elni
REVIEW

1+2/2013

ISSN 1618-2502

ENVIRONMENTAL
LAW NETWORK
INTERNATIONAL

RÉSEAU
INTERNATIONAL
DE DROIT DE
L´ENVIRONNEMENT

INTERNATIONALES
NETZWERK
UMWELTRECHT

elni REVIEW

Editorial

The aim of the Environmental Impact Assessment (EIA) process is to ensure that projects which are likely to have a significant effect on the environment are assessed in advance so that people are aware of what those effects are likely to be. The review process conducted by the Commission of the 25 year-old "EIA-Directive" identified its potential strengths and weaknesses. Set against this background, the current edition of the *elni review* is dedicated to legal challenges in the implementation of Environmental Impact Assessment.

Firstly, an overview of challenges and perspectives of the EU Environmental Impact Assessment Directive is given by *Sergiusz Urban and Jerzy Jendrośka* in their review of the elni conference held on May this year in Wroclaw which examined the proposed changes of the EIA Directive in the light of practical experience gathered up to now (Member States experience, jurisprudence of EU courts and international bodies) and views expressed in literature.

Subsequently, the Appropriate Impact Assessment and Authorisation Requirements of Plans and Projects likely to have significant impacts on Natura 2000 sites are examined by *Nicolas de Sadeleer*. The aim of his article is to shed light on the procedural requirements of the Habitats Directive, which are a key provision for implementing the EU's system of protecting and preserving biological diversity in the Member States.

The third article is written by *Eckard Rehbinder* and argues for (suitable) criteria for the assessment of the likely environmental impacts of projects which are subject to the EIA, focusing on the assessments carried out by the competent authority and the assessment elements of the environmental report and the consultation of interested authorities.

The final article which concentrates on EIA is by *Gijs Hoevenaars* and analyses the quality review of EIAs and Strategic Environmental Impact Assessments (SEA). With regard to the current discussions in Europe on this subject, this article provides an insight into Dutch experiences with the quality review of EIA and SEA.

Further articles are dealing with current EU legal issues.

The article of *Ludwig Krämer* analyses the practice of access to documents within the EU on the basis of several examples of legislation, and its use and interpretation by the EU Courts of Justice in the area of access to environmental information.

In a further article *Lorenzo Squintani* discusses the practice of national bodies exceeding the terms of European Union directives when implementing them into national law. He analyses certain provisions of the Directive 2008/98/EC on waste in order to understand the functioning of the Dutch policy on so-called "gold-plating".

Finally, *Peter Kremer* examines whether mercury depositions which are emitted by Coal-Fired Power Stations are in line with the Industry Emission Directive and the Water Framework directive. Furthermore, he analyses what instruments are available under prevailing law to prohibit the construction of new coal-fired power stations and to make their approval subject to judicial review.

We hope you enjoy reading the journal.

Contributions for the next issue of the *elni Review* are very welcome. Please send contributions to the editors by mid-February 2014.

Claudia Fricke/Martin Führ

December 2013

Pre-announcement

elni forum 2014

February 2014
in Brussels, Belgium

The elni forum will take place in February 2014, at EU Liaison Office of the German Research Organisations (KoWi), 8th Floor, Rue du Trône 98, 1050 Brussels.

The elni forum 2014 will offer the opportunity to discuss environmental footprint issues in environmental law from different point of views:

"Environmental Footprints–
Key issues and practical experiences"

With an introduction by

Arjen Hoekstra, *Professor for Water Management and co-founder and scientific director of the Water Footprint Network, University Twente, Netherlands.*

Imola Bedo*, Production Coordinator DG Environment, European Commission, Brussels.*

Arjen Hoekstra presents key issues on the concept and developments on the water footprint. Imola Bedo will provide the point of view of the EU green products policy (PEF, OEF, PCRs, product passport). Furthermore there we will be the possibility to discuss the topic from an NGO and business perspective.

Further information to follow soon on www.elni.org

The prohibition of mercury discharges from coal-fired power stations under European law*

Peter Kremer

1 Current situation

1.1 Coal-fired power station projects in the EU (including Germany)

Despite diverse pledges on climate change and plans to render the energy supply 100 percent renewable, in October 2012 there were eight coal-fired power stations under construction in Germany with a combined capacity of 8,600 MW and combined projected emissions of nearly 50 million tonnes of CO2.[1] A total of seven power stations (4,400 MW) are also under construction in other EU member states. There are plans for 50 more power stations across the EU, including four in Germany and eight in Poland. New coal-fired power plants are also under construction or planned in the EU's close neighbourhood: In Turkey, 31 coal-fired (23,600 MW) and 18 lignite-fired (7,800 MW) power stations are planned, and four are already under construction.

Despite the goal of cutting CO2 emissions, the European Union does not yet have an identifiable strategy on CO2-intensive power generation. The European Commission has nonetheless greatly tightened the rules on state aid, among other things for coal-fired power stations.[2] In response, the German government dropped its plan to subsidise such power stations in favour of subsidising combined heat and power.[3] Yet in the EU Energy Strategy 2011-2020, coal-fired power stations are not even given a mention.[4]

1.2 Coal power and mercury

Coal-fired power stations emit not just climate-damaging CO_2, but many other pollutants besides. The most relevant of these to human health is mercury. Taken up into the body by inhalation of its toxic vapours or by ingestion, even small quantities of this heavy metal and neurotoxin can cause chronic poisoning and harm to the central nervous system in humans and animals.

