The Water Framework Directive in Norway: An environmental vehicle in need of a jump-start

An English summary of the Norwegian report: “Vanndirektivet – et miljøløft med startvansker”.

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Main findings

Implemented properly, the Water Framework Directive will mean a significant improvement of water management in Norway. The WFD is, moreover, an essential tool for addressing structural problems in Norwegian environmental policies, securing clean and healthy water bodies, as well as living up to the UN Convention on Biodiversity.

However, the process in Norway is so far characterised by:
- lack of domestic political attention and ownership
- unclear legal basis for effective policy making
- rivalry between key ministries
- inadequate allocation of resources for effective implementation
- lengthy delays and rudimentary implementation activities
- lack of public debate and involvement of civil society

WFD implementation is in need of a jump-start in Norway.

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Community law, the EEA agreement and Norwegian law

The Water Framework Directive (2000/60/EC) – hereafter referred to as WFD - is considered one of the most important environmental directives of the EU. Norway’s day-to-day relationship with the EU is governed by the European Economic Area (EEA) agreement. The EEA agreement secures unhindered Norwegian access to the EU internal market (except for the agriculture and fisheries sectors) in exchange for Norwegian adaptation to Community legislation pertaining to the internal market as well as flanking policies (including environment issues).

Norway has for several years participated in the development of the WFD and in the WFD working groups pertaining to the Common Implementation Strategy. Norway is officially committed to implementing the WFD through the framework of the EEA-agreement. The transposition of WFD into national law was according to directive deadlines to take place by December 2003. This has not yet happened in Norway, due to (inter alia) a delay related to various operational issues relating to the EEA-mechanism. Norway cannot unilaterally include WFD into the EEA-framework as the EEA-EFTA countries speak with one voice in all EEA-matters. Norway is currently awaiting Iceland’s acceptance for integrating WFD into the EEA-agreement. It is expected that the WFD will become part of the EEA agreement at the end of 2004. Norway will at that point be obliged to implement the directive according to common standards and directive deadlines. The EFTA Surveillance Authority is responsible for monitoring that Norway is implementing EEA-legislation properly and in time.

Problems with WFD implementation in Norway

Delays and lack of political ownership

Norway is behind schedule in implementing the WFD. It is clear that the EEA-delay is merely due to procedural problems that will be overcome in due course and inevitably Norway will thus be legally obliged to implement the directive. The EEA-agreement does not make any concessions for delays in implementation of Community legislation integrated into the EEA, in spite of the at times time-consuming procedural issues. When the WFD eventually becomes part of the EEA-agreement and is officially transposed in Norwegian law, WFD deadlines will be valid for Norway with retroactive effect. In light of this and Norway’s official commitment to implement the WFD, an implementation process has begun in Norway that is supposed to follow WFD deadlines.

The Norwegian government has not kept the WFD deadline for adjusting the national law to the demands of the directive, for determining new water regions as administrative units, or appointing a superior responsible authority and the responsible authorities within each region. The different authorities’ responsibilities in relation to WFD implementation should also have been defined and suitable routines of co-operation established. This should have been in place by 22 December 2003.

These delays are to a large extent due to disagreement within the government as to whether the Ministry of Environment or the Ministry of Oil and Energy should have the overall responsibility for implementing the WFD in Norway. Hydropower is important in Norway and the Ministry of Oil and Energy has up until now been responsible for water management in general terms. Environmental NGOs in Norway have argued that the Ministry of Environment is best suited to be given the formal mandate to oversee implementation of the WFD, as the WFD is environmental legislation (the legal base being §175, [1] in the Treaty) regulating water management in light of an overall ecological approach. It is at present not clear when a decision will be made concerning which Norwegian ministry will be responsible for WFD implementation.
Absence of public debate and clear political signals

The maybe most significant problem emerging with regard to the continuing delay is that it has prevented a broad public debate concerning the national level of ambition in implementing the WFD and how to best interpret the contingent objectives in the Norwegian context. An extensive, national debate about goals and tools should be considered as the foundation of any Norwegian WFD implementation. The lack of official leadership and defined responsibility for the WFD at present delays the implementation process in Norway, continues to confuse inter-departmental priorities and leaves goals and sectoral responsibilities ill defined. The net result of these factors is that WFD implementation at present consists of task-oriented working groups from different directorates carrying out practical WFD implementation work, without clear political signals concerning level of ambition and without participation from the public.

