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## **Multifunctional policy measures for multifunctional agriculture**

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# Multifunctional policy measures for multifunctional agriculture

## Abstract

While agricultural policies in Europe place ever greater emphasis on the importance of agricultures' multiple roles, it is difficult to find policy measures designed specially for multifunctionality. The aim of our study is to identify actual and preferred policy measures to improve or to maintain the multifunctional role of agriculture, or both. We used the applied policy Delphi method to interview 24 Finnish experts in order to map a preferred set of policy measures to truly enhance multifunctionality. The results indicate that Finnish experts prefer targeted measures based on different national, regional and local agricultural conditions, but may be unaware of the costs these targeted policies might cause.

**Key words:** Multifunctional agriculture, agricultural policies, Policy Delphi

**JEL classification:** Q18, H41

## Introduction

In Europe, many of the agricultural policy makers consider multifunctional agriculture the future of agriculture. The basic idea behind multifunctionality is that agricultural production provides not only food and fibre, but also different non-market commodities, with characteristics of externalities or public goods or both. In the broadest definition, these non-market commodities or elements of multifunctional agriculture include: the impact of agriculture on the environmental state of rural areas, rural landscapes, biodiversity on and close to farm land, the contribution of agriculture to the socio-economic viability of the countryside, rural employment, food safety, national food security, the welfare of production animals and the cultural and historical heritage of agriculture itself (EC, 1999a; OECD, 2001; Vatn et al., 2002; Yrjölä and Kola, 2001; Lankoski, 2003).

While the OECD (2003a) strictly defines multifunctionality through pure jointness in production, clear market-failure and pure public good characteristic, the EU's statement of multifunctionality is wider. According to the European Commission (1999a), 'agriculture is multifunctional because it is not limited to the sole function of producing food and fibre, but it also has a number of other functions. At the same time it is the sector taken as a whole which is multifunctional'. Yet, in the EC's view, agriculture provides *land-linked* services which are *mainly* of a public good character. Overall, agriculture must respond to consumer concerns, including those regarding food quality and safety.

In the latest CAP reform, agreed on in the summer 2003, the EU took a step towards maintaining and improving the multifunctional role of agriculture. This refers mainly to modulation and cross-compliance. Cross-compliance means that the single farm payment scheme introduced in the reform is linked to environmental concerns, animal welfare, food safety and quality with a requirement to maintain agricultural land in good farming condition. Correspondingly, the aim of modulation is to transfer funds from the first to the second pillar of the CAP, and through that to strengthen rural development within the EU (European Commission 2003).

This reform reflects the OECD's (2003a) view that 'most non-commodity outputs can be linked to the existence of a certain level of production, but not directly to the intensity of production. If a non-commodity output is linked not to production intensity, but to a certain level of commodity production, a policy that stimulates production intensity beyond this level will not affect the provision of the non-commodity output'. By decoupling its agricultural support, the EU

seeks to encourage more extensive agricultural production, and thus to ensure the production of non-commodity outputs, whilst decreasing the market distortions due to coupled agricultural support. The reformed CAP and its subsidies are, however, still based on historical production and support levels. The measures introduced in the reform remain somewhat unchanged. Thus, the CAP reform adds only little new in terms of a more direct relationship to multifunctional agriculture.

The WTO, however, acknowledged the CAP reform. The criteria agreed upon in the WTO General Council in the beginning of August 2004 for blue and green box measures for less trade-distorting support includes elements, already found in the latest CAP reform. These elements include direct payments based on fixed area or yields or both, or correspondingly on fixed livestock payments. The green box criteria accept that green box measures have no, or at least minimal, trade-distorting effects, effects on production, and take non-trade concerns into account. (WTO, 2004).

Until recently, research has focused mainly on the relevance and definition of multifunctionality as a policy option (OECD, 2001, 2003a; Yrjölä and Kola, 2001), but also on environmental and biodiversity aspects. Lankoski (2003) and Lankoski and Ollikainen (2003) have created a model for the optimal provision of agri-environmental externalities to develop a framework for targeted agri-environmental policies. Peterson et al. (2002) have related environmental policies to agricultural trade to derive an efficient set of policies for multifunctional agriculture in an open economy, and Vatn (2002) has focused on the consequences of multifunctional agriculture for international trade regimes, when public goods are interrelated to trade policies. Moreover, Vatn et al. (2002), and the OECD (2003b) have focused on transaction costs related to multifunctionally-oriented policies.

In their recent study, Lankoski and Ollikainen (2004) extended and re-examined their model by including rural viability valuation as a non-public good item to develop a general framework covering the broad definition of multifunctionality, and to show how agri-environmental policies should be reformed to include the aspects of multifunctional agriculture, that cannot be considered pure public goods.

