

Vulnerable Areas according to the draft of the Fertilizer Ordinance (E-DüV)

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Initial situation:

- EU Nitrate Directive is implemented through a comprehensive action program.
- "Vulnerable areas" are being introduced to reduce nitrate pollution in particularly severely affected gwb (polluter pays).

Current situation:

- Fertilizer Ordinance is being amended, the last known draft is dated 16.12.2015 (E-DüV).
- According to this, the federal states are empowered (and thus virtually obligated):
 - a) to delineate vulnerable areas,
 - b) to design additional and more stringent requirements in these areas,
 - c) to allow less stringent requirements outside these areas.
- Vulnerable areas = areas where > 40 mg/l of nitrate and upward trend or > 50 mg/l of nitrate have been found in GWK . An addition concerning eutrophication is expected.
- Draft is revised due to the EU complaint, current status is not known.
- Since 2015, the federal states are discussing the area delineation (a) and the additional requirements (b)
- Aim: To develop common key points

Vulnerable Areas – First Thoughts for a Delineation

Proposal (1)

- areas predominantly located in „red“ GWB or
- in a 2-km radius of a measuring point with a nitrate concentration > 50 mg/l / > 40 mg/l with trend ↗
- and which are highly nitrate-sensitive (= maximum tolerable N-surplus from agriculture of <50 kg N / ha * a after modeling)

Proposal (2):

- Initially: „red“ GWB
- subtract: areas covered by protecting layers
- subtract: areas with soils of a denitrification stage < (high - very high)

Proposal (3):

- Nitrate-contaminated areas = subareas of a GWB with nitrate concentrations > 50 mg/l + areas > 40 mg/l with trend
- subareas: delineated parts of a GWB because of their hydrogeology, covering layers, horizons

Proposal (4)

- Initially: „red“ GWB + GWB „at risk“
- Areas with nitrate concentrations > 50 mg/l + areas > 40 mg/l with trend, determined after regionalization of immission values (improved monitoring network)

Vulnerable Areas – Discussion of Key Points

- Consideration of individual measuring points outside “red” GWK - Yes / No?
- What administrative boundaries should be adopted as external borders? (County / Commune/ Gemarkung / Flurstück / Feldblock*)
- Consideration of emission approach (modeled N-leakage potential) and immission approach (N-detection in groundwater) - Yes / No?
- How should special areas (such as water protection areas) be treated within the vulnerable areas?
- Consideration of individual farmers level (areas of a farm within / outside the vulnerable areas).

* coherent agricultural area, which is surrounded by natural boundaries (for example, forest, roads, cultivated land, bodies of water, trenches). A field block can be farmed by one or more farmers. Each field block has a 16-character area identifier.

Vulnerable Areas– Eutrophierungsgebiete

Expected (uncertain, new design DüV not known) :

- Eutrophication from P in SW inland waters:
additional measures in catchment areas of slow flowing / standing OW with agricultural P-load
- Eutrophication from N in SW coastal waters and seas:
 - Input from GW: Effect of measures aimed at reducing the N-load of the GW (55% of the input from GW)
 - Input from air: measures against atmospheric input (urease inhibitor)

Vulnerable Areas – Additional Measures

E-DüV from 16.12.2015:

In each Bundesland, at least 1 of the 8 possible additional requirements must be introduced.

The 4 most important water-related measures (according to the Länder):

- Analysis of the N-content of the manure to be applied
- Analysis of soil N-content before fertilization
- Reduction of the permitted control value* from 60 kg N/ha to 50 kg N/ha from 2018 and 40 kg N/ha from 2021 onwards.
- Increase of storage capacity for liquid manure to 7 months

* according to the farms nutrient balance in the average of the last 3 fertilizing years