

**Report on implementability of Agri-Environmental
Targets in Finland**

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Helsinki, March 2011

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1. Introduction

The purpose of this report is to describe the challenges faced in implementing agro-environmental targets in Finland. The report is one of the national reports compiled for the Work Package 6 of the Baltic Compass Interreg project in order to share lessons learned on the implementability of agri-environmental targets. The project covers the riparian countries of the Baltic Sea.

Finnish agriculture is traditionally based on a large number of small family farms, and many farmers still work outside the farm or engage in supplementary activities on their farm. However, there has been a considerable structural change in the agricultural sector since the 1960's. The change was accelerated after Finland joined the EU in 1995. The number of farms has reduced from about 330 000 in the early 1960's through 77 320 in 2001 to 63 716 in 2009, and the average farm size has grown from 28 ha in 2000 to 35 ha in 2009 (MMM, 2007, MTT, 2010, Tike, 2009). The most dramatic change has occurred in livestock production, especially milk production. The number of dairy farms in 2009 was only 37% of the number in 1995 (MMM, 2007; Tike, 2010). At the same time, the average size of farms in terms of livestock numbers has grown, reaching about 25 cows per farm in 2009 (MTT 2010).

Finland has rich water resources with abundant lakes and rivers, and relatively clean groundwater resources. According to the EU classification of Finnish surface waters, 57% of the lake area and 52% of the length of rivers is in good or excellent condition, but only 36% of the surface area of coastal waters is in good condition (Finnish Environment Institute, 2008). The water flow in several rivers is considerably low, which makes them very sensitive to pollution. In addition to loading, variations in weather conditions and water volumes also have an impact on water quality. The most common problem with surface waters is eutrophication caused by excess nutrient load.

Due to effective control of point sources, agriculture has become the single-most important source of phosphorus and nitrogen loading in watercourses in Finland. It accounts for 68% of phosphorus and 53% of nitrogen loading stemming from human activities (Finnish Environment Institute, 2008). In order to control the eutrophication the Government has set targets to reduce this nutrient load. These targets and the policy measures intended to implement the targets are described in Section 3.

2. Methodology

This report is based on a review of key policy documents concerning Finnish water protection, national legislation related to water protection and control of nutrients in agriculture, the Rural Development Programme for Mainland Finland 2007-2013, and other relevant documents related to Finnish agriculture or agri-environmental schemes. Some facts were checked through expert interviews.

The report was initially prepared in Spring 2010 and further revised and updated in Spring 2011. The section on the challenges faced in implementing agro-environmental targets was subject to a consultation process during Spring 2011. All relevant stakeholder groups will be further invited to express their views and contribute to the report.

3. Agri-environmental targets and policy measures

Water protection policy

In Finland the EU Water Framework Directive (2000/60/EC) is transposed to national legislation through the *Act on Water Resources Management (1299/2004)*. The EU target of preventing the degradation of water quality and reaching a good quality for all water bodies is further defined in the national Water Protection Policy Outlines to 2015, which were approved by the Finnish Government in 2006 (Ministry of the Environment, 2007).

Within HELCOM, Finland, together with the other riparian countries around the Baltic Sea has committed to absolute national nutrient reduction targets in the HELCOM Baltic Sea Action Plan (BSAP) (2007). For Finland, these targets are 150t phosphorus and 1200t nitrogen. These targets are periodically revised based on more harmonized pollution data and the river basin management plans (applicable for the EU countries). The BSAP reduction targets exclude the Archipelago Sea for which separate national targets and measures have been set.

The current programme is the fourth national water protection policy programme in Finland. The previous Water Protection Targets to 2005 issued in 1998 set a target for agriculture to reduce nutrient loads by 50% from the mean estimated level of 1990-1993 (Ministry of the Environment, 1998). This target was not met, and experts concluded that more effective water protection measures are needed in agriculture (Finnish Environment Institute, 2006).

The Water Protection Policy Outlines to 2015 set the reduction of nutrient loads causing eutrophication as the key objective for water protection. A clear target is set for agriculture to reduce nutrient loads by a third of the mean loads in 2001-2005 by 2015 (Ministry of the Environment, 2007). A further long-term reduction target is to halve the nutrient loads from agriculture as soon as possible.

The national targets mentioned above supported the preparation of seven Regional River Basin Management Plans approved in 2009. In the regional plans the targets were specified and focused to fit the needs and special conditions of each region. They cover the whole area of Mainland Finland and fulfil the obligation set in the Water Framework Directive for regional management plans. There are 5 national and 2 international river basin districts in Mainland Finland (Figure 1):

1. Vuoksi River Basin District
2. Kymijoki – Gulf of Finland River Basin District
3. Kokemäenjoki - Archipelago Sea - Bothnian Sea River Basin District
4. Oulujoki – Iijoki River Basin District
5. Kemijoki River Basin District
6. Tornionjoki International River Basin District shared with Sweden
7. Teno, Näätämöjoki and Paatsjoki International River Basin District shared with Norway

The autonomous province of Åland Islands forms a separate River Basin District (8), and the provincial government manages it.