Guyomard et al. (2004) have analysed and compared four agricultural income support programmes: an output subsidy, a land subsidy, and a decoupled payment with and without mandatory production, with respect to their ability to respond to multifunctional objectives of agricultural policies. The objectives considered included: the ability of agricultural policies to support farmers' incomes, the increase in the number of farmers, the decrease in negative externalities arising from non-land input use and, and the minimisation of trade effects. Their analysis shows that the four policy goals considered cannot be achieved with a single policy instrument, and that trade-offs exist among policy targets. In addition, decoupled income transfers without mandatory production are preferable to more coupled measures for supporting farmers' incomes and minimising trade effects. Yet, if policy makers pursue domestic objectives other than agricultural income support, this income support instrument should be supplemented with other measures targeted to other policy objectives.

In their recent study, Yrjölä and Kola (2004) studied consumer preferences and willingness to pay with respect to multifunctional agriculture. In their study, Finnish citizens were asked about the relative importance of multifunctional agriculture in its broadest definition. Food safety and welfare of production animals were most often considered as very important issues. On the other hand, the state of the rural environment was the second least often regarded as very important, and maintaining rural landscape was considered the least important element of multifunctional agriculture. Yet, society generally regards ensuring the viability and permanent settlement in rural areas, and sufficient production of wholesome and high quality food products, the key roles of agriculture.

This paper covers two main dimensions. First, we have asked experts to evaluate how effectively the current CAP, including Finland's national agricultural policy measures, is responding to objectives set for multifunctionality. Second, considering the results of Yrjölä and Kola (2004), we asked what kind of policy measures would be most efficient, keeping the consumer preferences in mind, to enhance and to benefit fully from multifunctional agriculture.

Our paper is structured as follows. The following section introduces the multifunctional elements of the current CAP as well as national measures in Finland; Section three presents methodological background; and our results appear in section four. The last section summarises major findings and discusses policy implications.

## **Multifunctional elements of the CAP**

Although multifunctionality of agriculture has received little attention until mid-1990s, some elements in the CAP have since 1970s improved multifunctionality, at least to some point. However, instead of being targeted directly on the basis of multifunctionality, these measures have been created as a response to the growing diversification of agricultural conditions through EU enlargements (from EU6 to EU15) and growing environmental concerns. Some national support systems have also been implemented to compensate for less sufficient agricultural conditions.

### *LFA-support*

As early as 1975, in response to growing differences in agricultural conditions, the EU introduced a support for Less Favoured Areas (LFA). This was the first measure introduced directly on the basis of equalising differences between agricultural regions. It was also the first acreage-based direct payment introduced in the CAP, although it includes headage based payments for livestock. The LFA support falls under the Second Pillar of the CAP, in that it is considered a structural development measure. The LFA scheme is targeted in particular to hilly and mountainous areas, Nordic zones, small islands and, under strict criteria, in zones where traditional farming plays a predominant role. The aim of the LFA scheme is to guarantee the continuation of farming in such areas, where natural conditions are less favourable for agricultural production and thereby, to maintain the rural population (EC, 950/97). According to Lowe and Whitby (1997), LFA support may have helped some farmers involved in low intensity farming to stay in business while its effects on the environment are less clear. Yet, in their evaluation, Agra CEAS (2003) points out that the LFA support scheme has failed to fully achieve its objectives. This is due mainly to the partially political nature of defining less favoured areas. Poor criteria and inconsistent definitions may have led to under-compensation in the most severely disadvantaged areas, while areas where the comparative disadvantage to non-LFAs is minimal or non-existent may have received over-compensation. On the other hand, the LFA scheme has affected on the provision of public goods concerning the countryside and the environment, though these effects are indirect, and thus form an inadequate basis for the scheme.

### *The environmental support scheme*

In 1992, the EU introduced MacSharry reform containing agri-environmental regulation currently known as the agri-environmental support scheme. To benefit the environment and the countryside, the scheme sought to discourage fertiliser use and plant protection, to encourage organic and more extensive farming practises, to reduce the proportion of sheep and cattle per forage area, to ensure the upkeep of abandoned farmland and to promote long-term set-aside of agricultural land (EEC, 2078/92). The scheme emphasises water protection, but also seeks to reduce the air emissions and risks from pesticide use, as well as to preserve rural landscapes. The environmental support aims mainly to compensate producers for increased production costs and

decreasing production on farms, which undertake measures aimed at reducing agriculture's load on the environment (EC, 1999b; Lowe and Whitby, 1997).

