

Report of:

Nordic Workshop on
Experiences from implementing
the water framework directive in Nordic countries with a
focus on coast and sea

28-29 August 2007, Novotel, Gothenburg, Sweden

Summary

This report is a summary of a Nordic workshop held at Novotel in Gothenburg, Sweden August 28-29, 2007. The workshop theme was “Experiences from implementing the water directive in the Nordic counties with focus on coast and sea”. Representatives from central and regional authorities connected to water administration in the Nordic countries participated.

The workshop covered areas like the classification system, environmental goals, programmes of measures and heavily modified water bodies with relevance to the marine environment. The Nordic countries have similar natural conditions and administrative prerequisites and by sharing experiences they can find common solutions. The participants were pleased with the workshop, found many mutual challenges and agreed on further cooperation.

Further, the forthcoming marine directive was shortly discussed. The directive will put increasing demands on cooperation between the Nordic countries.

INTRODUCTION 3

SUBJECTS DISCUSSED AT THE WORKSHOP 3

ABOUT THE MARINE DIRECTIVE 4

FURTHER COOPERATION 5

FINAL WORDS AND FURTHER READING 5

CONTACT LIST 6

APPENDIX 1- THE WORK WITH THE WFD IN EACH COUNTRY 8

Denmark 8

Norway 9

Finland 12

Åland 14

Iceland 14

Sweden 15

APPENDIX 2 – NATIONAL LEGISLATION 18

Introduction

The Water Framework Directive (WFD) is being implemented in the national legislation throughout the European countries. On September 28, 2007 - one month after this conference - the WFD was incorporated in the EEA-agreement which means that also Iceland and Norway will be implementing the directive, however with a delayed timeframe. The EU commission is now deciding about the marine directive. This will put further demands on the member states to coordinate their work, both between the countries and with the WFD.

The purpose with *the Nordic Workshop on experiences from implementing the water framework directive in Nordic countries with a focus on coast and sea* was to meet and share different experiences of WFD and to discuss certain questions regarding for example targets, goals, norms, notion of water bodies and classification system.

The workshop was initiated by Sweden and was arranged by the Skagerak and Kattegatt Water District Authority, with economical contribution from the Nordic Council of Ministers (NMR). The workshop was held at Novotel in Gothenburg and the participants represented central and regional authorities connected to the water administration in the different countries.

The Nordic countries have several common denominators. They have similar natural conditions and some of the counties share water bodies like lakes, rivers and seas. The countries also have similar administrative organisations and a common historical and linguistic background. There are many benefits with working together on certain issues like common projects as well as working together to create a stronger voice in Brussels.

Subjects discussed at the workshop

Below is a summary of the different issues discussed at the workshop.

Classification

- How do the countries work with the principle of “one out – all out”? Which factors and parameters are decisive when the principle is to be used?
- How do the countries classify water bodies when there isn't sufficient data? Some of the countries omit to classify water bodies when data is missing, while other use pressure analysis and expert assessments to classify water bodies.
- It is of importance that countries sharing water bodies harmonise their classifying system.

Environmental goals and program of measures

- How will the environmental goals and programmes of measures be linked to legislation? In Sweden, for example, programmes of measures will be legally cogent for authorities and municipalities. Also environmental goals, as Environmental Quality Standards (EQS) will be legally cogent. In Finland, discussions about legislation have not yet started, but at least, environmentally requirements on businesses that need permissions will increase. Norway links the legislation to their PBL (legislation of building acts and ground plans).
- In which level of ambition are the environmental goals composed? Are the valuations

among the countries similar? For countries sharing water bodies it is of great importance that factors and levels of the EQS correspond.

HMWB and “exceptions”

- For Heavily Modified Water Bodies (HMWB) there are certain criteria defined by the EU commission that will be available in the end of 2007. The criteria will be discussed 4th of October at Swedish Environmental Protection Agency, a meeting to which also Norway and Finland will be invited.
- What are the criteria for exceptions? How can the Nordic countries come to a common approach on exceptions? A seminar about the subjects was discussed at the workshop.