A total of 8,415 kg of mercury was released into the environment in Germany in 2010. By far the largest share (5,422 kg) was from electricity generation in large power stations.[5] The eight power stations under construction in Germany alone will – despite a range of filtering technologies – emit of the order of 750 kg of mercury annually (the annual load depends on the type and quantity of coal combusted and the filtering technology), thus adding 10% to the total load. Mercury and its compounds are highly toxic and harm the nervous system. As with other heavy metals, organic compounds of mercury are absorbed particularly well by organisms, and bioaccumulate.[6] This is especially harmful to the development of unborn life.[7] Despite this, the construction of new coal-fired power stations is subject neither to EU-wide control nor to rules targeting its reduction. In the following, therefore, it is asked what instruments are available under prevailing law to prohibit the construction of new coal-fired power stations and to make their approval subject to judicial review. The discussion centres on the Water Framework Directive.[8] First, however, a look will be taken at the Industrial Emissions Directive (IED),[9] with the focus on airborne and waterborne mercury emissions.

2 No rules on mercury emissions from coal-fired power stations in European environmental law

In its Community Strategy Concerning Mercury of 28.1.2005[10], the Commission describes coal burning as one of the main sources of mercury releases. In the review of the Community Strategy Concerning

* This article was first published under the same title in: Journal for European Environmental & Planning Law 2013, Volume 10, Issue 2, pages 132 – 151, Koninklijke Brill NV.

1 List from DUH: Projects of coal-fired power plants in Germany http://www.duh.de/uploads/media/New_coal_plants_Germany_2012_DUH.pdf.

2 Guidelines on certain State aid measures in the context of the greenhouse gas emission allowance trading scheme post-2012, OJ 5/6/2012, C 158/4, http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2012:158:0004:0022:EN:PDF.

3 German Bundestag, Bundestags-Drucksache 17/10269 (Federal Government answer to a minor interpellation tabled by the Fraktion Bündnis 90/Die Grünen party on the status of the power station subsidies programme for new fossil fuel power stations).

4 European Commission: "Energy 2020 - A strategy for competitive, sustainable and secure energy", http://ec.europa.eu/energy/publications/doc/2011_energy2020_en.pdf.

5 European database on hazardous substance (E-PRTR): http://prtr.ec.europa.eu/PollutantReleases.aspx; also German database on hazardous substance (PRTR): http://www.thru.de/.

6 http://www.prtr.bund.de/typo3/index.php?id=423&stuffId=21.

7 http://www.zeromercury.org.

8 Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy, OJ L 327, 22.12.2000, p. 1.

9 Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control) (Recast), OJ L 334, 17.12.2010, p. 17.

10 COM(2005) 20 final, http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2005:0020:FIN:en:PDF.

Mercury of 7.12.2010 [11], it is stated that the Commission will assess whether Community emission limit values are needed. To this day, however, there is a patent lack of legislation limiting mercury emissions.[12]

The Commission did make reference to the need for "rigorous application" of the best available techniques (BATs) in connection with the IPPC directive (now the IED). However, neither the BATs reference document on large combustion plants dating from 2005 [13] nor the IED (Directive 2010/75/EU) dating from 2010 lay down emission limit values for mercury from coal-fired power stations. Yet the IED is intended as the main instrument of environment protection for industrial plants. Under the 2005 BATs reference document, the targeted reduction in mercury is achieved by limiting emissions of particulate matter. Despite its toxic effects, there is not a limit value for mercury.[14] Although the meeting report on the kick-off meeting for the review of the BATs reference document on large combustion plants [15] states that emissions of mercury to air and water are to be reassessed, work does not seem to have progressed beyond requirements for the collection of relevant data. There are likewise no rules – with the exception of water legislation –directly limiting mercury releases into the various environmental media. An indirect restriction of this kind is contained in Regulation (EC) No 1881/2006 of 19.12.2006 setting maximum levels for certain contaminants in foodstuffs[16] and Directive 98/83/EC on the quality of water intended for human consumption. The permissible mercury concentrations for fish and fishery products are between 500 and 1000 µg//kg wet weight; for water intended for human consumption they are 1.0 µg/l. A Commission information note on methyl mercury in fish products [17] states that these concentrations are not low enough to adequately protect vulnerable groups, most of all women who are pregnant or breast-feeding. As this example shows, the pollution of the environment with mercury gives cause for concern, but at European level there is insufficient capacity to respond. The REACH (Registration, Evaluation, Authorisation and Restriction of Chemicals) regulation[18] does not help any further because it solely restricts or prohibits the use of mercury in specific products.

3 Restrictions on mercury discharges from power stations under the Water Framework Directive (2000/60/EC)

The Water Framework Directive (WFD, Directive 2000/60/EC) features a direct and an indirect approach for restricting mercury emissions from power stations:

Mercury is directly covered by the phase-out requirement in Article 4(1)(a)(iv) WFD. Indirectly, the admissibility (or rather inadmissibility) of mercury discharges into surface waters follows from the stipulation of a mercury limit value for biota.

