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Warsaw Agricultural University

# WFD and Agriculture Linkages at the EU Level

# Final Paper about Co-operation and participation at the interface of EU Agricultural and Water Policies

**02/05/2006**

**Final Version**


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The Water Directors endorsed the report during their meeting in Salzburg on 1-2 June 2006.

# Foreword

As a result of a process of more than five years of discussions and negotiations between a wide range of experts, stakeholders and policy makers, the Water Framework Directive (or the Directive 2000/60/EC) of the European Parliament and of the Council established a framework for European Community action in the field of water policy. The Directive, which entered into force on the 22nd of December 2000, sets a framework for the protection of all waters with the aim of reaching a "good status" of all community waters by 2015.

The latest reform of the EU Common Agricultural Policy (CAP) in 2003 increased the opportunities for the implementation of the Water Framework Directive (WFD). A working document prepared by the Environment Directorate General of the European Commission highlighted a number of opportunities where the CAP can help achieve the WFD objectives (European Commission, DG Environment, 2003). However, achieving these objectives remains a challenge. Acknowledging this, the Water Directors, who are the representatives of the EU Member States administrations with overall responsibility on water policy, agreed in June 2004 to take action in the context of a Common Implementation Strategy (CIS).[1] To this aim they established an EU Strategic Steering Group (SSG) to address the issues of interrelations between CAP and WFD. The timeframe for the SSG work is short, given the tight WFD timetable (developing draft River Basin Management Plans by 2008, achieving the ecological status objectives by 2015) and the timing of CAP developments, notably the new European Rural Development Regulation which is to cover the period from 2007 to 2013.

The Strategic Steering Group (SSG) on WFD and Agriculture is led by the UK and the Environment Directorate-General of the European Commission with technical support from the Directorate-General for Agriculture and Rural Development. The aim of the group's work, which met for the first time in April 2005, is to identify the issues relating to agriculture which affect a Member State's ability to meet WFD objectives. The group will also put forward suggestions on how to best manage the risk of not meeting these objectives, taking into account the opportunities of the reformed CAP. There is also a role for the group to consider the potential impacts of achieving the WFD objectives upon agriculture, and the effects this would have on policy development and decisions.

As one step, the focus of the SSG is on preparing a report on Co-operation and participation at the interface of EU Agricultural and Water Policies. Ecologic and Warsaw Agricultural University (WAU) have been commissioned to prepare this report in the context of the 6th Framework Programme for Research project "WFD meets CAP – Opportunities for the Future".[2] This report about co-operation and participation uses information from:

- the output of the SSG on WFD and Agriculture activities and discussions that have taken place since April 2005;
- the replies to the Commission Questionnaire on WFD and Programmes of Measures that was sent to the Water Directors represented in the CIS process;

[1] The main aim of this strategy is to allow a coherent and harmonious implementation of the WFD. The focus is on methodological questions related to a common understanding of the technical and scientific implications of the WFD.

[2] EC Contract no.: SSPE-CT-2005-006618 CAP&WFD.

- the Defra activities on the preparation and arrangement of the UK conference on Water Framework Directive and Agriculture, held on September 20-21, 2005 in London, and the conference outcome; and
- the activities on the preparation and arrangement of the Austrian technical conference "CAP & WFD – Opportunities for the Future" held on March 02-03, 2006 in Vienna.

Furthermore, the report builds on the input and feedback from a wide range of experts and stakeholders that have been involved through meetings or electronic communication media.

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## Background

1. A number of sectors contribute to the pressures which Member States need to take into account in determining how to achieve the WFD aim of 'good status' of all waters by 2015. Agriculture is among the most significant of these activities. Command-and-control approaches have achieved only limited success in controlling pollution from agriculture. New approaches are emerging.

2. The WFD establishes a framework for the protection of all waters, but it also establishes a framework for participation and co-operation, one of the pivotal elements of the concept of integrated water resources management. This framework is built along three lines: information, consultation and active involvement. It allows for the integration and consideration of the views, needs and interests of water users and of those affected by water management planning.

3. The current CAP and its upcoming Rural Development provisions also include a strong framework for co-operation between different stakeholder groups on many different issues and levels.

## Participation and co-operation – a holistic view

4. It is of outmost importance to ensure that all parties are properly informed at the beginning of a co-operation process. The information must contain all important aspects - including all positive and negative expected consequences. Only well-informed stakeholders will have the capacity to make a useful contribution to the overall participation and co-operation process.

5. As a general rule participatory processes need to be open to all stakeholders which have a vested interest in the respective issue, irrespective of their resources or powers.

6. Involved stakeholder groups differ in terms of thematic focus, degree of organisation, type of contribution and level of action (local, regional, national, international). The local level has to deal with the concrete implementation of plans and measures, the higher levels with the establishment of frameworks and overarching policies. Linkages between these levels in a co-operation process do not necessarily exist.

7. A careful selection of instruments and participatory activities is required for the establishment of participation and co-operation at different levels. Decentralised approaches allow tailor-made, solution-oriented activities but also require a certain degree of collaboration and co-ordination.

8. Training, advisory services and education on agricultural and water management issues form a pivotal element for information, raising awareness and the establishment of co-operation.

9. Timing is key in planning and initiating stakeholder processes. Careful planning is essential to avoid stakeholder fatigue.

10. Experiences from both policy fields throughout the EU-25 offer a multitude of feasible approaches. The transferability of success stories needs to be investigated further.

## Different objectives, yet several topics to co-operate on

11. Even if the CAP and the WFD have different objectives, co-operation between both the agricultural and the water sector can be established on various issues.

12. With regard to the development and maintenance of control rules and measures for example, a close co-operation between stakeholders involved in water and agriculture

management in Member States can help establish an economically efficient system in terms of administration and reporting (shared databases WFD and CC control purposes).

13. The development of farm advisory systems to support the implementation of the cross-compliance requirements and standards should be carried out in the framework of a co-operation between agricultural and water authorities and institutions; communication and dissemination are important elements of such advisory systems.

14. Co-operation among farmers, water services and competent authorities on the selection of cost-effective measures as well as the development and implementation of water pricing systems is crucial to mitigate conflicts and social hardships to farmers but also to reach WFD objectives.

## Conclusion

15. While experience from past activities in both policy fields indicate that participation and co-operation are key factors for a successful implementation in these two policy areas, future efforts will have to focus on transferring the lessons learned in each of the field to benefit the implementation in the other.

16. The potential synergies that could arise from a better concentration of co-operative and participative efforts in both areas could substantially increase the momentum of policy implementation at the interface of CAP and WFD.

17. Bringing the message to the farmers is one key component for successfully establishing water protection activities on the ground. Several cases show that only if farmers feel responsible for achieving the environmental objectives, will they actually undertake actions in this field, even if this causes a financial burden. The best solutions can be developed “around the kitchen table” giving the opportunity to create win-win solutions.

18. Consequently, it is necessary to involve the agricultural sector in the development of River Basin Management Plans already in an early stage. Thereby all levels have to be considered. Co-operations between the environment administration and the agriculture/rural development administration on the national level are needed as well as between local water managers and farmers. This is “all level” approach is particular important in cases of big scale and /or transboundary River basins.

19. Fostering the participation of stakeholders in decision-making processes will lead to better planning decisions and thus improve the acceptance of future measures.

# 1 Introduction

Numerous human activities adversely affect the quality and quantity of available water resources in Europe, including the construction of dams and canals, large irrigation and drainage systems, changes in land cover in watershed areas, high inputs of chemicals from industry and agriculture and the depletion of aquifers. Agriculture is among the most significant of these activities, and agricultural practices are responsible both for the depletion and the contamination of Europe's surface and groundwater resources (Herbke et al., 2005).

However, in addition to exerting pressures, agriculture can also play a positive role in respect to water resources and related ecosystems. For example, the preservation of farming activities in mountain and hill zones can ensure the maintenance of a positive land management in these areas, which possibly contributes to the prevention of floods and landslides and, by decreasing the rapidity of peak run-off of waters, to a better regulation of the flow pattern and level of the surface water bodies downstream (European Commission, DG Environment, 2003). Further, the agricultural sector has an additional strong incentive to reduce the pressures on water bodies, since clean water is essential for agricultural production.

Even if such positive effects exist, the negative aspects prevail and the number of conflicts between competing uses and actors has rapidly grown, particularly after the sequence of relatively dry years. In addition, the agricultural policy of the EU is today faced with the introduction of the Water Framework Directive (WFD) which requires the “good status” for all waters, bringing in major changes for farming. More particularly the WFD requires the introduction of the principle of cost recovery, the Polluter Pays Principle (PPP) and the use of pricing of water as a recommended instrument for reducing water use and water pollution which might result in even more conflicts between the agricultural and water sectors (Bazzani et al., 2002).

