

Intercompartment Soils & Sediments: News

Chemical Monitoring Activity under the Common Implementation Strategy of the WFD

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DOI: <http://dx.doi.org/10.1065/jss2006.02.002>

The future monitoring programmes under the Water Framework Directive [1] will represent a cornerstone for European environmental assessment, which will be closely coordinated with European Environment Agency's State of the Environment (SoE) reporting in the context of WISE (Water Information System for Europe). The wide-scale gathering of monitoring data will be of obvious interest to all those involved in environmental sciences. Harmonisation will, however, be required to make sure that monitoring data will be of comparable quality. This news article is an extended version from information provided in the newly published WISE Newsletter, which is the bulletin of information of the EC Environment Directorate-General's Water & Marine unit, accessible at <http://europa.eu.int/comm/environment/water/>.

Introduction

The Water Framework Directive (2000/60/EC) [1] includes requirements for monitoring of the chemical status of surface and ground waters. Such monitoring programmes, to be carried out by all Member States, should be operational by the end of 2006. The effectiveness of these programmes, and hence of the overall Directive implementation, will highly depend on the ability of Member States laboratories to measure chemical status of Community waters and changes of this status. Measurement data will, therefore, represent the foundation of the water quality evaluation system, on the basis of which decisions will be taken on the programme of measures required to achieve WFD environmental objectives.

More specifically, a large part of compliance requirements to **good chemical status of both surface and ground water bodies** is based on chemical monitoring data. This means in turn that the legal basis of the overall directive will be primarily linked to reporting of data, which should be of demonstrated and comparable quality throughout the European Union. Sufficient knowledge presently exists to confidently expect that high quality data could be obtained. To date, the available knowledge is often tailor-made to specific monitoring needs (e.g. marine monitoring, river conventions etc.). For surface waters the work of an expert group launched under the Common Implementation Strategy (CIS) of the Water Framework Directive [2], namely the Analysis and Monitoring of Priority Substances (AMPS) expert group [3], has highlighted that specific guidelines would be highly desirable in support of the WFD implementation, and in particular to its legal compliance regime.

For these purposes a new activity has been proposed under the CIS, bringing together experts on **surface and ground water monitoring** in order to ensure a coherent view and to avoid duplication on effort on issues of joint concern. Key issues are monitoring design and strategies in relation to compliance checking to good chemical status, as they should be applied to the different types of media covered by the WFD (i.e. surface waters including inland (rivers, lakes), transitional, coastal and territorial waters and other marine waters under the jurisdiction of the Member States, ground waters, sediments, suspended matters and biota), and issue working documents including aspects of quality assurance.

The starting point for the Chemical Monitoring Activity (CMA) is based on the existing requirements of the Water Framework Directive, the proposed 'daughter Directive' on ground water (expected to be adopted before the end of 2006) and the future proposal on priority substances, the work of the European Marine Monitoring and Assessment (EMMA) working group under the EU Marine Strategy (and in this respect in particular the work already carried out within ICES, HELCOM and OSPAR), and the work carried out in different working groups and expert groups of the Common Implementation Strategy (CIS) of the WFD, which resulted in the development of a guidance document on monitoring (CIS Guidance N°7) [4].

For surface water, specific discussions have taken place in the framework of the AMPS expert group [3] with regard to monitoring of priority substances in surface waters, suspended particulate matter, sediments and biota. To avoid overlapping work and to ensure coherence between WFD and chemical monitoring in the framework of the Marine Strategy, the activities of EMMA will form an integral part of this work. For ground water, the work of CIS Working Group C regarding ground water, for what concerns chemical monitoring, will be fully included in the CMA activities [5]. Specific monitoring guidance already developed by international or national organisations, and research-related activities (e.g. projects funded under the 'Scientific Support to Policies' (SSP) priority of the 6th RTD Framework Programme) are being taken into account, e.g. the SWIFT-WFD project [6], the NORMAN project [7] and the newly started EAQC-WISE project [8].

Worth to be noted is that chemical monitoring under the WFD will not only concern different types of waters, but also their interactions with other environmental compartments (including biota). In particular, **sediment** is clearly mentioned in the requirements of the WFD (Annex V) with respect to monitoring of priority substances. In this respect, the CMA will strongly benefit from experiences gathered in the framework of SedNet, and representatives of this network will be active in this activity. Last but not least, **soil-groundwater** interactions will also need to be looked at in the framework of the implementation of the new Groundwater Directive, in particular in the light of the 'prevent/limit' requirements, and these are being examined in an ad hoc expert group with the help of experts from the AQUATERRA Integrated Project. The CMA outcome will hence be of direct interest to the sediment and soil sectors.

