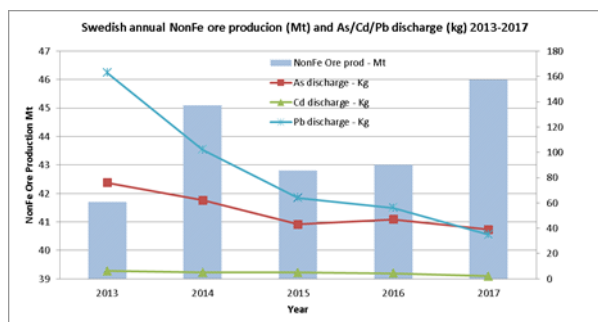


Euromines position on the current evaluation of the Water Framework Directive (WFD)

Introduction

Euromines welcomes and supports the European Union commitment to achieve good qualitative and quantitative status of all water bodies. We support society's development according the UN sustainable development goals.

The European mining industry contributes to the ability of the European Union to nurture sustainable growth including access to and supply of raw materials. Raw materials are essential to numerous industrial sectors including over 30 million jobs and playing a key role in the development of modern environmentally friendly technologies (batteries, solar cells, wind turbines etc.). Therefore, a strong industrial base, securing a reliable fair international competition, a level playing field and unhindered access to extractable raw materials is of key importance for Europe's prosperity and growth. The provisions of the WFD provide the framework for the improvement of water conditions in Europe and contribute to a sustainable water policy *inter alia* through the integrated management of river basins. Over the last decades, before and after the adoption of the WFD, industry, including mining, has reduced discharges to water dramatically leading to a significant improvement



of the status of European waters. Figure 1 presents an example from Sweden where in period 2013 to 2017 discharge of heavy metals has been reduced despite of an increasing Non-ferro ore production (sources: Swedish National Emission Register www.naturvardsverket.se, and Swedish Geological Survey <https://apps.sgu.se/geolagret>).

Nevertheless, the objectives of the WFD and other European policy strategies such as Energy, Transport, Raw

Material Initiative, Best Available Techniques for industrial emissions, Chemicals Policy or the Urban Waste Water Treatment Directive are not fully coherent with each other. The work of industry installations is directly affected by sometimes contradictory requirements of those strategies.

Since its initial implementation, the WFD has been forced into new directions *inter alia* by the European Court of Justice's ruling in the "Weser" ruling case (C-461/13) etc., which were not foreseen during its drafting and adoption. The imminence of the 2027 deadline for achieving the WFD's objectives is now highlighting such legal uncertainties and the possibility that the WFD's Annex 5 is no longer consistent with achievable and proportionate objective-setting. Altogether, the post-"Weser" ruling interpretation of WFD provisions hinders a proper balancing of different water uses in river basin management and variation in and amongst water bodies.

As according to the European Environmental Agency's State of Water report of January 2018 only 9% of all EU waters have the 'high status', the "Weser" ruling could mean that industry and public works (factories, mines, waste water treatment plants, bridges, railways etc.) can only realistically apply for permits to operate in this limited set of EU waters. The new interpretation of WFD articles 4.4, 4.5 and 4.7 has lead for the EU industry to a status quo where it cannot sufficiently foresee and manage if any current and future water permits may (remain to) be granted.

Euromines members believe that the WFD should aim for good ecological status of water bodies holistically, such as was initially intended. Since the start of WFD, new tools have been developed that can help to improve an efficient dynamic overview of Europe's water bodies that is capable of taking into account their continuously changing conditions (natural, climate change, anthropogenic, etc.).

Given the above, Euromines would like to make the following comments with regards to the WFD:

1. The objective: reference conditions

The WFD definition of ecological status is based on a reference condition that is equivalent or close to undisturbed conditions. The WFD in Annex 5 Tables 1.2.1 - 1.2.5 presents "good" ranges for various quality parameters. Yet, the complex interactions between quality elements are often insufficiently understood. The current WFD provisions and natural concentration ranges do not take account of natural change in ecosystems and therefore the proposed pathway to achieving the WFD's objectives appears out-dated and unrealistic. The objective of good ecological status should in fact be based on a balanced water environment whose ecosystem is sufficiently resilient to resist the long-standing impact of human activity, the natural changes of the aquatic environment, and the climatic changes that are becoming increasingly clear. The definition of Good Ecological Status needs to be redefined - it cannot continue to be defined in relation to a static original state without human influence. Entrepreneurs today are facing difficulties in obtaining discharge permits although independent ecological assessment finds that the overall ecological state of water bodies would not be impacted by their discharges.