Further, command-and-control approaches have achieved only limited success in controlling pollution from agriculture. New governance approaches are emerging, which involve voluntary co-operation between the main actors, water suppliers, farmers and public authorities, responsible for the sustainable management of water resources (Brouwer et al., 2003). Central governments, local authorities and environmental agencies become increasingly sensitive to the need for greater public participation in their day-to-day activities (WWF, LUPG and SNM, 2005).

Due to the strong linkage between agricultural activities and water protection, there is an obvious necessity to look for synergies in present agricultural and water policies in order to solve existing and prevent upcoming conflicts. Addressing problems of deterioration of quality and quantity of water bodies related to agriculture will require multidirectional activities. The general aim should be to achieve win-win situations, where the desired level of agricultural production is attained (or maintained) in parallel with the objectives of water resources protection, both in terms of quantity and quality. Against this background, there is a need to identify possible issues and options for **co-operation** between the **environment stakeholders/administrations** and the **agriculture stakeholders/administrations** on the national level but also between **farmers** and **water managers** at the local level to generate a better mutual understanding.

This paper aims to contribute to a better comprehension of the role such co-operation can play in complying cost-effectively with European legislation - in particularly the EU Common Agricultural Policy and the Water Framework Directive - and in achieving a sustainable agriculture. It focuses mainly on the co-operation between administrations and stakeholders, but several aspects mentioned are also relevant for the establishment of co-operations between the different administrations responsible for the WFD implementation and the CAP.

# 2 Legislative Provisions – A Framework for Co-operation

The WFD and the CAP both contain specific provisions for enhancing co-operation among different actors. The following sections will give an overview of the main requirements with regards to co-operation and participation in the framework of these two policies. A list of topics to co-operate on can be found in chapter 4.

## 2.1 General Overview of the WFD in view of Participation

The involvement of all relevant stakeholders in water management is one of the pivotal elements of the concept of integrated water resources management (IWRM) as it allows for the integration and consideration of the views, needs and interests of water users and those affected by water management planning. The WFD clearly caters to this paradigm and is one of the first EU environmental directives to include public participation as an explicit requirement, therefore also reflecting the requirements of the "Aarhus Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters".[3]

Public participation (PP) is referred to in Preamble 14 and 46, Article 14 and Annex VII A (points 9 and 11) of the WFD. Preamble 14 and 46 stress the need and the importance of sound information policy and the active involvement of the public. Preamble 14 underlines that the success of the WFD directly depends on a comprehensive involvement of the public. Preamble 46 highlights the importance of timely information to ensure public participation.

The core public-participation provision of the WFD is Article 14, referred to as "Public Information and Consultation". Three levels of participation are mentioned in this article – information, consultation and active involvement – which are modelled after the first two pillars of the Aarhus Convention. In this agreement, the term public participation refers to initiatives by authorities reaching out to the public and offering opportunities for getting involved. Alternatively, activities can also originate from the stakeholders themselves claiming their right to have a voice.

On a conceptual level, it is furthermore necessary to differentiate between two different understandings of the public: the general public and organised stakeholder or interest groups. Public participation activities must be tailored to address these groups according to their specific interests and capacities. The following sections will provide more details on the three different levels of PP.

As a first step, **information** provides the basis for all further forms of participation, as only well-informed stakeholders will actually have the capacity to make a useful contribution to the overall process.

With regard to **consultation**, the following detailed provisions are given by the Directive. In three rounds (December 2006, 2007 and 2008), the Member States are required to publish specific documents on the river basin management planning process. In each round the public needs to be given the opportunity to comment in writing within six months. Member States have to provide additional background information upon request. For this purpose, contact points and procedures have to be pointed out in the river basin management plan (Annex VII A.11). Moreover, Annex VII A.9 of the WFD requires that the management plan document the measures taken to inform and consult the public, the results of the consultations, and the respective changes made.

[3] This UNECE Convention was adopted on 25th June 1998 in the Danish city of Aarhus at the Fourth Ministerial Conference in the "Environment for Europe" process.

The highest level of participation mentioned by Article 14 is **active involvement**. This is considered a higher level of participation than consultation and "shall be encouraged" by the Member States. Active involvement implies that interested parties are invited to actively contribute to the planning process, discuss the issues and contribute to their solution. There are three levels of active involvement: 1) participation in the development and implementation of plans, 2) shared decision-making and 3) self-determination (EU CIS Working Group 2.9, 2003). The Member States themselves can decide on the level of active involvement. Encouraging the first level is the minimum requirement for active involvement, while the other two levels can be considered as best practice in specific cases.

The appointed competent authorities are responsible for the successful outcome of the implementation of the WFD and they decide to what extent they are willing to share their power with other stakeholders. The rationale behind leaving the choice of the level of active involvement to the responsible authorities is pointed out in Preamble 13, which stresses that "there are diverse conditions and needs in the Community which require different specific solutions".

At the European as well as the national level, PP is repeatedly raised as one of the most pressing and also challenging issues in ensuring the prompt and adequate implementation of the WFD and the achievement of river basin management (Harrison, 2001). Under the Common Implementation Strategy (CIS), a "Guidance on Public Participation in relation to the Water Framework Directive – Active Involvement, Consultation, and Public Access to Information" was prepared and adopted by the EU Water Directors in November 2002.[4]

At the same time, the implementation of the WFD and the CIS process have triggered manifold approaches towards public participation in the different MS reflecting different cultural and governance background in each of the countries. In addition, participative processes also depend on the sectors and thus the structure of actors involved (see also chapter 3). There is already a vast amount of best practice cases which have emerged at different levels of water governance throughout the EU.

## 2.2 General Overview of the CAP in the view of Co-operation

The CAP is centred around two main areas (so-called 'pillars') of agricultural expenditure: pillar 1 on market and income support and pillar 2 on rural development[5]. Especially the rural development policy offers various opportunities for co-operation among experts, stakeholders and competent authorities across the EU.

The Rural Development Regulation (RDR) for the programming period 2007 to 2013 establishes an organisational framework for co-operation, including the establishment of networks at both EU and national level and the activities under LEADER at local level.[6] The following section will provide more details on the three different levels of co-operation.

**EU Level**

Under RDR Art. 67, a European Network for RD shall be established. This would bring about the networking of national networks, organisations and administrations active in the field of rural development at Community level. The aims of the European Network are among others to collect, analyse and disseminate information on good practices of Community RD

[4] The guidance can be downloaded at: http://forum.europa.eu.int/Public/irc/env/wfd/library?l=/framework_directive/guidance_documents/0publishedsguidancesdocu&vm=detailed&sb=Title

[5] For further information, see http://europa.eu.int/comm/agriculture/publi/capleaflet/cap_en.htm.

[6] For more information on the linkages between Rural Development and WFD, see Dworak et al., (2005).

measures, to facilitate an exchange of expertise and to support the implementation and evaluation of the rural development policy. Further, it should support the national networks and transnational co-operation initiatives. As the WFD will have a strong influence on the future development of rural areas, a close link between both policies should be established.

**National Level**

At national level, the framework for co-operation in the field of rural development consists of two parts:

- ***National Networks for Rural Development*** (Art. 68 RDR): these networks should group the organisations and administrations involved in RD (as set out in Art. 6 RDR). Furthermore, the involvement of any other appropriate body representing civil society (e.g. NGOs) is foreseen. It provides an option to bring together authorities responsible for water management and persons responsible for RD.
- ***National Strategy Plan and Rural Development Programmes*** (Art. 15 RDR): each MS is required to submit a national strategy plan indicating the priorities for action. This plan will ensure that aid for rural development is consistent with the Community Strategic Guidelines and ensure the co-ordination of Community, national and regional priorities. It shall be implemented through the RD programmes. The establishment of RD programmes within a MS should be realised in close co-operation with relevant stakeholders (as set out in Art. 6 RDR), such as competent local and regional authorities, other public bodies, economic and social partners or any body representing civil society. This could also include relevant water stakeholders.

**Local Level**

LEADER established under Axis IV of the RDR is a bottom-up initiative financed by the EU and designed to help rural actors consider the long-term potential of their local region. It encourages the implementation of integrated, high-quality and original strategies for sustainable development and places a strong focus on partnership and networks of exchange of experience.

