Introduction to the new EU Water Framework Directive

The increasing demand by citizens and environmental organisations for cleaner rivers and lakes, groundwater and coastal beaches has been evident for considerable time. It has recently been reconfirmed by a representative opinion poll Eurobarometer in all 25 EU countries:

When asked to list the five main environmental issues that Europeans are worried about, averaged results for the EU25 show that nearly half of the respondents are worried about “water pollution” (47%), with figures for individual countries going up as far as 71%.

This demand by citizens is one of the main reasons why the Commission has made water protection one of the priorities of its work. The new European Water Policy will get polluted waters clean again, and ensure clean waters are kept clean. In achieving these objectives, the roles of citizens and citizens' groups will be crucial. This is why a new European Water Policy has to get citizens more involved.

European Water Policy has undergone a thorough restructuring process, and a new Water Framework Directive adopted in 2000 will be the operational tool, setting the objectives for water protection for the future.

The following will provide an overview on development, present state and future of European Water Policy.

An early beginning

Early European water legislation began, in a "first wave", with standards for those of our rivers and lakes used for drinking water abstraction in 1975, and culminated in 1980 in setting binding quality targets for our drinking water. It also included quality objective legislation on fish waters, shellfish waters, bathing waters and groundwaters. Its main emission control element was the Dangerous Substances Directive.

Addressing pollution from urban waste water and from agriculture

In 1988 the Frankfurt ministerial seminar on water reviewed the existing legislation and identified a number of improvements that could be made and gaps that could be filled. This resulted in the second phase of water legislation, the first results of this were, in 1991, the adoption of

- the Urban Waste Water Treatment Directive, providing for secondary (biological) waste water treatment, and even more stringent treatment where necessary.
- the Nitrates Directive, addressing water pollution by nitrates from agriculture.

Other legislative results of these developments were Commission proposals for action on

- a new Drinking Water Directive, reviewing the quality standards and, where necessary, tightening them (adopted November 1998),
- a Directive for Integrated Pollution and Prevention Control (IPPC), adopted in 1996, addressing pollution from large industrial installations.

Getting Europe 's waters cleaner, getting the citizen involved: the new European water policy

Pressure for a fundamental rethink of Community water policy came to a head in mid-1995: The Commission, which had already been considering the need for a more global approach to water policy, accepted requests from the European Parliament's environment committee and from the Council of environment ministers.

Whilst EU actions of the past such as the Drinking Water Directive and the Urban Waste Water Directive can duly be considered milestones, European Water Policy has to address the increasing awareness of citizens and other involved parties for their water. At the same time water policy and water management are to address problems in a coherent way. This is why the new European Water Policy was developed in an open consultation process involving all interested parties.

A Commission Communication was formally addressed to the Council and the European Parliament, but at the same time invited comment from all interested parties, such as local and regional authorities, water users and non-governmental organisations (NGOs). A score of organisations and individuals responded in writing, most of the comments welcoming the broad outline given by the Commission.

As the culmination of this open process a two day Water Conference was hosted in May 1996. This Conference was attended by some 250 delegates including representatives of Member States, regional and local authorities, enforcement agencies, water providers, industry, agriculture and, not least, consumers and environmentalists.

The outcome of this consultation process was a widespread consensus that, while considerable progress had been made in tackling individual issues, the current water policy was fragmented, in terms both of objectives and of means. All parties agreed on the need for a single piece of framework legislation to resolve these problems. In response to this, the Commission presented a Proposal for a Water Framework Directive with the following key aims:

- expanding the scope of water protection to all waters, surface waters and groundwater
- achieving "good status" for all waters by a set deadline
- water management based on river basins
- "combined approach" of emission limit values and quality standards
- getting the prices right
- getting the citizen involved more closely
- streamlining legislation

The outline below shows how these elements are made operational within the Directive.

A single system of water management: River basin management

The best model for a single system of water management is management by river basin - the natural geographical and hydrological unit - instead of according to administrative or political boundaries. Initiatives taken forward by the States concerned for the Maas ,

Schelde or Rhine river basins have served as positive examples of this approach, with their cooperation and joint objective-setting across Member State borders, or in the case of the Rhine even beyond the EU territory. While several Member States already take a river basin approach, this is at present not the case everywhere. For each river basin district - some of which will traverse national frontiers - a "river basin management plan" will need to be established and updated every six years, and this will provide the context for the co-ordination requirements identified above.

Co-ordination of objectives - good status for all waters by a set deadline

There are a number of objectives in respect of which the quality of water is protected. The key ones at European level are general protection of the aquatic ecology, specific protection of unique and valuable habitats, protection of drinking water resources, and protection of bathing water. All these objectives must be integrated for each river basin. It is clear that the last three - special habitats, drinking water areas and bathing water - apply only to specific bodies of water (those supporting special wetlands; those identified for drinking water abstraction; those generally used as bathing areas). In contrast, ecological protection should apply to all waters: the central requirement of the Treaty is that the environment be protected to a high level in its entirety.

