaviour and to the over-exploitation of the respective public good. The absence of an articulated demand means that the public good has no price. As a result of the defining characteristics of public goods, and the fact that they cannot be secured through ordinary market mechanisms, farmers have few incentives to provide them because they are not being paid to do so – leading to a situation of undersupply. In order to prevent the decline of public goods into the future, other allocation mechanisms are needed to steer resource use towards the provision of a given public good.

The main public goods provided by agriculture

The most significant public goods associated with agriculture in the EU do not all share the same underlying relationship with agricultural production. For certain public goods – such as particular species and habitats, agricultural landscapes and resilience to wildfire – their existence is inherently linked to certain types of agricultural activity and there are limited opportunities for them to be provided through alternative forms of land use. This inherent relationship exists because of the co-evolution of European landscapes and the adaptation of many species to agriculture over significant periods of time, such that there is a close interrelationship between these valued environmental public goods and certain attributes of the agricultural systems with which they are associated [Havlik et al. 2005, Hodge 2008].

¹ The degree of publicness determines the maximum number of people who are able to consume the public good. A public good which displays a high degree of publicness, such as clean air, is largely non-rival and no-one can be excluded from consuming it. This means that the number of people who can enjoy it is extremely large. Certain public goods exhibiting a medium degree of publicness are non-rival but there is a risk of congestion as the number of users increase, like the public parks.

Society's requirements for food, the provision of these public goods will continue to depend on those forms of agricultural activity which are typically less environmentally intrusive in nature, and thus on those management practices which tend to reduce the adverse effects of agricultural production.

In the section that follows, the most significant public goods associated with agriculture in the EU are discussed. These include environmental public goods, such as [Cooper *et al.* 2009]:

- agricultural landscapes,
- farmland biodiversity,
- water quality and water availability,
- soil functionality,
- climate stability – carbon storage and climate stability – greenhouse gas emissions,
- air quality,
- resilience to flooding and resilience to fire,
- social public goods, including rural vitality, food security and farm animal welfare and animal health.

The provision of environmental public goods in European agriculture is widespread but clustered around a number of farming systems and the practices employed within them. One element of ensuring the provision of these public goods can be considered conservationist, requiring the continued management of historically established landscapes and biotopes which have acquired particular value and are difficult to substitute. A second element is more dynamic, including the development and use of new methods of saving energy and reducing greenhouse gas emissions from agriculture.

The evidence reviewed here suggests that public good provision is most often associated with:

- certain systems of agriculture, particularly those that are extensive, where there is a coherent structure of linked practices which contribute to public goods provision in a holistic way, these are particularly important for the provision of biodiversity and landscapes,
- a valued suite of individual practices that may be deployed in a range of different production systems, including more intensive systems – some of these practices involve reductions in the use of inputs or the removal of land from production, as in the case of buffer strips,
- a strand of specific practices and systems which are associated with energy efficiency and reductions in greenhouse gas emissions – including practices associated with intensive livestock production.

The supply of public goods is not static, it changes over time. A range of factors influence agricultural production and land management in the EU, and hence the associated provision of public goods. These include market forces, macroeconomic conditions, policy drivers, technological change and increasingly, the impacts of climate change. In the absence of policy intervention and a direct incentive to farmers to provide public goods, these drivers of agricultural restructuring often lead to a loss of beneficial land management with implications for the provision of public goods [Nunez, Kaditi 2008].

The scale of public demand for environmental public goods also changes over time. As widely discussed in the academic literature, there is a range of interlinking economic, political, social, cultural and institutional factors that influence social preferences for the environment. These social preferences vary between individuals, as well as reflecting value systems embedded in national and regional cultures. As such, the scale of public demand relative to the provision of public goods is a dynamic relationship, as well as being geographically and culturally specific. The principal factors influencing the scale of demand and provision of public goods are depicted schematically in Figure 2.

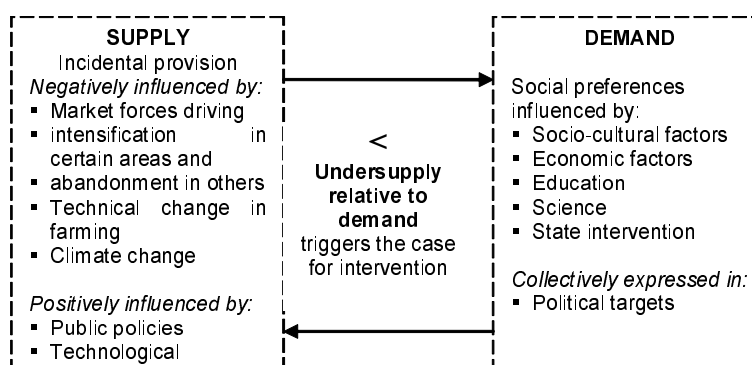
Assessing the scale of demand in Europe for the public goods provided through agriculture is difficult. This is due to the fact that the very characteristics of public goods – their non-rivalry and non-excludability – means that there are no markets for these goods, and therefore there is no formal mechanism outside the political process through which consumers as 'citizens' can express their demand for a given public good.

