

ERMITE: supporting European policy making on mine waste and waters

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Abstract

After the Aznalcóllar and Baia Mare disasters the regulation of the environmental impacts from the extractive industries has become a focus of attention for European environmental policy. The EC Framework 5 project ERMITE has specifically supported the development of European policies on the management of water in the mining sector. One component of the project was the review of mine water policies in six case study countries in Europe and their links with European policy. This paper presents a summary of the findings of the UK case study. A key element of the project was the establishment a National Stakeholder Group with regulators, industry, consultants and representatives of civil society. Four main open issues for mine water management in the UK were identified: closure of coal mines and large coalfields, abandoned metal mines, spoil heaps and improvement of working mines and quarries. From the analysis of the UK position on the consultations for the proposed Directive on waste from the extractive industries three critical questions are discussed: water pollution from excavation voids, establishment of programmes of abandoned site remediation and inclusion of all structures for stability and water pollution purposes. Finally, based on the conclusions of the study the UK ERMITE team proposes a set of seven specific recommendations for mine water management in the UK.

1 Introduction

After the Aznalcóllar and Baia Mare disasters the regulation of the environmental impacts from the extractive industries has become a focus of attention for European environmental policy. Following the recommendations of the Baia Mare task force (CEC 2000), the European Commission (EC) initiated a legislative process to cover the glaring omissions in the European environmental policy framework exposed by these accidents (Kroll et al., 2001). The crafting of a new proposed Directive on the management of waste from the extractive industries (CEC 2003) has been the most important element of this process.

The EC Framework 5 project “Environmental Regulation of Mine Waters in the European Union” (ERMITE) ran from February 2001 to January 2004. The goal of this project was to provide integrated policy guidelines for developing European legislation and practice in relation to water management in the mining sector. The project achieved the stated objective of FP5 Key Action Sustainable Management and Quality of Water of *supporting the implementation of various EU policies related to the sustainable management of water resources*.

ERMITE was a multidisciplinary project involving expertise on water resources, mining, ecology, economy, law, institutions and policy. Its main policy objective was to bring about attention to the importance of water management in the mining sector and help improving the current legislative proposals. It was particularly focussed on highlighting the requirements from a catchment management perspective. Intensive interaction with the European Commission and other policy actors has allowed the project to have a demonstrable impact on the policy process. In order to achieve this objective the project paid particular attention to the development of interfaces with stakeholders involved in the policy process.

In this paper will present ERMITE’s policy activities following the Context, Evidence and Links analytical framework for connecting research and policy proposed by the Overseas Development Institute (Crewe and Young 2002). First, we will introduce the policy context of the project, focussed on the development of the proposed Directive on mineral waste. Second, we will explain the main elements of ERMITE as a project to support evidence-based policy making. Third, we will examine the three different types of interfaces linking ERMITE with the policy process: 6 National Stakeholder Groups, European Stakeholder Group (European Commission) and WWF (European Commission and European Parliament). Finally, we will provide a summary of the key policy recommendations of the ERMITE project.

2 European Policy Context

Within the European Commission, mining interests reside in two different Directorates General (DGs): DG Transport and Energy which deals with the energy extractive industry and DG Enterprise which deals with the non-energy extractive industry. So far, the emphasis on European mining policies has been on the industrial (including safety and health) and economic aspects of such an important sector. For historical and economic reasons mining has been specifically excluded from much of the environmental policy developed by DG Environment. Recent reviews of relevant Community legislation show how the mining industry had a favorable treatment compared with other industrial sectors (Hámor 2002). Mining was excluded from the Integrated Pollution Prevention and Control (IPPC) Directive (96/61/EC) and the Seveso II Directive (96/82/EC). It was included, but with greater freedom of interpretation, in the Environmental Impact Assessment Directive (97/11/EC). The inclusion or not in waste legislation has been a contentious issue due to the clause of the Waste Framework Directive (75/442/EEC) stating that mining waste would be excluded where they are already covered by other legislation, interpreted by the European Commission as referring exclusively to European legislation. Water legislation has much less direct references to mining than waste. The Water Framework Directive (WFD) (2000/60/EC) applies to mining activities in a generic sense but there is no specific water legislation addressing the specific requirements of this sector.