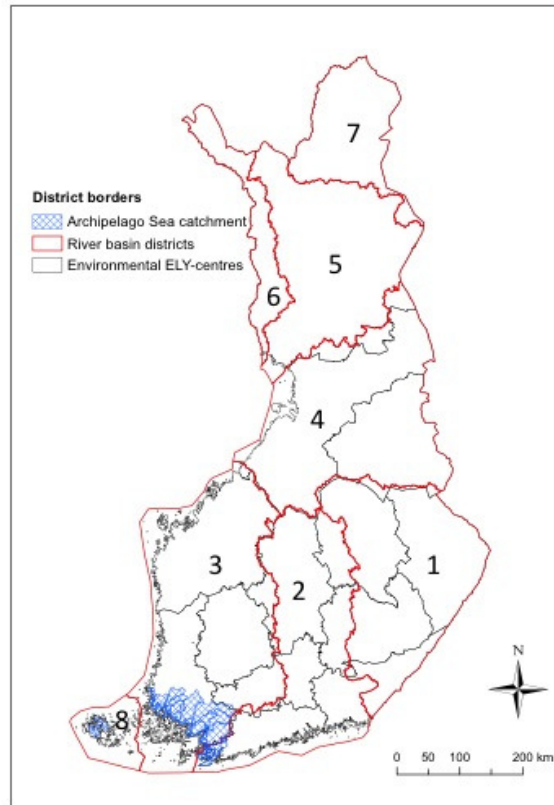


Figure 1. The River Basin Districts in Finland, and the Archipelago Sea Catchment Area (Finnish Environment Institute, 2011).

In February 2011 the Finnish Government approved the national Programme for Implementation of River Basin Management Plans 2010-2015 (Ministry of the Environment, 2011), which draws together measures defined in Regional River Basin Management Plans. The measures are expected to assure an existing or future good state in 90% of the lake area and 70% of the river length by 2015. Reaching a good state in coastal waters and some rivers will be more challenging, and the final target in some areas is set for 2027. Agri-environmental measures will be the main tool in reducing the nutrient load from agriculture also in the future. Measures to improve its efficiency are proposed.

Control of nutrient discharge from agriculture

One policy measure aimed at decreasing nutrient discharges from agriculture is the implementation of the EU Nitrates Directive. Finland has designated the entire territory as nitrate vulnerable zone by which the stipulations of the Directive apply for agricultural installations across the country. To implement the requirements of the Nitrates Directive, the Government issued a decree on the restriction of discharge of nitrates from agriculture into waters (931/2000). It contains provisions on good agricultural practices, storage of manure, spreading and allowable quantities of fertilizers and silage liquor, among others. All farmers should follow these regulations, regardless of their participation in the agri-environmental scheme.

In practice about 90% of Finnish farmers and 95% of the utilized agricultural area is covered by agri-environmental payments, and thus is subject to stricter regulations regarding fertilization and manure management. Agri-environmental payments are considered the most important policy measure in controlling the nutrient load from agriculture. They form part of the Finnish Rural Development Programme, which is briefly described in the next section.

Also the environmental permit procedure based on the *Environmental Protection Act (86/2000)* and *Environmental Protection Degree (169/2000)* contributes to the control of nutrient discharge from manure. Building or changing a larger animal shelter requires an environmental permit. Environmental permits regulate, amongst other things, the storage and management of manure.

Measures under the Finnish Rural Development Programme 2007-2013

The Finnish Rural Development Programme (RDP) 2007-2013 has a total budget of about 68 thousand million EUR. It allocates most of the funds (about 81%) to Axis 2, ‘Improving the environment and the countryside’ (Ministry of Agriculture and Forestry, 2007, Figure 2). Axis 1 and Axis 3 (‘Improving the competitiveness of the agricultural and forestry sector’ and ‘The quality of life in rural areas and diversification of the rural economy’) are allocated about 8% and 7% of the funds, respectively. The funds for Axis 4, ‘Leader’, comprise 4% of the total budget.