Agri-environmental payments are implemented through a series of programmes. Five basic mandatory measures apply to all farms, committed to environmental support: environmental planning and monitoring of farming, fertiliser base level settings for arable crops, plant protection, headlands and filter strips, and maintenance of biodiversity and landscape management. A sixth basic measure applies to livestock farms governing the handling of animal manure (including storage conditions, the taking into account of nutrient content in manure when fertilising, and detailed instructions for spreading manure). Farmers commit themselves to the scheme for five-year periods. In addition to the mandatory basic measures, each farmer has to select one additional measure. The measures available for crop farms include more precise fertilisation, plant cover during winter and reduced tillage on arable land, and farm biodiversity. Livestock farms have to select either one of these, or one of the following: reducing ammonia emissions from manure, promoting the welfare of production animals, and treating discharged washing water from the milking room. Farmers have to implement the selected additional measure in the first year after committing to agri-environmental support for five years (EEC, 2078/92; MTT, 2004).

The agri-environmental support scheme also includes special measures. Farmers can make contracts concerning the establishment and management of riparian zones, wetlands and sedimentation ponds, as well as other methods for treating run-off water, organic production, arable farming in groundwater areas, improving efficiency in the use of animal manure, maintaining traditional biotypes, promoting biodiversity, developing and managing landscapes, raising local breeds, cultivating local crops, and reducing acidity in certain regions. Such contracts for special measures are made for five to ten years (MTT, 2004).

### *CAP reform 2003*

Until the Agenda 2000 Mid-Term Review (or CAP reform 2003), direct payments served to compensate for farmers' losses due to lower prices. Yet, the latest CAP reform introduced a single farm payment scheme. The single farm payment is based on a reference amount covering payments for as many products as possible, including, e.g. arable crops, beef and veal and dairy, in a reference period. The single farm payment will be broken down into payment entitlements to facilitate their transfer, and each entitlement will be calculated by dividing the reference amount by the number of hectares. Farmers may use this agricultural land for any agricultural activity except permanent crops, and thus to adjust production in response to market situation (European Commission, 2003).

The two other major parts of the reform are cross-compliance and modulation. Compulsory cross-compliance will apply in order to achieve goals to be set in the fields of environment, food safety, animal health and welfare, and occupational safety in farm level. Yet, to avoid land abandonment and the environmental problems due to decoupling, all farms entitled to direct payments are also to be obligated to maintain all agricultural land in good agricultural conditions. Farmers receiving single farm payment or other payments under the CAP, who fail to comply with these standards, will be subject to a system of sanctions. These sanctions can, depending on the severity of the case, result in partial or full reduction of aid (European Commission, 2003).

The aim of the modulation is to strengthen rural development by extending the scope of currently available instruments for rural development. Modulation seeks to promote food quality, meet higher standards and foster animal welfare by introducing a series of measures available under the second pillar of the CAP. These measures include incentive payments to improve the quality of agricultural products and the production process, and support for producer group activities intended to inform consumers about supported the quality schemes. Member countries can choose whether to adopt to take these measures within their rural development programmes (European Commission, 2003).

## *Agricultural support and national measures in Finland*

Although Finland is a member of the EU and its Common Agricultural Policy, its less favourable agricultural conditions have forced Finland to implement some national measures to support its agriculture. About 58% of total spending on agricultural support in Finland is paid from the national budget while the EU finances 42%. The EU finances CAP support in full, but only partly funds the LFA, at 32%, and the environmental support, 55%. Since 2000, the whole agricultural area in Finland was defined as less favoured agricultural area, up from 85% since 1995. Yet, at the end of 2002, the environmental support covered 92% of the arable area of active farms in Finland.

Aid paid totally from the Finnish national funds includes, among some other measures, northern aid, national aid for Southern Finland, and a national supplement to environmental support (Table 1). These measures serve to secure the preconditions for Finnish agriculture in the different sectors and regions. The accession treaty set out the principles for establishing the level and regional distribution of national aid. The aid may not be used to increase production and the total amount of aid may not exceed the total support level prior to EU membership.

The northern aid is targeted to those areas lying north of and adjacent to the 62nd parallel. Northern aid consists of milk production aids as well as aid based on the number of animals and aid on cultivated area. Yet, to alleviate serious difficulties resulting from EU accession, Finland has had a possibility to apply national aids to Southern Finland. However, these difficulties are not specified in no greater detail, than that, due to improving competitiveness and increased farm size, such national aid would no longer be required in the future. Finland must negotiate with the Commission every few years on the use of this aid. The next review of the national southern aid scheme will take place in 2006. The national aid for crop production, paid from 1997 to 2003, was area-based, targeted namely for the most important arable crops and vegetables grown outdoors in Southern Finland. Since 2004, this aid is paid as a national supplement to the environmental support and is established relative (percent) to the environmental support for the crop concerned, and share must remain unchanged during the whole commitment period. The total amount of the supplement may not exceed a predetermined level (MTT, 2004).

Table 1. Agricultural support in Finland (in million of euro) 1995-2004 (MTTL, 1998, 2001; MTT, 2004).

