



Methodologies and results
of assessing groundwater status
in the River Basin Community Elbe
(FGG Elbe;
German part of River Basin District Elbe)

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Results of first assessing of groundwater status in the River Basin Community Elbe (FGG Elbe)

Number and area of groundwater bodies:

total 224	in nearest surface main aquifer 220 95.676 km² [435 km²]	in deeper aquifers 4 3.834 km² [958 km²]
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Results of the updated pressures and impacts analysis:

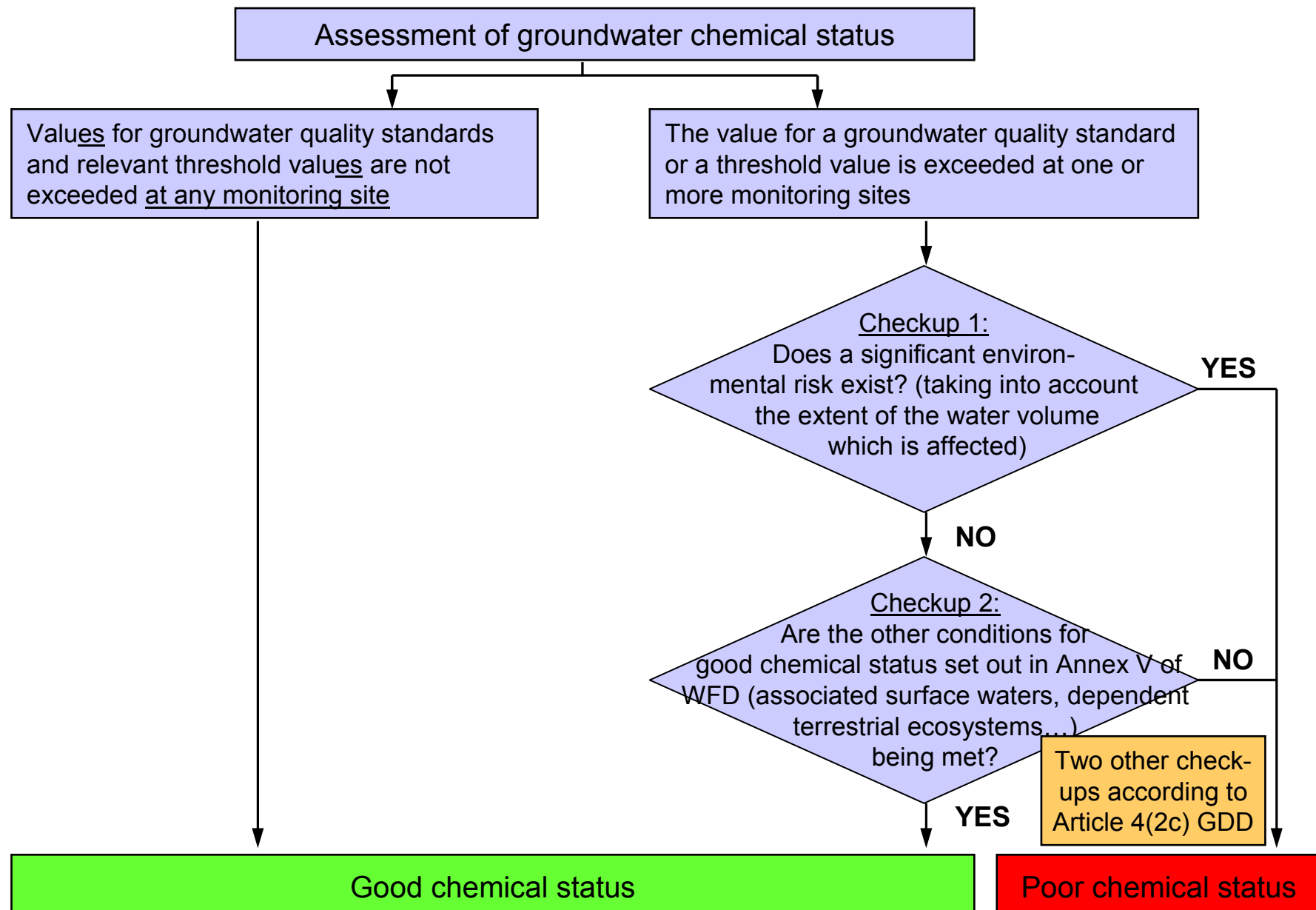
Number of groundwater bodies have being identified as being at risk of failing to achieve the Water Framework Directive's objectives concerning					
<i>quantitative status</i> because of significant pressures from			<i>chemical status</i> because of significant pressures from		
abstraction 2	salt intrusion 1	mining 5	diffuse sources	point sources 5	mining 9