Norwegian authorities have so far done a poor job of including civil society in the task of implementing the WFD. Organisational structures and routines that can ensure active public participation have not been established. Moreover, no funds have been allocated to secure a broad cooperation over time between different interested parties in carrying out WFD tasks. Such funds are prerequisite for an effective and open implementation process in which different stakeholders are engaged actively to achieve common goals. So far, the implementation in Norway has primarily been a technocratic process in which basic implementation activities are carried out without openly addressing the overarching question on how the WFD can best be used as a tool for realising official Norwegian policy goals for environment.

Two pilot projects have been carried out to test CIS-guidelines for WFD-implementation in Norway, in Suldalslågen with external coastal areas in Rogaland County and the Vannsjø-Hobbo water course (also called the Morsa watercourse) in Akershus and Østfold counties. No attempt has been made by the ministries involved to include Norwegian environmental NGOs on a national or regional level in the actual work. The reports from the projects are available for the general public on the internet, but are highly technical and not easily accessible for interested non-specialists. Only brief drafts of Norwegian versions of some of the Common Implementation Strategy guidelines have been made, tucked in as appendices to the pilot river basin testing reports.

Methodological weaknesses

We are currently in the characterisation phase of WFD implementation. Norwegian authorities have so far carried out pilot characterisation in eight catchment areas, constituting a total of approximately 10% of Norwegian water bodies. According to the pollution control authority (Statens Forurensingstilsyn), only one out of eight catchments lives up to WFD demands in a strict sense. The pilot characterisation exercise thus shows that even in comparatively clean Norway, it will be a major challenge, albeit a worthwhile one, to achieve the ambitious environmental goals of the WFD. (Cf. also current threats and problems for Norwegian water bodies, described in the Background section below).

Substantial uncertainty is linked to the results of the pilot characterisation. Due to limited resources the pilot characterisation was carried out using pre-existing data produced under a water management regime with a much weaker focus on ecological factors than the WFD. Existing data primarily focuses on pollution, i.e. the chemical status of Norwegian water bodies. There is little data on the status of the ecosystem (including terrestrial species) linked to the particular water body. It is therefore highly likely that a number of relevant ecological factors for ascertaining the degree of compliance with WFD environmental goals are not fully disclosed in these reports.
Without a balanced perspective, there is every chance that the status of Norwegian water bodies is even worse than that portrayed by the pilot studies. Secondly, if failure to live up to the ecological standards in the directive is not disclosed fully in the characterisation reports, this will, for the water bodies in question, not be addressed in the follow-up management plans and initiatives designed to achieve WFD goals. It would appear that a sloppy start is threatening to compromise the ecological dimension of the whole implementation process in Norway, at least in the first 12-year cycle.

We should in this context also note that a number of problematic issues related to the characterisation process call for active involvement of additional stakeholders. Issues concerning the choice of scale, how to aggregate data relating to water bodies, identifying what necessary data is missing and how to get it, should be subject to a comprehensive local debate with relevant stakeholders in light of particular regional conditions. Relevant authorities have not addressed such issues in an open and inclusive manner so far.

Lack of funding

The official, Norwegian WFD impact analysis (direktoratgruppens konsekvensutredning) from 2001 pointed out that a restructuring of Norwegian water management in accordance with the guidelines in the WFD would imply increased cost in the short term, but a substantial profit for society as a whole in the long term. The cross-ministerial Norwegian WFD working group (direktoratsgruppen) authored this analysis and is at present responsible for practical implementation work in Norway. The analysis estimated that the increased administrative cost connected with characterisation and increased monitoring would come to on average 15 mill. NOK annually for the period 2002 - 2005. In 2003 the working group received only 6 mill. NOK for implementation work. Also for 2004 the working group has received a much smaller amount for implementation work than what was called for. As a consequence the working group has chosen to extend the characterisation work until autumn 2005 (i.e. a full year’s delay) in order to be able “to secure the necessary quality”. Thus far, inadequate government funding has seriously hampered WFD implementation in Norway. At this point even basic commitments and activities are not supported to an extent allowing for compliance with the common WFD implementation schedule.

WFD in Norway: an environmental vehicle in need of a jump-start

The WFD introduces a broad perspective to water management based on developing a partnership between relevant stakeholders and securing integrated water management within the framework of strong environmental considerations. As such, the WFD is a valuable tool to address structural problems in Norwegian environmental policies and to achieve the goal of halting the loss of biodiversity before 2010 (see background below).