	1995	1999	2000	2001	2003	2004*
<b>CAP-support</b>	263	276	382	435	456	502
<b>LFA</b>						
EU share	81	101	128	131	137	137
National share	192	195	286	291	286	286
<b>Environmental support</b>						
EU share	119	135	155	157	167	171
National share	120	135	121	124	139	141
<b>National measures</b>						
Northern support	136	280	354	355	359	389
National aid for Southern Finland			141	141	133	129
National aid for crop production		59	76	81	100	
National supplement to environmental support						60
Transitional aid	724	213				
Other national aid	34	20	19	13	16	16
<b>EU share of total support</b>	463	512	665	721	760	810
<b>National share of total support</b>	1206	902	997	997	1033	1018
<b>Total support</b>	1669	1414	1662	1718	1793	1828

\*estimate

Agricultural support is more important to Finland's agricultural income than to that of any other EU member country. Yet, the total amount of agricultural support in Finland in 2003 totalled 1 800 million euro, or 44% of the total return in agriculture.

## Methodology

We used the applied policy Delphi method to study the opinions of experts. Policy Delphi differs significantly, however, from other Delphi methods. According to Turoff (1975), 'the policy Delphi seeks to generate the strongest opposing views on the potential resolutions of a major policy issue'. While a conventional Delphi can serve as a method for making policy decision, the policy Delphi serves as a tool for analysing of policy issues. Raynes and Hahn (2000) introduce the policy Delphi as a systematic method for obtaining, exchanging and developing informed opinions on an issue. They suggest, however, that the policy Delphi should be used to develop consensus either for or against policy issues, while Turoff (1975) and de Loe (1995) argue that finding consensus is inappropriate for the policy Delphi.

According to de Loe (1995), the policy Delphi and conventional Delphi have very little in common. In addition to their very different purposes, they expect vastly different things from their subjects. When the conventional Delphi seeks to generate consensus among experts, the policy Delphi seeks to find information and options available for future policy decisions.

The purpose of the policy Delphi method is to identify different opinions, stemming from the different interests and background of the experts interviewed (Turoff 1975). A Delphi typically consists of one to several rounds of questionnaires providing a group of experts with information and questions. If the experts are interviewed more than once, the results from the previous Delphi rounds are used to design the questionnaire for the latter rounds.

Turoff (1975) suggests six steps for designing the policy Delphi:

1. Formulating of the issues: What is the issue under consideration? How should it be stated?
2. Exposing the options: Given the issue, what are the policy options available?
3. Determining initial positions on the issues: Which issues does everyone already agree upon and which can be discarded? Which issues lead to disagreement among the respondents?
4. Exploring and obtaining the reasons for disagreements: What underlying assumptions, views or facts do the individuals use to support their respective positions?
5. Evaluating the underlying reasons: How does the group view the separate arguments used to defend various positions, and how do they compare to one another?
6. Re-evaluating the options: Re-evaluation re-examines the underlying evidence and, the assesses of its relevance to each position taken.

Turoff argues that these six steps could be condensed into a few rounds. However, de Loe (1995) condensed these into two rounds by dropping out the fifth step of the process.

Delphi methods have been used in several fields of study. Rikkonen (2003) has evaluated future alternatives for Finnish agriculture. Horst et al. (1998) and van der Fels-Klerx et al. (2000) have assessed risk factors for various animal diseases using Delphi methods together with conjoint analysis. Wilenius and Tirkkonen (1997) have used Delphi in evaluating the future of Finnish climate policy, and Tapio (2002) in evaluating the prospects of climate and traffic in Finland. Moreover, Crithcer and Gladstone (1998) have applied the Delphi technique in the British electricity supply industry, to discover consensus among people who would not normally cooperate.

### *Survey design and the interviews*

Considering the many different frameworks in which Delphi and policy Delphi methods have been used, we decided to combine two essential parts in a one-round policy Delphi by sending a questionnaire beforehand and by interviewing the respondents at the time of collection. We used



an informative and structured questionnaire, which included also open questions. Due to the expert's different backgrounds and various levels of expertise in multifunctional agriculture, we provided the same background information to all respondents. We pre-tested and modified the questionnaire based on received comments and suggestions.

We arranged interviews beforehand and sent the questionnaire at least one week before the interview. In the interview we asked more precise reasons for respondents' answers and discussed the relevance of multifunctional agriculture. We conducted the interviews between December 2003 and March 2004.

### *Expert selection*

Respondents comprised 24 experts involved in research, administration, political parties and interest groups (Table 2).

Table 2. Area of expertise of respondents

	N	Percent
Research	10	41.7
Administration	5	20.8
Interest groups	4	16.7
Politics	5	20.8
<b>Total</b>	<b>24</b>	<b>100.0</b>

The experts interviewed were selected on the basis of multifunctionality: We attempted to find expertise in every dimension of multifunctional agriculture, including agriculture, rural, environment, animal welfare and consumer issues (Table 2).

Table 3. Background of respondents.