Measures

- What is the level of disproportional expenses of measures? What is the limit for economical loss?

Expert assessments

- How are expert assessments made? What is taken under consideration?

Pressures and discharges spread internationally

- What are the opinions about measures for pressures and diffuse discharges? Is this a question that will get a solution via the marine directive?

About the marine directive

The EU's forthcoming framework directive on the marine environment will aim to bring European seas back to "good environmental status" by 2021. The directive provides a framework for EU countries to set up, by 2016, marine strategies aimed at restoring and protecting the seas by 2021. The directive contains a list of criteria, which can be used to assess good environmental status and maintaining, or restoring natural diversity.

The directive covers all marine waters, meaning all territorial waters and the seaward side of the baseline. Coastal waters on the landward side of the baseline are also included in so far as particular aspects of environmental status of the marine environment are not addressed through the water framework directive. Thus there are a geographical overlap between the two directives, what is the significance of this with regard to the implementation of the water framework directive?

Member states sharing a marine region or sub region should ensure that a single and joint marine strategy is developed for the waters falling under their sovereignty or jurisdiction. Within the region or sub region just one set of environmental objectives and indicators should be adopted. For each marine region or sub region an initial assessment should be made taking account of existing data and comprising characteristics, functions and environmental status of the waters based on a specific list of elements taking into account elements regarding coastal, transitional and territorial waters covered by the water framework directive. Does this require a complete

harmonization of the implementation of the water framework directive between Denmark and Sweden in the Kattegat region?

Further cooperation

The workshop provided a place for meeting and discussing different practical questions about the implementation of the WFD. The Nordic countries all agreed that further cooperation was of importance. There are several arguments for this:

- Several of the Nordic countries have had complaints on their reports to the commission. One reason is that the Nordic countries have other natural conditions than the continental Europe; huge land areas, low density of people and lot of different waters. Working together increases the possibilities of bringing the directive in line with Nordic conditions.
- Through cooperation the Nordic countries could easier and more often be present in meetings within the EU, in order to be updated and involved in new discussions. In this way the Nordic countries to a greater extent would be able to advocate their interests.
- Thanks to the similar natural and administrative conditions in the countries, they can share experiences and together find solutions on certain questions.
- The marine directive will put more emphasis on cooperation between the Nordic countries.

Further cooperation could be held in different forms and at several levels. Below are some examples discussed at the workshop:

- Cooperation as informal meetings held in the languages of the Nordic countries to easily be able to take part of the other countries experiences and together find solutions on practical tasks. Projects could be held about different themes as for example HMWB and exceptions.
- To be a part of international constellations as for example in the International Network of Basin Organisations (INBO) and in addition form a subgroup for the Nordic countries. To have influence in major questions in the EU this could be of importance.
- Work together on expensive projects, as for example monitoring modelling and development of computer networks and more.

Final words and further reading

The workshop was well organised and the participants found the discussions very fruitful. Everybody agreed that further cooperation among the Nordic countries is of importance. Future meetings were discussed, but a list of current dates is not included in this text. For questions, please see the contact list below. For readers interested in the work with WFD in the Nordic countries, this is presented in appendix 1 and a list of links to enactments is included in appendix 2.