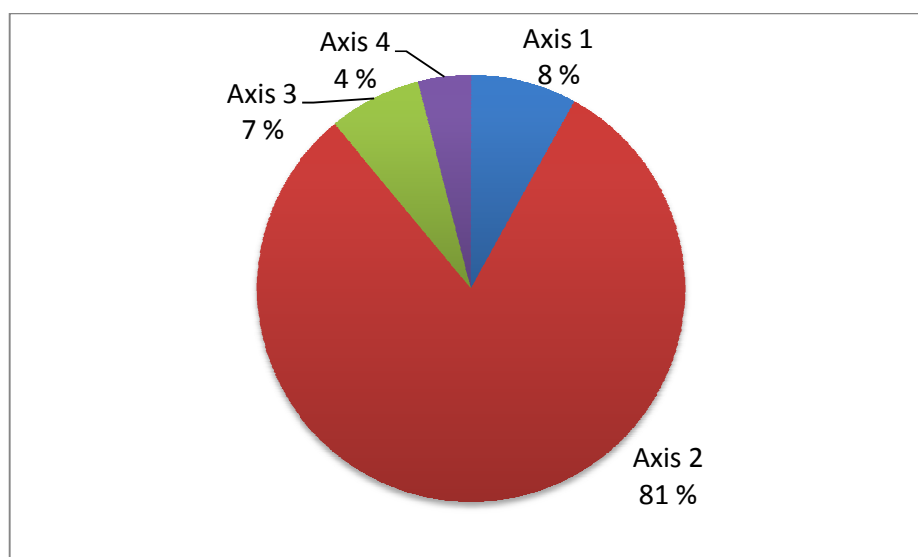


Figure 2. Preliminary allocation of funds in RDP 2007-2013, public funding (Ministry of Agriculture and Forestry, 2007).

The RDP allocates the largest proportion of Axis 2 funds to Measure 214, agri-environmental payments (44%, 2 370 million EUR). However, the natural handicap payments in mountain areas (Measure 211) and payments in other areas with handicaps (Measure 212) together take about 54% of the Axis 2 funds. Allocations for the remaining measures are substantially smaller. The natural handicap payments are an important measure for Finland since they provide compensation for the harsh conditions and elevated production costs in agriculture that are caused by the northern location. Natural handicap payments contribute to one of the

key objectives of Axis 2 measures: maintaining valuable, open, cultivated agricultural landscapes as well as meadows and pastures (Ministry of Agriculture and Forestry, 2007).

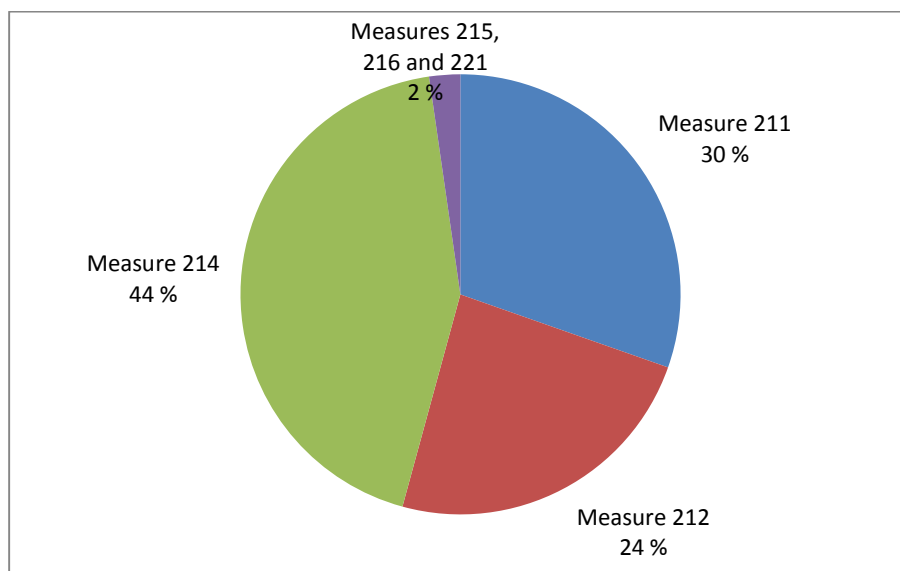


Figure 3. Preliminary allocation of funds of Axis 2 according to RDP 2007-2013 (Ministry of Agriculture and Forestry, 2007).

Another key objective of Axis 2 is reducing the environmental load from agriculture to the soil, surface waters, groundwater and air by promoting environmentally friendly production methods (Ministry of Agriculture and Forestry, 2007).

Agri-environment payments

In Finland agri-environment payments are divided into basic, additional and special measures. All farms participating in agri-environment schemes are required to implement the basic measures. Farmers may select additional measures according to the area and activity type (for example, horticultural farms are not required to select additional measures). Special measures are contract-based, more demanding measures. In order to be eligible for a special measure a farmer must first engage in the basic and additional measures. Finland has a particularly high proportion of water protection measures in the agri-environment scheme in comparison to many other EU countries (Berninger, 2011). Box 1 gives a general outline of the water protection measures in Finland.

The ex-ante evaluation of RDP 2007-2013 predicts that the most important effect of agri-environment measures will be a long-term reduction of the environmental load in water bodies. Reaching even minor positive trends in optimising the use of nitrogen and phosphorus fertilisers as well as animal manure is challenging, and an important goal for the coming years. The regional adjustment of water protection measures is a particular challenge in developing agri-environment schemes.