	N	Percent
Agriculture	15	62.5
Environment	3	12.5
Rural	2	8.3
Consumer	2	8.3
Animal welfare	2	8.3
<b>Total</b>	<b>24</b>	<b>100.0</b>

Because multifunctionality is still quite a broad concept that people interpret differently, we first asked respondents to evaluate their knowledge of multifunctionality. Seven of the experts interviewed considered themselves very familiar with multifunctionality, having previously worked with the concept (Table 4). However, 13 of the experts considered themselves familiar with multifunctionality to some degree, but had never worked with the concept. Four of the experts considered themselves unfamiliar with multifunctionality.

Table 4. Familiarity with the concept of multifunctional agriculture.

	N	Percent
Familiar	7	29.2
Familiar at some point	13	54.2
Not familiar	4	16.7
<b>Total</b>	<b>24</b>	<b>100.0</b>

During the interviews, however it appeared that also those who had not worked with multifunctionality in fact possessed adequate knowledge of the multifunctional role of agriculture, thus indicating their acknowledgement of the wider role of agriculture. Nevertheless, not all the experts agreed with the definition and principles introduced.

## Results

In the questionnaire we introduced multifunctionality in its broadest definition which included the environmental aspects, biodiversity on and close to farm land, the rural landscape, the contribution of agriculture to socio-economic viability and rural employment, the welfare of production animals, food safety and quality, and food security. The results presented in this section combine data from the structured questionnaire and the interviews.

### *Policies and measures for multifunctional agriculture*

During the interviews the respondents most often noted, that while agriculture clearly plays multiple roles, these roles differ between nations, regions and areas. Within the European Union, at least as many different aspects for multifunctionality exist as there are member countries, not to mention global differences. Moreover, one should realise that effective and common policy measures are difficult to find. Yet, the need exists to design and target policies based on different local conditions and needs, to fully benefit from and to enhance multifunctionality. These targeted policies should seek primarily to direct agriculture from intensive production to more extensive production practices, and thus to ensure sustainability in food production. While no consensus existed among the respondents, neither did any substantial correlation between respondents' backgrounds and their answers.

Respondents felt that, with the exception of the environmental support scheme, policy measures currently used in the Common Agricultural Policy failed to improve multifunctionality (Figure 1). While respondents noted that current policy measures, both common and national, contribute to maintaining agricultural production in the less favoured agricultural areas, they are inefficient in the provision of multifunctionality.

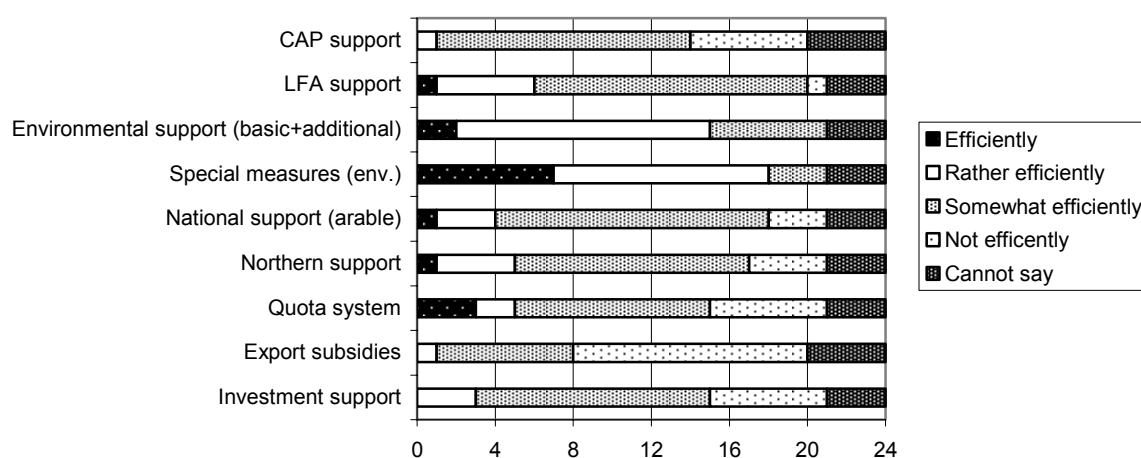


Figure 1. How efficiently do current policy measures enhance multifunctionality?

Measures targeted to environmental concerns, especially additional and special measures in the current environmental support scheme were considered efficient with respect to multifunctionality (Figure 2). In the current environmental support scheme, these special measures include, among some others, wetland establishment, establishment and management of the riparian zones, and biodiversity-enhancing measures. Overall, coupled support measures, as well as input-tied subsidies, were considered inefficient. Thus, the more targeted the measure is, the more it is considered efficient. These results indicate that the efficient use of different agricultural policy measures requires clear targeting to achieve its objectives.