## 2.3 Key Messages

- The WFD establishes a framework for the protection of all water bodies (including inland surface waters, transitional waters, coastal waters and groundwaters); it also establishes a framework for participation and co-operation. This framework is built along three levels: information, consultation and active involvement.
- The reformed CAP and especially its 2007-2013 Rural Development provisions included a strong framework for co-operation among stakeholders on various issues at different levels (EU, national and local level).
- In the wake of these developments and changes, both the water and agricultural policy provide powerful approaches and instruments for fostering participation and involvement of stakeholders as well as co-operation among experts involved in the water and agricultural sectors. This situation furthermore bears considerable potential for identifying overlaps and synergies between these two policy areas.

# 3 Levels of Co-operation and Participation

## 3.1 General Overview

Measures and initiatives to foster co-operation and participation between the various stakeholders and administrations need to be carefully adapted to the governance level they are intended to address. The stakeholder structure differs significantly between the different decision-making levels and not all methods are suitable for all types of stakeholders. The following paragraphs will centre on these questions by outlining the main issues to be addressed at different governance levels and by briefly outlining the respective stakeholder structures in relation to these issues at the specified levels.

**International & EU Level and Transboundary Aspects**

At the international level, mostly overarching policies and programmes are being developed in both policy fields, which are to be applied in a wide range of contexts, while addressing issues in a rather general way. At the same time, a large number of stakeholders is affected simultaneously by such policies. As a consequence, participation and co-operation at this level is predominantly realised through the involvement of organised stakeholder groups, representing the interests of their constituents at the regional and local level.

A specific situation exists with regards to the management of issues and decision-making in transboundary river basins. Depending on the respective organisational arrangements, in most European transboundary basins there are several institutions and access points established to allow for the participation and involvement of stakeholders in policy- or decision-making procedures. Usually, stakeholders do not have any decision-making powers, but serve in an advisory function. A great challenge is the complexity and multitude of facts that need to be considered at the basin level. This demands a high professionalism of all parties involved. Many stakeholders present significant deficiencies regarding the necessary background knowledge, therefore sound and target-orientated information and capacity building is especially required at basin scale. Lack of capacity on the part of certain stakeholders should never be a reason for exclusion if these stakeholders have a significant stake in water resources management.

**Regional Level**

Compared to the transboundary level, the issues set are defined in greater details at the regional level. Different models have been developed to provide for the involvement of different stakeholders groups, including exchange fora and advisory councils. With regard to WFD implementation, these have mostly included activities to inform the public as well as to elicit public opinion on concrete plans and strategies. The type of stakeholder groups represented in these activities also correspond mostly to organised stakeholder groups belonging to different sectors. Particularly environmental groups, but also representatives from the industrial and agricultural sector can be found at this level.

**Local Level**

When it comes to the implementation of concrete measures, however, the local level is crucial. The modes of participation and interaction with the stakeholder also need to be fundamentally different at this level. In the context of the cross-cutting area of agricultural and water policies, at this level it is necessary to address practitioners of both fields alike and to initiate a dialogue among these different groups.

In the past, a lot of experience on co-operation at local level has been accumulated in the agricultural sector. In this area, the direct collaboration and involvement of farmers and water

suppliers has been established as very beneficial to tackle water pollution at the local scale (see also section 5.2 and examples from MS presented in the Annex). While the framework for these collaborations has to be established at the national and international level, the concrete selection of measures and the implementation thereof has to be realised at the local scale. Such a framework is doubtless even more important if the potential for conflicts is high (e.g when the measures very expensive to the farmers or to a high extent interferes with the present use of the land). To avoid such situations and to help to solve problems local discussions must be backed up from the regional and national level with the necessary support regarding economic means, knowledge, synchronisation of the level of ambition and the necessary legislation.

The local level is furthermore the appropriate scale for launching awareness-raising campaigns among different stakeholder groups.

## 3.2 Key Messages

- Stakeholder activities take place at different governance levels. The involved stakeholder groups differ among those levels in terms of thematic focus, degree of organisation and type of contribution. The mode and instruments of participatory activities also varies among those levels. While the policy arena at lower governance levels is influenced by decisions and processes on higher levels through the establishment of frameworks and overarching policies, there is still a considerable degree of independence between the respective activities. Linkages between processes do not necessarily exist.
- Stakeholders from the water and agricultural sectors take part in participatory processes at all levels. Their representation and interaction at these different scales is of utmost importance. In addition, the importance of an efficient management of boundaries between the different levels, i.e. the transfer of knowledge and information between these levels, is also increasingly recognised. This is “all level” approach is particular important in cases of big scale and /or transboundary River basins.
- The most useful level to address the concrete implementation of plans and measures is the local level, as this allows for a direct interplay of all actors involved in a concrete case. However, a local and therefore decentralised approach also requires a certain degree of collaboration and co-ordination.

# 4 Topics to Co-operate on

When looking at both policy areas, several issues for co-operations can be identified. This chapter describes possible issues for co-operation on a rather theoretical level. As previously stated, co-operations have to be carefully adapted to the governance level they are intended to address (see chapter 3). The issues addressed in the following follow the chronological order of the implementation process of both policies.

## 4.1 The Use of WFD Article 5 Reports to target RD Measures

Article 5 of the WFD required Member States to carry out an analysis of the characteristics of each river basin district, a review of the impact of human activity on waters and an economic analysis of water use by 22 December 2004.[7]

The 2007-2013 Rural Development Regulation (RDR) directly supports the WFD objectives under its Axis 2 (Art. 38). In addition, the four RDR axes contain a set of measures that offers opportunities to indirectly protect and enhance natural water resources (e.g. agri-environment and agro-forest payments, natural handicap payments, use of advisory services), as well as to preserve high-nature value farming and forestry systems and the cultural landscapes of EU rural areas.[8]

The WFD Art. 5 reports could be a valuable source of information for targeting territories (e.g. areas of high nutrient pollution, flood prone areas) and setting the objectives of the measures for the RD programmes under the upcoming RDR. In addition, the Art. 5 reports could be used to evaluate the performance of RD measures such as agri-environmental measures.

## 4.2 Monitoring for Control

Both policies contain certain monitoring requirements that have different purposes. Table 1 gives an overview of the requirements under the WFD, Cross Compliance and RDR.

**Table 1: Monitoring Requirements for Control under CAP and WFD**

| Directive | Comments |
|---|---|
| WFD | Monitoring programmes play a key role in the practical implementation process of the WFD (Art. 8). They are required to establish a coherent and comprehensive overview of water status (quality, quantity and hydromorphology) within each river basin district. Further, they form the basis for developing effective Programmes of Measures (Art. 11) and will be used to measure the success of these programmes (see also EU CIS Working Group 2.7 – Monitoring, 2003). |
| Cross Compliance | Art. 9 of the Regulation (EC) No. 1782/2003 requires Member States to establish a system guaranteeing an effective control on the respect of cross-compliance. In order to ensure that the cross compliance mechanism is effective in water protection (in particular Nitrates Directive, Groundwater Directive, Sewerage Sludge Directive), it is crucial that proper control methods for verification of the actual implementation of the requirements be in place (see also Müssner et al., 2006). |
| RDR | Art. 13 (2a) and Art. 82 of the RDR require that each MS submit a summary report to the Commission, setting out the progress made in implementing its strategy and objectives and their contribution to the achievement of the Community Strategic Guidelines for Rural Development (European Commission, 2006). A first annual report has to be submitted by 2008 describing, among other issues, the progress of the programme in relation to the set objectives on the basis of output and result indicators. As RDR Art. 4b sets the objective of improving the environment and countryside, indicators for such an improvement are needed. The Commission will set out EU level indicators for monitoring purposes, and MS are allowed to identify additional national indicators for their purposes. |

[7] The following website provides an overview of the state-of-play of WFD transposition and reporting: http://europa.eu.int/comm/environment/water/water-framework/scoreboard.html. A preliminary assessment of the pressures and impacts from agriculture can be found in Herbke et al., (2005).

[8] For a more detailed assessment on how measures under the 2007-2013 Rural Development Regulation can support the WFD implementation, please refer to Dworak et al., (2005).

As these monitoring requirements include to some extent water quality, quantity and hydromorphological aspects, a close co-operation among the stakeholders involved could be beneficial for all sides. This is of specific importance, as the development and maintenance of control rules and measures can lead to excessive operational costs and are very difficult to implement in practice. Therefore, economic efficiency of the system and administrative capacity to implement it should constitute important criteria for developing an appropriate system. A close co-operation between stakeholders involved in water and agriculture management in Member States could also influence the costs for reporting, as similar data has to be reported several times to different authorities. Examples for possibilities to share monitoring information are given in Box 1.

**Box 1: Examples for Co-operations on the Issue of Monitoring**

In view of boosting information, knowledge exchange and good practices, the Water and Marine Unit of DG Environment has considered it useful to summarise key information related to water policies on a regular basis. This consideration is part of a wider initiative to modernise the collection and dissemination of information on water policy across Europe: WISE – the Water Information System for Europe. Such a database could also be used to control e.g. Cross Compliance and results of RD measures.