Contact list

Sweden Skagerak and Kattegatt Water District

Authority coordination of water administration within the district
Björn Sjöberg (bjorn.sjoberg@o.lst.se)

Denmark Agency for Spatial and Environmental Planning

Coordination of the nationally work with WFD
Tonny Niilonen (tn@mst.dk)

Norway Directorate for Nature Management

The directorate coordinating implementation of WFD nationally
Jo-Halvard Halleraker (jo-halvard.halleraker@dirnat.no)

Finland Regional Environmental Centre of west Finland

Competent authority runs coordination of
water administration within the district
Vincent Westberg (vincent.westberg@ymparisto.fi)

Åland Government of Åland

Responsible for implementation of WFD in Åland
Mikael Wennström (mikael.wennstrom@regeringen.ax)

Iceland Environment and Food Agency of Iceland

Responsible for implementation of WFD in Iceland
Gunnar Steinn (gunnar@ust.is)



Participants in the workshop

Appendix 1- The work with the WFD in each country

General information about each country's work with WFD is presented here. The text is compiled from the presentations held by the participants in the workshop.

Denmark

Organisation and Responsibilities

The Danish Ministry of the Environment has the main responsibility for implementation and legislation of WFD in Denmark. The assignment of preparing nationally prerequisites used to be done by the Danish Environmental Protection but since an extensive administrative reform has been carried out in Denmark, the task is now handed over to the new established Agency for Spatial and Environmental Planning (By- og Landskabsstyrelsen), under the Ministry of the Environment.

Due to the administrative reform the county administration boards (Amterne) were eliminated and from now on Denmark only has two administrative levels, the government and the municipalities. Thereby, unlike most of the other Nordic countries Denmark only has one Competent Authority that formally is Danish Ministry of the Environment.

Denmark has four water districts (one shared with Germany) and for each of these there will be handed out a River Basin Management Plan (RBMP) (vandplaner) that includes a survey analyse, environmental goals, program of measures and an economical analyse. The RBMPs will be produced on a regional level by the Environmental Centres (Miljøcentrene), the regional parts of the ministry. The Environmental Centres (ECs) do also have the responsibility for running the consultation and collaboration with municipalities, stakeholders and the public.

Participation and action

The method used for the consultation, has been to establish an informational website www.vandognatur.dk. Here all available data and information about the water districts and the 23 river basins have been gathered. For each river basin district it is presented:

- A general description of the district
- The pressures on the system
- Protected areas
- The characterization of surface water and groundwater
- An risk assessment of not reaching the goal "god status" until 2015
- Essential water administrative tasks

With this information, municipalities, organisations, companies and public are asked to give their ideas, opinions and also complement with additional information.

In 2009 the definitive RBMPs of Denmark will be ready. Out of this, together with several tools presented by the ECs the municipalities, are supposed to draw up a strategy, an action plan of how to reach the goals within the municipality. The action plans will thereby be created of their own prerequisites.

Organisation of monitoring

Previously, the National Environmental Research Institute (DMU), an institute under the Danish Ministry of the Environment, performed monitoring in Denmark. Recently Ministry of the Environment established a “secretariat of monitoring” that has the task to administrate, prioritise and delegate monitoring programmes according to WFD. The monitoring has been decentralized and coastal- and inland surveys will be performed by the ECs, in some cases also by municipalities and consultants. Still DMU, now belonging to the University of Århus, has the responsibility for offshore monitoring and do also have the responsibility for quality control of the coastal- and inland surveys.

Monitoring is well financed by the ministry and organised by the monitoring secretariat, but technically it has to be developed and intensified. Today primary the Institute of Water, Environment and Health (DHI) develops modelling for efficient monitoring. Denmark also uses self-registration buoys and surveillance by satellites.

Characterization and environmental goals

Denmark is now waiting for the final results of the European inter-calibration. The Danish locals included in the calibration were these shared with other countries, these with abundant data and locals that were thought to lie on the boundary either between high- and good status or between good- and moderate status.

Denmark has chosen to use an interval system for classification to make it functional for variations of the ecosystems.

Administrative challenges

Denmark is now in a dialogue with the commission about the prerequisites for Denmark. Denmark reported 35.000 water bodies, compared to their total water area that indicates high accuracy.

As in many other countries Denmark have no economical recourses set aside for the new assignments that will be put on the municipalities due to the implementation of WFD. The municipalities will have an important role in the water administration of Denmark.

