



## Position Paper

# Implementation of the General Administrative Regulation on the Designation of Nitrate-Polluted and Eutrophic Areas (AVV GeA)

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## Preliminary Remarks

In June 2021, the EU Commission called on Germany to make significant improvements in the designation of nitrate-polluted and eutrophic areas. This concerned primarily the designation of nitrate-polluted areas, the total size of which, across Germany, had shrunk considerably compared to the designation of areas in 2019. Consequently, on 10 August 2022, the German Federal Government passed a revised version of the General Administrative Regulation on the Designation of Nitrate-Polluted and Eutrophic Areas (AVV GeA). That legislation stipulated the following changes to the criteria for designating nitrate-polluted areas which the EU Commission had criticised in 2021:

- end of emissions-based modelling;
- where 20% or more of a field block is located within the designated area, the whole of that field block has to be included in the nitrate-polluted area (Section 7(1) AVV GeA);
- all monitoring points at which pollution has been found must be located within the areas designated as nitrate-polluted (Section 6 AVV GeA);
- where denitrifying conditions exist in groundwater, the measured nitrate concentration will be adjusted by the amount of the converted nitrate (GrwV [German Groundwater Ordinance], 2022);
- internal differentiation within nitrate polluted groundwater bodies must be implemented nationwide by the end of 2024, at the latest by the end of 2028, using a new geostatistical regionalisation procedure. One prerequisite for this is the expansion of the network of monitoring points (Section 4(2) and Section 15(1) AVV GeA).

According to Section 14(2) first sentence of the amended AVV GeA (2022), the German *Länder* were required to review the existing designations of nitrate-polluted and eutrophic areas according to the revised provisions and make any necessary adjustments by 30 November 2022. In light of that, the various existing fertiliser application ordinances in force in the individual *Länder* had to be amended accordingly by that date.

The EU-COM had called for the requirements of the AVV GeA to be implemented by the *Länder* in full. **However, the following shortcomings are already apparent:**

- 1. Lack of transparency in some cases as to use and disclosure of information;**
- 2. No uniform national approach to regionalisation;**
- 3. Density of monitoring points is too low;**
- 4. Reduction in denitrification capacity often not taken into account;**
- 5. Partially incomplete designation of eutrophic areas.**

In order to fully implement the requirements of the EU Nitrates Directive, the *Länder* are required to completely implement all provisions of the AVV GeA.

## On the individual points

### 1. Lack of transparency in some cases as to use and disclosure of information

The publication of relevant information, such as the choice of procedural parameters but also information on the monitoring points used or not used and monitoring point findings, is handled very differently within the *Länder*. These factors influence the result of the designation of areas and need to be known in order to objectively assess the quality of the designation of areas. Often, the necessary data is not publicly accessible (e.g. homepage). If this information is not disclosed, it is impossible to assess whether a particular procedure has been applied properly.

### 2. No uniform national approach to regionalisation

The majority of *Länder* reported that they use a deterministic regionalisation procedure for the designation of “red” areas. BDEW highlights that according to the recent study titled, “Methods for regionalisation of nitrate concentrations in groundwater” by Ohlert et al. (2023) it has been scientifically proven that both deterministic and geostatistical regionalisation procedures lead to a systematic underestimation of “red” areas. This means that these procedures cannot produce a realistic picture of the distribution of nitrate concentration in groundwater.

### 3. Density of monitoring points is too low

According to Ohlert et al. (2023), for a statistically robust application of deterministic and geostatistical regionalisation methods to adequately address the problem, a certain distribution and density of monitoring points is required. At the present time, this condition is not met in the German *Länder*. This also means that the necessary validation of the regionalisation methods used, i.e. a checking of measured values against interpolated values, is only possible to a limited extent.

The EU Nitrates Directive does not provide for the use of modelling techniques or of methods in general that could lead to an artificial “accounting away” of nitrate exceedances and increasing trends. In light of this, BDEW is critical of the use of unvalidated deterministic and geostatistical regionalisation procedures for the designation of new nitrate-polluted areas.

### 4. Reduction in denitrification capacity often not taken into account

The EU Nitrates Directive explicitly provides for consideration of the denitrification potential in accordance with the provisions in Annex I B 2 and Annex III 2 b.

The extent of the denitrifying capacity of groundwater should always be checked using a scientifically recognised measurement method, such as the “N<sub>2</sub>/Ar method”. This enables a determination of whether over-fertilisation is occurring despite denitrification.

Section 3(3) AVV GeA stipulates that the denitrifying conditions in groundwater must be taken into account when determining whether the threshold value of 50 mg NO<sub>3</sub>/l has been exceeded. Although some *Länder* have reliable N<sub>2</sub>/Ar findings, which, if taken into account

would lead to an increase in the number of monitoring points with threshold value exceedances in groundwater, these are not or not fully taken into account in the designation of areas.