On the other hand, by using innovative Geographic Information System (GIS) technology, satellite imagery and land parcel identification systems (LPIS), the European Commission helps prevent agricultural subsidy irregularities within area based payments (EU Press release, 2004). The same information on land-use management could be used to monitor hydromorphological derogations under the WFD monitoring requirements.

## 4.3 Advisory Systems

Controls of compliance should be complemented by effective advisory systems addressing specific actions on both farm and land management and water management. The implementation of the cross-compliance requirements and standards is a challenging task that shall be supported via farm advisory systems (see Müssner et al, 2006). But advice will play a much broader role with respect to the WFD implementation and will be a key part in helping farmers comply with WFD requirements and appreciate the reasons behind their implementation. Therefore, development of such an advisory system should be carried out in co-operation between agricultural and water authorities and institutions. The use of existing institutions and participatory structures should be considered.

Communication and dissemination of information are important elements of farm advisory systems. Participatory approaches and engaging in an intensive dialogue with farmers to evaluate present practices and constraints to water management have proved effective to convince farmers to adopt practices and technologies for an effective use of water (Smith and Munoz, 2004).

## 4.4 Good Environmental and Farming Conditions and Good Practices

Nitrogen and phosphorus are essential plant nutrients and valuable resources for farmers, but when they leach from the soil into the water environment they contribute to the process of eutrophication, which may result in an undesirable disturbance to natural conditions (see Herbke et al., 2005).

To palliate this, since the 2003 CAP reform all farmers claiming direct payments, whether or not they actually produce from their land, must abide by certain standards within **good agricultural and environmental condition** (GAEC). Member States shall define, at national or regional level, minimum requirements for GAEC taking into account the specific

characteristics of the areas concerned, including soil and climatic condition, existing farming systems, land use, crop rotation, farming practices, and farm structures (see also Müssner et al., 2006).

Properly designed GAECs can also become part of the WFD (if needed), as the WFD provides that MS may apply supplementary measures, which may include codes of good practice (Art. 11(4) with Annex VI Part B).

Due to the different implementation timetables of both Directives such a co-operation is not possible at the moment but may become part of the CAP mid-term review required in 2008.

## 4.5 Sustainable River Basin Management as Key Component of Multifunctional Rural Areas

Under WFD Article 11, from 2006-2009 Member States will need to develop a River Basin management plan including Programme of Measures (PoMs) for each RBD. The PoMs should take into consideration the results of characterisation (WFD Article 5 reports, see section 4.1).

The EU Rural Development policy strengthens vital rural areas which not only cater to the needs of the rural society, but also to those of society as a whole. Investments in the broader rural economy and rural communities are essential to increase the attractiveness of rural areas, promote sustainable growth and generate new employment opportunities, particularly for women and young people. Further, the competitiveness of the farming sector must be a key aim of rural development policies (EU Press Release, 2003).

The aims of the two policies might be compatible in several cases, but as recognised in the ongoing discussion between farmers and water managers the two policies are to a certain extent antagonistic.

In order to overcome these conflicts there is a need to establish a dialogue between farmers and water management authorities. The aim of such a dialogue should be to discuss problems associated with WFD implementation, to indicate best approaches of implementation, to combat organisational obstacles and particularly to stimulate contacts and co-operation between the competent authorities, the public administrators, the specialists of water management, agriculture and environmental protection, and the stakeholders. This will be crucial for a successful and commonly agreed PoM, optionally including the use of exemptions according to WFD Art. 4[9].

## 4.6 Developing a Water Pricing System

As demand and stresses on water use increase in Europe, the introduction of water pricing as a central policy and one of the main innovations of the WFD is designed to address problems of water quality and quantity. To make water pricing work the sustainable management of water resources and an effective pricing policy must clearly be in line with both the CAP and the WFD (see also Interwies et al., 2006).

The development and implementation of water pricing system is generally determined by social, cultural and institutional conditions. In such a development process, co-operation among farmers, water services and competent authorities is crucial in order to mitigate conflicts and social hardships for farmers but also to reach WFD objectives.

[9] The WFD allows the application of less stringent objectives or extended deadlines under specific circumstances (e.g. in cases where the most cost-effective combinations of measures for reaching the good status prove to be disproportionately costly).

## 4.7 Cross-cutting Research

The WFD does not only impact the quality of water bodies, but also brought up several new questions in terms of water management (e.g. definition of environmental and resources costs). At the same time, the 2003 CAP reform and its changes in the funding system have led to new questions concerning the impact of EU agricultural policies on the environment, but also on socio-economic issues (e.g. the effect of the single farm payments on the quality of the environment). Due to the newly required impact assessment of new EU directives, more efforts have to be spent on cross-cutting issues and investigating the effects of individual directives on other policy areas in order to facilitate an efficient and coherent implementation of the directives.

In order to adequately address these new challenges strong knowledge-based expertise is required. Cross-cutting research, involving different researchers from the agricultural, water and economical sciences, could provide this expertise. Co-operation between the two sectors is necessary in order to address research challenges from multiple perspectives.

## 4.8 Key Messages

- Co-operation between actors from the water and agricultural sectors, particularly those developing or implementing sector policies, can potentially deliver important added-values with regard to several topics, such as monitoring, establishment of GAECs and codes of good farming practices, as well as sustainable river basin management as an integral part of rural development. The level of co-operation and even more so the aim and area directly determine the design of the different sectoral programmes and co-operative agreements.
- The newly emerging policies in the agricultural and water sector have opened up a window of opportunity, which provide the ground for new modes of co-operation. In order to reap the possible benefits from these new opportunities, starting co-operation at this stage is absolutely necessary.
- With regard to the development and maintenance of control rules and measures for example, a close co-operation between stakeholders involved in water and agriculture management in Member States can help establish an economically efficient system in terms of administration and reporting.
- The development of farm advisory systems to support the implementation of the cross-compliance requirements and standards should be carried out in the framework of a co-operation between agricultural and water authorities and institutions; communication and dissemination are important elements of such advisory systems.
- Co-operation among farmers, water services and competent authorities on the selection of cost-effective measures as well as the development and implementation of water pricing systems is crucial to mitigate conflicts and social hardships to farmers but also to reach WFD objectives.

# 5 Approaches for Facilitating Participation and Co-operation

The following chapter introduces a selection of potential tools and instruments for facilitating participation and co-operation in both policy fields (water management and agriculture), including possibilities arising from the WFD (section 5.1) and Co-operative Agreements (section 5.2). Section 5.3 briefly summarises lessons learned from Member States, while the Annex of this paper includes several examples from different EU Member States.

When selecting an appropriate approach for participation, it is important to consider the related costs. The time and money required for the approach chosen should be weighted against its potential benefits. This will have to be evaluated on a case-by-case basis depending on the form of participation intended to use and circumstantial factors.

## 5.1 Getting Farmers on Board – Possibilities Arising from the WFD

In response to the legislative framework established by the Water Framework Directive as described in section 2.1 several approaches for implementing these requirements have emerged throughout Europe over the past years. The underlying assumption of all these approaches is that river basin management planning is too complex to be managed without the involvement of all those holding a stake, including agriculture. At the same time, collaborative management of natural resources will facilitate a common learning process through a better understanding of the issues at stake and the pool of possible solutions, which can eventually also lead to enhanced management capacities for decision-makers and stakeholders alike.

As a general rule participatory processes need to be open to all stakeholders which have a vested interest in the respective issue, irrespective of their resources or powers. However, this does not imply that everybody should participate at any time. Rather, a careful and transparent selection of stakeholders is necessary at the beginning of the process.

### 5.1.1 Participatory Process

Participatory processes are aimed at involving all affected and interested parties. For actors from the agricultural sector several access points exist. Approaches suggested in this context have been developed in the CIS Guidance on “Public Participation in Relation to the Water Framework Directive” (EU CIS Working Group 2.9, 2003) and have been further refined in the context of the research project HarmoniCOP focusing on collaborative planning approaches in water management with a focus on WFD implementation[10].

#### 5.1.1.1 Stakeholder and Context Analysis

The first step in starting a participatory process usually involves a thorough analysis of the stakeholder structure, any concerns stakeholders might have about the process, their motivations to participate. The stakeholder analysis is augmented by further analyses of the broader context. The latter factor is particularly crucial with respect to farmers, as their capacity to participate in stakeholder activities might be limited and thus needs to be allocated wisely.