Box 1. Water protection measures in the Finnish agri-environmental schemes

Basic measures

- Environmental planning and monitoring of farm practices
- Fertilisation of arable crops
- Fertilisation of horticultural crops
- Headlands and filter strips

Additional measures

- Reduced fertilisation
- More accurate nitrogen fertilisation on arable crops
- Plant cover in winter and reduced tilling
- Plant cover in winter
- Intensified plant cover in winter
- Extensive grassland production
- Spreading of manure during the growing season
- Nutrient balance
- Cultivation of catch crops

Special measures

- Establishment and management of riparian buffer zones
- Management of multifunctional wetlands
- Arable farming in groundwater areas
- More efficient reduction of nutrient load
- Runoff water treatment methods
- Incorporation of liquid manure in the soil

4. Actors engaged in implementing agro-environmental targets

A broad set of implementing actors from different sectors of society is involved in implementing the agro-environmental targets in Finland. This section describes the roles of different actors and the co-operation and consultation processes related to River Basin Management Plans and the Rural Development Programme.

Public authorities

The main implementation responsibility of agro-environmental targets falls under two ministries, the Ministry of the Environment and the Ministry of Agriculture and Forestry. Water resources management and the Rural Development Programme and thus also the responsibility for agri-environment payments, are under the Ministry of Agriculture and Forestry. Implementation of the Water Framework and Nitrates Directives, and environmental permits are under the Ministry of the Environment. In addition, the Ministry of Employment and Economy leads regional development and Centres for Economic Development, Transport and the Environment (Figure 4).

Other national level agencies engaged in the implementation of agro-environmental targets are the Agency for Rural Affairs in charge of agri-environment payments, and the Finnish

Environment Institute as the expert body supporting the implementation of the River Basin Management Plans.

Finnish administration is relatively de-centralized, and many tasks are given to either regional or local authorities. Thus the main responsibility for the River Basin Management Plans lies with the Centres for Economic Development, Transport and the Environment. Regional State Administrative Agencies and Municipalities issue Environmental Permits, and the Centres for Economic Development, Transport and the Environment supervise and monitor them. Municipalities, together with Regional Councils, have a key role in land-use planning guiding, for example, which areas are used for agriculture (Figure 4).

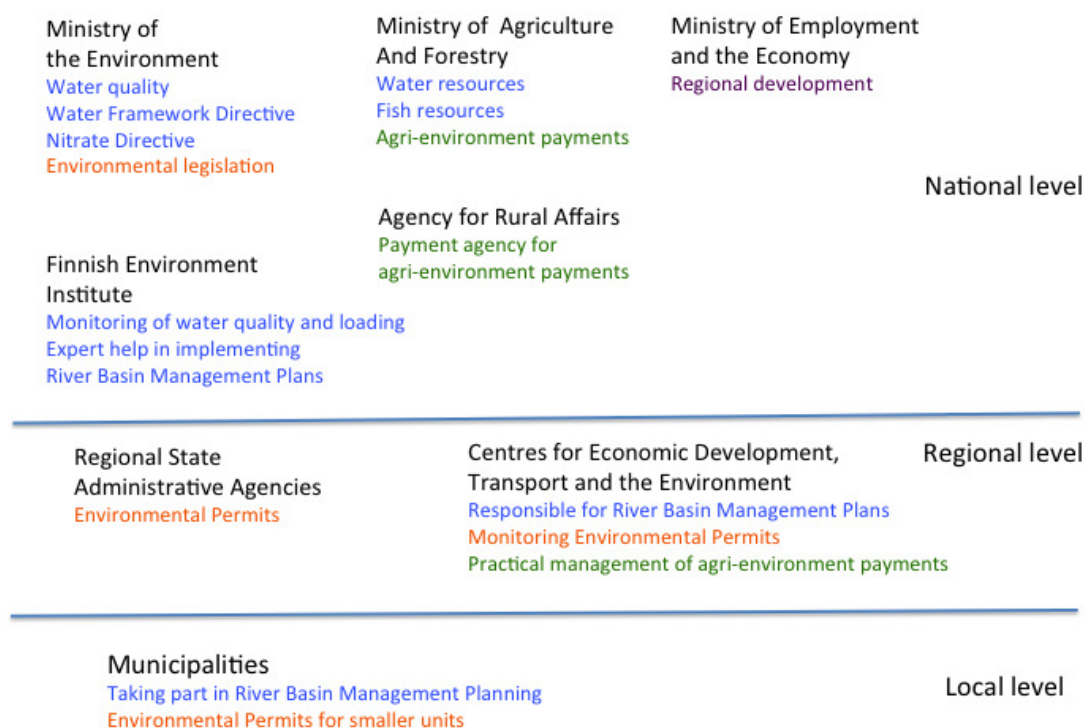


Figure 4. Implementing agencies of agro-environmental measures at the national, regional, and local levels. The tasks marked in blue are related to water resources, green refers to agri-environment payments, purple to regional development, and orange to environmental permit procedure.