In the aftermath of the Aznalcóllar (April 1998) and Baia Mare (January 2000) accidents, the EC created the Baia Mare Task Force (March 2000) to follow-up these events and propose a plan of action. In less than one year, the EC published three communications on environmental aspects of mining emanating from two different Directorates General: Enterprise, [COM (2000) 265f], and Environment, [COM (2000) 664f] and [COM (2000) 593f]. In particular, the Baia Mare Task Force recommended three key actions: amendment of the Seveso II Directive, a document on Best Available Techniques (BAT) similar to those produced under the IPPC Directive and an initiative on the management of mining waste. Conspicuously, the Task Force with its narrow focus on tailings dam safety failed to identify the need for a water related initiative (Kroll et al. 2002). Thus, the Baia Mare Task Force report defined the policy agenda within the European Commission. A very important consideration is that the key policy initiative, the development of a new directive, was labelled as a **waste** initiative

and as such became the domain of particular unit within the Commission, DG Environment Unit A2.

The co-decision procedure for a Directive of the European Parliament and of the Council as established by the European Treaty is very complex. It includes a series of sequential steps involving the Commission, the Parliament and the Council. The European Commission has a central role as the originator of legislation. The first step of the process is completely controlled by the EC. In this particular case, it started with the communication after Baia Mare (CEC 2000) and finished with the official presentation by the Commission of a proposal for a Directive on the management of waste from the extractive industries (CEC 2003). The *modus operandi* of the EC is that the desk officers of a unit have ownership of the process. There is a degree of consultation between units, and at certain steps in the process there are compulsory interservice consultations involving all relevant DGs of the Commission. But, in general, the directives are shaped by the unit in charge. This proposal had a very open consultation with all kind of stakeholders until the draft proposal was released within the Commission. Alas, the final version of the Directive coming out of this internal consultation was much more restricted than the previous 3rd draft.

Table 1. Steps in the development of the new directive on mining waste

European Commission - DG Environment Unit A2 Waste	
EC Communication	(23.10.2000)
1st Working Document based on Landfill Directive	(15.06.2001)
2nd Working Document	(04.02.2002)
3rd Working Document	(05.06.2002)
Draft Proposal for interservice consultation	(Feb 2003)
Proposed Directive on Mining Waste by the Commission	(02.06.2003)
European Parliament- Environment Committee	
Roundtable Discussion by Rapporteur	(03.11.2003)
Rapporteur draft report	(17.11.2003)
Adoption by Environment Committee	(16.03.2004)
First Reading Plenary vote by European Parliament	(31.03.2004)

The next step is the first reading by the Parliament. There the key unit was the Environment Committee of MEPs and the key actor the MEP acting as rapporteur. The proposal goes then to the Council and comes back for a second reading to the Parliament, before being returned to the Commission. Most probably the final conciliation between the Council and the Parliament will happen in 2005.

3 ERMITE: evidence for policy-making on mine waste and water.

ERMITE was a research project conceived between the Aznalcóllar and the Baia Mare accidents with the goal of contributing to the development of European policies for the management of water in the mining sector. The project was specifically designed to really fulfil the EC 5th Framework requirements of underpinning European policies, achieving demonstrable policy impact. So, its activities were oriented to the generation of guidelines for policy covering the different conditions within EU member states and paying particular attention to the intersection of water and mining issues. It also developed an understanding of the context of European policy making from a multidisciplinary perspective. The participation of the JRC-IPTS, which is a centre of the EC, provided the necessary links with the internal workings of the Commission. ERMITE established interfaces with key stakeholders at national and European level which would contribute to the content of the project and act as a platform for promotion and dissemination.

The project partners were: University of Oviedo (Spain, Coordinator), University of Newcastle Upon Tyne (UK, Technical Coordinator), Institute for Prospective Technological Studies (Joint Research Centre, European Commission), Netherlands Institute for Ecology, University of Exeter (UK), Royal Institute of Technology/ Swedish University of Agricultural Sciences (SLU) (Sweden), Technical University and Mining Academy Freiberg (Germany), IRGO (Slovenia) and Hydro-Engineering Institute (BiH).

The main outputs of the project were:

- Six national case studies (Spain, UK, Sweden, Germany, Slovenia and Bosnia-Herzegovina) analysing in depth the technical, socio-economic and institutional aspects of mine water management.
- Overview of the whole the EU and Eastern Europe.
- Multidisciplinary analysis of the overall EU policy framework and, in particular, the ecological and legal principles (environmental liability) of existing legislation.
- Mining Impacts on the Fresh Water Environment: Technical and Managerial Guidelines for Catchment-Focused Remediation. (ERMITE Consortium 2004)
- Methodology for economic analysis of mine water abatement.
- National recommendations for mine water management in the six case studies.
- Policy briefs for the European Commission.