#### 5.1.1.2 Development of a Participation Strategy

Based on these initial analyses, the participation strategy can be developed and the detailed process be designed. In the ideal case, this step should also be realised in co-operation with

[10] The HarmoniCOP project was supported by European Union's 5th Framework Programme for Research and Development (contract no.: EESD-ENV-2000-02-57).

the stakeholders already identified. Guiding questions in drafting a participation strategy could be the following:

1. *Timing of stakeholder involvement*

Timing is key in planning and initiating stakeholder processes. For one, stakeholders should be included as early in the process as possible. On the other hand the involvement of stakeholders might not be required at any stage of the process. Careful planning is inevitable to avoid stakeholder fatigue. Sometimes only involving a smaller group of stakeholders at different stages of the process might be the better strategy.

Again, specific challenges arise in this respect for different stakeholder groups. From the perspective of actors from the agricultural sector, it might not be possible to participate in all phases of the process. However, they need to be present in those phases by which they are most crucially affected.

2. *Definition of most pressing issues, goal and limitations of the process*

Participation also requires a clear definition of the most relevant issues to be covered as well as the scope and aim of the participatory activities. It is essential to communicate clearly to stakeholders to which extent and concerning which issues their contribution is desired and likely to influence the decisions taken. It is not necessary to involve stakeholders to the maximum extent. It is however absolutely necessary to clearly define any limitations.

3. *Definition of project organisation, selection of the owner/facilitator of the process*

Project organisation is key in designing and implementing participatory processes. The success of a participatory process is largely dependent on the initiator and owner of the process. The convenor and facilitator of the process needs to be independent and furthermore have the necessary skills to lead participatory processes.

4. *Selection of methods and tools*

The selection of methods and tools determines to a large extent the course and further planning of a participatory process. There is a wide variety of tools to choose from (only a few will be outlined in the next section) and careful attention needs to be paid to selecting the appropriate methods and tools for the specific context , the stakeholder groups to be addressed as well as the goal of the participatory process. Approaches applicable for industry representatives might not be suitable for the agricultural or the environmental sector, and methods designed in order to enhance information of stakeholders cannot be applied to facilitate public consultation.

### 5.1.2 Approaches to Public Participation

Depending on the issues addressed and the stakeholder structure of the process, different methods and tools can be employed to foster public participation. Each participatory level – information, consultation or active involvement – referred to in section 2.1, requires specific approaches as well.

#### 5.1.2.1 Training, Education and Advisory Systems – A two-way Process beyond Information

While in the context of WFD implementation the information of stakeholders is usually understood as a one-way process, particularly the complex structure of the agricultural sector requires a more education and training -focused approach in order to allow for the creation of linkages between the water and agricultural sectors. Training and education as well as advisory services can be considered the core information activity in the agricultural sector and therefore require specifically designed measures and approaches.

***...for the agricultural sector***

Education and training cater to two different dimensions of information needs in the agricultural sector with regard to water management challenges. The promotion of an interdisciplinary education and training approach is therefore indispensable in order to address this challenge.

First, educating farmers about water resources and raising awareness for the relationship between water use and the depletion and deterioration of water resources is a crucial activity. Farmers will show more acceptance for obligations resulting from water management measures if they understand the rationale behind them. In addition to technical knowledge education will also increase their capacity to take part in participative processes. Only if the implications of their own behaviour will be understood and if they know about opportunities and possibilities for interaction and participation, farmers will be willing to become active and voice their concern in the context of participatory activities.

Second, training and advisory services related to water pollution control will assist farmers in tackling these problems and also impart knowledge regarding the development of measures for avoiding impacts on water-bodies. The upcoming RDR includes several measures for setting up and organising training, education and advisory services. If the content of such services is chosen properly they can become a powerful tool to reduce pressures on water.

In addition to information and training approaches, capacity-building on participatory and co-operative methods, specifically for the agricultural sector, on topics, such as facilitation skills, participatory methods, social partnerships will lead to a broader application of thus processes.

***...for the water sector***

In parallel, it is equally necessary to inform decision-makers administrators and stakeholders from the water management sector about the specific challenges and boundary conditions of agricultural activities. Thus, information and training activities should be conceived as a two way process, facilitating capacity building for actors from water management as well as agriculture to better understand the challenges of the opposite policy field.

#### 5.1.2.2 Consultation for River Basin Management Planning

A considerable potential for participation of the agricultural sector at all levels is provided by the upcoming consultations for the river basin management planning process, which will require the bridging of the gap between water quality goals and agricultural needs. Farmers will have to play a crucial role in these planning processes and therefore need to be explicitly involved.

It is required that the procedures for consultation should be outlined by the authorities by 2006, an interim overview of the significant water management issues need to be provided by 2007 and the draft copies of the river basin management plans need to be completed by 2008. Member states can choose to (and some do) carry out certain obligations earlier. All these stages foresee a period for consultation with the public. Proposed measures and planning are likely to significantly affect the agricultural sector. At the current stage it would therefore be necessary to identify and prioritise key challenges and potential solutions for the agricultural sector in order to provide feedback in a concerted way.

Currently, consultations are already taking place on the regional level on several aspects of WFD implementation, with a past focus on the 2004 status analysis. Farmers' associations have taken part in these consultative activities together with stakeholders representing other interests.

#### 5.1.2.3 Active Involvement – The Role of Farmers

The participatory stage of active involvement has not been brought to full implementation in many contexts yet. This might be related to the capacity on the side of the authorities but also on that of the stakeholders to engage in participatory decision-making processes. The idea of transferring responsibility to stakeholders is still quite novel and the authorities' willingness, as well as the respective procedures, still have to evolve. As referred to above, the CIS guidance on public participation envisages a three-tiered process, where stakeholders gradually obtain more and more decision-making power and eventually hold responsibility for the decisions taken.

Active involvement as related to decision-making processes requires highly collaborative mechanisms and structures. Some of the instruments and tools to facilitate these, which are also suggested in the HarmoniCOP Handbook (HarmoniCOP, 2005) are summarised in the following table.

**Table 2: Instruments and Tools to Facilitate Active Involvement**

| Method | Short description |
|---|---|
| **Public hearing** | Meeting which presents the public with information and provides a forum for answering questions and collecting opinions |
| **Reframing workshop** | Workshop setting which allows participants to explore different analytical frameworks and refine their problem perception |
| **Review sessions** | Workshop setting to monitor progress, keep momentum, discuss lessons learnt and evaluate steps taken so far |
| **Roundtable conference** | Facilitated and reported open discussion between participants |
| **Scenario building** | Workshop setting in which policy options for the present and immediate future are debated and their possible future consequences are explored |

Meetings and workshops are a fundamental element in fostering public involvement in decision-making. They can be used to inform a broad range of stakeholders but also to actively involve them. In organising a stakeholder meeting, a whole set of factors needs to be considered in order to account for the needs of the different stakeholder groups and the requirements of the specific context. With regards to the involvement of farmers, specific attention needs to be paid to their availability and capability to participate in these exercises. Other factors to consider are the selection of a facilitator, who is trustworthy and legitimate to all stakeholder groups and, last but not least, choosing an appropriate meeting place, which should be conducive to creating trust and openness.

With regards to the agricultural sector, the term active involvement could also take on a completely different meaning when it comes to the actual implementation of measures on the ground. Programmes of Measures for the River Basin Management Plans are likely to include measures affecting agricultural practices. For this reason, farmers will actually be directly involved in the implementation of these measures. Their acceptance to implement these measures will be heavily dependent on the degree to which they have been involved in the decision-making process beforehand.

## 5.2 Co-operative Agreements

Due to the growing incidence of agriculture-related pollution in Europe and its becoming a problem for drinking water sources, the interaction between farmers, authorities and water utilities has, on occasions, taken a number of forms that go beyond the normal framework that regulates their obligations. In addressing this problem, a variety of mechanisms, agreements and co-operation approaches have been implemented between various groupings of stakeholders.

Co-operative agreements (or CAs) between farmers and water suppliers or water management authorities respectively represent a special manifestation of participation (addressed in a research project under the 4th EU Research Framework Programme[11]). Co-operative agreements are defined as voluntary agreements entered into as a result of negotiations between farmers and water supply companies. In addition to their voluntary nature, CA rely on the self-interest of the parties involved, are based on the self-regulation among actors and are mostly targeted to a specific water catchment area.