3.1 The phase-out requirement for mercury under the WFD

Article 4(1) (a) (iv) WFD contains a phase-out requirement for priority hazardous substances, which according to the definition in the Directive include mercury:[19]

> **Article 4 Environmental objectives**
>
> 1. In making operational the programmes of measures specified in the river basin management plans:
>
> (a) for surface waters (…)
>
> (iv) Member States shall implement the necessary measures in accordance with Article 16(1) and (8), with the aim of progressively reducing pollution from priority substances and ceasing or phasing out emissions, discharges and losses of priority hazardous substances without prejudice to the relevant international

11 COM/2010/0723final, http://eurlex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2010:0723:FIN:en:HTML

12 The REACH Regulation (Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006, amended with regard to Annex XVII, amended with regard to mercury by Regulation (EC) No 552/2009 of the European Commission of 22 June 2009, OJ L 164, 26.6.2009, p.7, further amended with regard to mercury by Regulations (EU) No 847/2012 and 848/2012 of the Commission, OJ L 253, 20.9.2012, p. 1 and p. 5) relates solely to the placing on the market of products containing mercury.

13 European commission: Integrated Pollution Prevention and Control Reference Document on Best Available Techniques for Large Combustion Plants, July 2006; http://eippcb.jrc.es/reference/BREF/lcp_bref_0706.pdf.

14 A direct air emission limit value is contained in Annex VI Part 3 of the IED solely for waste incineration plants.

15 Kick-off Meeting for the review of the best available techniques reference document on large combustion plants, Seville, 25 - 28 October 2011, http://eippcb.jrc.ec.europa.eu/reference/BREF/LCP_kom%2010-2011.pdf.

16 Commission regulation (EC) No 1881/2006 of 19 December 2006 setting maximum levels for certain contaminants in foodstuffs, http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2006:364:0005:0024:en:PDF.

17 http://ec.europa.eu/food/food/chemicalsafety/contaminants/information_note_mercury-fish_21-04-2008.pdf.

18 Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), amended with regard to Annex XVII, amended with regard to mercury by Regulation (EC) No 552/2009 of the European Commission of 22 June 2009, OJ L 164, 26.6.2009, p.7.

19 Article 2 definition 30 WFD: "Priority substances" means substances identified in accordance with Article 16(2) and listed in Annex X. Among these substances there are "priority hazardous substances" which means substances identified in accordance with Article 16(3) and (6) for which measures have to be taken in accordance with Article 16(1) and (8). Also see Decision No 2455/2001/EC of the European Parliament and of the Council of 20 November 2001 establishing the list of priority substances in the field of water policy and amending Directive 2000/60/EC, OJ L 331, 15.12.2001, p. 1, as amended by Directive 2008/105/EC of the European Parliament and of the Council of 16 December 2008 on environmental quality standards in the field of water policy, amending and subsequently repealing Council Directives 82/176/EEC, 83/513/EEC. 84/156/EEC, 84/491/EEC, 86/280/EEC and amending Directive 2000/60/EC of the European Parliament and of the Council. OJ L 348, 24.12.2008, p. 84, Annex X, item 21.

agreements referred to in Article 1 for the parties concerned;

Article 4(1)(a)(iv) WFD requires the of necessary measures to attain the objective of ceasing or phasing out pollution from substances such as mercury. For the implementation of such measures by Member States, Article 4(1)(a)(iv) refers to the procedure in accordance with Article 16(1) and (8) WFD.

3.1.1 No Commission proposals to date

Article 16(1) WFD requires the Commission to present proposals to the Parliament and the Council for the cessation or phasing out of discharges, emissions and losses of mercury. Article 16(6) WFD stipulates that the timetable for this cessation or phasing out must not exceed 20 years after adoption of the proposals by Parliament and the Council.

Article 16 (6) WFD

6. For the priority substances, the Commission shall submit proposals of controls for:

— the progressive reduction of discharges, emissions and losses of the substances concerned, and, in particular

— the cessation or phasing-out of discharges, emissions and losses of the substances as identified in accordance with paragraph 3, including an appropriate timetable for doing so.

- The timetable shall not exceed 20 years after the adoption of these proposals by the European Parliament and the Council in accordance with the provisions of this Article. In doing so it shall identify the appropriate cost-effective and proportionate level and combination of product and process controls for both point and diffuse sources and take account of Community-wide uniform emission limit values for process controls.

No such proposals have been forthcoming. Under the first sentence of Article 16(8) WFD, the Commission should have presented them within two years of the inclusion of the substance concerned on the list of priority substances, hence in the case of mercury by 16.12.2003.[20]

Article 16 (8) WFD

8. The Commission shall submit proposals, in accordance with paragraphs 6 and 7, and at least for emission controls for point sources and environmental quality standards within two years of the inclusion of the substance concerned on the list of priority substances. (…)

The Commission has not met its obligation under Article 16(6) and the first sentence of Article 16(8).

3.1.2 Subsidiary obligation on Member States

Under the second sentence of Article 16(8) WFD, in the absence of agreement at Community level, the phase-out requirement is transferred to Member States six years after the entry into force of the WFD.