Research agencies and universities

Various sector research agencies are involved in the work concerning implementation of agri-environmental targets. The Finnish Environment Institute (SYKE) monitors the state of the environment and loading of water bodies, and is an expert organization in questions related to water protection or other environmental issues. Agrifood Research Finland (MTT) conducts research related to agriculture and food production. MTT coordinates the follow-up study on the effectiveness of the agri-environmental measures in 2007-2013, conducts research on

alternative manure management methods, and compiles statistics on nutrient balances. Finnish Game and Fisheries Research Institute (RKTL) conducts research on fish resources.

Universities conduct both basic research on agriculture, water ecosystems, economics, rural sociology etc., and applied research on environmental problems like eutrophication. The University of Helsinki is involved in the follow-up study on the effectiveness of the agri-environmental measures in 2007-2013.

Cooperation groups and consultations

Regional cooperation groups are formed for each River Basin District for River Basin Management planning. Members represent various actors in the region like municipalities, private enterprises, universities, water protection associations, and NGOs. New plans are under preparation, and comments will be sought from the public in two consultation processes taking part in 2012 and 2014. During the previous consultations, the participation of citizens not represented by NGOs was limited.

The Rural Development Programmes are prepared in working groups with representation from various organizations. The current agri-environment scheme was prepared in a working group with a representative from three ministries, the Finnish Environment Institute, regional authorities, research organizations, producer and advisory organizations as well as environmental organizations (Ministry of Agriculture and Forestry, 2007). The draft programme was circulated for comments and it was also available for the public on the internet. The Ministry of Agriculture and Forestry received almost 100 opinions on the draft agri-environment scheme.

Actors directly related to farming

Farmers play a key role in reducing nutrient discharge from agriculture. With their management practices they have a direct impact on the quantity of nutrient leaching and erosion from the fields. As the minimum standards are not sufficient to control the eutrophication of the Baltic Sea, voluntary measures are important. Especially in order to apply for the special agri-environment contracts farmers need to be especially motivated.

The Central Union of Agricultural Producers and Forest Owners (MTK) is an interest organization for Finnish farmers, forest owners and other rural actors. MTK educates farmers in water protection issues, provides grants for agricultural water protection activities, and participates in various projects that promote water protection at a practical level.

ProAgria is a cooperative providing agricultural advisory and planning services. Its expertise includes environmental plans and analyses of the nutrient content of soils and manure as well as calculating nutrient balances.

Environmental organizations and other NGOs

Various environmental organizations play a role in agro-environmental policy. They participate in various working groups, write statements and opinions as well as raise public awareness. The Finnish Association for Nature Conservation (SLL) published in 2010 its own Baltic Sea Programme, which includes many suggestions for the reduction of nutrient load

from agriculture. SLL has regional offices and local environmental associations who play an active role in regional and local settings. WWF Finland launched a campaign for the protection of the Baltic Sea in 2009. It coordinates the annual environmental competition of the Baltic Sea region farmers since 2009. The Finnish winner is sought in cooperation with MTK. Birdlife Finland mainly focuses on questions related to biodiversity, but it participates in a coalition of NGOs working in cooperation on agro-environmental issues. Other participating organizations are SLL, WWF, Rural Women's Advisory Organisation, and Hunter's Central Organization.

5. Will the targets be met?

The effectiveness of the agri-environment measures implemented in 2007-2013 is assessed in a follow-up study financed by the Ministry of Agriculture and Forestry, and conducted by Agrifood Research Finland, the Finnish Environment Institute, University of Helsinki and Finnish Game and Fisheries Research Institute. The study focuses on the environmental and farm-level impacts of the agri-environment payments, and suggests improvements to increase the effectiveness of the agri-environment scheme.

According to the follow-up interim report the measures with the highest success in reducing nutrient loading on waters are the basic measures 'fertilisation of arable crops' and 'nature management fields', and the additional measures of 'plant cover in winter' and 'reduced fertilisation' (Aakkula *et al.*, 2010).

The follow-up results show that when measured by nutrient balances, the nutrient loading potential of agriculture has steadily decreased for both nitrogen and phosphorus (See Figures 5 and 6 for latest results on nutrient balances). The reduction has been especially prominent for phosphorus balance. The observed reduction in nutrient surplus is primarily due to decreased use of mineral fertilisers. The sales of mineral fertiliser per hectare cultivated land decreased from about 93kg N and 16kg P in 1995 to about 67kg N and 5kg P in 2009 (MTT, 2010). The yield per hectare did not decline during this period. The phosphorus content of the soil in some plots is still very high due to historical accumulation following high levels of mineral fertilization from the 1960's to the beginning of the 1990's (Ministry for Agriculture and Forestry, 2011).