Such co-operative agreements have found wide application throughout the EU, while distribution and the design of the agreement vary considerably among the different member states and regions. In Heinz (2004), a general outline of the extent to which co-operative agreements are currently being used in several European countries is provided. The study shows very strong differences from country to country: in the Netherlands, Germany and France, the proportion of drinking water resources that are "protected" ranges between 34% and 54%, whereas this value does not exceed 5% in any of the other countries studied (EU-15). Particularly in Germany these co-operative agreements are widely applied. The study also analyses the possible reasons behind this uneven distribution, concluding generally that the relationship between compulsory rules and their enforcement, on one hand, and the possibility of co-operation being financially beneficial to all parties involved, on the other, determine the extent to which these agreements take place.

The drive to implement agreements of this nature is usually a product of recognising that regulatory approaches have failed to effectively address this problem; due to its complexity, the subject of non-point-source pollution in agriculture is often not adequately covered in legislation. Agreements of a voluntary nature are thus aimed for between the different stakeholders. It usually proves to be the case that either the water utility or the authorities (sometimes one and the same, e.g. town municipalities) are the ones who set in motion the process of achieving an agreement between the different actors. Nevertheless, the actual premises on which this co-operation is based, as well as the form it finally takes, vary widely (Brouwer et al., 2003).

A significant amount of these CAs is based on providing an economic compensation to farmers for their modifying their agricultural methods. Even though it can be argued that this practice does not follow the polluter-pays principle, the logic behind it is that this kind of approach is economically more efficient, as well as more sustainable, than the other alternatives available, such as building and operating a water treatment plant. This compensation is by no means the only, or even the major, cost of such a collaboration: major cost items for all collaborations are human resources, chemical analyses, and providing expert technical advice. Usually, payment is provided by the water utility, which is sometimes enabled to pass on these costs to consumers; some regions levy a tax on groundwater extraction, which can also be used to finance these activities, or financing comes from agri-environment programmes. Co-operative agreements with economic compensation are particularly widespread in Germany (Brouwer et al., 2003).

In some cases, "best-practice methods" are defined through the joint work of experts and authorities, and farmers agree to adhere to these practices. Other cases are based on a "payment-by-results" approach: the farmer receives the technical assistance needed, but it is up to him/her to decide which combination of methods is the best considering his/her particular crops, soil types, etc. Payment is based on the values obtained through monitoring; in the case of nitrate contamination of groundwater, for instance, the farmer is typically

[11] Co-operative agreements in agriculture as an instrument to improve the economic efficiency and environmental effectiveness of the European Union Water Policy, contract no.: ENV4-CT98-0782.

rewarded according to how small the amount of left-over mineralised nitrogen in the soil is (Brouwer et al., 2003).

Many co-operative agreements do not rely on compensation payments as incentive for farmers. In some cases, the threat of litigation, hand-in-hand with the polluter-pays principle, can provide enough incentive for farmers to reach an agreement with the authorities and/or water utilities. But the incentive for farmers to co-operate does by no means depend exclusively on the possibility of economic gain/threat of economic sanctions. The same is true for water utilities: the economic advantages of co-operation are only one of the advantages of this kind of deals, and a large amount of co-operative agreements rely on these non-economic advantages as incentives. Some non-economic factors, for farmers and water utilities as well as other stakeholders, are (Andrews, 2002):

- Improved **image** of drinking water company, of its product (drinking water) as well as of the farmers,
- Less reliance on technology and greater **innovation** on farms to cope with the problems,
- **Conservation/**improvement of ecosystem,
- Improved **farming practices** and improved quality of foods,
- Increased **trust/**co-operation between farmers and water suppliers,
- Decreased need for **interference/control** by the authorities and **strategic compliance** benefits.

In many cases co-operative agreements are increasingly seen as an effective way for addressing the negative impact of agricultural practices on water quality, such as the pollution of water resources through pesticides and nitrates, excessive water abstraction and the alteration and modification of water bodies. In addition, the experiences gained from CAs may provide information about the most appropriate measures to change farming practices in terms of environmental effectiveness and economic efficiency.

Nevertheless even if such CAs are proven to be cost-effective for WFD implementation and create incentives of a more sustainable water use, they are not fully in line with the polluter-pays principle[12]. Therefore, there is a need to consider how to deal with such payments in the long-term.

Due to this effect, CAs contribute to the attainment of the environmental goals of several water directives. In addition, the principle of self-determination provides for many opportunities for stakeholders to interact and influence water management processes according to their interests and needs.

## 5.3 Lessons Learned from Member States

In deriving the lessons learned, the past implementation of co-operative and participative approaches in water and agricultural policy were reviewed in order to identify success factors as well as main challenges. The lessons derived from both policy areas will help in devising a strategy for the successful combination thereof.

Experience with public participation in the context of WFD implementation is rather limited, as efforts are currently underway and gaining momentum. There is however experience with participative approaches in water resources management across Europe, which provides indications regarding best practice.

[12] See Interwies et al., (2006).

In a review of European practices for public participation conducted in the context of the HarmoniCOP project, several recommendations were developed regarding the successful realisation of participatory approaches. The most relevant lessons with view to the agricultural sector will be briefly outlined below.

Experience with participatory processes in water management has shown that it is of crucial importance to allow for an **early involvement of stakeholders** so as to achieve greater ownership of the entire process and the outcomes. Furthermore, it also helps to ensure approval of decisions made and to avoid resistance from stakeholders or other affected parties. However, many involved in water resources management are inclined towards limiting public participation to information gathering at the beginning of the process and soliciting comments to the more or less finalised planning.

In developing participatory approaches, making use of **existing participatory structures** can aid in gaining momentum for these approaches, in a way that is more efficient than starting processes completely from scratch. However, existing structures also need to be carefully examined so as to detect existing inefficiencies and limitations inherent to traditional practices. As a general observation, the more flexible, dynamic, open and transparent the strategy for public participation, the more accessible it is for a wide variety of stakeholders and the more likely it is that it will lead to the required results.

Another important factor identified is the allocation of **sufficient and adequate resources** to the processes and its participants. Stakeholder groups enter such processes with completely different resources and means and also different knowledge about the participative process itself. **Education and training** for public participation therefore forms an important component; another central component is providing sufficient support to stakeholder groups in order to enable them to perform or engage actively in planning procedures.

In addition, it was highlighted that efforts to enhance public participation need to be **tailor-made for the specific stakeholder group**. The groups differ significantly in terms of capacity, structure and set-up. These differences need to be accounted for in designing participatory processes, in order to ensure a fair representation of all vested interests. As an example, farmers require different processes and access points to participation in comparison to industry groups or environmental NGOs.

At the same time, while individual approaches and strategies might be necessary, it has proven to be absolutely instrumental to provide for a **common understanding** of the challenges and problems among all stakeholders on the expected results of the process. With respect to the WFD, it is therefore mandated to establish a clear understanding of the requirements of the Directive. This also implies **mutual recognition** of the other partners and participants in the process.

With regards to co-operative agreements, in the last number of years a substantial number of such arrangements regarding water resources – mostly targeting pollution problems, but some focussing on other issues such as allocation of water resources – have been implemented throughout Europe. The significant differences in size of the agreement, methodology, mechanisms, actor involvement, financing, etc. make direct comparisons problematic, but are also the key to a central advantage of these kind of agreements: they are **local** in nature, and implement **tailor-made solutions** based on (knowledge of) local conditions and problems, which can even be on a farm-on-farm basis. This aspect, highlighted repeatedly in the studies on the subject, is central to their high efficiency.

Analyses of the forms of creation of and participation in these initiatives point to a **central role of the way farmers are involved** in the process on determining its results. Some studies have concluded that agreements in which water utilities and authorities work together to

determine best method practices, which are then presented to farmers, show worse results than other approaches in which farmers are involved in the process from the beginning, such as water utilities/farmers approaches, or multi-stakeholder approaches (Gasteyer, 2002), even if compensation forms part of the approach. "Farmer-ownership" of the process, participation of farmer-led organisations or organisations advised by farmers (such as the *Landwirtschafts-kammer* in Example 1 presented in the Annex) seem to have positive effects on the efficiency of these programmes.

Both previous points are related to a third aspect: the **decentrality** of these approaches. The direct interaction between water suppliers and farmers, say, creates less administration work for the parties involved. This is usually also a central aspect in German co-operative efforts, which often relieve farmers of compliance with other pertinent regulations if they are involved in a co-operative agreement, and thus of proving compliance. In some cases, direct agreement between water suppliers and farmers even means water authorities are not enabled to request specific information, e.g. particular soil analyses of a particular farm, but instead control only the overall outcome (e.g. groundwater quality of the whole area) of the agreement. This aspect can also be of convenience for water utilities: local approaches are usually less expensive than government controlled programmes, which could end up being financed through water abstraction taxes, for instance. Decentrality affects the speed with which administrative tasks can be fulfilled and modifications can be made to the agreement.