Article 16 (8) WFD

(…) For substances included in the first list of priority substances, in the absence of agreement at Community level six years after the date of entry into force of this Directive, Member States shall establish environmental quality standards for these substances for all surface waters affected by discharges of those substances, and controls on the principal sources of such discharges, based, inter alia, on consideration of all technical reduction options. For substances subsequently included in the list of priority substances, in the absence of agreement at Community level, Member States shall take such action five years after the date of inclusion in the list.

(i) Content of the obligation and its applicability to discharges of waste water containing mercury from coal-fired power stations

The phase-out requirement applies to all surface waters affected by discharges of mercury. It applies for the principal sources of such discharges and consists of an obligation to establish controls based, inter alia, on consideration of all technical reduction options. Coal-fired power stations meet these requirements: The annual mercury load from a normal power station unit, when compared with other emission sources (other branches of industry, sewage works, etc.), constitutes a principal source. Power stations discharge waste water containing mercury from flue gas scrubbing into surface waters. Further plant-related discharges of mercury into surface waters take place through the air pathway and the air-soil pathway (leaching of mercury from sites where airborne mercury has precipitated).

(ii) Obligation merely for the control or for the cessation of discharges?

The question can be raised as to whether Member States are merely required to establish controls based on the available technical reduction options. The wording in the second sentence of Article 16(8) WFD could be construed in this way.

"… Member States shall establish (…) controls on the principal sources of such discharges (…)"

The words "emission and losses" as they appear in Article 4 and 16 (6) WFD are mission here. This would mean that with regard to mercury reduction, power stations were only required to be operated in application of the best available techniques (BATs). The zero discharges requirement under the Directive would not come into play here at all.

[20] Decision 2455/2001/EC was published in the Official Journal on 15.12.2001 and consequently entered into force on 16.12.2001.

Such an interpretation, however, would fail to take into account the requirement under Article 4(1)(a)(iv) WFD. This requires Member States to implement the **necessary** measures in accordance with Article 16(1) and (8) WFD with the aim of a phase-out. For the subsidiary obligation on Member States – should the Commission fail to act – Article 4(1)(a)(iv) refers on to the second sentence of Article 16(8) WFD. The controls under the second sentence of Article 16(8) WFD are thus by definition necessary measures for attainment of the phase-out objective with regard to discharges. If they are necessary to the attainment of that objective, then they also have to be capable of attaining it. Controls merely in application of the best available techniques, however, would not be directed towards attainment of the stipulated objective, but towards the available technical options. This would be incompatible with the requirement under Article 4(1)(a)(iv) WFD.

This means the key criterion for controls on discharges is whether they are able to meet the phase-out requirement. Otherwise, Member States would fall short of the requirement of implementing the necessary measures to attain that objective. This is underscored by the definition of controls in the first sentence of Article 16(6), under which they must consist of controls for the cessation or phasing-out of discharges, emissions and losses of priority substances.[21] The controls must hence result in zero emissions of those substances [22] The requirement for Member States to cease or phase out mercury emissions is also not limited to **discharges** (through the water pathway). The wording of the Directive in Article 16(8) WFD is as follows:

> "…for all surface waters affected by **discharges** of those substances (…)"

The ECJ[23] has held that the term 'discharge' includes discharges into surface waters from plants via the air pathway or via the air-soil pathway:

> 1. The term 'discharge' in Article 1(2)(d) of Council Directive 76/464/EEC of 4 May 1976 on pollution caused by certain dangerous substances discharged into the aquatic environment of the Community must be interpreted as covering the emission of contaminated steam which is precipitated on to surface water. The distance between those waters and the place of emission of the contaminated steam is relevant only for the purpose of determining whether the pollution of the waters cannot be regarded as foreseeable according to general experience, so that the pollution is not attributable to the person causing the steam.
>
> 2. The term 'discharge' in Article 1(2)(d) of Directive 76/464 must be interpreted as covering the emission of contaminated steam which is first precipitated on to land and roofs and then reaches the surface water via a storm water drain. It is not material in this respect whether the drain in question belongs to the establishment concerned or to a third party.

(iii) Mandatory timetable: December 2026 with no scope for extension

The obligation on Member States takes the place of the (unpresented) Commission proposals under Article 16(6) WFD. The same timetable therefore applies to implementation of the Member States' proposals. The WFD entered into force on 23.12.2000. [24] The obligation on Member States takes effect six years after entry into force of the WFD, i.e. on 23.12.2006. The measures must therefore bring about zero discharges of mercury into bodies of water by 23.12.2026.

The great majority of the WFD environmental objectives set out in Article 4(1) WFD come under the provisions for deadlines to be extended and for less than full attainment of the objectives. Article 4(4) WFD thus provides for deadlines to be extended, Article 4(5) WFD permits the adoption of less stringent environmental objectives, Article 4(6) WFD contains a transitional provision permitting which temporary deterioration in the status of bodies of water, and Article 4(7) provides for exceptions from the Directive's stipulations subject in each case to specific conditions and requirements.