Objectives

The objectives of the **Chemical Monitoring Activity** are the following:

1. **Collect the existing information** from the WFD Common Implementation Strategy process and best practices from other bodies (e.g. marine conventions, river conventions, research projects etc.) regarding chemical monitoring.
2. **Exchange information on existing best practices** among member states.
3. **Develop non-legally binding technical guidance and/or technical specifications** on chemical monitoring on specific issues not yet sufficiently developed in previous work and that would merit an EU wide approach. The final outcome can also include a compilation of already produced guidance, extracted from different sources, and relevant to both surface and ground water categories under WFD.
4. **Develop legally binding requirements on method's performance** e.g. in the form of a Commission decision, to ensure that quality assurance/control principles established under existing standards (e.g. ISO 17025) will be mandatory within the WFD monitoring framework.
5. **Assess and develop coordination** needed at EU level with respect to quality assurance of WFD monitoring programmes to ensure that monitoring data will be comparable from one river basin district to another.

General Organisation

Three drafting groups have been established under the activity. Group leaders will put forward proposals for discussion and comments to the respective groups. Most of the work relies on email consultations and exchange of drafts steered by the leaders, with drafts submitted for comments to the group members and discussed at regular workshops. The three groups are:

- **Surface/Marine water group** focusing on technical specifications on inland and marine water monitoring. This group is chaired by the German Federal Environment Agency and co-chaired by the EC Joint Research Centre' Institute for Environment Sustainability, and is composed of Member State's experts, CEN representatives, and representatives of related RTD projects (in particular SWIFT-WFD, EAQC-WISE and NORMAN)
- **Groundwater group** solely focusing on technical groundwater monitoring issues. This group is chaired by the Austrian Environment Agency and co-chaired by the UK Environment Agency. Similarly to the surface/marine group, it involves Member State's experts, stakeholder organisations and representatives of the scientific community.
- **QA/QC group** developing a cross-cutting document on method's performance criteria. It is chaired by the European Commission, and its drafting involves a core set of organisations such as the JRC-IES, the JRC' Institute for Reference Materials and Measurements and the CEN. The document will be reviewed by the above groups prior to submission (and adoption) by the WFD Regulatory Committee.

Timetable

The activity has been officially launched on 11th April 2005, and outlines of the respective guidance contents have been discussed in *ad hoc* workshops on 12th October 2005 (groundwater), 17th November 2005 (surface/marine water) and 5th December 2005 (QA/QC). The CMA will be developed along the following timeframe:

- QA/QC group meeting on 9th February 2006 in Geel
- Groundwater expert group meeting on 13–14 February 2006 in Brussels
- Surface/marine expert group meeting on 23rd March in Brussels
- Plenary meeting (three drafting groups) on 22nd May in Rome

The aim is develop consolidated documents for discussion and possible approval by the expert groups at the plenary meeting in Rome. Final drafts should be made available for submission to the Member States through the WFD Common Implementation Strategy before Autumn 2006 so that the guidance documents may be adopted before the official start of the WFD monitoring programmes. In parallel, RTD projects will contribute to the discussions through scientific outputs and expertise, and medium to long-term developments will be planned.

Contacts. The overall activity is coordinated by Philippe Quevauviller (philippe.quevauviller@cec.eu.int). With regard to the surface/water group, contacts are Peter Lepom (chairman – peter.lepom@uba.de), Jan Wollgast (jan.wollgast@jrc.it) and Ulrich Borchers (u.borchers@iwu-online.de). Contacts for the groundwater monitoring group are Johannes Grath (Johannes.grath@umweltbundesamt.at) and Rob Ward (rob.ward@environment-agency.gov.uk). Finally, besides the above contacts, additional contacts for the QA/QC group are Andrea Held (andrea.held@cec.eu.int), Philip Taylor (Philip.taylor@cec.eu.int) and Lutgart Van Nevel (lutgart.van-nevel@cec.eu.int), as well as coordinators of related RTD projects, namely Catherine Gonzalez (Catherine.gonzalez@ema.fr) for SWIFT-WFD, Anne-Marie Fouillac (am.fouillac@brgm.fr) for EAQC-WISE, and Valeria Dulio (valeria.dulio@ineris.fr) for NORMAN.

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