The favourable side-effects for farmers that decentrality can entail is one of the non-economic advantages of these agreements, which can be important enough to incentive farmers to co-operation, as well as the image gains and even some economic benefits produced through non-compensation co-operation, e.g. reduction in nutrient requirements through better use. Even though a lot of discussion exists regarding the efficiency of approaches that do not use economic compensation, and some evidence points towards a higher efficiency of agreements that use economic compensation, there are numerous instances of co-operative agreements that have achieved very positive results without relying on economic handouts to farmers. This is probably also a product of the local and national conditions, e.g. environmental history of farming, experience in co-operation, importance of subject in press, strength of the farming lobby, etc. and can thus not be established *a priori* for all initiatives. Nevertheless, the huge amount of experience that has been amassed in the field of co-operative agreements should be channelled into other co-operation efforts targeting agriculture and water quality. Bringing farmers on board of well designed co-operation programmes can prove invaluable for water quality.

## 5.4 Key Messages

- The WFD has generated considerable momentum towards increased participation of various stakeholder groups in water management throughout Europe. The CIS process suggests concrete procedures and approaches for organising a PP process.
- Training and education form a pivotal strategy for raising awareness among actors from the agricultural sector for water management issues. At the same time, water managers also need to receive training with regards to challenges in the agricultural sector.
- The upcoming consultations for WFD implementation will offer opportunities for the agricultural sector to get more involved.
- The active involvement of farmers is contingent on their capacity to participate in collaborative activities. This capacity needs to be enhances through targeted measures.
- Co-operative agreements (CAs) represent a special manifestation of participation, which rely on the self interest of the parties involved. Especially in conjunction with cross compliance these agreements allow for a maximisation of the benefits for water bodies and minimisation of the financial burden on farmers.
- While CAs are realised through different approaches and arrangements, water utilities and farmers gain a number of benefits, rendering CA as attractive tools for a more effective way of addressing (mostly local) water management issues.
- Experiences from both policy fields throughout the EU-25 offer a multitude of feasible approaches. The transferability of success stories needs to be investigated further.

# 6 Conclusions

The Common Agricultural Policy (CAP) and the Water Framework Directive (WFD) are two of the major policies in Europe with a strong influence on environmental issues.

Water has played a vital role in the development of the European agricultural policy. In many regions, agriculture can only exist where water for irrigation purposes is plentiful and inexpensive; much farmland would be unproductive without access to water. But some agricultural practices are hampering the successful implementation of the WFD objectives in certain areas. These constraints, as well as the opportunities affected by the CAP to help achieve WFD objectives, need to be identified.

The EU has introduced measures to tackle pressures on water resources since the 70ies, but these command-and-control approaches have achieved only limited success. New governance approaches are emerging that involve voluntary co-operation between the main actors, such as water suppliers, farmers and public authorities responsible for the sustainable management of water resources.

The WFD establishes a framework for the protection of all waters and is one of the first environmental directives to require the information, consultation and active involvement of stakeholders in decision-making on water resource management. The implementation process of the directive so far has recognised the agricultural sector as one of the most important challenges in water management.

The CAP as reformed in 2003 includes also opportunities for co-operation among experts, stakeholders and competent authorities on many different issues including environmental issues. The 2007-2013 Rural Development Regulation (RDR) for example establishes an organisational framework for co-operation, including the establishment of networks at both EU and national level and the activities under LEADER at local level.

In the wake of these developments and changes both policy areas provide powerful approaches and instruments for fostering participation and involvement of stakeholders as well as co-operation. This situation furthermore bears a considerable potential for identifying overlaps and synergies between these two policy areas.

Co-operation between both the agricultural and the water sector can be established on various issues (e.g. monitoring, establishment of GAECs and codes of good farming practices, sustainable river basin management as an integral part of rural development) and with different aims. One aim could concern cost saving (shared databases for WFD and CC control purposes), another aim could be the prevention of further conflicts (e.g. water pricing, agricultural land use). Fostering the participation of stakeholders in decision-making processes will lead to better planning decisions and thus improve the acceptance of future measures.

Stakeholder activities concerning water and agriculture take place at different governance levels. The groups of involved stakeholder differ between those levels in terms of thematic focus, degree of organisation and type of contribution. Therefore measures and initiatives to foster co-operation and participation need to be carefully adapted to the governance level they are intended to address.

The mode and instruments of participatory activities also vary among those levels. While the policy arena at lower governance levels is influenced by decisions and processes on higher levels through the establishment of frameworks and overarching policies, there is still a considerable degree of independence between the respective activities. Past experience has shown that the local level plays a crucial role for effectively involving key actors from the agricultural sector and establishing successful co-operations.

While experience from past activities in both policy fields indicate that participation and co-operation are key factors for a successful implementation in these two policy fields, future efforts will have to focus on transferring the lessons learned in each of the field to benefit implementation in the other. The potential synergies that could arise from a better concentration of co-operative and participative efforts in both areas have the potential to substantially increase the momentum of policy implementation at the interface of CAP and WFD.

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# 8 Annex: Examples from the Member States

## Example1: Lower Saxony, Germany

Agriculture is practised very intensively in the German federal state (*Land*) Lower Saxony. The increasing nitrate concentrations observed in groundwaters gave evidence to the ineffectiveness of compulsory drinking water protection. For over a decade now, a model of co-operation between farmers and water supply companies has been followed.

The financial resources necessary for this co-operation have been provided by the *Land*, which introduced a water abstraction charge in 1993 of 0,10 DM/$m^3$ for public water supply. The co-operation process was initiated by the water authority, but has achieved a multilateral status, with authorities related to farming, such as the Chamber of Agriculture (*Landwirtschaftskammer*), playing central roles.

This process has been developed in a stepwise manner. Addressing farmers, the process of realising the interests in common, and the provision of technical advice bridging the gap between the stakeholders, were followed by an inventory of land use and vulnerability, and the development and adjustment of measures related to reducing groundwater pollution. The consolidation phase has seen mutual development of measures and of concepts, integrated land management, a monitoring of the efficiency and a cost-benefit analysis of measures, as well as the integration of groundwater protection measures in the rural development programme.

Also of interest in this process is the role of the Chamber of Agriculture. Its self-declared aim is to contribute to putting into practice the principle of co-operation between agriculture and water protection interests. As well as aiming to reduce the contribution of nitrate to groundwater due to agricultural activities, it focuses on minimising the economic disadvantage for farmers. The chamber also plays a role in the testing of different measures and advising farmers regarding these, as well as providing information concerning the compensation payments, etc. It is currently participating in three EU research projects related to the subject: NOLIMP-WFD (NOrth Sea Regional and Local IMPlemantation of Water Framework Directive), “Farmers for Nature” and the Hanseatic Network for WFD.

The 10 years of co-operation have shown a very significant improvements. Different indicators for nitrogen in water and soils (e.g. nitrogen concentration in raw water, nitrogen concentration in leachate, etc.) show positive trends. The experiences obtained in this area have also awakened the interest of other European countries, and currently research projects, which include international partners (e.g. WagriCo), are being carried out which aim to extend the knowledge in this area.

## Example 2: Auradé, France

The Auradé Farmers Association present an example of co-operation of a different nature than that of Example 7.1. Instead of limiting the consideration to those areas that are recharging the groundwater extracted by given water works, this example is based on the following of all of the “parcels” of the Auradé river basin (over 2500 ha.). In addition, 328 ha. were used as an experimental sub-basin. Backing up this approach was the fact that the area is considered a representative farming site, and is a hydrologically isolated territory: the effects of the measures can be determined through water quality measurements at the river basin outlet.

Although information regarding the different interest groups and their motivation for action is not clear, activities in the area go back to the 1980s, when measurements of nitrogen concentrations in waters were realised, and the first experiments with the participation of farmers were conducted. The financial partners of the initiative include the Water Authority,

the European Union, and several scales of local government (Gers "Département", Midi-Pyrénées Region, Auradé Municipality). The technical partners include technical institutes and agronomical schools, as well as "Grande Paroisse S.A." a fertiliser producer, who were also the first to make nitrogen measurements in the waters of the basin.

The programme of action of the association included agro-environmental measures, such as the creation of buffer strips and the planting of hedges, a registration of the farming practices applied in the basin, and a rationalisation of both nitrogen and pesticide application, which was achieved through the signature of a protocol. These actions were followed up by monitoring of status of the waters and of the effects of the different measures involved.

Through the combination of buffer strips, which would ideally surround each watercourse, and the revised application of nitrogen and pesticide, very significant effects on water quality were achieved, creating no effects on yield and quality of crops. It provides an option to get authorities responsible for water management and persons responsible for RD together at one table.