These facilitations explicitly do not apply, however, to the environmental objectives laid down in Article 4(1)(a)(iv). This follows from the way in which the environmental objectives in Article 4(1) are set out, stating for each individual environmental objective whether the facilitations under Article 4(4) to (7) apply and, if so, which ones. It would be unnecessary to draft the provisions in this way if the facilitations under Article (4) to (7) applied to all environmental objectives in Article 4(1). It is therefore unanimously assumed that the facilitations under Article 4 (4) to (7) WFD only apply to those environmental objectives in Article 4(1) for which it is explicitly stated.[25] For the objective laid down in Article 4(1)(a)(iv) – ceasing or phasing out emissions, discharges and losses of

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21 Article 16(6), first sentence, WFD: For the priority substances, the Commission shall submit proposals of controls for:
- the progressive reduction of discharges, emissions and losses of the substances concerned, and, in particular
- the cessation or phasing-out of discharges, emissions and losses of the substances as identified in accordance with paragraph 3, including an appropriate timetable for doing so.

22 Likewise the Opinion of the Council Legal Service issued 7.3.2001 (JUR 79, ENV 116).

23 ECJ, C-231/97, 29.9.1999

24 Article 25 WFD; publication in the Official Journal: 22.12.2000.

25 See also the expert opinion compiled on commission to Regierungspräsium Darmstadt by Prof. Dr. Michael Reinhardt, LL.M. (Cantab), „Wasserrechtliche Anforderungen an die Einleitung quecksilberhaltigen Abwassers in ein oberirdisches Gewässer", March 2010, p. 22.

priority hazardous substances – there is no reference to the facilitations under Article 4(4) to (7) WFD. For this reason, the timetable inferred above from Article 16 WFD applies without any possibility of an extension.

(iv) Direct effect of the objective under the Directive

The conditions for the objective under the Directive (a phase-out of mercury discharges) to have direct effect are met even without transposition into national law.

Under Article 288(3) TFEU, a directive is binding on Member States as to the results to be achieved but leave the choice of form and methods to national authorities. The objective of ceasing discharges of mercury by 23.12.2026 is therefore binding, while Member States themselves can decide how they attain it. The binding stipulation of the objective for Member States creates a follow-on obligation not to adopt or allow any measures that would prevent the objective's attainment. This advance or suspensory effect of a European directive also goes hand in hand with the prohibition on frustrating the objectives of a directive, and serves to prevent the implementation of European directives from being obstructed by conflicting measures at Member State level.[26]

(v) New discharge already prohibited before 23.12.2026

Based on the reasoning presented here, the obligation on Member States goes still further. This is because the environmental objective laid down in Article 4(1)(a)(iv) WFD demands not only the cessation, but also the phasing out of discharges of priority hazardous substances. While cessation relates to the date in 2026 inferred above, the obligation to phase out discharges of priority hazardous substances means that Member States are required to ensure that such discharges are gradually reduced until the point in time when they ultimately cease. The phase-out requirement prohibits the approval of discharges of new mercury loads if it is not simultaneously ensured that discharges continuously decrease overall. Whether this means it would be admissible – for example in the context of a programme of measures for a river basin district – to offset new discharges from one coal-fired power station with corresponding reduction measures elsewhere is a question that will be left open here. In any event, based on the current situation in Germany there are so far no such plans for river basin districts in relation to mercury. And there is nothing to suggest the situation is better in other Member States. Therefore as long as Member States are unable to demonstrate with binding force for an affected river basin district that discharges are continuously or gradually decreasing despite additional discharges from a newly approved power station, any new discharge is inadmissible in light of the environmental objective laid down in Article 4(1)(a)(iv) WFD.

(vi) Conclusion 1: Obligation to cease discharges and prohibition of new discharges due to the phase-out requirement

It may thus be noted by way of a first conclusion that under the stipulations of the WFD and the environmental objective laid down in Article 4(1) (a) (iv), discharges of mercury from coal-fired power stations into water bodies must cease by 23.12.2026 at the latest.

The phase-out requirement for mercury as a priority hazardous substance should have been met with regard to the cessation of discharges by the adoption of appropriate measures by the Member States by 23.12.2006. These measures should have been designed to attain zero emissions by 23.12.2026. For the approval of new coal-fired power stations whose operation gives rise to mercury discharges by way of waste water from flue gas scrubbing or discharges via the air or air-soil pathway, this means new discharges are inadmissible in the light of the objective of continuous reductions under Article 4(1)(a)(iv) WFD, unless it can be demonstrated under the framework of a programme of measures that mercury discharges are continually decreasing overall despite the new discharges from a power station added in the meantime.

Even if there is a programme of measures, however, the approval would have to contain a stipulation that it expired with regard to the discharges on 23.12.2026. The Member States are not permitted to allow new discharges that do not cease by 23.12.2026. Hence where new coal-fired power stations with such discharges are approved, the approval notices must stipulate a time limit of 23.12.2026.[27]

3.2 Current effective ban on any new discharges or emissions into water bodies constituted by limit values for biota

Discharges of mercury from coal-fired power stations, however, are in breach of a second requirement under European law. Directive 2008/105/EC of 16 December 2008 on environmental quality standards in the field of water policy[28] lays down environmental

[26] See ECJ, Case C-129/96; Case C-144/04; on the entire topic see also Reinhardt, loc. cit., p. 24 ff.

[27] Such a time limit on permitted discharges is included for the first time in the approval notice dated 28.3.2012 for a new unit at the Staudinger power station in the state of Hesse, although based on a different calculation of the timetable the deadline is not until 2028.