4 ERMITE policy interfaces

ERMITE worked in parallel with the policy process described in section 2. The initial policy objective of the project was water policy within DG Environment, in particular the implementation of the Water Framework Directive. However, as the policy agenda became fixed on mining waste, the project focussed on raising the profile of the water aspects of the mining waste policy initiative. The water unit of DG Environment is fully devoted to the implementation of the Water Framework Directive and did not perceived (incorrectly from the ERMITE perspective) the requirements for a catchment approach to mine water management to be a central issue in the current phase of environmental policy-making for the mining sector. On the contrary, ERMITE interaction with the waste unit has helped to increase the awareness of water issues in the current proposal for a directive.

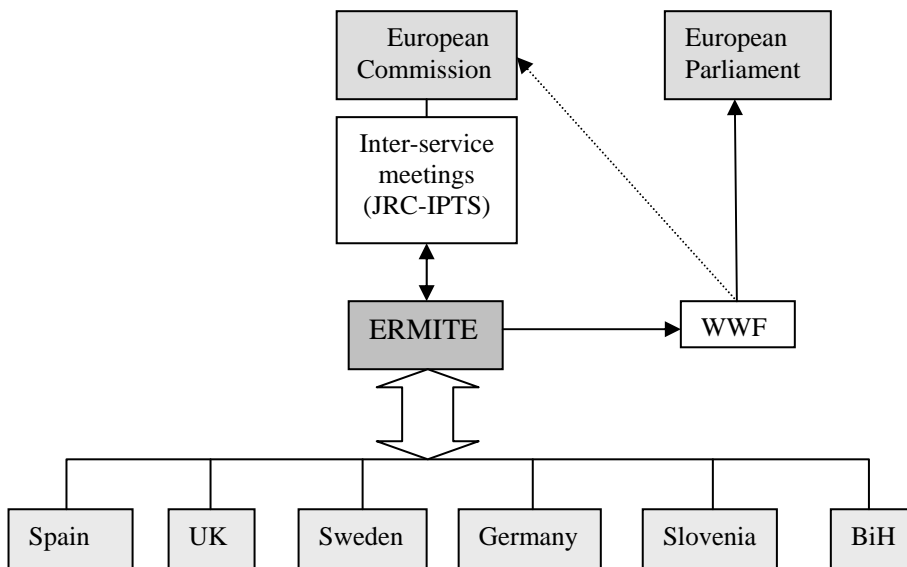


Fig. 1. ERMITE policy interfaces

ERMITE had three key policy interfaces for the promotion and dissemination of the ideas of the project. Two were designed in the original concept of the project (National Stakeholder Groups and European Stakeholder Group); the third one (WWF European Water Policy Function) evolved during the life time of the project. Altogether they have proven to

be a successful mechanism for policy interaction within the constraints of a time and resource limited research project.

National Stakeholder Groups

ERMITE established a network for stakeholder dialogue in the six case study countries: Spain, UK, Sweden, Germany, Slovenia and Bosnia-Herzegovina. Each group was adapted to the local conditions and contacts of the research group. They included representatives from industry, regulatory bodies, independent experts and civil society. The groups sought to integrate both water management and mining expertise. Another paper in this conference describes the role played by the national stakeholder group in the development of the UK case study (Amezaga and Younger, 2004).

The national stakeholder groups met three times during the life time of ERMITE. They discussed the development of the project, the management of mine water management in the country and the evolution of European policies. The minutes of these meetings and the national recommendations for each country can be found at <http://www.minewater.net/ermite>). The existence of this wide network of stakeholders increased the credibility of the project. They provided a test base for the findings of the research and a source of very useful institutional and policy information.

Each local partner had autonomy to steer the national group in the direction most appropriate to the local circumstances. In most of the cases they provided an interface with national policy-making. Thus, the UK group became an important platform for dialogue of key institutional actors which is going to continue after the end of the project. In Sweden, the group looked in depth at the issues related to the implementation of the Water Framework Directive. The group of Bosnia-Herzegovina reached an ample group of stakeholders including representatives of neighbouring countries. There, the last workshop was organised as a parallel session to a regular meeting of the Environmental Steering Committee of Bosnia-Herzegovina.

Some groups also had an interface with European policy-making. The German stakeholder group had a strong industry representation which also participated in the stakeholder consultations for the new directive. Some meetings of the Spanish and the UK group were attended by the national representative in the consultations organised by the EC. The UK representative was later detached to DG Enterprise in Brussels and became involved in the interservice consultations. The Swedish group also established contacts with the Swedish MEP who acted as rapporteur in the first reading of the proposed Directive on management of mine waste.