### Example 3: "Ferti-Mieux" agreements, France

The predominant modality for co-operative agreements in France, which is called "Ferti-Mieux", does not involve compensation. The nature of farmers co-operation in these agreements is more voluntary than elsewhere: no formal agreements are signed, and thus the agreements are not binding. The aim of the Ferti-Mieux is to protect drinking-water resources through better fertilisation without generating income loss for the farmers; communication and technical assistance are the main means utilised. Involvement of government and agricultural organisations, such as the Ministries for Agriculture and Environment and the National Association of Agricultural Development (ANDA), is typically strong; water utilities can also be strongly involved in these agreements. Two national committees award Ferti-Mieux labels to these initiatives (which amounted to 56 comparatively large-scale agreements in 2002). A recent announcement from the Department for Environment, Food and Rural Affairs (DEFRA) indicates that the UK plans to follow a similar, non-compensational approach.[13]

### Example 4: Dialogue on Water, Food and Environment, Hungary

An interesting case which illustrates how farmers participate in the (pre-)implementation process of the WFD in the part of the Danube Basin lying in Hungary (more than half of the country). In the context of the Global "Dialogue on Water, Food and Environment", backed by international organisations such as FAO, GWP, UNEP and WWF, a series of dialogue processes for the Central and Eastern European Countries (in those days candidate countries to EU membership) was initiated. The public participation process was spread on four levels: international, national, regional and local. Ijjas and Botond (2004) analysed the process in Hungary. The analysis shows that the dialogue process, which up to the point of publication had seen 3 phases, managed to create a series of fundamental advancements in the subject. As a result of this dialogue process an Hungarian response paper to the European Commission's working document "The Water Framework Directive and tools within the Common Agricultural Policy to support its implementation" was elaborated; the taking-up of these suggestions by the European Commission, i.e. the demonstrable result of the process, strengthened belief in the possibilities of these dialogue initiatives. The farmers and other stakeholders represented in the Water Management Authorities acquired a high level background knowledge base on the WFD and built their capacity regarding EU tendering. The

[13] See press release of 19 December 2005; download at http://www.defra.gov.uk/news/2005/051219a.htm.

bottom-up initiation of the communication process, with participants presenting topics and the Ministry agreeing on them, and the ensuing continuous two-way communication procedure, ensured issues were relevant to stakeholders. Organisers placed emphasis on finding a creative synthesis of a number of perspectives, instead of choosing one between those available. The complexities that organisations face in policy decisions were made obvious to both the Water Management Agencies' stakeholders and the nature conservation organisations. Other side products of the process were the increase in trust between the different participants, the build-up of relationships between them, establishing and maintaining the legitimacy of the organisers and of the project, and an increase in knowledge for better water management.

### Example 5: Experimental programme of struggle against nitrate and pesticide pollution in river basins, French district Loire Bretagne

End 2005, the Loire Bretagne Water Agency decided to build up an experimental programme including new action. This programme seeks to reinforce the measures of struggle against agricultural pollutions, for a better environmental efficiency. The main objective is to succeed in focusing action on specific territories in order to get results on water quality. The programme are implemented in 11 experimental river basins, where new measures intend to complement already existing processes of training, co-ordination and collective action.

The water agency has introduced a condition that consists in asking each farmer to realize a pesticide diagnosis at level of his farm. This diagnosis needs to include two parts : a part on punctual farming pollutions, the other part on diffuse pollutions. The farmer is also recommended to take part in a prior training period on pesticides. The agency ensures the financing of the national part of the measures. These measures can also be associated with additional measures supported by the ministry of agriculture.

The experimental programme is adapted locally, depending on the relevance of the measures, the local regulatory framework and the existing financing resources.

Supports provided by the water agency are of four types :

- supports to set-up individual prior diagnoses,
- supports to implement agro-environmental measures and investments,
- supports for collective investments,
- supports for demonstration in pilot farms.

Meetings of information took place in each river basin involved in the experimental programme, with the participation of the local water and agricultural state authorities. A local manager has been in charge of supporting the drafting of the individual diagnoses.

The water agency considers that the success of the programme highly depends on the local communication and follow-up ensured by the local manager. It is obvious that making farmers be aware of water issues, will contribute to the best selection of relevant agro-environmental measures and their focusing on priority areas. Permanent help provided by a local adviser is also a key condition to ensure a collective involvement and have a maximum of priority areas be covered by effective measures.

### Example 6: Agricultural Programme of Measures, Ribble WFD Pilot River Basin

Through the Ribble WFD Pilot Project, the Environment Agency of England & Wales (EA) is investigating how effectively changes to the CAP, the introduction of Cross-compliance and measures under the England Rural Development Plan can reduce diffuse water pollution from agriculture (DWPA) and help meet the WFD environmental objectives.

In this WFD/agriculture part of the Ribble Pilot project, the team is investigating agricultural land use in the catchment, farmers' attitudes to diffuse pollution, impact of cross-compliance, uptake of historical and current agri-environment schemes and testing some of the new water quality monitoring methods required by WFD. Another important strand of the project is looking at how to develop an agricultural PoMs for the Ribble river basin.

To this purpose, the EA held a small workshop on 1st December 2005. A broad cross-section of stakeholders from the individual farmer to the retailer were invited to ensure close work with those who will have to deliver the solutions and measures and those who will be impacted or affected. The objectives of the workshop were to (1) identify the types of measures that would form part of a PoMs, (2) comment on a draft agricultural PoMs for the NW RBD, (3) develop an agricultural PoMs for the Ribble Basin, and (4) identify what a PoMs might look like and what information would be needed to develop the programme.

The workshop was divided into three working sessions; the participants were first divided into two groups and given a very short period of time to identify the most important measures that could be used to address **diffuse pollution**. The main issues raised included:

- Measures and mechanisms need to be included as there tends to be several different mechanisms available to deliver many of the measures;
- there are two ways of developing the PoMs, firstly through looking at the problem (pressure) on the ground and then identifying measures, or conversely through identifying all the existing measures and then assessing how they tackle the pressure/impact.

During the second session, all participants were invited to discuss a **mock RBD PoMs** drawn up by the Ribble Pilot team in advance of the workshop. Main issues raised included:

- All parts of the food chain can be involved in measured to address DWPA. The supermarket representative was pleased to have been involved in these discussions;
- There was extensive debate about the role and limitations of market mechanisms for more sustainable food production. Many of the stakeholders felt this was an appropriate measure to help address DWPA. The retail representative asserted that local brands held greater appeal for the consumer than organic brands. The farmer present was not convinced of the value of local/environmental branding.
- It may be difficult to link all measures to specific WFD pressures, and several measures will address several pressures. This raises difficult presentational issues for the PoM.
- An important question related to PoMs is whether measures should include more aspiration measures or just realistic measures (for example there are several more 'social' measures that have a higher degree of uncertainty of take-up).
- There was an equal mix of regulatory and non-regulatory/advice measures, therefore future PoMs are almost always going to be a combination of measures that cannot be easily summed in a technical fashion.

During the last session, participants developed a **draft PoMs,** including some examples of the types of measures they would like to see included in it. The main points included:

- Need for early involvement of co-deliverers in developing the measures for the RBD.
- Uncertainty that measures will achieve objectives set out, as many of the agricultural measures do not have quantifiable outcomes.
- Sufficient evidence will be required to engage the farming community to help bring about the necessary change.

- It could be valuable to break down measures by sector (dairy/arable/horticulture etc.), and the measures could be either categorised by risk (pesticide) or location (Stock Beck)
- Many of the current measures will be in place, through existing Environment Agency plans and the plans of other organisations, e.g. agri-environment schemes administered by the Rural Development Service. The way in which these planned programmes form part of the 1st cycle of PoMs has to be defined.

In general, the participating stakeholders called for clearer and easier regulation and more information and education services for farmers.

### Example 7: Training of Operators and to prevent Pollution from Point Sources (TOPPS)

TOPPS (http://www.topps-life.org) is aimed at identifying and disseminating advice, training and information at a larger co-ordinated scale in Europe with the intention of reducing losses of plant protection products into ground - and surface water. The project is funded under the EU LIFE Programme and runs from November 2005 to October 2008.

TOPPS objectives are to develop:

- Best Management Practice for the safe use of Plant Protection Products
- Best Management Practice for stewardship activities for sustainable risk mitigation of water contamination
- Generic skills and knowledge required for safe Plant Protection Product use and to build a common training framework
- Options/ tools and practises and minimal technical specification for hardware tools (rinsing tools, filling and cleaning places, sprayer requirements etc.)
- Training and demonstration tools for intermediaries ( influencers of operators) to train and inform operators on the prevention of pollution by point sources