[28] Directive 2008/105/EC of the European Parliament and of the Council of 16 December 2008 on environmental quality standards in the field of water policy, amending and subsequently repealing Council Directives 82/176/EEC, 83/513/EEC, 84/156/EEC, 84/491/EEC, 86/280/EEC and amending Directive 2000/60/EC of the European Parliament and of the Council, OJ L 348, 24.12.2008, p. 84.

quality standards (EQS), among other things within the meaning of Article 1, no. 35 WFD. One of these environmental quality standards lays down the maximum permissible mercury content in biota. On current knowledge, these biota limit values are universally exceeded many times in German inland waters. In most cases, the scope for extensions under the WFD is apparently not applicable, hence new discharges of mercury are inadmissible as early as from the end of 2015.

3.2.1 The biota limit value and the situation in German waters

Directive 2008/105/EC on environmental quality standards lays down a limit value of 20 µg/kg for the prey tissue (wet weight) of fish, molluscs, crustaceans and other biota. An as-yet unpublished report[29] by the responsible German government ministries notes:

> *"… that the environmental quality standard for mercury in biota in German inland waters is universally exceeded. This is also proven by tests on fish documented in the German Environmental Specimen Bank."*

Experience from various approval proceedings for coal-fired power stations in Germany shows the values to be exceeded in fish by between ten and 25 times.

3.2.2 The biota requirements in Directive 2008/105/EC

Article 3 of the Directive 2008/105/EC on environmental quality standards in the field of water policy requires Member States, in accordance with the Water Framework Directive, to apply the environmental quality standards laid down in Annex I Part A for bodies of surface water. Directive 2008/105/EC consequently demands that Member States lay down an environmental quality standard of 20 µg/kg relative to the wet weight of fish, molluscs, crustaceans or other biota. Member States have a certain amount of scope both when it comes to choosing the most appropriate indicator for determining the level of mercury contamination in biota and with regard to the derivation of this biota value. Under Directive 2008/105/EC as it currently stands, the main option consists of a choice between laying down biota values directly and stipulating mercury concentrations in water that must ensure that the biota values are attained.[30] Hence even though there is a degree of scope regarding the indicator and the derivation of the biota value, ultimately it has to be concluded that the biota value as such is undisputed. This also follows from Recital 15 of Directive 2008/105/EC.[31]

3.2.3 Obligation to comply with the biota limit values

Directive 2008/105/EC merely stipulates the biota limit value as an environmental quality standard without laying down any requirements as to its attainment. The Directive requires Member States to "apply" the environmental quality standards.[32]

The legal significance of the environmental quality standards follows from the reference back to the WFD in Article 3 (1), first subparagraph of Directive 2008/105/EC. The environmental quality standards thus serve the attainment of the environmental objectives laid down in Article 4 WFD. Among those environmental objectives is the attainment of good surface water chemical status.[33] As environmental quality standards under the WFD, the biota limit values define that good chemical status. Member States are therefore required to attain and comply with the biota limit values.[34]

Under the WFD, environmental quality standards define good surface water chemical status. According to Article 2, no. 35 WFD, an environmental quality standard is the concentration of a particular pollutant or group of pollutants in water, sediment or biota which should not be exceeded in order to protect human health and the environment.[35] Environmental quality standards in turn, according to Article 2, no. 24

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29 Bericht der Ad hoc-AG Quecksilber LAWA, LAI, LABO, Kenntnis- und Diskussionsstand betreffend Quecksilberbelastungen in Gewässern und diesbezügliche Relevanz luftbürtiger Quellen (Bund/Länder-Arbeitsgemeinschaft Bodenschutz, Bund/Länder-Arbeitsgemeinschaft Wasser, Bund/Länder-Arbeitsgemeinschaft für Immissionsschutz, undated, presumably 2012).

30 Article 3(2), Directive 2008/105/EC:

2. Member States may opt to apply EQS for sediment and/or biota instead of those laid down in Part A of Annex I in certain categories of surface water. Member States that apply this option shall:

(a) apply, for mercury and its compounds, an EQS of 20 µg/kg, and/or for hexachlorobenzene, an EQS of 10 µg/kg, and/or for hexachlorobutadiene, an EQS of 55 µg/kg, these EQS being for prey tissue (wet weight), choosing the most appropriate indicator from among fish, molluscs, crustaceans and other biota;

The footnote on mercury stipulates as follows:

(9) If Member States do not apply EQS for biota they shall introduce stricter EQS for water in order to achieve the same level of protection as the EQS for biota set out in Article 3(2) of this Directive. They shall notify the Commission and other Member States, through the Committee referred to in Article 21 of Directive 2000/60/EC, of the reasons and basis for using this approach, the alternative EQS for water established, including the data and the methodology by which the alternative EQS were derived, and the categories of surface water to which they would apply.

31 *(15) For the majority of substances the establishment of EQS values at Community level should, at this stage, be limited to surface water only. However, as regards hexachlorobenzene, hexachlorobutadiene and mercury, it is not possible to ensure protection against indirect effects and secondary poisoning at Community level by EQS for surface water alone. It is therefore appropriate to establish EQS for biota at Community level for those three substances. In order to allow Member States flexibility depending on their monitoring strategy, Member States should be able either to monitor and apply those EQS for biota, or to establish stricter EQS for surface water providing the same level of protection.*

32 Article 3(1) subparagraph 1 of Directive 2008/105/EC.

33 Article 4(1)(a)(iii) WFD.

34 Recital 5 of Directive 2008/105/EC explicitly states that the Directive lays down environmental quality standards in accordance with the provisions and objectives of the WFD.