Norway

Norway decided to start the implementation of WFD before it was incorporated in the EEA agreement as a way to gain experience and deal with major environmental problems at their coast and in their watercourses. The implementation legally started by 1 of January 2007 and will, for the first planning cycle concern about 20 % of the water bodies. Remaining water bodies will be phased in during the next planning cycle. The chosen water bodies are spread over the country and represent different types of water and environmental problems. Norway has chosen to give

priority to the watercourses shared internationally.

Organisation and responsibilities

The Ministry of Environment has the responsibility for implementing the WFD in Norway. A group of Ministries with coordinating roles is established involving Ministry of Petroleum and Energy, Ministry of Fisheries and Coastal Affairs, Ministry of Agriculture and Ministry of Social and Health Affairs. The ministry of Environment reports to the EU commission and represent Norway in meetings on a European level.

A group of eight directorates will carry out the practical work with the directive and support with prerequisites and guidelines to regional and local levels. From August 1, 2007 the Directorate for Nature Management (DN) has the coordinating role of the group where the most active directorates are Norwegian Pollution Control Authority (SFT) and Norwegian Water Resources and Energy Directorate (NVE). The directorate group work according to a consensus principle and they interact with a national reference group consisting of representatives of organisations concerned (e.g. NGO's, Electricity producers, Industry etc.).

Competent authorities (vannregionmyndighet) have been established by staff from county administration boards (fylkesmannen). One competent authority is defined for each of the nine water districts. They do the coordination of regional participation, full characterization, decisions of river basin management plans and programme of measures.

Cooperation and participation

The competent authorities work close together with water councils (vannområdesutvalg). The organisation of these differs according to former constellations in the area, but they always consist of authorities from regional and local levels. Politicians of the municipalities are in some regions chairmen of these councils. It is of great importance to have political mandates when suggested measures have to be realized.

To take part of local knowledge and involve stakeholders, the work is implemented in a close connection to reference groups. These groups consist of, for example, agricultural organisations and landowners, representatives from the industry, non-profit-making organisations and authorities from neighbouring countries. The vision is that water councils together with reference groups shall produce drafts to river basin management plans and programmes of measures.

Norway still lacks economical resources for compensations to the reference groups and the municipalities. But interest in participating is high thanks to significant problems, and forthcoming measures of the watercourses.

Characterization

The directorate group, with help by consultants, have developed a GIS-tool named VANN-nett and a common website for characterization of waters, where data from different databases have been merged and water bodies defined. The county administration boards and municipalities are also highly involved in the characterization process. They verify the data, add information on e.g. acidification and add supplements of pressures and ecological status.

Norway has many fresh water bodies in good status thanks to low density of people and large pristine areas. These can serve as a natural reference in the classification. Since Norway not yet has developed a complete ecological classification system they have chosen to focus the

following categories:

- Not at risk
- At risk
- Possible at risk
- Heavily modified waters bodies (HMWB)

Examples of water bodies said to be “at risk” are e. g. these with significant pressures as:

- Former mining activities
- Considerable population density
- A certain percent of agriculture and scattered dwelling
- Industry and contaminated spots
- Acidification
- Unhygienic impacts
- Invasive (alien) species
- Smaller hydro morphological pressures
- Dams (HMWB)

In costal areas some of the most significant pressures are:

- Alien species
- Pollution from aquaculture
- Long borne pollution
- Eutrophication
- Polluted sediments
- Harbours (HMWB)
- Physical, chemical and biological changes caused by hydropower

Monitoring - coastal areas

Norway's monitoring programmes are fragmented and have to be reorganized and probably increased to meet the demands of the directive. The coast of Norway consists of several ecological regions and for each of the environmental region the coast is divided in water types out of these categories:

- Totally exposed coast
- Moderate exposed coast/fjord/archipelago
- Shelterd coast/fjord
- Fjord with significant freshwater income (ferskvannpåvirket)
- Fjords deficient in oxygen
- Straits with strong currents

Totally twenty three types of coastal waters are defined, and it has been found out that fifteen of these are representative sites that will be subject to surveillance monitoring. All surveillance monitoring will be organised nationally while operative monitoring will continue to be executed on regional and local levels.