2. The starting point: Status assessment of water bodies

The classing of chemical status into one of only two categories (good and not good) gives rise to legal interpretations that are difficult to reconcile with the scientific approach of the WFD, in particular with regard to the ECJ "Weser" ruling. The "Weser" ruling recognises *deterioration* in the *ecological* status of a water body if the situation of only one quality parameter deteriorates - a strict application of the so-called "one out all

out” approach. If the quality parameter in question is already associated with the worst status category, any further measurable negative change away from its desired range would, according to the “Weser” ruling, constitute *deterioration* in the status of the whole water body.

It is to be feared that the “Weser” ruling could be applied also to the assessment of chemical status of water bodies as well as ecological status¹. Many European water bodies fail to achieve good overall status because of the elevated presence of just one naturally occurring substance or pollutant (e.g., mercury, nitrate or phosphate from diffuse sources). The two-category system for chemical status (good or not good) does not allow the same freedom of action as the five-category system for ecological status (High, Good, Moderate, Poor, Bad). Thus, in the “not good” chemical status, it could be that no measurable negative change is allowed, even if it has no scientific consequences for the ecology. In order to avoid such distortions connected with the one-out-all-out approach and the categorization of the chemical status, it should be possible to consider also quality elements that have been improved in order to draw a realistic picture of the status of the water body. Therefore a practicable and proportionate definition of deterioration is needed that includes also the evaluation of both positive and negative changes.

For example, the “Weser” ruling should not raise an obstacle to potential industry investments in air or water purification systems (due to the legal uncertainty), which on the whole contribute positively to EU policy objectives.

3. Alternative paths to the objectives: duty of reasoned assessment

The WFD requires that measures to achieve good status/potential should be technically possible, cost-proportionate and lead to a significant improvement. The “Weser” ruling’s interpretation of the non-deterioration and one-out-all-out clauses introduces a requirement to implement measures that would otherwise have been considered impossible, disproportionate and/or ecologically unnecessary. Due to the new interpretation of the combination of non-deterioration and one-out-all-out clauses, the environmental quality standards (originally conceived as assessment benchmarks) have become automatic limit values. Therefore the duty of competent authorities to provide *reasoned assessment* of measures for River Basin Management Planning, and project proposals, has been rendered inoperable. For the moment, this has increased the need to make use of the exemptions provided in the WFD to re-establish the intended balance. However, the current possibilities for exemptions no longer meet all the needs:

¹ There is a request for a preliminary ruling to the ECJ (IL and Others v Land North Rhine-Westphalia; Case C-535/18) concerning the definition of deterioration of the chemical (groundwater) status.

3.1 Art 4.4 - Deadline 2027

Under article 4.4, under certain circumstances, the deadline to achieve good status (2015) can be extended. This option has been used by Member States in many water bodies. Nevertheless, this option can apply beyond 2027 only if it can be shown that the objectives cannot be achieved until 2027 due to the natural conditions of the water body. In case that the good status of the water body is endangered for anthropogenic reasons, then any extension of the deadline beyond 2027 will not be possible. This restriction is critical for industrial projects that require water uses beyond 2027. The resulting investment uncertainty has become untenable.

3.2 Art 4.5 - Less stringent environmental objectives

The WFD covers the setting of less stringent targets due to socio-economic needs under article 4.5, but has so far failed to properly integrate them. Instead, in practice, the instrument of extended deadlines with a limitation by 2027 is rather used (under article 4.4). For those water bodies where it won't be possible to reach a "good status" by the deadline, it leaves industries at constant risk regarding their activities. This situation has been accentuated by the "Weser" ruling.

