

Workshop „Mine Water Legislation“

Chaired by Jan Bongaerts, Peter Waggitt, and Christian Wolkersdorfer

The workshop's goal was to give an overview about mine water legislation in Europe and to discuss the needs and wishes for legislative regulations on a European and world-wide scale.

Christian Wolkersdorfer and Jan Bongaerts gave an introductory overview on European mine water legislation within the European Union Water Framework Directive and the 3rd working document on a Mine Waste Directive. It became clear that numerous horizontal legislative measures exist covering certain mining issues, but there is no vertical directive for mine water issues in the European Union. Furthermore, a European research project, ERMITE (“Environmental Regulation of Mine Waters in the European Union”) was presented to the workshops participants.

Peter Waggitt started the discussion with the Australian legislative perspective on mine water issues. Australia has site-specific regulations for each mine, but pollutant loads can be traded between mines within a water shed. This is similar to the European Union Water Framework Directive which also intends to regulate water bodies on a water shed (river basin) basis. Future legislation must be quality based, taking into account the environment as a whole.

All participants agreed that we should abandon the pollutants concentration view point, and come to a pollutants load view point. Ranger Uranium mine, for example, has both annual maximum load limits and maximum concentration values for discharge waters. It was also agreed that there should be mixing zones downstream the discharge points, to give the discharged water the opportunity to mix with the receiving water stream. Quality monitoring, as done in Victoria, should imply measurements within the mixing zone and downstream the mixing zone. During the discussion it became clear that mixing zones can range from several hundreds of meters to kilometres, as the monitoring usually is at the mining license's boarder in the case of large Australian mines. Nevertheless, a length of the mixing zone of about 50 times the width of the receiving stream should be applied.

With respect to the river basin view point of the European Union Water Framework Directive it was not clear how large the catchment scale is supposed to be in the case of a mine. Mine owners, being aware of the catchments' boarders could construct pipelines or adit tunnels to drain the mine water into catchments with lower discharge limits, the Freiberg Rothschnberger Adit being an example of a 33 km long dewatering adit. An interesting point is the fact that ground water issues, according to the Water Framework Directive are Commission and Council issues, while surface water issues have to be handled by the Member States. This means that policy-making for groundwater protection is a transnational business under the competence of the decision-makers of the European Union.

During the discussion it became clear that mine water is not always waste water from a legal view point – though it might be waste water by its contaminant load. A European Directive should therefore clarify whether mine water is to be defined as waste water in the sense of existing legislation. In many cases (e.g. open pit dewatering), it might be useful not to categorize mine water as waste water – nevertheless, according to the European Union waste directives and the Water Framework Directive, mine water is a waste. Furthermore, if one gives a narrow interpretation of the Landfill Directive, a flooded mine is a landfill. However, there are also mines where the drainage water is contaminated in the first period after the mine's flooding and, after several years, turns into good quality water. Such cases must be taken into account by existing legislation, e.g. by evaluating the standards and ecological status on a 5 – 10 year period. Obviously, new legislation should also take these cases into account.

An open question concerned groundwater. Can groundwater be classified as “used” or “unused”? How shall “used” groundwaters (e.g. groundwater that flows through a partially or fully flooded

underground mine or a flooded open pit) be classified? [During the workshop this question was left open. If one checks the definition of groundwater in the Water Framework Directive, one sees that this definition considers "all water which is below the surface of the ground and in direct contact with the ground or subsoil." This means that the origin is irrelevant. Whether this definition satisfies the needs of the mining industry which deliberately floods mines and, hence, "generates" groundwater is indeed an open question.] In those cases where the ground water is already degraded, it can be classified as used and it might become contaminated. We should be aware that in many such cases of degraded ground water, public authorities (e.g. local governments) will not be able to finance ground water clean-up operations and that, as a result, it will stay contaminated for a long time. A second point of discussion arose on an even more complex issue: In case polluted mine water from mine 1 flows into mine 2 – do we have “used” mine water in that case? Who shall be liable for clean-up procedures of “used” mine water?

Participants explained that new legislative procedures must take into account already existing permits. However, during the discussion it was made clear, that due to the structure of the German Water Resources Act and the specific regulations concerning point sources of the Water Framework Directive, there is no such protection of "old" permits, as they can be changed according to the needs of good water quality.

Participants also agreed that, under the current environmental discussion, the closure phase of a mine must be looked at from the early beginning of mining.

At the end, all participants explained, that – whatever the final version of a mine water legislation might look like – it must take into account the aesthetics of law production: the law must be simple, efficient, and it must easily fit into already existing laws, considering the interests of different lobbying groups as well.