Norway foresees an increased cost of monitoring, especially for the northern parts were there is an increase in oil drilling and shipping. Financing for expanded monitoring is not yet agreed

between Ministries involved.

Challenges

Norway as many other countries struggle with short deadlines and a lack of economical resources, primary for monitoring and local participation and is a task for the ministries to solve.

There are political discussions going on about pressures as kelp harvesting, trawling of shrimps and crayfish, impacts of aquaculture in coastal areas and windmills at sea and their environmental impacts. More knowledge is needed, to permanently decide to which extend these pressures may characterise water bodies at risk

The county administration boards in Norway have a tradition of mainly river and lake management. With the long coast of Norway, knowledge of coastal management is very important for a good result of classification and measures. Thereby increased knowledge and education of coastal management is needed at the county administration boards and the municipalities.

Finland

Organization and responsibilities

Finnish Ministry of the Environment runs the national coordination of WFD in Finland. Under the ministry, Finland is organized in regional Environmental Centres (EC: s). Five of these are defined as competent authorities according to WFD, one for each of the eight water districts (including Åland islands) in which Finland is divided, additionally three districts in Lapland are coordinated by one environment centre. They are responsible for the coordination of water administration within the district and for the reports to the EU commission. Three of Finland's water districts are international, shared with Sweden, Norway and Russia.

Cooperation

The competent authorities work closely together with cooperation groups and steering groups consisting of other EC: s, enterprises, authorities, land- and water owners and others.

Within some of the water districts in Finland there are also river basin organizations called "river delegations" (älvdelegationer). The river delegations have a long history of cooperation within the river basins. These "river delegations" are involved in the cooperation groups within the work with WFD.

Other subgroups (existing or newly established), in districts without river delegations are used for certain issues such as heavily modified waters, point load discharges etc. How these cooperation groups are organized differs for each competent authority, depending on former constellations within the water district.

Characterization of coastal water

The coast of Finland has been divided in eleven types of waters and around 220 water bodies, based on depth, morphology and initial classification. The water bodies will further be grouped during the classification process.

For the classification, data of benthos, phytoplankton (chlorophyll-a), macrophytes and chemical parameters will be used. An index for benthos classification, Benthic Brackish Water index

(BBI), has been developed. The index is a modified version of the Swedish Benthic Quality Index (BQI) and more suitable for low saline conditions. Inter-calibrations with Sweden have also been successfully made.

An initial risk assessment has been done where focus is on significant human impacts, water quality, biological parameters and hydro morphological changes. Also expert judgments have to be used for risk assessment.

The water management plans will be prepared by the competent authority in close cooperation with stakeholders groups. For example, the main environmental issues for the Western River Basin District are:

- Eutrophication caused by diffuse loading
- Acidity of the soil and its effects on water environments
- Structural problems in water courses (HMWB)
- Risk activities on ground water areas

Monitoring

In Finland, enterprises, which need environmental permissions for their activities, have to follow and finance recipient control programs. The programs are often executed by consultants and sometimes the EC in the region. For diffuse discharges, state-financed national monitoring programs have been established for the WFD work. All data from the 20th century until now is gathered in a central database. In this database also water bodies and classification are defined. The database is still not accessible for the public, but used by authorities, universities and municipalities.

Public participation

An analysis of factors influencing the public to participation has been made. This information is supposed to be a base for the work of forming cooperation groups. Public hearing, on the document of central environmental issues, is now taking place and water management plans will be available for public hearing in 2008/2009.