The instrument of setting less stringent targets (article 4.5) must be able to play its intended role in the exercise of planning water management, taking into account socio-economic aspects, local hydrogeological and anthropogenic conditions and water protection concerns in line with sustainable development. Up to now, this instrument has been used rarely and under great legal uncertainty. This is due to the fact that article 4.5 foresees a set of strict conditions which makes it more difficult in practice to set less stringent objectives.

Inter alia a setting of less stringent objectives is only permissible if "no further deterioration occurs". It seems like a self-contradiction if the derogation from the application of the non-deterioration clause depends itself on the condition of "no deterioration". Therefore the requirement of "no further deterioration" within article 4.5 seems not justified. The strict interpretation of the non-deterioration clause in the Weser Ruling for industrial projects limits the application of article 4.5 and makes permitting procedures more difficult and insecure.

3.3 Art 4.7 – Exemption clause, linked to Non-deterioration principle and One-out-all-out approach

Water uses are subject to strict observance of the non-deterioration principle and the requirement of protection and enhancement.

A fortiori, in many cases it will depend on the exemption clause 4.7 to ensure the permissibility of projects as the articles 4.4 and 4.5 do not comply. This is also due to the Weser ruling regarding the non-deterioration principle.

However, art.4.7 provides exemptions only for certain constellations: the possibility to grant an exemption from the achievement of good status of a surface water body is limited to ecological status (not chemical status) and the non-achievement has to be the result of “new modifications to the physical characteristics of the surface water body”. Further, exemptions from the non-deterioration principle are very limited. Deterioration may only be accepted if it is limited to a change of ecological status from “high” to “good” or if it is the result of “new modifications to the physical characteristics of a surface water body”. This means that the exemption is not applicable i.e. to discharge of substances into water.

Such restrictions of the scope of article 4.7 in combination with the Weser ruling lead to legal uncertainty and endanger the development of any activities with an impact on water, e.g. industry, housing and infrastructure.

Although the term “deterioration” is a pillar of the WFD, namely the prohibition of deterioration, the WFD does not contain a definition of “deterioration”. It is therefore necessary to include in the WFD a practicable and proportionate definition of “deterioration” that is in line with the principle of equal treatment. The non-deterioration principle existed from the beginning of the WFD, leaving its interpretation and application to the Member States where, in most of the countries, the impacts on the water body as a whole were assessed. Then, through the 2015 “Weser” ruling, the ECJ ruled that there is a deterioration of the ecological status (or potential) of a surface water body, if at least one quality component of Annex V of the WFD deteriorates by one class, even if this does not lead to a deterioration of the classification of the water body in total. If the quality component in question is already classified in the lowest grade, any deterioration of that component will constitute deterioration in the terms of the “Weser” ruling. The “Weser” ruling further implies that the non-deterioration principle is implemented at the level of individual projects and not at the level of the entire water body.

The one-out-all-out approach of the WFD defines the ecological status of the water body by the status of the lowest ranked quality component that was analyzed. By analogy, if the same applies to the classification of the chemical status, the procedure prevents industry and other stakeholders from showing the result of their efforts since the introduction of the WFD. Furthermore, the proportionality of this measure is questionable since both improvements and deteriorations of the water body are inadequately captured. The one-out-all-out

approach is also not the ideal tool for water bodies affected by diffuse, multiple stressors, thus posing additional problems to track progress in ecological status. For instance, some of the Swedish water bodies fail to achieve good overall status because one priority substance (chemical status) or one specific pollutant (ecological status) does not comply with a given quality standard. This is sometimes a naturally occurring substance, such as a metal, when natural background levels are high or another ubiquitous substance (for instance diffuse nitrate or phosphate from over-fertilization in agriculture).

In this context, permitting procedures of even existing industrial discharges into water bodies could conclude that they constitute a prohibited deterioration. In addition, in many EU water bodies the EQS for priority substances are exceeded. According table 2.1 of EEA Report of January 2019 more than 25000 surface water bodies currently fail to achieve good ecological and chemical status. Any new input of the substance in question caused by a new planned or expanded water use could constitute a prohibited deterioration in principle, if it is not discharged to a constant or decreasing degree. Besides, a minor class descent of a low-importance parameter triggers the same legal consequences as the far-reaching decline of a priority parameter that has significant consequences for the whole water body. All in all the resulting investment uncertainty has become untenable.