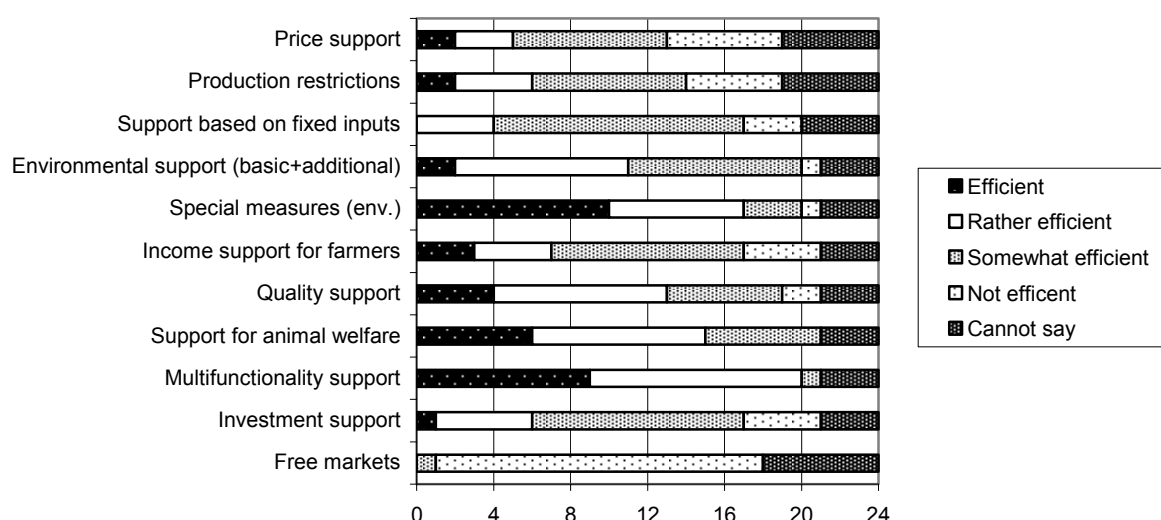


Figure 2. How efficient would different policy measures be in enhancing multifunctionality as a whole?

The multifunctionality support (Figure 2) was introduced as a measure that one could design directly on the basis of the elements of multifunctionality. This kind of measure or combination of supplementary measures was considered efficient if the actual basis were in objectives set for multifunctionality.

To combine measures into future multifunctionality-enhancing policies, we asked respondents to freely introduce measures on the basis of varied elements of multifunctionality. A vast variety of measures were introduced. Yet, there can be found similarities among responses and different respondents introduced same measures. These measures appear in Table 5 in the same form as introduced.

Table 5. Suggested policy measures for multifunctional agriculture\*

<b>Environmental load</b>
<ul style="list-style-type: none"> <li>Directed support for targeted fertiliser use</li> <li>Decoupled support with cross-compliance (e.g. keeping agricultural land in good farming conditions)</li> <li>Specialised treatment for sensitive areas (e.g. leaching areas)</li> <li>Farm territorial contracts</li> <li>Improving organic farming</li> <li>Discouraging monotonic farming through improving rotation</li> <li>Extensive farming</li> <li>Border strips</li> <li>Improving new environmentally friendly technologies</li> </ul>
<b>Biodiversity</b>
<ul style="list-style-type: none"> <li>Targeted measures for sensitive areas</li> <li>Setting more freedom for individual judgement</li> <li>Improving organic farming in sensitive areas (e.g. near the largest water areas)</li> <li>Special measures in the environmental support scheme</li> <li>Improving the efficiency of current measures by integrating larger areas into the environmental support scheme</li> <li>Auction methods</li> <li>Improving contracting in non-commodity output production</li> <li>Regionally differentiated measures</li> <li>Compensation payments for taking care of the agricultural landscape</li> <li>Maintenance of diversified agricultural production</li> <li>Balancing production with consumption</li> <li>Bans on GMO-products</li> <li>Regulations for pesticide use</li> <li>Organic farming</li> <li>Border strips</li> </ul>

**Rural viability**

- Decoupled base support for every farm
- Support for less-favoured areas based on grassland and arable land
- Targeted measures improving quality, the environment and animal welfare
- National measures to compensate for growing production costs
- Integrating different sector policies
- Farm territorial contracts
- Differentiating measures for a single farm (i.e. taking into account the differences between areas, small and large farms)
- Taking into account the structural conditions on every farm and area
- Single farm payments
- Creating wider rural policies
- Ensuring operational preconditions for continuing farms
- Allowing structural adjustment in the whole agricultural sector
- Guaranteeing high prices for agricultural products
- Supporting ethical production practises
- Improving secondary industries in the rural areas
- Tax privileges directed in agriculture
- Tax privileges for off-farm labour use
- Increasing the types of services in rural areas

**Animal welfare**

- Terms for decoupled support
- Incentives created through agricultural policy
- Investment support
- Relinquish maximum efficiency goals
- Focusing on animal welfare when directing investment supports
- Education, advisement, enlightenment, guidance
- Markets
- Animal units per farm
- Labour per animal
- Supporting grazing
- Improving animal healthcare systems
- Regulation on production conditions
- Restrictions on farm size
- Allowing free area and movement for animals