Instead, there are indications that nutrient leaching from manure from large animal production units is becoming a more serious problem. The current trend that farms and regions specialize more often in either livestock or plant production makes the recycling of nutrients from manure more difficult. There is a clear need for more efficient nutrient recycling (Aakkula *et al.*, 2010).

In spite of the reduction in nutrient loading potential, there is no clear indication of a reduction of the nutrient load in watercourses in all regions. The phosphorus load has decreased in most regions, but the nitrogen load has increased. These results are based on water quality data until 2006, and they don't tell about the effects of the current agri-environment scheme. They indicate, however, that meeting the targets of reducing the nutrient load by a third by 2015 will be challenging, especially for nitrogen (Aakkula *et al.*, 2010).

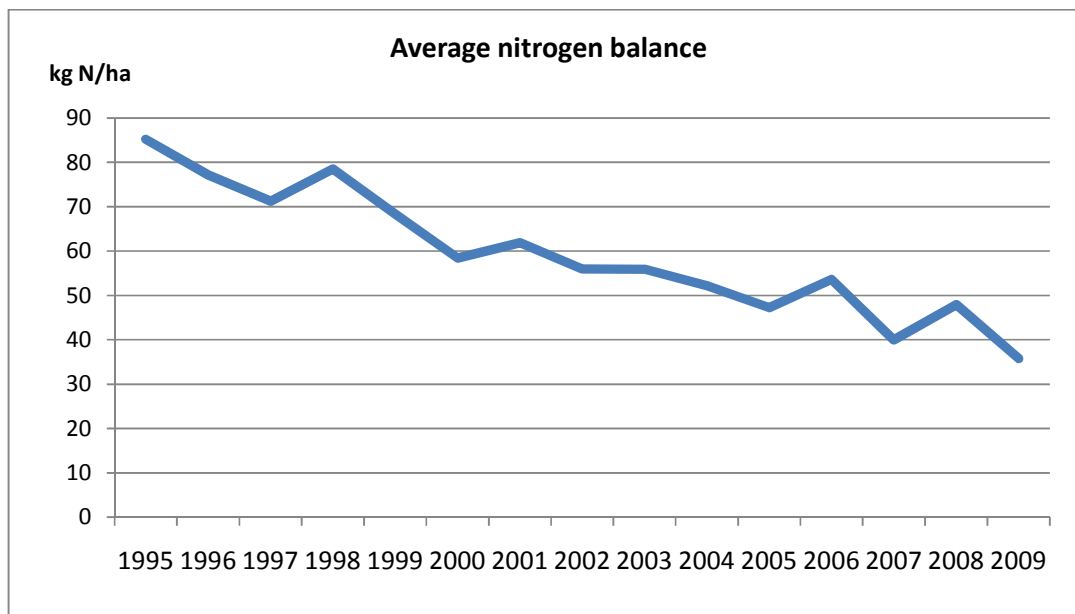


Figure 5. Average nitrogen surplus kg N/ha from 1995 to 2009 (Ministry of Agriculture and Forestry, 2010).