Finally, Euromines repeat their support for the WFD objectives and consider the legal means of achieving them should be more practical than they currently are. The Fitness-Check of the WFD gives the chance to balance the different kind of challenges. Euromines would support a dialogue between stakeholders on the best way forward to improve the Directive. Practical examples of recent cases where the mining sector is facing difficulties with the mentioned issues from the WFD are specified in Appendix I.

About Euromines

Euromines, the European Association of Mining Industries, Metal Ores & Industrial Minerals, represents large and small companies and subsidiaries in Europe and in other parts of the world which provide jobs to more than 350,000 people. Through the activities and operations of these members, more than 42 different metals and minerals are produced. Their sustainable exploitation can increase Europe's supply of mineral resources, help reduce imports from third countries usually applying lower environmental, corporate and social standards and foster the socio-economic growth of Europe's Regions. European mining also reduces the EU's dependence on external mineral sources.

APPENDIX I: Cases that demonstrate barriers to continuation of the EU mining industry.

Case 1 referring to the non-deterioration principle and possible exemptions

The authorities' analysis of a certain EU water body has indicated that the EQS for one of the four naturally occurring priority substances (cadmium, lead, mercury or nickel) for that water body has been exceeded. The chemical status of the affected water body is therefore already classified as poor. Although the discharge of (treated) production water from an industry could have a significantly positive influence on the overall water quality of the receiving water body (improvement of iron load, oxygen saturation, nutrient contents, temperature, suspended solids, etc.), it probably would legally be considered as an infringement of the non-deterioration principle because one specific priority substance is already above, and would remain above, the EQS of the receiving water.

In this case, it may not be possible to set a less stringent objective according to Article 4.5 of the WFD for the affected water body, as less stringent objectives are only permissible if no further deterioration occurs (see Article 4.5 lit.c). Hence, the water body should remain bound to the objective of good chemical status by 2027.

Possibilities to postpone the date of achievement of the good status definitely come to an end in 2027 according to Article 4.4.

In such a scenario, the last option for applying for an exemption would be through Article 4.7. However, this provision does not contain any possibility to grant an exemption for the failure of the good *chemical* status of a surface water body, which would be crucial in this example. It is very much unclear how permissions for discharges like in this example will be granted before and beyond the 2027-deadline.

Case 2 referring to the non-deterioration principle and possible exemptions

The intake of a significant amount of cooling water for a power plant or other industrial processes may lead to a local change in water levels and flow conditions of the water body. The withdrawn water may need to be treated to remove microorganisms before it can be used as cooling water. When the water is discharged again into the water body it may therefore possibly affect the general chemical-physical and biological quality components with regard to the ecological status of the receiving water. Such removal and return of water could therefore be interpreted legally as precluding the achievement of good ecological status. Application of the exemption clause in Article 4.7 of the WFD would not appear to be available in this case, because of its limitation to "modifications to the *physical* characteristics" of a water body. In this case, the hydromorphology

has not been altered but only the chemical or biological characteristics. This is confirmed by the very narrow interpretation of Article 4.7 provided by Guidance Document No. 20 (CIS 2000/60/EC), most recently adopted in 2018.

A similar situation would appear if, due to a necessary temporary increase in water intake for cooling purposes, the impact on the quality components would be momentarily increased (for example deterioration of the downstream macrozoobenthos quality parameter). The application of Article 4.5 to such variable intakes and discharges may be blocked because – strictly speaking - it requires “no further deterioration”. The existing extraction permit of the plant therefore cannot provide the required level of legal certainty.

If new changes in the physical water body characteristics are needed, for instance the installation of fish protection infrastructure at the withdrawal point, it may be permitted as a “new modification” under Article 4.7 because – strictly speaking – the hydromorphology of the water body is being influenced. However, if the same infrastructure is already in place as part of the existing operation, then the infrastructure cannot – strictly speaking - be treated as a “new modification” and granted a permit under Article 4.7. Though in both cases the installed infrastructure would legally be considered to be causing exactly the same deterioration of the water body, the WFD would require that the non-deterioration principle be enforced for just one of them.