Surface water

Ecological protection

For this reason, a general requirement for ecological protection, and a general minimum chemical standard, was introduced to cover all surface waters. These are the two elements "good ecological status" and "good chemical status". Good ecological status is defined in Annex V of the Water Framework Proposal, in terms of the quality of the biological community, the hydrological characteristics and the chemical characteristics. As no absolute standards for biological quality can be set which apply across the Community, because of ecological variability, the controls are specified as allowing only a slight departure from the biological community which would be expected in conditions of minimal anthropogenic impact. A set of procedures for identifying that point for a given body of water, and establishing particular chemical or hydromorphological standards to achieve it, is provided, together with a system for ensuring that each Member State interprets the procedure in a consistent way (to ensure comparability). The system is somewhat complicated, but this is inevitable given the extent of ecological variability, and the large number of parameters, which must be dealt with.

Chemical protection

Good chemical status is defined in terms of compliance with all the quality standards established for chemical substances at European level. The Directive also provides a mechanism for renewing these standards and establishing new ones by means of a prioritisation mechanism for hazardous chemicals. This will ensure at least a minimum chemical quality, particularly in relation to very toxic substances, everywhere in the Community.

Other uses

As mentioned above, the other uses or objectives for which water is protected apply in specific areas, not everywhere. Therefore, the obvious way to incorporate them is to designate specific protection zones within the river basin which must meet these different objectives. The overall plan of objectives for the river basin will then require ecological and chemical protection everywhere as a minimum, but where more stringent requirements are needed for particular uses, zones will be established and higher objectives set within them.

There is one other category of uses which does not fit into this picture. It is the set of uses which adversely affect the status of water but which are considered essential on their own terms - they are overriding policy objectives. The key examples are flood protection and essential drinking water supply, and the problem is dealt with by providing derogations from the requirement to achieve good status for these cases, so long as all appropriate mitigation measures are taken. Less clear-cut cases are navigation and power generation, where the activity is open to alternative approaches (transport can be switched to land, other means of power generation can be used). Derogations are provided for those cases also, but subject to three tests: that the alternatives are technically impossible, that they are prohibitively expensive, or that they produce a worse overall environmental result.

Groundwater

Chemical status

The case of groundwater is somewhat different. The presumption in relation to groundwater should broadly be that it should not be polluted at all. For this reason, setting chemical quality standards may not be the best approach, as it gives the impression of an allowed level of pollution to which Member States can fill up. A very few such standards have been established at European level for particular issues (nitrates, pesticides and biocides), and these must always be adhered to. But for general protection, we have taken another approach. It is essentially a precautionary one. It comprises a prohibition on direct discharges to groundwater, and (to cover indirect discharges) a requirement to monitor groundwater bodies so as to detect changes in chemical composition, and to reverse any antropogenically induced upward pollution trend. Taken together, these should ensure the protection of groundwater from all contamination, according to the principle of minimum anthropogenic impact.

Quantitative status

Quantity is also a major issue for groundwater. Briefly, the issue can be put as follows. There is only a certain amount of recharge into a groundwater each year, and of this recharge, some is needed to support connected ecosystems (whether they be surface water bodies, or terrestrial systems such as wetlands). For good management, only that portion of the overall recharge not needed by the ecology can be abstracted - this is the sustainable resource, and the Directive limits abstraction to that quantity.

One of the innovations of the Directive is that it provides a framework for integrated management of groundwater and surface water for the first time at European level.

Co-ordination of measures

There are a number of measures taken at Community level to tackle particular pollution problems. Key examples are the Urban Waste Water Treatment Directive and the Nitrates Directive, which together tackle the problem of eutrophication (as well as health effects such as microbial pollution in bathing water areas and nitrates in drinking water); and the Integrated Pollution Prevention and Control Directive, which deals with chemical pollution. The aim is to co-ordinate the application of these so as to meet the objectives established above. This is done as follows.

First of all, the objectives are established for the river basin as outlined in the previous section. Then an analysis of human impact is conducted so as to determine how far from the objective each body of water is. At this point, the effect on the problems of each body of water of full implementation of all existing legislation is considered. If the existing legislation solves the problem, well and good, and the objective of the framework Directive is attained. However, if it does not, the Member State must identify exactly why, and

design whatever additional measures are needed to satisfy all the objectives established. These might include stricter controls on polluting emissions from industry and agriculture, or urban waste water sources, say. This should ensure full co-ordination.