**Food safety and quality**

- Cross-compliance
- Quality policy
- Supervision
- Incentives
- Supervision in the processing stage
- Farm level self-management; failure leads to sanctions
- Quality over low price
- Regulations for good farming practises
- Traceability
- Supervision in the feed processing
- Domestic production
- Quality pricing

**Food security**

- Keeping agricultural land in good farming conditions
- Maintaining agricultural production
- Stockpiles for agricultural products
- Supporting non-food production
- Hand-to-hand markets for agricultural products
- Ensuring profitable agriculture
- Maintaining as many farms as possible

\*Agricultural landscape and measures introduced are integrated in other aspects

The results presented above show that contracting, targeting, and thus creating incentives for more extensive farming practises form the basis for multifunctionality-oriented policies. Respondents often considered farm territorial contracts most efficient in improving multifunctional agriculture as a whole. These contracts could be designed directly on the basis of functions and services needed, and differentiated with respect to production structures and conditions in specific areas. Support based on ethical production is closely related to these contracts. The idea is that if a farm fails to fulfil clearly defined terms and conditions related to environmental, animal welfare, food quality and safety issues,

it will not be entitled to agricultural support. At the same time, there could be an incentive to improve production conditions beyond the level stated in these terms.

In addition, there emerged several combinations of measures not directly involved in contracting. An overall base support, with cross-compliance, would ensure a base income for agriculture in the less-favoured agricultural areas, and thus would secure the provision of non-commodity outputs. Yet, respondents often considered restrictions on fertiliser and pesticide use, and encouragement on grazing to be elements of the most efficient combination of multifunctionality-oriented policy measures.

Opposing views, however, also exist. A few respondents argued that multifunctionality can most efficiently be improved by using coupled support measures such as price support. Price support would most efficiently maintain at least current production levels, and would help farmers to compensate for growing production costs. Some experts preferred wider support for rural industries, which would improve new services in rural areas. With respect to overall rural viability, food safety, and quality, respondents also preferred a creation of local markets for these elements and services, and thus for agricultural products as well.

The experts also expressed their distinct views on restrictions, controlling and incentives. While some respondents saw that efficient provision of multifunctionality requires structural adjustment in the agricultural sector, others argued that maintaining structure with as many farms as possible would be inevitable. In addition, some suggested incentives and individual judgement, while others favoured greater restrictions and controlling. In designing policies, however, the experts prefer clearly justified restrictions and efficient controlling.

### *Transaction costs*

More than half of our experts considered transaction costs rather difficult, arguing that they have insufficient expertise to evaluate these costs. In addition, no additional information on transaction costs emerged from the interviews.

The experts regarded controlling, and system conduct and management as the most essential contributors to transaction costs in current agricultural policy as a whole (Figure 3). Application process and fulfilling the terms and conditions were also evaluated to incur these costs.

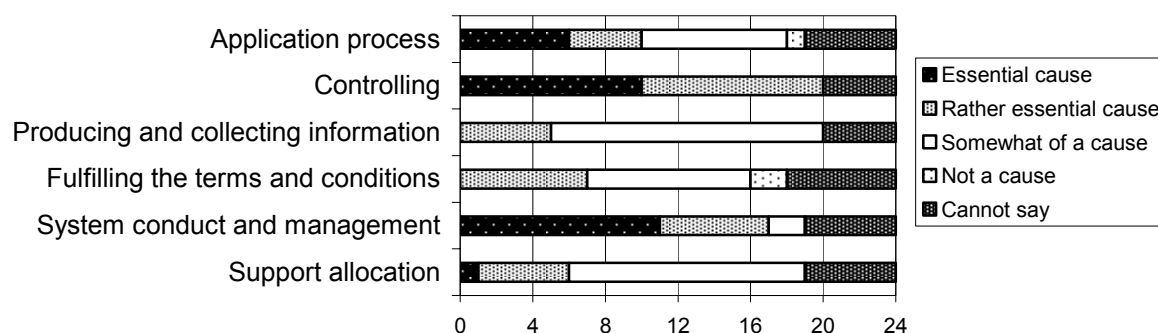


Figure 3. What contributes to transaction costs in the current policy system?

Controlling and information-collection and -delivery incur transaction costs both to farmers and administration, while system conduct and management incur costs mainly to administration. Application process was regarded to incur cost mainly to farmers. The respondents most often attributed transaction costs, affecting both farmers and administration, to excessive high bureaucracy and detailed controlling.

The experts believed the environmental support scheme and the additional and special measures to incur more transaction costs than do the other current policy measures. When scaled from one to

nine, (1 represents a high transaction cost and 9 a low transaction cost), the mean for the environmental support scheme is 2.2 and 3.2 for special measures. Also CAP support (4.1) and export subsidies (4.4) were seen to incur significant transaction costs. National support measures, however, receives a rather high values indicating low transaction costs.