However, the Norwegian government has so far shown little political initiative to use this tool actively, nor has it harnessed the broad and ambitious process the WFD represents. This is in marked contrast to the ambitious and environment friendly role Norway has played in earlier stages of developing the WFD as a legal framework.

Such is the extraordinary variety and richness of Norway’s aquatic systems that the Norwegian Minister of Environment, Mr. Børge Brende, last year was moved to describe the task of preserving these as Norway’s “rainforest responsibility”. It is now time for the Norwegian government to live up to Norway’s “rain forest responsibility”, by means of an active, ambitious and broad national WFD implementation strategy.
Background: WFD – a new and important environmental tool in Norway

The WFD provides a long-term framework for the management of freshwater resources (surface waters, coastal waters and groundwater) throughout Europe, including Norway. Indeed the WFD has very ambitious environmental goals for the region in that by 2015 all freshwater resources shall be of an ecologically sustainable level of quality and quantity - effectively restored to so-called “good chemical status” and “good ecological status”. “Good ecological status” means that only a slight departure from the biological community that would be expected in conditions of minimal anthropogenic impact will be allowed. Essentially the WFD dictates that pollution, encroachments and other activities affecting freshwater ecosystems will only be acceptable under certain conditions. The strong focus on the ecological aspect of freshwater is something new for Norwegian water management authorities and presents fresh challenges.

The WFD introduces a holistic perspective to water management, where the management of water is organised according to catchment areas. This is new in Norway where water management responsibilities currently are divided between a wide range of ministries, directorates and administrative levels (counties, municipalities). The more comprehensive structure and holistic way of thinking in water management introduced by the WFD will be a great advantage with regard to increased efficiency and a more comprehensive management of Norwegian catchment areas. It will also be of great advantage to ecosystems that are under pressure due to a lack of overall environmental goals and mechanisms in the currently fragmented water management system.

In brief, the WFD is good news for all Norwegian freshwater ecosystems and will be one of the most important tools for the Norwegian government to use in meeting its UN Convention of Biodiversity obligations, as well as achieving the official goal of halting the loss of biodiversity in Norway within 2010.

Norwegian water ecosystems: unique, but threatened...

Norway has an abundance of freshwater habitats and these vary considerably in their nature throughout the country. International geographical surveys place Norway near the top in all categories relating to the frequency and diversity of freshwater resources. The diverse topography and extraordinary geology of Norway have combined to produce many waterfalls, lakes, rivers, valleys and fjords that are among the most magnificent and renowned in the world. Norway has many unique freshwater environments and a corresponding responsibility for managing these responsibly.

Water is an essential ingredient for all life. In freshwater we encounter, amongst other things, a multitude of mushrooms, algae, moss, vascular plants, insects, spiders, crawfish, molluscs, fish, mammals and birds! The biological diversity is probably greater in and along watercourses than anywhere else in nature. In fact such is the extraordinary variety and richness of Norway’s aquatic systems that the Norwegian Minister of Environment, Mr. Børge Brende, was last year moved to describe the task of preserving these as Norway’s “rainforest responsibility”.

However, Norway’s water systems are today seriously threatened. Norway’s ecologically rich wetlands are recognised as a highly endangered biotope. Infrastructure development continues to take place too close to the normal flow of watercourses, infringing upon the natural dynamics of river systems and negatively impacting on wildlife. Furthermore this can also have negative flow-on effects for society, one economic consequence of such infrastructure development being repeated and costly flood damage. The natural biodiversity of Norwegian coastal waters and watercourses is also threatened. Marine habitats are besieged by alien species introduced, *inter alia*, courtesy of
indiscriminate dumping of ballast water by ships. One third of the total wild salmon stock in Norway is extinct, seriously threatened or vulnerable. Due to mercury pollution in Norwegian watercourses the Norwegian Food Safety Authority advises pregnant and breastfeeding women not to eat pike and perch above 25 cm, nor trout and char above 1 kg. The condition of 700 to 900 lakes is considered by national pollution control authorities to be bad or very bad due to discharges of phosphorous and/or nitrogen. In summary, physical encroachments, the introduction of alien species and parasites, and pollution today constitute serious threats to the health of Norwegian water bodies.

How does the WFD work in Norway?

The WFD is a framework directive: It establishes the basic framework for the future of broader European water management in terms of environmental goals, leading principles and a time schedule for related activities. Within this framework, however, Norway is relatively free to choose the degree of commitment and instruments to use in implementing the directive.