Conclusion

The need to provide public goods in Europe would be a valid and coherent justification for a future CAP. The challenge of encouraging this provision of public goods on the scale required to meet societal demand is considerable but the policy has several strengths for this purpose. The integration of the EU Sustainable Development Strategy (SDS)² on sustainable development into the CAP over the course of successive reforms provides sufficient scope for a wide range of policy actions affecting agriculture and environmental land management. In addition, the CAP provides a coherent European framework, taking account of common goals, the common market for agriculture and the need to maintain a broadly level

Figure 2. Factors influencing the supply of and demand for environmental

Source: based on Cooper, Hart, Baldock 2009.



playing field for farmers. It has the flexibility to take account of varying regional and national conditions without losing transparency if policies are well designed and administered [Why do... 2009b].

Confronted with the challenge of addressing the undersupply of public goods, the CAP would need to retain a range of instruments capable of addressing the wide variety of agricultural conditions in Europe and the full suite of environmental public goods.

At present, direct payments contribute to enhancing the economic viability of farming and serve as a foundation for more targeted measures pursuing the provision of public goods. However, linking those payments, through cross compliance to a robust regulatory baseline is considered essential in addressing environmental issues in the countryside. Regulatory demands are scheduled to increase over time, for example, as the implementation of the Water Framework Directive is taken forward, and any future agricultural policy will need to adapt to such changes in the legislative baseline [Cao et al. 2009].

The key challenges can be identified if we look ahead towards a revision of the CAP in which the focus on the provision of environmental public goods. These challenges are:

- giving more emphasis to the integration of environmental objectives at the heart of the policy: a consistent policy framework is needed to manage tensions in policy objectives and to ensure that an appropriate balance is struck between the economic, social and environmental dimensions of sustainable agriculture,
- establishing appropriate targets: with a focus on environmental public goods, it will be important to establish clear targets for the full range of public goods that relevant policy measures are intended to deliver,
- enhancing the effectiveness and efficiency of measures: selecting the policy measures required to achieve these targets at a European level requires that due attention is given to the need for measures to be both effective and efficient,
- improving implementation: the use of a range of policy measures in synergy can help to achieve better results; this requires a coordinated approach to scheme design and the fostering of increased institutional capacity at the Member State level, including the provision of advice and capacity building to farmers,
- effective monitoring and evaluation: the monitoring and evaluation of the impacts of expenditure under the CAP is critical to ensure accountability and to allow for improvements to be made in terms of the design and targeting of support; the Common Monitoring and Evaluation Framework (CMEF) for Rural development Policy provides a solid foundation in this respect,
- securing sufficient budgetary resources: calculations concerning funding requirements demonstrate the significant difference in the scale of funding estimated to be needed to achieve

² It builds on the Gothenburg strategy of 2001, in July 2009 the Commission adopted the 2009 Review of EU SDS. The strategy sets overall objectives and concrete actions for seven key priority challenges for the coming period until 2010, many of which are predominantly environmental: climate change and clean energy, sustainable transport, sustainable consumption and production, conservation and management of natural resources, public health, social inclusion, demography and migration, and global poverty and sustainable development challenges. [Mainstreaming sustainable... 2009a]

European environmental targets, and that currently available for those CAP measures targeted towards public good provision; securing sufficient budgetary resources for supporting the provision of public goods would appear to be a clear priority for the future.

In addition to meeting society's requirements for environmental public goods there are competing demands on land use in Europe which are likely to be exacerbated in future. Potentially substantial changes in land management can be expected to arise from a variety of pressures, with increasing intensification and the growth of the area under arable production a likely impact of some of these trends. Many will be in direct conflict with the provision of public goods and thus contribute to an increased risk of undersupply in those situations where there is insufficient political intervention.

Given that land is a finite resource, the provision of public goods associated with land use should reflect the social optimum in Europe, both at the present time, and also take into account the needs and requirements of future generations. What is considered to be in society's best interest will reflect common objectives for food, the environment, bioenergy and social and economic cohesion, but it is essential that all of Europe's priorities are assessed in a strategic and integrated manner, with full consideration given to the trade-offs that achieving these objectives may imply. Finally, not all of Europe's broader requirements arising from agriculture are met by land managers within the EU, which relies heavily on imports of food and other bio-materials. This underscores the need to consider the global pattern of land use and agricultural activity when thinking about agriculture's role in providing society with a stream of both public and private goods.

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Streszczenie

Wspólna polityka rolna UE jest w fazie znaczących zmian związanych z nową perspektywą finansową po 2013 roku. W procesie tym istotną rolę przypisuje się dobrom publicznym. Artykuł omawia zagadnienia środowiskowych dóbr publicznych w kontekście reform WPR.

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