35 Article 2 definition 35 WFD: "Environmental quality standard. means the concentration of a particular pollutant or group of pollutants in water, sediment or biota which should not be exceeded in order to protect human health and the environment."

WFD, determine the requirements for good surface water chemical status.[36] According to this definition, good surface water chemical status is the chemical status achieved by a body of surface water in which concentrations of pollutants do not exceed the environmental quality standards established, inter alia, in Annex IX and under Article 16(7) WFD. Article 4(1)(a)(iii) requires Member States to achieve good surface water chemical status at the latest 15 years from the date of entry into force of the WFD, subject to the facilitations under paragraphs (4) to (7).[37] The biota limit values must thus be complied with by the end of 2015. This deadline can be extended under Article 4(4) WFD for a maximum of two six-year periods, i.e. until 2027, if a management plan exists stating the measures necessary to bring the water bodies to the required status by the extended deadline. A timetable must also be submitted for implementation of the measures.[38] This means that if by 2015 there is no management plan containing such measures together with a verifiable timetable, an extension under Article 4(4) is likewise inadmissible.

The facilitations in Article 4(5) WFD, on the other hand, does probably not to come into question for new discharges of mercury associated with power station approvals. Under Article 4(5) WFD, less stringent environmental objectives may be laid down subject to certain conditions. Among other things, there must be no alternative to allowing greater pollution of the water body relative to the de facto objective. With particular regard to new discharges of mercury, this is not the case for the simple reason that there are other ways of supplying energy, for example by building gas-fired power stations that do not emit mercury.

3.2.4 No linear relationship yet found between water mercury concentrations and contamination in biota

Scientists have not yet succeeded in demonstrating a linear relationship between mercury concentrations in water and values in biota. This is partly because mercury can accumulate in biota in a way that is not yet sufficiently well understood, so that for example it is not possible given a decrease in the concentration of mercury in a water body to project from that decrease a linear reduction in biota mercury contamination.

This observation means that any additional discharge of mercury into a water body conflicts with the attainment of the good chemical status defined as the environmental quality standard in terms of the biota values. For good chemical status to be at all attainable with regard to the environmental quality standard for mercury in biota, it is necessary to reduce mercury contamination in every body of water in which the biota values are exceeded. In contrast to the phase-out requirement described above, where an offsetting of new discharges with reduction measures laid down in a management plan is at least theoretically conceivable, such offsetting is presumably impossible regarding the biota limit values for mercury. This would require a demonstrable linear relationship between water body mercury concentrations and biota values, but no such relationship has yet been demonstrated. In order to attain the biota objective therefore, Member States are required to reduce mercury concentrations in water bodies as far as possible. Any new discharge of mercury into a water body conflicts with this objective.

There are in the meantime visible efforts in power station engineering to significantly reduce mercury discharges through waste water from flue gas scrubbing. It cannot yet be said with sufficient certainty whether such efforts will succeed. But even if mercury discharges were to be reduced, even small new discharges by new power stations would be inadmissible in light of the obligation of attaining the biota values either by 2015 or, if the extension options under Article 4(4) WFD are available, at the latest by 2027. Only when it becomes possible to determine a concentration level that simultaneously provides assurance that the biota limit values will be attained within the legally allowable timetable would it be admissible to permit new discharges subject to offsetting with other reduction measures. Furthermore, this would not remove the need to also give consideration to discharges through the air and air-soil pathways.

3.2.5 Conclusion 2: Obligation to cease discharges and prohibition of any new discharges due to the requirement to comply with the biota limit values

Based on the reasoning presented here, the provisions of EU water law mean that the approval of new coal-fired power stations is prohibited until mercury emissions can be reduced to zero or compliance with the biota values can be ensured despite the discharges associated with new power stations.

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36 Article 2 definition 24 WFD: "Good surface water chemical status means the chemical status required to meet the environmental objectives for surface waters established in Article 4(1)(a), that is the chemical status achieved by a body of surface water in which concentrations of pollutants do not exceed the environmental quality standards established in Annex IX and under Article 16(7), and under other relevant Community legislation setting environmental quality standards at Community level."

37 iii) Member States shall protect and enhance all artificial and heavily modified bodies of water, with the aim of achieving good ecological potential and good surface water chemical status at the latest 15 years from the date of entry into force of this Directive, in accordance with the provisions laid down in Annex V, subject to the application of extensions determined in accordance with paragraph 4 and to the application of paragraphs 5, 6 and 7 without prejudice to paragraph 8.

38 Article 4(4)(d) WFD: "A summary of the measures required under Article 11 which are envisaged as necessary to bring the bodies of water progressively to the required status by the extended deadline, the reasons for any significant delay in making these measures operational, and the expected timetable for their implementation are set out in the river basin management plan. A review of the implementation of these measures and a summary of any additional measures shall be included in updates of the river basin management plan."