The WFD is a large and complicated edict that will be implemented gradually over a number of years. The timeframe can briefly be summarised as follows:

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<tr>
<th>Topic</th>
<th>Description</th>
<th>Deadline</th>
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<tr>
<td>1. Legal status and organisation</td>
<td>The requirements of the WFD shall be transposed to national legislation. The political responsibility for the implementation of the directive shall be allocated. The number of catchment areas shall be defined together with corresponding administrative units.</td>
<td>December 2003</td>
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<td>2. Characterisation</td>
<td>Mapping of Norwegian water bodies with regards to chemical, ecological and hydromorphological status, in order to identify water bodies where measures need to be taken in order to achieve WFD goals. An analysis of main pressures and impacts for each water catchment shall be made, together with an economic analysis of water use and water services.</td>
<td>December 2004</td>
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<tr>
<td>3. Intercalibration</td>
<td>The Commission and EEA Member States determines a methodology to define a common understanding of the qualitative terms “high”, “good”, “moderate”, “bad” and “very bad” which is comparable across Europe.</td>
<td>June 2006</td>
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<tr>
<td>4. Monitoring</td>
<td>A programme securing the necessary monitoring of the qualitative indicators in the catchments shall be developed</td>
<td>December 2006</td>
</tr>
<tr>
<td>5. Development of action and management plans</td>
<td>An action plan describing the necessary measures to be taken to achieve the environmental goals in the catchment area shall be developed and integrated with the management plan for the catchment area.</td>
<td>December 2009</td>
</tr>
<tr>
<td>6. Implementation of measures</td>
<td>The action plan is implemented</td>
<td>December 2012</td>
</tr>
<tr>
<td>7. Realisation period</td>
<td>Allowed time for the employed measures to have effect and realisation of WFD environmental goals</td>
<td>December 2015</td>
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The WFD will thus be implemented over a period of 12 years. New technology and a better understanding of relevant circumstances will develop during this period, in light of which it will be possible to consecutively improve on efforts to achieve the ambitious environmental goals of the directive. Using this framework, the directive will operate with a view to continuous improvement. When the first cycle is completed in 2012, a new cycle will begin at which time the WFD will be revised and updated.

Exceptions and alternative environmental goals

When the WFD was being developed, the EU member states and Norway adopted the basic and principally important stance that the goal of the WFD is to ensure that all water bodies attain or uphold its natural condition (“good ecological status” and “good chemical status”). It is clear,
however, that for some water bodies this will not be possible, as they have been modified to serve essential functions for society – such as water bodies utilised to produce hydropower. WFD thus allows for certain water bodies to be excepted from the overall environmental goals of the directive under strict conditions.

A water body can for instance be defined as an “artificial” or “heavily modified water body” (HMWB) under certain conditions: It must have been subject to a physical encroachment affecting the ecology of the water body and the initiatives necessary in order to reverse these effects must be disproportionally costly or violating overriding interests of society. For such water bodies (typically reservoirs, harbours, piped rivers in cities, channels linked to infrastructure etc.) the WFD operates with an alternative and mandatory ecological goal called “good ecological potential”. Norwegian authorities will thus for HMWB’s be obliged to achieve “good ecological potential” and “good chemical status” for each specific instance of this classification. Achieving good ecological potential requires that the composition and concentration of animal and plant species in the water body is as close to “good ecological status” as possible given the presence of the specific physical encroachment.

Openness and integration of interested parties

The WFD introduces a new way of thinking about Norwegian water management and establishes a framework for a comprehensive management system in which all user interests are to be balanced in accordance with ambitious environmental goals. The WFD emphasises that this requires a broad and open implementation process, where all interested parties are included in the national development and implementation related to living up to WFD requirements. In WFD article 14 it is emphasised that authorities are strongly encouraged to ensure “active involvement” of all interested parties in the implementation of the directive. It is further emphasised that the public shall have access to all background information related to implementation. The directive also stresses that the assignment of HMWB status to a water body shall be an open process based on clear and transparent criteria.