Results of first assessing of groundwater status:

Number of groundwater bodies are considered to be of poor status concerning		
<i>quantitative status</i> 9	<i>chemical status</i> 99	<i>chemical status</i> because of which type of pollutant
[Total number]		nitrate 59
		pesticides 3
		other pollutants 52

[Multiple answers for one and the same groundwater body are possible]

Procedure for assessing groundwater chemical status



Procedure for assessing chemical status in case of exceeding the value for a quality standard at one or more monitoring sites (1)

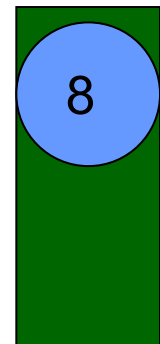
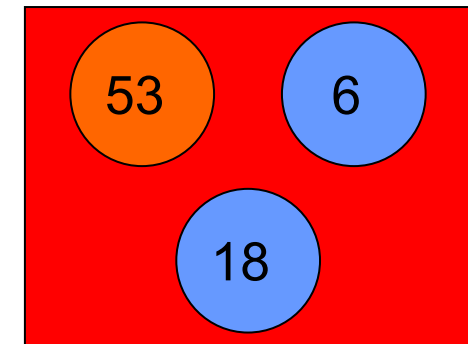
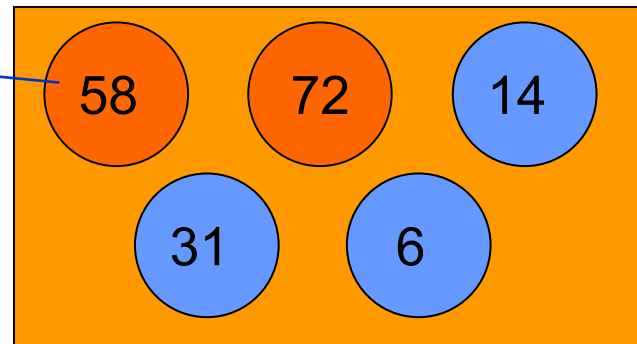
Diffuse sources, Groundwater body with total area of 400 km²

Agriculture 245 km²

Settlements, Industry 135 km² Forest 20 km²

Monitoring site with nitrate concentration [mg/l]

Groundwater quality standard for nitrate: 50 mg/l



Calculate the area of exceeding of quality standard for each type of land use (contaminated area):

98 km²

45 km²

0 km²

Rate the relevance of exceeding of quality standard for each type of land use:

→ Contaminated area >

1/3 of the type of land use area?

YES

NO

Only if prior question was answered "YES":

For each type of land use: Rate the relevance of the contaminated area for the status of the whole groundwater body:

→ Contaminated area > 25 km²?

YES

Result: The groundwater body is considered to be of poor chemical status because of diffuse sources from agricultural land use.

Procedure for assessing chemical status in case of exceeding the value for a quality standard at one or more monitoring sites (2)

