



Briefing Note

Priority and other specific polluting substances and the Water Framework Directive

The Water Framework Directive (WFD) requires the management of chemical pollutants through a combination of Environmental Quality Standards and emission controls. This Brief gives the Environment Agency's current understanding and position on some of the key issues.

Key issues

- Identification and review of 'priority substances' and identification of 'priority hazardous substances' (WFD - Annex X).
- The use of Environmental Quality Standards and emission controls ('the combined approach').
- The identification and development of controls for 'other specific polluting substances' (WFD - Annex VIII).
- Groundwater chemical quality and links to the Groundwater Daughter Directive.

Definitions

Pollutant - any substance liable to cause pollution and in particular those listed in Annex VIII of the WFD.

Pollution - the direct or indirect introduction, as a result of human activity, of substances or heat into the air, water or land which may be harmful to human health or the quality of ecosystems, which result in damage to material property, or which impair or interfere with amenities and other legitimate uses of the environment.

Priority substances - substances which present a significant risk to or via the water environment and which are identified in accordance with WFD Article 16(2) and listed in Annex X. They will be subject to measures aimed at the progressive reduction of discharges, emissions and losses.

Priority hazardous substances - a sub-set of priority substances, listed in Annex X and identified in accordance with Article 16(3) and (6) of the WFD, that are toxic, persistent and liable to bio-accumulate, and other substances or groups of substances which give rise to an equivalent level of concern. These substances will be subject to measures in accordance with Article 16(1) and (8) aimed at the cessation or phasing out of discharges, emissions and losses by 2020.

Other specific polluting substances - in the context of this Brief, these are substances liable to cause 'pollution' (see above) which are not priority or priority hazardous substances.

Background

The aim of the WFD in relation to pollutants is to achieve compliance with Environmental Quality Standards (EQSs) for 'priority substances', eliminate 'priority hazardous substances' and contribute to achieving concentrations in the aquatic environment of near-background values for naturally occurring substances (e.g. nutrients, organic material and sediments). The mechanism for achieving these aims is to use the combined approach of emission controls for pollutant sources and EQSs for the receiving environment.

In the WFD, surface water bodies are classified on the basis of ecological status and chemical status. Chemical status is based on the concentrations of substances for which EQSs have been established at European Commission level. Groundwater bodies are classified according to quantitative status and chemical status.

Each member state is required to establish and implement a programme of measures for each River Basin District to achieve the required aims and objectives. This includes controlling inputs from point and diffuse sources and from accidents.

The WFD will take over the provisions of the Dangerous Substances Directive (76/464/EEC), which will be repealed in 2013. Management at European, national and local levels may be required to meet the WFD's requirements to ensure cessation of discharges, emissions and losses of 'priority hazardous substances'.

Review of the priority list and identification of priority hazardous substances

The European Commission is required to review the adopted list of priority substances (see Box 1) by the end of 2004, and then at least every four years thereafter. At the time of the adoption of the list of priority substances, 14 of these were identified as under review as possible priority hazardous substances. The Commission has to make proposals as to which of these 'under review' priority substances should be designated as priority hazardous substances.

Box 1. Priority substances		
Priority hazardous substances	Priority substances subject to review to priority hazardous substances	Priority substances
1. Brominated diphenylether (only pentabromobiphenylether)	1. Anthracene	1. Alachlor
2. Cadmium and its compounds	2. Atrazine	2. Benzene
3. C10-13-chloroalkanes	3. Chlorpyrifos	3. Chlorfenvinphos
4. Hexachlorobenzene	4. Di(2-ethylhexyl)phthalate (DEHP)	4. 1,2-Dichloroethane
5. Hexachlorobutadiene	5. Diuron	5. Dichloromethane
6. Hexachlorocyclohexane	6. Endosulfan	6. Fluoroanthene
7. Mercury and its compounds	7. Isoproturon	7. Nickel and its compounds
8. Nonylphenols	8. Lead and its compounds	8. Trichloromethane
9. Pentachlorobenzene	9. Naphthalene	
10. Polyaromatic hydrocarbons (PAHs)	10. Octylphenols	
11. Tributyltin compounds	11. Pentachlorophenol	
	12. Simazine	
	13. Trichlorobenzenes	
	14. Trifluralin	

Environmental Quality Standards

The WFD sets out a methodology for determining EQSs for priority substances (including priority hazardous substances) and other specific pollutants. The UK has existing EQSs for many of these substances; however, work is required to ensure their derivation is compliant with the WFD methodology.