For precautionary reasons, however, it is essential that denitrification conditions be taken into account in the current designation procedure. This is the only way to ensure the effective and sustainable protection of groundwater against further nitrate inputs. It should be the common interest of all stakeholders to create planning certainty as soon as possible with regard to the actual size of the areas with excessive nitrate inputs into groundwater and thus of the “red areas” to be designated in the future.

Particular criticism must be placed on the fact that, contrary to existing legal provisions, Lower Saxony does not incorporate its N<sub>2</sub>/Ar findings in the designation of red areas and thus such findings are not taken into account in the 2023 fertilisation period. In this regard, we will have to wait and see whether Lower Saxony will meet this requirement with the revision announced for summer 2023.

## **5. Partially incomplete designation of eutrophic areas**

According to the Nitrates Directive, Germany is obliged to designate eutrophic areas. Many of the *Länder* have stated, however, that they will not designate eutrophic areas but will instead use the option provided for in Section 13a(5) DüV [German Fertiliser Application Ordinance] (increased mandatory minimum distances to water bodies). No indications are given as to which eutrophic areas exist, thereby not allowing for the implementation of remedial measures on a polluter-pays basis.

The EU Nitrates Directive does not provide for such an exception or “alternative”, in particular in relation to phosphate exceedance. An exemption would only be possible under the EU Nitrates Directive where Member States establish and apply the action programmes referred to in Article 5 throughout their national territory. This has demonstrably not occurred in Germany (see CJEU judgment). Annex V of the EU Nitrates Directive requires the submission of a summary of monitoring results and a statement of the considerations which led to the designation of each vulnerable zone and to any revision of or addition to designations of vulnerable zones.

The data which would enable eutrophic areas to be designated accordingly is available to the *Länder*. This is a further reason why the chosen “minimum distance rule” seems inadequate for the reduction of phosphorus inputs. Moreover, that rule has been made obsolete by the mandatory nationwide requirements for riparian areas, adopted in the First Act Amending the German Federal Water Act of 19 June 2020.

The Federal Government's goal is to comply with the phosphorus guideline values in all water bodies by 2030 at the latest. According to the German Federal Environment Agency, excessive phosphorus concentrations have been observed at more than half of all monitoring points on rivers that flow into the North Sea and Baltic Sea. According to the Federal Environment Agency, if the target values for water management set out in the German Surface Waters Ordinance are to be met, it is imperative that fertilisation practices in agriculture change.

## Literature:

Ohlert PL, Bach M, Breuer L: Methods for regionalisation of nitrate concentrations in ground-water. HyWa 1/2023

## Contact:

(List of all signatory associations within the Nitrates Initiative)

Bundesverband der Energie- und Wasserwirtschaft e. V. (BDEW), Marika Holtorff  
Tel: 030/300199-1214, [marika.holtorff@bdew.de](mailto:marika.holtorff@bdew.de)

Bund für Umwelt und Naturschutz Deutschland e. V. (BUND), Daniela Wannemacher  
Tel: 030/27586-567, [daniela.wannemacher@bund.net](mailto:daniela.wannemacher@bund.net)

Deutscher Naturschutzring (DNR), Florian Schöne  
Tel: 030/678177-599, [florian.schoene@dnr.de](mailto:florian.schoene@dnr.de)

Deutsche Umwelthilfe, Gabi Fiedler  
Tel: 0511/390805-13, [fiedler@duh.de](mailto:fiedler@duh.de)

Global Nature Fund, Thomas Schäfer  
Tel: 07732/9995-89, [schaefer@globalnature.org](mailto:schaefer@globalnature.org)

Greenpeace, Martin Hofstetter  
Tel: 030/308899-35, [martin.hofstetter@greenpeace.de](mailto:martin.hofstetter@greenpeace.de)

GRÜNE LIGA e.V., Michael Bender  
Tel: 030/403935-30, [wasser@grueneliga.de](mailto:wasser@grueneliga.de)

Naturschutzbund Deutschland (NABU), Dr. Christine Tölle-Nolting  
Tel: 030/284984-1641, [christine.toelle-nolting@nabu.de](mailto:christine.toelle-nolting@nabu.de)

ver.di, Clivia Conrad  
Tel: 030/6956-1740, [clivia.conrad@verdi.de](mailto:clivia.conrad@verdi.de)

WWF Deutschland, Michael Berger  
Tel: 030/ 311777-226, [michael.berger@wwf.de](mailto:michael.berger@wwf.de)