An administrative challenge

Since the work of WFD is supposed to be financed by existing financing systems, lack of money is always a challenge in the water administration of WFD. One example is the work of the river delegations and other subgroups. Stakeholders with considerable resources, as for example the forest- and agricultural organization can easily participate in local meetings and argue for their interests, while for example NGO: s and smaller organizations with limited resources are not able to participate in the same extent. For that reason they cannot advocate their interests in the same extent.

Åland

Åland is an autonomic, demilitarised administrative province of Finland and thereby runs the WFD on its own. The competent authority is the Government of Åland (Ålands Landskapsregering). They do their own report to the EU commission and also their own river basin management plan. Åland co-operate with Finland and take experiences from their work with WFD. Only two persons work with the WFD in Åland and they are both working at the Government of Åland. Åland only has one water district and, since Åland consist of many small

islands and only tiny watercourses, the water administration is mainly focused on the coastal areas.

Iceland ¹

The WFD was incorporated to the EEA agreement by 28 September this year. Consequently, the WFD that is implemented in Iceland has later implementation dates for the individual paragraphs than the EU countries have. In Iceland provisions of the directive will, consequently, be undertaken with the common understanding in mind where appropriate.

The Icelandic government found that some issues of the WFD were outside of the EEA agreement. Further, the situation in Iceland is different from industrialized, heavily populated areas and areas with extensive agriculture in continental Europe. As none of this applies to Iceland, country specific adaptations were proposed in addition to the general adaptation text referring to the scope of the EEA agreement.

Special conditions

Iceland does not share drainage basin, coastal area or coastal water with any other country. It has the lowest population density in Europe ($<3\text{inh}/\text{km}^2$) with limited anthropogenic stress and insignificant releases to water from industries. And finally Iceland has significant part of the runoff stems from glacial fed rivers, and potential effects from natural causes such as volcanism and geothermal processes.

In discussion with the commission, Iceland was assured that the same items of concern were shared with some sparsely populated areas in Europe. There is a general understanding that these concerns can be dealt with within the framework of the directive in order to avoid actions where they are not needed.

Organization and responsibilities

The organization system is under construction but The Ministry for the Environment is responsible for the implementation of the WFD in Iceland.

There has been proposed one river basin district of Iceland. Coordination and strategy will thus be centralized and implementation of measures and actions probably decentralized. Institutes under Ministry for the Environment, and ministries for Industry, Fisheries and Agriculture will have the technical tasks. The local authorities have, and will presumably be responsible for the measures and actions for protection.

¹

Written by Gunnar Steinn, Environment and Food Agency of Iceland

Characterization

The coastline of the island is about 5,000 km long with large number of rivers discharging to the sea of which seven have river basins larger than 2500 km^2 , and some 200 larger than 100 km^2 . Around 70% of the inhabitants (300.000) are living within the Faxaflói area and most of the industries are within the area, located mostly at the coast. For the rest of the country, small villages are distributed scattered along the coastline. Outside the Faxaflói area, only Akureyri has more than 10.000 inhabitants. For the characterization Iceland uses existing information and data. An analysis of human activities is under construction were focus primary is held on density of people, industries (mainly metal- and mineral industry), fish meal processing plants and protected

areas. There is not yet set any time schedule for the river basin management plan and programme of measures.

Monitoring

Monitoring programs in Iceland covers river chemistry, monitoring of trace metals and POPs in cod and blue mussel, radioactivity and Biological effect monitoring in coastal and marine areas since these are the areas where human activities and population densities are located. Marine Research Institute is using standard sections for repeated hydrographic- and plankton research in Icelandic waters. Standard section (Faxaflói section) has been designated for winter monitoring of nutrients for the purpose of OSPAR reporting. Biodiversity monitoring has yet to be planned but there exists a programme for watch of poisonous algae. Many sample spots are outside the zone of WFD and some biological parameters and researches of sediment is lacking in order to meet the demands of WFD.