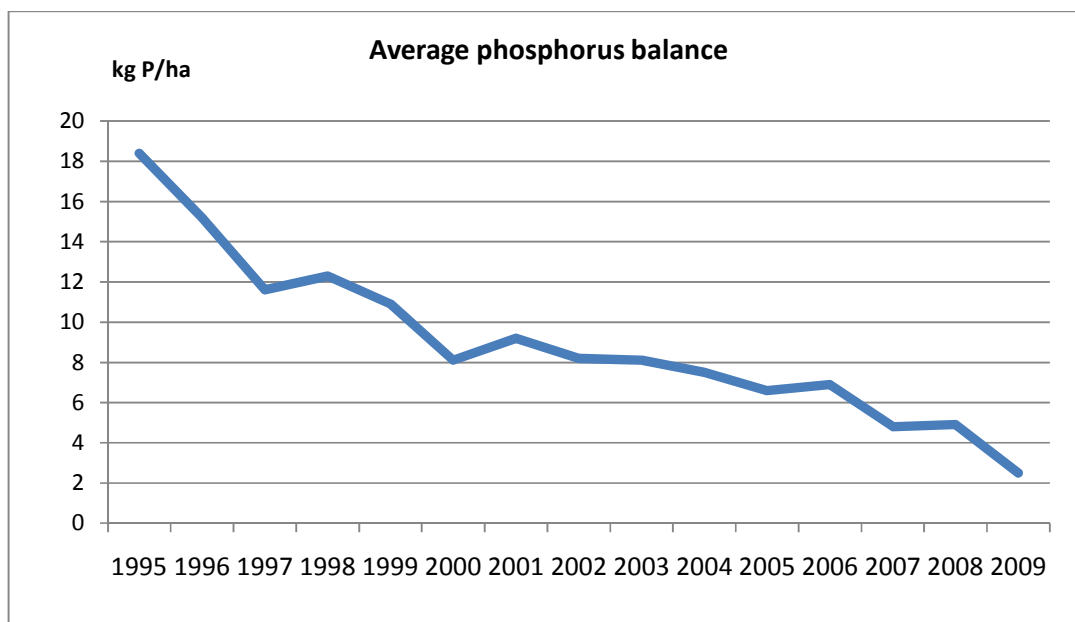


Figure 6. Average phosphorus surplus kg P/ha from 1995 to 2009 (Ministry of Agriculture and Forestry, 2010).

More education, extension and research is needed in order to adjust the fertilization and animal feeding according to the specific local conditions and the physiological need of animals (Ministry for Agriculture and Forestry, 2011).

The follow-up report concludes there is a need to adjust and customise the objectives, measures and support levels of the agri-environment scheme regionally, by production sector, and also considering different parts of individual farms. This would mean putting more emphasis and directing more resources on the special measures (Aakkula *et al.*, 2010).

The buy-in from farmers of the special measures buffer zones and multifunctional wetland has been well below the targets set for both number of contracts and the area covered (Ministry of Agriculture and Forestry, 2010). This may be explained at least partially by the heavy and bureaucratic planning procedure required for these measures (Hagelberg, 2009). More efficient extension services are needed for the implementation of these measures, and easier procedures should be developed for the next planning period.

6. Discussion on the expected changes into the CAP and RDP

According to the official view of the Finnish Ministry of Agriculture and Forestry, the Common Agricultural Policy (CAP) should continue to ensure agricultural production in all regions of the EU, and the total Community funding for agriculture and rural development should stay on the current level. Maintaining the current structure of two pillars is justified, the first pillar comprising the EU-funded single payment scheme and market support, and the second pillar the co-funded rural development measures. The Ministry stresses the importance of the funding under the second pillar of the CAP for ensuring balanced development of rural areas, and states that funds transferred from the first to the second pillar through modulation should be transferred permanently to the second pillar (Ministry of Agriculture and Forestry, 2009).

The Ministry of Agriculture and Forestry further states that the Member States should be able to define the measures used in rural development based on their own needs and special conditions. It is also important that both the areas and the level of payments for less favoured areas are based on objective criteria and calculations concerning the natural handicap, and that there is no artificial ceiling for the payments. The criteria to be applied must reflect the differences in the production conditions caused by the different natural conditions (Ministry of Agriculture and Forestry, 2009).

Concerning the agri-environmental scheme, the Ministry states that it must be maintained, but it must be further developed and focused more clearly to ensure better effectiveness of the measures. Priority areas include water protection and reducing nutrient loading of marine areas, mitigating climate change and preserving biodiversity. Improvement of the energy self-sufficiency of the Community, and promoting bioenergy production should also be considered (Ministry of Agriculture and Forestry, 2009).

The Finnish rural network promotes co-operation between different rural actors in questions related to rural development. It is coordinated by the Ministry of Agriculture and Forestry. The rural network consulted the participating actors on their views of the EU agricultural policy after 2013 and its implementation. Finnish Federation for the Animal Welfare Associations (SEY), The Finnish Association for Nature Conservation (SLL), Finnish Food Safety Authority (Evira), National Council of Women in Finland (NJKL), Birdlife Finland (BLF), and six local action groups (LAGs) stated their views, which are summarized below. Agriculture is considered important in maintaining a viable countryside and a secure supply of safe food as well as ecosystem services. The organizations engaged in nature protection and animal welfare (SLL and BLF) criticize the current CAP for its poorly targeted tools, and expect the agricultural policy as well as agricultural support payments to be more closely linked to environmental challenges. Extension services should be improved to better disseminate results of current research projects. The actors more directly engaged in agriculture (NJKL and LAGs) stress the need for dismantling bureaucracy in rural

development and agricultural support payments. Agricultural production should be maintained also in less favoured areas (Rural Network, 2010).

Both the Ministry of the Environment and Ministry of Agriculture and Forestry seem to agree that future agro-environmental payments should be tied to the achieved environmental benefit/impact. This has also been suggested in the TEHO project final report (Lillunen *et al.*, 2011). The challenge with this approach, apart from monitoring the impact, is that it may lead to homogenisation of the applied measures, limiting the support to the measures with the most obvious and verifiable environmental impact. Researchers and policy actors have suggested agri-environmental auctions as one way of increasing the efficiency of agri-environment payments. Auctions could help to achieve more environmental benefit with the same resources (Iho and Lehtimäki, 2010).