The importance of WFD for different sectors in Norway

Hydropower: Stronger environmental demands and focus on saving energy

The WFD puts restrictions on all water users influencing the ecological and chemical condition of a water body. Water use that substantially influences the morphology of a water body can only be legitimised by documenting that it serves an overriding interest of society as a whole. Likewise, it must also be proven that no alternative solution could fulfil the same needs of society with less impact. The WFD thus implies that hydropower development in each case must be evaluated against other solutions, such as for instance developing alternative energy systems and power saving campaigns. The WFD will make it more difficult than it is today for Norwegian authorities to further develop water bodies for hydropower production, as there is a large and documented potential for exploiting other renewable energy sources and cutting energy consumption through energy efficiency initiatives. This is highly relevant in light of current plans for hydropower development of for instance the Vefsna river system in Trøndelag County, one of the few remaining large, untouched river systems in Norway.

Less development in the river zone: more restrictions on the municipality

Norwegian municipalities have a long tradition of permitting development close to rivers (i.e. within the 10-year-floodmark). This causes increased pollution of the watercourse, loss of biodiversity and increased problems with flooding. Currently there are no restrictions in Norwegian law governing
planning and building (Plan- og byggningsloven) that directly support the environmental demands of Norwegian water legislation (Vannressursloven). The implementation of the WFD should ensure that a more integrated and co-operative legal framework is developed in Norway with regards to water management. This will impose more restrictions than exist today on municipalities wishing to develop areas connected with water (wetlands, deltas, coastal areas, closing of brooks etc.). When WFD requirements are operationalised, development in the flood-zone of a river will only be permitted in exceptional cases. Norwegian municipalities will, moreover, be obliged to restore water bodies to “good ecological status” to the extent that this is possible.

**Genetic pollution: new and stronger demands for aquaculture**

The salmon louse gyrodactylus salaris and other such fish diseases carried by runaway farmed fish are problems that affect the wild salmon population in Norway. With this, runaway farmed fish influence negatively upon the ecological condition of water bodies with wild salmon populations. Living up to WFD requirements for such water bodies will back up and if necessary, strengthen the initiatives to tackle these problems, based on the polluter pays principle. In Namsen river in Trøndelag County up to 50 % of the salmon population consists of farmed salmon that has escaped from fish farms, consisting a direct threat to the integrity of the wild salmon stock in this river system. In light of WFD environmental demands it is clear that the presence of escaped farmed salmon in this and other Norwegian rivers, must be reduced to a level approaching zero tolerance in order to live up to the “good ecological status”. In light of the WFD economic analysis of each catchment area and the application of the “polluter pays” principle, the aquaculture industry will be obliged to participate in covering costs related to achieving the necessary ecological standard for these rivers.

**Pollution: new and stronger demands on agriculture and other sectors**

Norwegian pollution control authorities have in a pilot project evaluated eight Norwegian watercourses against the environmental demands of the WFD. The conclusion was that for seven of eight watercourses there is still a long way to go. Orrevassdraget in Rogaland County and Haldenvassdraget in Akershus County came out worst. In these cases pollution of salts and nutrients from agriculture were the main reason for the poor condition of water quality. The WFD will mean increased surveillance of the pollution affecting Norwegian watercourses and we can expect stricter demands with regards to agricultural pollution as well as on industrial and municipal waste water treatment plants.

Pollution from sediments is another considerable environmental problem in Norway, especially in Norwegian fjords. Advice on food intake has been issued to the general public due to the high content of toxins (PCB, PAH, TBT, dioxins) found in fish and/or shellfish in approximately 30 Norwegian fjords. The WFD’s water quality requirements will demand that stronger initiatives be implemented to reverse the effects of pollution caused by industrial effluents, shipyards and harbours, municipal drainage as well as rubbish dumps and polluted soil affecting water catchments.

**Infrastructure development: restriction and increased focus on mitigating measures**

Both existing and future infrastructure (roads, railway, airports, settlements etc.) may come into strong conflict with the environmental goals of the WFD. In reality, the WFD does allow for further infrastructure development that may actually oppose its goals, but only if the benefits for society of such encroachments are very large and if there are no better ways of addressing the specific societal need in question. This will, however, have to be tried in an open process in each case and according to strict criteria. If an exemption from the directive’s goals is allowed, the developer in question is
committed to introduce mitigating measures to secure the best ecological condition possible given the specific, physical influence on the water body. Further still, the specific development will only be allowed if it does not jeopardize the objectives of other EEA-legislation nor the status of another water body in the same river basin. All in all it seems clear that the WFD will require a stronger legal and political commitment to ecologically sustainable management of water bodies, in order to achieve compliance with the terms of the directive. This includes protecting (and in some cases restoring) the fragile ecological balance of aquatic systems as well adopting a more cautious and regulated approach to infrastructure development that affects such water bodies.