The combined approach

But there is a further aspect. Historically, there has been a dichotomy in approach to pollution control at European level, with some controls concentrating on what is achievable at source, through the application of technology; and some dealing with the needs of the receiving environment in the form of quality objectives. Each approach has potential flaws. Source controls alone can allow a cumulative pollution load which is severely detrimental to the environment, where there is a concentration of pollution sources. And quality standards can underestimate the effect of a particular substance on the ecosystem, due to the limitations in scientific knowledge regarding dose-response relationships and the mechanics of transport within the environment.

For this reason, a consensus has developed that both are needed in practice - a combined approach. The Water Framework Directive formalises this. It does so as follows. On the source side, it requires that as part of the basic measures to be taken in the river basin, all existing technology-driven source-based controls must be implemented as a first step. But over and above this, it also sets out a framework for developing further such controls. The framework comprises the development of a list of priority substances for action at EU level, prioritised on the basis of risk; and then the design of the most cost-effective set of measures to achieve load reduction of those substances, taking into account both product and process sources.

On the effects side, it co-ordinates all the environmental objectives in existing legislation, and provides a new overall objective of good status for all waters, and requires that where the measures taken on the source side are not sufficient to achieve these objectives, additional ones are required.

The river basin management plan

All the elements of this analysis must be set out in a plan for the river basin. The plan is a detailed account of how the objectives set for the river basin (ecological status, quantitative status, chemical status and protected area objectives) are to be reached within the timescale required. The plan will include all the results of the above analysis: the river basin's characteristics, a review of the impact of human activity on the status of waters in the basin, estimation of the effect of existing legislation and the remaining "gap" to meeting these objectives; and a set of measures designed to fill the gap. One additional component is that an economic analysis of water use within the river basin must be carried out. This is to enable there to be a rational discussion on the cost-effectiveness of the various possible measures. It is essential that all interested parties are fully involved in this discussion, and indeed in the preparation of the river basin management plan as a whole. Which brings me to the final major element of the proposal, the public participation requirements.

Public participation

In getting our waters clean, the role of citizens and citizens' groups will be crucial.

There are two main reasons for an extension of public participation. The first is that the decisions on the most appropriate measures to achieve the objectives in the river basin management plan will involve balancing the interests of various groups. The economic analysis requirement is intended to provide a rational basis for this, but it is essential that the process is open to the scrutiny of those who will be affected.

The second reason concerns enforceability. The greater the transparency in the establishment of objectives, the imposition of measures, and the reporting of standards, the greater the care Member States will take to implement the legislation in good faith, and the greater the power of the citizens to influence the direction of environmental protection, whether through consultation or, if disagreement persists, through the complaints procedures and the courts. Caring for Europe 's waters will require more involvement of citizens, interested parties, non-governmental organisations (NGOs). To that end the Water Framework Directive will require information and consultation when river basin management plans are established: the river basin management plan must be issued in draft, and the background documentation on which the decisions are based must be made accessible. Furthermore a biannual conference in order to provide for a regular exchange of views and experiences in implementation will be organised. Too often in the past implementation has been left unexamined until it is too late - until Member States are already woefully behind schedule and out of compliance. The Framework Directive, by establishing very early on a network for the exchange of information and experience between water professionals throughout the Community will ensure this does not happen.

Streamlining legislation: seven old directives to be repealed

One advantage of the framework directive approach, in its own way a significant one, is that it will rationalise the Community's water legislation by replacing seven of the "first wave" directives: those on surface water and is two related directives on measurement methods and sampling frequencies and exchanges of information on fresh water quality; the fish water, shellfish water, and groundwater directives; and the directive on dangerous substances discharges. The operative provisions of these directives will be taken over in the framework directive, allowing them to be repealed.

Getting the prices right

The need to conserve adequate supplies of a resource for which demand is continuously increasing is also one of the drivers behind what is arguably one of the Directives's most important innovations - the introduction of pricing. Adequate water pricing acts as an incentive for the sustainable use of water resources and thus helps to achieve the environmental objectives under the Directive.

Member States will be required to ensure that the price charged to water consumers - such as for the abstraction and distribution of fresh water and the collection and treatment of waste water - reflects the true costs. Whereas this principle has a long tradition in some countries, this is currently not the case in others. However, derogations will be possible, e.g. in less-favoured areas or to provide basic services at an affordable price.

Conclusion

Much progress has been made in water protection in Europe , in individual Member States, but also in tackling significant problems at European level. But Europe 's waters are still in need of increased efforts to get them clean or to keep them clean. After 30 years of European water legislation, this demand is expressed, not only by the scientific community and other experts, but to an ever increasing extent by citizens and environmental organisations. We should take up the challenge of water protection, one of the great challenges for the European Union in the new millennium. Let us seize the initiative generated by the political process on the Water Framework Directive for the benefit of all Europe 's citizens and waters:

- Getting Europe 's waters cleaner
- Getting the citizens involved.

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