European Stakeholder Group (European Commission)

The participation of the JRC-IPTS as one of ERMITE partners provided an exceptional platform for interaction with the European Commission. The IPTS is itself a centre of the Commission and its staff members can interact directly with officers of other DGs. In this particular case, the interaction was facilitated by the fact that the IPTS staff member had worked previously in DG Environment.

As explained in section 2, during the life time of ERMITE there was an on going policy process within DG Environment triggered by the Baia Mare report. The Waste Unit organised a series of meetings with Member States and other stakeholders (industry, environmental NGOs) to discuss the successive working documents of the proposed directive. This meant that the interaction with the Commission was framed by a political context which constrained the possibilities of communication with the Commission. However, the JRC-IPTS succeeded to co-organise with the Waste Unit two informative workshops on research and policy at DG Environment inviting the other units of the Commission with an interest on mining and the environment. These were the ERMITE European Stakeholder meetings.

The first meeting was in June 2001 when the Waste Unit was going to release the first working document based on the Landfill Directive. The meeting was attended by staff from Waste Unit, Water Unit (WFD), Seveso Unit, IPPC Bureau (BAT on tailings and waste-rock), JRC IPTS, JRC Ispra, DG Enterprise, DG Research and BRGM. ERMITE presentation focussed on three issues: regulating only the mine waste facilities and not the mine voids misses the main pollutant source (voids); if the full life-cycle of mine operation is considered, post-closure phase is dominant, but is poorly regulated; and problems are substantial and impact at catchment scale (and beyond).

Due to the political context it was not possible to organise another stakeholder meeting until the end of the project. However, ERMITE maintained the interaction with the officers of the Waste Unit. Amongst others, it contributed to DG ENV Workshop on 'Mine and quarry waste – The burden from the past' Lake Orta, 27 – 28.05.02 with a presentation on the importance of mine voids. It also provided official comments on draft Directive presented for Inter-service Consultation through DG Research on 13.03.03. This version of the Directive had included some key points raised by ERMITE comments and it had a much better coverage of water issues than the first working document. However, it was still weak in the regulation of "inert and non-hazardous waste", mine voids and still used a pH based definition of polluted drainage.

The second ERMITE European meeting was held in November 2003 after the official publication of the proposal by the Commission which had water down some of the good aspects of the original draft proposal. This meeting was attended by staff from the Waste Unit, Water Unit (Head of Unit and WFD), Environmental Liability (HoU), DG Research (HoU), DG Enterprise, DG TREN (energy mining), JRC Ispra, JRC IPTS and all ERMITE partners. The key messages here were again the need to pay more attention to inert waste, mine voids and abandoned mines. It was also emphasised the need to develop specific guidelines for mine water management for the implementation of the Water Framework Directive.

WWF European Water Policy Function

The WWF Water Policy Function in Brussels has been very involved in the policy process triggered by the Aznalcóllar and Baia Mare incidents. They saw clearly the implications for European water policy of the existing gap in legislation on the mining sector. ERMITE partners have provided independent technical advice to WWF officers, which has shaped their policy position in the process. So WWF has contributed to the consultations organised by the Commission for the preparation of the proposed Directive with key messages similar to those supported by ERMITE findings.

WWF has had a very important role in the first reading of the directive by the European Parliament. Intense lobbying of MEPs have helped to produce nearly 100 amendments strengthening many aspects of the proposed Directive in particular alignment of water related aspects to the WFD, mine voids and abandoned mines.

6 Conclusions

ERMITE has demonstrated how a research project can really play the role of supporting the development of European policies. Adequate project design, team work and active networking can produce the desired outcomes. Gathering the experience and technical knowledge of a selected group of researchers can generate strong collective evidence of enough quality to question policy developments. But researchers need to understand the vagaries of the policy process and how to create interfaces with it. In the particular case of mine water management, it is fundamental that both water and mining expertise be taken into account. Our experience in policy research in this area shows that this is rarely the case. The mine water perspective cannot emerge in a policy discussion dominated by waste experts

and mining representatives looking at the problem from a narrow perspective. At the same time, the water management class cannot usually see the particularities of mine water problems and the need to involve mining expertise. The result is that the long-term, catchment perspective is not taken into account. Surprisingly enough, best practice of international mining companies is already beyond of what is being proposed in European policies. It is our opinion that the interest of the mining industry is better protected by enshrining best practice in legislation rather than opposing it.

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