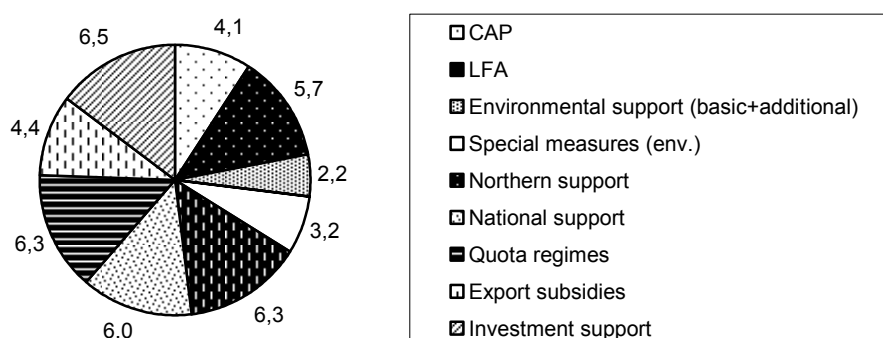


Figure 4. What elements of the current support scheme incur the greatest transaction costs?

Respondents found that the CAP reform introduced in 2003 will also contribute to transaction costs. As a whole, transaction costs are expected to increase due to the reform. The experts found that transaction costs incurred in the application process will remain at the current level or even increase after implementation of the CAP reform. However, the collection and production of information as well as controlling were considered to become more costly. Although respondents expected transaction costs to increase due to the reform, they argued that in the long run, the reformed CAP may be less costly than the current CAP.

While the respondents were, to a large extent, unable or unwilling to identify the causes for transaction costs, we can draw only a few conclusions. Respondents quite well realised that targeting and differentiation of policies increases transaction costs. This increase results from increased implementation, controlling and monitoring of policies. However, respondents could not determinate to whom these costs would incur: farmers, administration or both. Comparison of these results to the policy measures section presented earlier shows that while willing to introduce more targeted and differentiated measures, the experts interviewed may be unaware of the costs these policies might cause.

## Discussion and policy implications

Our results show that experts regard multifunctionality of agriculture as an important element for future agricultural policies. To fully benefit from and to enhance multifunctionality, however, wider co-operation between different sector policies, and consequently, co-operation between all actors in the whole supply chain are required. The environmental aspects of multifunctionality are more an issue in agri-environmental policies, rural viability and employment broadens the scope to rural policies and vice versa, while food safety and quality are more an issue for the whole supply chain. The experts regard role of agriculture in the provision of these non-commodity outputs as important. However, it is not self-evident, that agriculture is the most efficient provider for these outputs.

Regionally and locally targeted measures are needed to fully benefit from multifunctional agriculture. Respondents most often regarded farm territorial contracts as efficient policy measures to enhance multifunctionality. Overall, different combinations of measures, with one targeted measure for one object, seem a preferred option. However, some coupled support measures were also considered efficient, indicating that the experts considered elements of multifunctional agriculture closely linked to the level of agricultural production. More targeting incurs more transaction costs. Our experts were unfamiliar with transaction costs and, consequently, incapable of evaluating the costs of

more targeted policy measures. In general, however, it is quite clear that targeted measures will be more efficient in achieving clearly defined policy objectives.

The current CAP and its measures, while they somewhat improve multifunctionality, are incapable of guaranteeing the full benefits of multifunctionality, neither in the EU nor nationally in Finland. With the exception of decoupling and cross-compliance, the reformed CAP does not meet the objectives set for multifunctionality. Moreover, the measures included in the CAP should be redesigned on the basis of different agricultural, regional and local conditions within the EU.

We found no clear correlations between the experts' answers and their backgrounds. Moreover, respondents' opinions seem to stem from personal interests rather than from the interests of their organisations. Yet, those with a strong background in agriculture were more conservative and detailed in their answers than were those with a background other than agriculture, but no clear distinctions emerged between respondents. Politicians seem more unanimous than the others, despite their widely varied backgrounds, while the opinions of researchers and administrators seem to differ somewhat more considerably. Reaching consensus or finding more detailed background information on the experts', would require another Policy Delphi round. However, we used the results presented in this paper in the farmer survey, carried out during the summer of 2004. After comparing these results to those received from the farmer survey, and to those from the consumer survey presented by Yrjölä and Kola (2004), we will have comprehensive information to evaluate how well different agricultural policy measures respond to societal demands. This forms the basis to design policies in a way that the overall welfare in society could be improved. It is quite clear, that more effective policies are needed, however, to truly enhance multifunctionality, provided that it represents widely accepted policy goals in both Finland and the EU, as well as in relation to the WTO negotiations.

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