Even a complete relocation of the water body or its deepening – although creating more impact on the aquatic ecosystem - could be legally viewed as permissible under Article 4.7 because it would clearly constitute a new change in the physical properties of the water body.

Case 3 referring to non-deterioration principle

A base metal mining company in Northern Europe invested heavily in advanced (BAT) water treatment techniques for the removal of residual thio-salts and metals in the discharge water from their mine tailings facility. As part of the treatment process, a Fenton oxidation step is applied. In this step thio-salts are oxidised which leads to the generation of sulphate, which is discharged as effluent.

The current permit does not include a limit value for sulphate and the sulphate concentration of the effluent has been demonstrated not to cause any biological impact on the receiving water body. Even so, the National Agency for Marine and Water Management was considering at the end of 2018 that sulphate should be classified as a Specific Pollutant.

An EQS was proposed with an annual average value of 34 mg/l and a maximum allowable value of 73 mg/l, additional to the natural background levels. These EQS values can be considered as very low (as a reference the EU drinking water standard for sulphate equals 250 mg/l). In such a scenario Fenton oxidation is

technically not viable anymore if the suggested EQS values are to be reached at the same time.

The ecological status of the receiving water body before the application of the Fenton treatment of thio-salts and metals was already categorized as moderate. After the introduction of Fenton treatment, the metal and thio-salt effluent concentrations went down but at the same time the SO₄ concentration increased.

Detailed investigations show that the increase in SO₄ concentration has not led to any measurable negative impact on aquatic ecology. The classification of ecological status of the water body remains moderate. Notwithstanding the fact that As and Zn concentrations have gone down and there is no degradation in ecological status the proposed EQS would mean that the Fenton treatment could not be allowed anymore due to the increase of SO₄ concentrations.

This case shows clearly how the current interpretation of the non-deterioration requirement may lead to a situation where a reduction of negative impact is not possible to permit. This leaves operators with great uncertainty regarding which water treatment will be accepted and how possible new requirements will affect (even possibly stop) on-going operations and water treatment processes although applying best available techniques.

Case 4 referring to the one out-all out approach

The ecological status of a receiving water body near a European coastline is moderate, as a result of N-nutrients according to the one out-all out approach. However the ecological status of the benthos is good. Measures to decrease zinc emissions from an associated steel plant have been taken since 2007 resulting in a decrease of zinc emissions of more than 50%. The company carried out toxicity studies for zinc in brackish waters (as required by its permit) through a local university and results show that the observed zinc concentrations do not pose any risk to the aquatic system, and that they are dominated by natural background concentrations. A Court decision in August 2018 supported the conclusions and set final limit values for emissions from the steel plant. However, the regional authority appealed that Court decision in November 2018 making reference to the non-deterioration principle in the WFD as interpreted in the “Weser” ruling. The plant was the legally obliged to lower its maximum discharge concentrations of zinc from 2 mg/l to 1 mg/l despite the scientific evidence that its zinc emissions were not affecting the ecosystem negatively. As a consequence, the steel plant has been forced to allocate significant resources to regulatory red-tape and to use more chemical reagents to further treat its discharge.

Case 5 referring to integration of WFD with other EU policies

A municipal water treatment plant needs to expand as the population it serves is increasing. The only available receiving water body has a moderate ecological status (due to diffuse sources from surrounding farmland and other upstream sources). When a new permit was applied for in December 2018, it was suggested that the objectives for ecological and chemical status might be endangered as the predicted effluent contained a risk of water body deterioration due to phosphate, ammonium and Perfluorooctanesulfonic acid (PFOS) concentrations. There is no better applicable technology available that could further decrease those concentrations and they meet the water quality standards set by the EU Urban Waste Water Treatment Directive. According to the “Weser” ruling, an exemption according to Article 4.7 is not permissible if the status of a single quality element may deteriorate for a receiving water body of moderate ecological status. Therefore the operation of the extended treatment plant was not permissible according to the WFD.