PADRE – Partnership for Acid Drainage Remediation in Europe

Christian Wolkersdorfer¹, Paul L Younger², and Rob Bowell³

¹Technische Universität Bergakademie Freiberg, Lehrstuhl für Hydrogeologie, Gustav-Zeuner-Str. 12, 09596 Freiberg/Sachsen, Germany; ²Univ of Newcastle, Dept of Civil Eng and Geosciences, Newcastle upon Tyne NE1 7RU, UK; ³SRK Consulting, 1 Windsor Place, Cardiff/Wales CF10 3BX, UK; corresponding author's e-mail: c.wolke@IMWA.info

Introduction

Acid drainage is the single greatest environmental challenge in the mining sector. Within Europe, the problem is manifest at both active and abandoned mine sites, from as far north as Spitzbergen (only 640 km from the North Pole) down to the arid regions near the Mediterranean coast. Given the present status of mining in Europe, it is not surprising that most European mine water problems are associated with abandoned mines, thousands of which can be found in nearly all European countries. Similar problems have been recorded worldwide, though in most other continents, a greater proportion of the problems are being tackled at active mining sites.

When policy makers within the European Commission began the ongoing process of preparing a European Union Directive on mining wastes, they had little awareness of the nature and scale of acid drainage problems associated with mine voids and bodies of mine waste. Fortunately, a process of awareness-raising soon ensued, facilitated in part by two very timely research projects of the European Commission's 5th R&D Framework Programme (PIRAMID and ERMITE), in which the authors were heavily involved. The experience of engaging with policy making made it abundantly clear that future mine drainage research within Europe needs to be coordinated in order to avoid unnecessary duplication of effort, both within and beyond Europe. A similar realisation at the global scale led to the formation first of INAP, and then of the Global Alliance, in which INAP is partnering with relevant organisations from several continents, most notably ACMER (The Australian Centre for Mining Environmental Research, Australia), MEND (Mine Environment Neutral Drainage, Canada), and ADTI (Acid Drainage Technology Initiative, USA). The latest member of the Global Alliance is PADRE (Partnership for Acid Drainage Remediation in Europe).

What is PADRE?

PADRE is a "Permanent Commission" of IMWA, the International Mine Water Association. It was established by a formal vote by the IMWA General Assembly in October 2003. PADRE now has its own statutes and bye-laws, which are based on (and therefore consistent with) those of IMWA as a whole. PADRE's five objectives are:

- 1. To promote international best practice in the stewardship of water and soil at European sites subject to the generation and migration of acidic drainage.
- 2. To foster collaborative, international research and development into techniques for characterisation and abatement of acidic drainage in Europe.
- 3. To promote dissemination of knowledge of current best-practice and innovations relating to acidic drainage prevention and remediation, with particular reference to European conditions, including the evolving framework of relevant EU legislation.
- 4. To advance the training of present and future generations of European professionals who will engage in the art and science of acidic drainage prevention and remediation.
- 5. To actively collaborate with a Global Alliance of organisations based in other continents which share similar objectives.

Membership is open to all individuals and institutions working in acid mine drainage remediation and research, and all European IMWA members are automatically members of PADRE, unless they request not to be. Currently PADRE has 140 members, of whom the majority are working in acid mine drainage remediation or research.

What has PADRE done so far?

PADRE was publicly launched during IMWA's Mine Water 2004 conference, in Newcastle Upon Tyne (UK) in September 2004. In the run-up to that Conference, founding members of PADRE were engaged in the production of the ERMITE and PIRAMID guidelines, as well as a passive treatment database, which are all available through the internet.



Furthermore, course notes of a mine water remediation course within the EU IMAGE-TRAIN network have been produced and engagement with several symposia and congresses were initiated.

Planned Activities

To educate junior researchers and practitioners in the acid mine drainage field, PADRE plans to seek funding from European Commission sources (including the EU objective 4 "Know-How Fund") to organise training courses at various locations in Europe.

PADRE will actively contribute to the IMWA 2005 Congress in Oviedo/Spain and the IMWA 2007 Symposium in Portugal. The founder-Chairman of PADRE serves on the Scientific Committee of the 2005 "Securing the Future" conference to be held in Skellefteå (Sweden). Furthermore, PADRE will coorganize the Bergakademie Freiberg Meeting on "Mine Water Treatment" in June 2005. All PADRE information will be disseminated through the IMWA journal "Mine Water and the Environment" and the PADRE web page www.PADRE.IMWA.info. Furthermore, the European knowledge gathered within PADRE will be disseminated through the Global Alliance, which was launched in July 2003 for collaboration between various institutions word-wide. Until the next General Assembly of IMWA, at which the membership of the PADRE Council will be put to a vote, the provisional Executive Council of PADRE will consist of Paul Younger (UK) (Chair), Rob Bowell (UK) (Treasurer and Vice-Chair), Christian Wolkersdorfer (Germany) (Secretary), Ingar Walder (Norway), and Ludo Diehls (Belgium).

If you are interested in obtaining up-to-date information about acid mine drainage issues in Europe, or if you want to contribute actively to the partnership, feel free to contact the PADRE Councillors through PADRE@IMWA.info.