Some current EQSs in England and Wales may be superseded by EQSs being developed for priority and priority hazardous substances at a European Community level. However, Article 16(8) of the WFD states that in the absence of agreement at community level six years after the WFD comes into force, member states will be required to establish EQSs for priority (including priority hazardous) substances. Therefore the UK must monitor progress in Europe and prepare for this eventuality.

Other specific polluting substances

Member states are also required to develop quality standards for 'other specific polluting substances'. Many of these substances will also have existing UK EQSs. However, these will need to be reviewed to ensure their compliance with the provisions of the WFD.

The Agency is currently working on the selection of these 'other specific polluting substances'. A risk-based approach will be applied to potential polluting substances to identify the most relevant and important pollutants. Annex VIII of the WFD identifies generic groups of other pollutants which may make up the potential list considered. However, it is also necessary to ensure that requirements from existing legislation (e.g. the Dangerous Substances Directive) which will eventually be repealed are met. We will make use of existing information (including that on EQSs) and analytical experience within the Agency during this process.

Emission controls

The European Commission is currently developing the emission controls required to enable the quality standard and phase-out objectives for priority substances to be met. The controls are required to achieve the progressive reduction of discharges, emissions and losses of priority substances and, in addition, the cessation or phasing-out of discharges, emissions and losses of priority hazardous substances.

An inventory of all the sources that result in releases has been produced and the sources have been categorised as major, minor or negligible ('source screening'). The Commission has consulted on the resulting source screening sheets, and comments from the UK were collated through the Agency's Priority and Other Specific Polluting Substances (POSPS) team within the national WFD Programme and from the other relevant agencies, organisations and industry bodies.

These source screening sheets will help with identification of appropriate emission controls, which will be set either at a community or member state level. It is possible that sources identified as 'major' will attract a community-level control, with all other sources being controlled at member state level. Where substances are already controlled under existing legislation, these controls will be considered to determine whether they are appropriate for achieving the objectives on priority and priority hazardous substances before any new controls are developed.

As part of this process, existing legislation and controls will be reviewed to assess whether they are sufficient to meet the requirements of the WFD. Existing legislation that may be used within the 'programmes of measures' to address emission controls include Integrated Pollution Prevention Control (IPPC) and the Marketing and Use Directive. Possible controls include prohibition, prior regulation, emission limit values, Best Available Technology (BAT), Best Environmental Practice (BEP), general binding rules and voluntary agreements.



A daughter directive on emissions controls will be produced. It is likely that appropriate measures for the control of currently identified List 1 (Dangerous Substances Directive 76/464/EEC) substances will be incorporated in this daughter directive.

Groundwater Daughter Directive

The priority list of substances in the WFD was not drawn up with consideration of its application to groundwater and it is widely agreed that it does not apply to groundwater directly. However, there is an indirect relationship via the surface water objectives incorporated within groundwater objectives. A Groundwater Daughter Directive (GDD) is being prepared and it is intended that this will include provisions for the protection of groundwater from pollution and also set chemical quality standards for groundwater. The Agency's POSPS team and others within the National WFD Programme are contributing to the development of the GDD.

The way forward - the POSPS team

The Agency's POSPS team has been set up both to provide policy advice relating to priority substances and other pollutants and to develop some of the mechanisms through which these substances will be managed.

The remit of the POSPS team is primarily to provide policy and strategic advice to the Secretary of State, the National Assembly for Wales, the UK Technical Advisory Group (UK TAG) and the Environment Agency on the implementation of the WFD with respect to priority substances and other identified pollutants. Specifically, it aims to:

- enable the Agency to inform Defra of the environmental relevance of substances proposed for inclusion on the priority substances list, and advise on appropriate targets, standards and emission limits, for both surface water and groundwater;
- support Defra in further development and refinement of the priority substance selection process;
- identify other hazardous substances and develop standards or targets for these substances;
- identify other polluting substances as set out in Annex VIII of the WFD (in addition to those set out in Annex X) and develop EQSs or targets in accordance with the procedure in section 1.2.6. of Annex V of the WFD for these substances;
- support Defra in the development of measures required for the control of priority and other polluting substances and provide guidance on compliance with these measures (this involves a review of the existing controls under the Dangerous Substances Directive); and
- advise the National Assembly for Wales as required, particularly on those matters in Wales for which the Assembly has devolved responsibility.

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