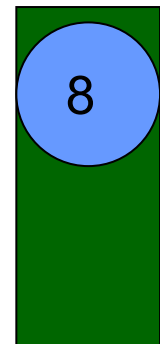
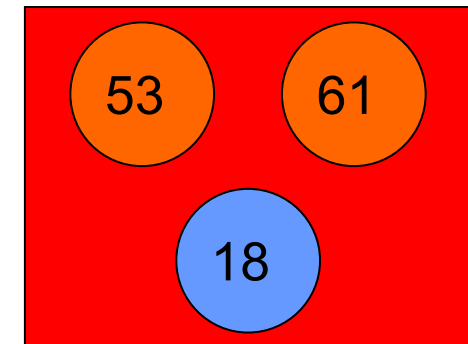
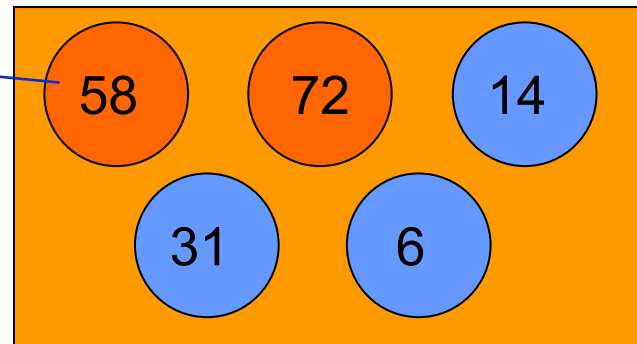
Diffuse sources, Groundwater body with total area of 400 km²

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Settlements, Industry 135 km² Forest 20 km²

Monitoring site with nitrate concentration [mg/l]

Groundwater quality standard for nitrate: 50 mg/l



Calculate the area of exceeding of quality standard for each type of land use (contaminated area):

98 km²

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Rate the relevance of exceeding of quality standard for each type of land use:

→ Contaminated area >

1/3 of the type of land use area?

YES

YES

Only if prior question was answered "YES":

For each type of land use: Rate the relevance of the contaminated area for the status of the whole groundwater body:

→ Contaminated area > 25 km²?

YES

YES

Result: The groundwater body is considered to be of poor chemical status because of diffuse sources from agricultural land use and from settlements.

Procedure for assessing chemical status in case of exceeding the value for a quality standard at one or more monitoring sites (3)

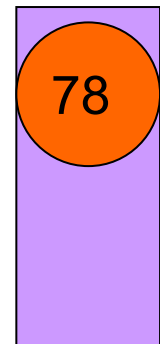
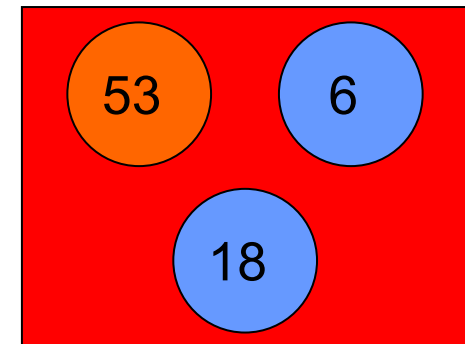
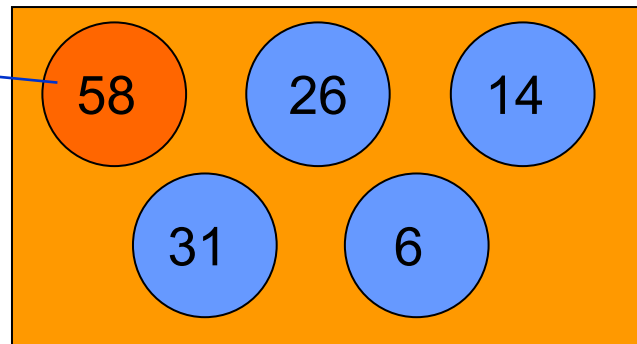
Diffuse sources, Groundwater body with total area of 400 km²

Agriculture 245 km²

Settlements, Ind. 135 km² Winegro-
wing 20 km²

Monitoring site
with nitrate
concentration [mg/l]

Groundwater quality
standard for nitrate:
50 mg/l



Calculate the area of exceeding of qua-
lity standard for each type of land use
(contaminated area):

49 km²

45 km²

20 km²

Rate the relevance of exceeding of qua-
lity standard for each type of land use:

→ Contaminated area >

1/3 of the type of land use area?

NO

NO

YES

Only if prior question was answered "YES":

For each type of land use: Rate the rele-
vance of the contaminated area for the
status of the whole groundwater body:

→ Contaminated area > 25 km²?



NO

Result: The groundwater body is considered to be of good chemical status.