The TEHO project (2008-2011) tested in practice various water protection measures, and organized discussions on the future agri-environment scheme. In the closing seminar of the project on March 30th, 2011 one of the key messages was that farmers believe in voluntary measures and need more face-to-face extension and advisory services on environmental management of their farm. From farmers' points of view environmental policy should be persistent, not changing every time there is a new government.

The TEHO project has identified issues that should be taken into account in planning the new agri-environment scheme. There is consensus across actors that some kind of basic measures common to all farmers should be maintained in the new agri-environment scheme, but that these could be different from the current system. The basic measures should be combined with focused, environmentally efficient measures: the right measures to the right place. The bureaucracy should be reduced and the new system should be simpler. Sanctions should be fair and reasonable in order to prevent farmers from not selecting a measure in fear of sanctions. The payment could also be based on the environmental service produced instead of the cost as it is in the current system (Lillunen *et al.*, 2011).

7. Challenges faced in implementing agro-environmental targets

Reaching the target set by the Finnish Government to reduce the nutrient load from agriculture by a third by 2015, and to halve it in the long term is a big challenge. Also, reaching a good state in coastal waters is particularly challenging in the area of the Archipelago Sea. Nutrient balances for both phosphorus and nitrogen have steadily reduced during the last decades, but this positive development does not yet show in the state of water bodies. Thus more efficient and better focused actions are needed.

Co-operation is a key success factor in environmental management related to agriculture. The TEHO project has shown that different actors may learn to act together and after working together may also have surprisingly similar goals in agricultural water protection. The big challenge is to spread this positive co-operation to other areas, and reach more actors.

Taking care of the land productivity is a key factor in efficient nutrient use, and thus environmental management in agriculture. Rented fields cause problems since the rental contracts are short, in the Teho project area from 2 to 3 years. Short contracts do not motivate farmers to take care of the land.

The agri-environment payments are considered the main tool in the implementation of agri-environmental targets in Finland. It is well justified since about 90% of Finnish farmers

participate in the agri-environment scheme. The agri-environmental measures have contributed to a reduction in the use of mineral fertilizer to better fit the needs of cultivated plants. However, exceptions used in the phosphorus fertilization limits when fertilization is based on manure only, and not considering the organic nitrogen content of manure, increase the nutrient loading potential in areas with a high concentration of animal production.

The agri-environment measures are rather uniform in all farms, and their effect is based on small steps taken by many farmers implementing basic and additional measures. The follow-up results and the current discussion show that the small steps are not enough to guarantee a reduction in nutrient discharge and a 'good state' in coastal waters. Special actions should be focused on vulnerable regions, regions with a high nutrient content in the soil, and regions with a heavy concentration of animal husbandry. Agri-environment payments in the form of special contracts together with efficient extension services are needed.

The buy-in from farmers of the special measures buffer zones and multifunctional wetlands has been below the targets. The amount of payment is considered sufficient, but the heavy bureaucracy in the application procedure has been a serious inhibiting factor. Stakeholders have made a general request of lightening the bureaucratic load of both rural development and agricultural support payments.

Limited resources in environmental administration due to the state efficiency programme form an administrative challenge. No specific funding has been provided for the implementation of the Water Framework Directive. Another administrative challenge is that the roles of various ministries and the Finnish Environment Institute in the implementation of the Water Framework Directive are not clearly defined, which causes problems in administrative guidance. Moreover, the River Basin Districts don't follow the borders of Centres for Economic Development, Transport and the Environment (Figure 1, p. 5). It is thus more difficult to produce information for the River Basin Management Plans, but on the other hand, the process increases co-operation across regions.

In measuring the effect of policies, it is important to maintain a systematic monitoring framework. Currently the environmental monitoring system is not able to monitor the impact of agro-environmental measures on water quality and thus the link between measures and the nutrient discharge or water quality targets is not verifiable. This is partly because the current EU RDP monitoring framework does not require evaluation of environmental impact of measures. In the current monitoring system, there is a further discontinuity in water quality assessment between inland and coastal waters. On the other hand, uncertainties in the classification and nutrient loading data as well as impact assessment methodology do not allow monitoring of very exact targets.

Gaps in knowledge exist on the share of the natural washout in the total nutrient load. The information used in Finland is based on measurements made mainly on forested areas. Also monitoring of the nutrient load from agriculture is limited. There are more areas under monitoring in forestry than in agriculture although agriculture is the most important source of nutrient load.

The motivation of citizens to participate in River Basin Management Planning has been relatively low, partly due to the quality of public information produced. The challenge is to provide more concrete and locally interesting information describing different opinions on the issues in hand.

A major challenge remains in the governance and policy drafting processes. Special working groups have operated over the years with the task to revise the agro-environmental payment scheme in the Finnish RDP's. Both interest groups and ad-hoc stakeholders have been consulted in these groups and specific proposals have been developed. However, proposals developed outside these working groups are very rarely passed on to the working group and for further policy revision procedures.

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