3.3 Applicability to modifications and upgrades of existing power stations

The derived conclusions apply not only to approvals of new power stations as such, but also to cases where older power station units are replaced with new ones. Such modifications to existing power stations likewise require approval under the law of the Member State and thus a sovereign decision. Even where national law provides that in certain circumstances the need for approval can be waived, there must at least be control by the Member State authorities.

In its decision of 14.1.2010 [39], the ECJ held with reference to the Habitats Directive that projects approved before entry into force of the Habitats Directive cannot be permanently excluded from its application. Drawing upon relevant case law[40], the ECJ developed a principle that with regard to the applicability of requirements under material European law, the principle of the protection of legitimate expectations does not generally prevent new rules from applying to future effects of a situation that arose under the earlier rules.

In the context of the Water Framework Directive, it is additionally to be noted that it represents not project-related but media-related legislation with corresponding permanent obligations on Member States. Under the principle developed by the ECJ in the Papenburg case[41], it is even possible to infer from the WFD a requirement that existing and approved discharges of mercury into water bodies must, by retroactive limitations on existing power stations, be reduced to a minimum and in the foreseeable future be made to cease entirely. Then, however, decisions concerning the replacement of old power plants are also affected as it becomes necessary to apply the prohibition against new discharges of mercury that are the consequence of a sovereign decision (approval of a new part of a power station). Any other interpretation would mean perpetuating the admissibility of the mercury discharges associated with the old power station units, thus making it impossible for the Water Framework Directive ever to succeed. This is precisely the kind of situation that the passage referred to from the EJC decision in the Papenburg case is designed to prevent. For this reason, whenever a new sovereign decision or action by a Member State is necessary or applied for in connection with existing power stations, prevailing European law must be applied.

3.4 No collision with the unanimity requirement in Article 192 TFEU

In the debate on the above conclusion, the argument is often put forward that such a conclusion collides with Article 192(2)(c) TFEU. [42] This stipulates that the Council must act unanimously when adopting measures significantly affecting a Member State's choice between different energy sources and the general structure of its energy supply.[43] It is recognised in the ECJ's case law, however, that the requirement in Article 192(2) TFEU does not apply to directives that merely reflect on the policy areas named in Article 192(2) TFEU.[44] The ECJ held in a decision of 30.1.2001[45] that a provision only falls within the scope of the requirement in Article 192(2) TFEU (previously Article 175(2) EC) if the measures in question have the policy areas named in Article 192 TFEU as their subject matter. In other words, provisions that have a different aim, in this case water and environmental policy, but whose content reflects on the policy areas named in Article 192(2) TFEU do not come under the unanimity requirement, hence there is no collision with that requirement.

4 Summary and conclusions

Despite what is noted in the Community Strategy Concerning Mercury of 28.1.2005, there are no emission limit values in European law for this severely toxic heavy metal. Discharge limits can only be inferred for water bodies from the Water Framework Directive:

Firstly, Member States, in the absence of activity on the part of the Commission, are required under this directive to adopt measures with the aim of a phase-out by 2026.

Secondly, even without any action by Member States, the authorities are already prevented from permitting new discharges because they have to comply with the environmental quality standards laid down by Directive 2008/105/EC in order to achieve good chemical status within the meaning of the Water Framework Directive. Those environmental quality standards include the mercury limit values for biota, which are universally exceeded many times over in German inland waters. Both of these requirements must be given due consideration in approval proceedings.

39 ECJ, 14.1.2010, Case C-226/08 (Papenburg).

40 ECJ, 7.6.2005,Case C-17/03; ECJ 29.1.2001, Case C-162/00.

41 Footnote 43.

42 Durner/Trillmich, Ausstieg aus der Kohlenutzung kraft europäischen Wasserrechts?, DVBl. 2011, 517 (519).

43 Article 192 TFEU: 2. By way of derogation from the decision-making procedure provided for in paragraph 1 and without prejudice to Article 114, the Council acting unanimously in accordance with a special legislative procedure and after consulting the European Parliament, the Economic and Social Committee and the Committee of the Regions, shall adopt: (…)
c). measures significantly affecting a Member State's choice between different energy sources and the general structure of its energy supply. (…).

44 On the topic as a whole see Gellermann, Europäisches Wasserrecht und Kohlenutzung in der Perspektive des Primärrechts, NVwZ 2012, 850.

45 ECJ, 30.1.2001, Case C-36/98.

Imprint

Editors: Regine Barth, Nicola Below, Claudia Fricke, Martin Führ, Gerhard Roller, Julian Schenten, Silvia Schütte

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The Editors would like to thank **Vanessa Cook** (Öko-Institut) for proofreading the *elni Review*.

We invite authors to submit manuscripts to the Editors as files by email using an IBM-compatible word processing system.

The *elni Review* is the double-blind peer reviewed journal of the Environmental Law Network International. It is distributed twice a year at the following prices: commercial users (consultants, law firms, govern-ment administrations): € 52; private users, students, libraries: € 30. Non-members can order single issues at a fee of € 20 incl. packaging. The Environmental Law Network International also welcomes an exchange of articles as a way of payment.

The *elni Review* is published with financial and organisational support from Öko-Institut e.V., and the Universities of Applied Sciences in Darmstadt and Bingen.

The views expressed in the articles are those of the authors and do not necessarily reflect those of elni.

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