An administrative challenge

The local authorities will presumably be responsible for the measures and actions for protection, but many of the municipalities of Iceland are very small and with limited administrative capacity. It is necessary to take notice of this in the process of planning and development of the organization system in order to ensure cooperation within the river basin concept. Furthermore, today the communities only have administrative jurisdiction 150 m out into the sea, far less than the Coastal water area, defined by the Directive.

Sweden

Organization and responsibilities

Sweden has five water districts and three of these are shared with Norway and Finland. The north and northwest parts of Sweden are characterized by a low density of people and big watercourses. Most of these watercourses are modified with dams for waterpower production. The south and east parts of Sweden are characterized by a high density of people and agricultural activities, The west part of Sweden deals with an increasing density of people and pleasure boats.

It is in particular the Ministry of Environment that is involved in the WFD.

For implementing the directive, there are two central environmental authorities: The Swedish Environmental Protection Agency (SEPA) and Geological Survey of Sweden (SGU). They have the responsibility to decide on guidelines and directions, and to coordinate the work on a national level.

For each of the five water districts there has been established a competent authority (Vattenmyndigheterna) consisting of experts from county administrative boards (länsstyrelsen). The competent authorities coordinate the operative work that is made by the county administrative boards in each district. They also define the Environmental Quality Standards (EQS), the program of measures and the river basin management plans for the district. The water district boards then takes the final decisions.

Cooperation and Participation

Until now most of the work with WFD has been performed on a regional and national level, but there is an ongoing process to involve municipalities, landowners, agricultural organisations, forestry associations, the public, NGOs and more in cooperative water councils. Some parts of

Sweden already have existing river basin organisations. These are associations of stakeholders that are users, polluters or have interests in the river basin district. They execute monitoring of the recipient, sometimes also measures and are a good base for forming the councils. In districts without river basin organisations new cooperation's have to be established.

In water councils stakeholders can meet and discuss questions on common water issues. With their local knowledge of the area the aim is to let water councils develop advisory programmes of measures.

The county administrative boards lead the process of establishing the water councils, but they are not a part of them. The expectation is that water councils will be led by representatives from the municipalities.

Monitoring and characterization

In Sweden, data from monitoring programmes are collected from databanks of county administrative boards, municipalities, river basin organisations, national institutions and others. All data is quality checked and merged into one database: Water Information System Sweden (VISS) (www.viss.lst.se). This database will be the complete database of water bodies, full characterization and pressure analysis and will be available to the public through the Internet. It will also be used for reporting to the European commission.

Today, assessments of the water bodies are made based on monitoring information. To meet the demands of the WFD, the monitoring programmes have to be fully completed and reviewed. The question is how this is to be financed. Use of modelling for monitoring is discussed. Modelling can also constitute as a base in expert estimations to increase the credibility of assessments and classification. Modelling is also a question of costs. Monitoring and analysis are expensive.

Until now, focus during the process of characterization has been on natural scientific aspects. From now on, Sweden also must include social sciences and economics to find realistic measures. Statistic data has been bought from Statistics Sweden to find out which waters are in use, by whom, and what the economical value of these particular waters are.

Administrative Challenges

The major question today is who will pay for the measures? According to the WFD the "polluter pays", but it is not always evident who the polluter is.

Appendix 2 – National legislation

National legislation within each country can be found in following websites:

Denmark www.blst.dk/Vand/Vandrammedirektivet/Regler/06050000.htm

Norway www.vannportalen.no/enkel.aspx?m=31930

Finland www.finlex.fi/sv/laki/kokoelma/

Search the legislation at the website by using following numbers:

Lag om vattenvårdsförvaltningen 1299/2004
Statsrådets förordning om vattenförvaltningsområden 1303/2004
Statsrådets förordning om vattenvårdsförvaltningen 1040/2006
Statsrådets förordning om ämnen som är farliga och skadliga för vattenmiljön
1022/2006

Sweden www.vattenportalen.se/docs/2004_660.pdf