Replies to comments for the 2023 – Consultation on Nutrients in freshwater in Europe (WAT003)

Consultation deadline	2023/09/02
# Comments received	8
Replies provided	2023/10/30

1. Comment, Contributor: pozdzmal (Malgorzata Pozdzik), Date: 2023/08/17 14:53				
Paragraph URL: https://forum.eionet.europa.eu/nrc-eionet-freshwater/library/nutrients-freshwater-europe/eionet-consultations-nutrients-rivers-lakes-and-groundwater/2023-consultation-on-nutrients-in-freshwater-in-europe-wat003/1-indicator-text-and-figures/003				
Section	Paragraph	Message	Reply
1 - Indicator text and figures	Figure 1. Nutrients in European water bodies Notes: Additional information The geographical coverage is the 38 EEA member countries, but only complete time series are included in the analysis. The selected time series are aggregated to European level by averaging across all sites for each year. Two time series are shown – a longer time series representing fewer water bodies and a shorter time series representing more water bodies. Upper chart: Nitrate in groundwater: The number of groundwater bodies included per country is given in parenthesis: - 1992-2021: Europe (475), Austria (14), Belgium (24), Bulgaria (25), Denmark (1), Estonia (16), Finland** (7), France (260), Germany (67), Ireland (49), Portugal (2), Slovakia (4), Slovenia (5), Spain (1). - 2000-2021: Europe (1025), Austria (14), Belgium (37), Bulgaria (40), Cyprus (6), Czechia (64), Denmark (4), Estonia (18), Finland** (8), France (452), Germany (176), Ireland (66), Italy (10), Latvia (11), Malta (2), Portugal (10), Serbia (21), Slovakia (16), …	It is advisable to consider presenting also data from a shorter reporting period, which will allow to include countries that started reporting data to the Agency in later years.	Yes, this is something we have discussed in recent years, and we will consider it again. It is definitely in our interest to be able to show data from as many countries as possible.

2. Comment, Contributor: ritvamar (Maria Szomolanyi Ritvayne), Date: 2023/08/29 14:01			
Paragraph URL: https://forum.eionet.europa.eu/nrc-eionet-freshwater/library/nutrients-freshwater-europe/eionet-consultations-nutrients-rivers-lakes-and-groundwater/2023-consultation-on-nutrients-in-freshwater-in-europe-wat003/1-indicator-text-and-figures/023			
Section	Paragraph	Message	Reply
1 - Indicator text and figures	Aggregate level assessment Nitrate in groundwater The average nitrate concentration in European groundwater is fluctuating around the same level and there is no clear trend (Figure 1). The shorter, but more representative time series starting in 2000 follows the longer one closely. Agricultural activities, such as over-use of fertilizer, is the main driver for nitrate in groundwater. Nitrate in rivers The average nitrate concentration in European rivers decreased steadily over the period 1992-2009 but has levelled off since then. The shorter time series is parallel to the longer series, but the concentration level is lower. Agriculture remains the main contributor to nitrogen pollution, but the EU Nitrates Directive and national measures have contributed to lower concentrations. However, the apparent stabilisation in recent years calls for further measures. Phosphate in rivers The average phosphate concentration in European rivers more than halved over the period 1992-2011. The marked decline is also …	It might be useful to express the concentration of nitrate for groundwater as milligrams of nitrate-nitrogen per litre (mg NO3-N/l), similarly to that for rivers, for easier comparison.	It was decided a long time ago to use the units most commonly used in work on river and groundwater data, respectively. I agree that it would be easier to compare the data if they had the same unit, but we believe it is easier for people working on river or groundwater data to relate to the units currently applied.

3. Comment, Contributor: ritvamar (Maria Szomolanyi Ritvayne), Date: 2023/08/29 14:01			
Paragraph URL: https://forum.eionet.europa.eu/nrc-eionet-freshwater/library/nutrients-freshwater-europe/eionet-consultations-nutrients-rivers-lakes-and-groundwater/2023-consultation-on-nutrients-in-freshwater-in-europe-wat003/1-indicator-text-and-figures/023			
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4. Comment, Contributor: rintapae (Paeivi Rinta), Date: 2023/09/01 15:09

Paragraph URL: https://forum.eionet.europa.eu/nrc-eionet-freshwater/library/nutrients-freshwater-europe/eionet-consultations-nutrients-rivers-lakes-and-groundwater/2023-consultation-on-nutrients-in-freshwater-in-europe-wat003/1-indicator-text-and-figures/032

Section	Paragraph	Message	Reply
1 - Indicator text and figures	Country level Figure 2. Nitrate in rivers in European countries Notes: Kosovo* refers to Kosovo under UNSC Resolution 1244/99. The current concentration per river site is calculated as the average of available annual mean concentrations for the years 2019-2021. Concentrations are in mg nitrate-nitrogen per litre (mg NO3-N/l). The river sites are assigned to different concentration classes to visualise the distribution of data in the dataset. 11.3 mg NO3-N/l corresponds to the maximum allowable concentration for nitrate of 50 mg/l in the Drinking Water Directive (2020/2184) and the Groundwater Directive (2006/118). The number of river sites per country is given in parenthesis.	Switzerland reports nitrate data for rivers since 1992. These data are listed for Fig. 1 (6 sites for 1992-2021 and 16 site for 2000-2021). Why are they not integrated in Fig. 2? Switzerland is not listed in the table at all, which must be a mistake. Could you please check the data again?	There was indeed an error in the plot, so thanks for poiting this out. The data were there, it was simply an error in the making of the plot. This will be corrected.

5.	Comment, Contributor: ritvamar (Maria Szomolanyi Ritvayne), Date: 2023/08/29 13:59		
Paragraph URL: https://forum.eionet.europa.eu/nrc-eionet-freshwater/library/nutrients-freshwater-europe/eionet-consultations-nutrients-rivers-lakes-and-groundwater/2023-consultation-on-nutrients-in-freshwater-in-europe-wat003/3-general-comments-and-questions/000			
Section	Paragraph	Message	Reply
3 - General comments and questions	If you have further comments or questions on e.g. methodology, data availability, further improvement of the indicator, please provide your recommendations, expectations and ideas.	It might be interesting to explore deeper connections in the complex data set. For example, it might be worth to reveal the extent of correlation (i.e. Pearson, Kendall or Spearman) between each indicator parameter based on the whole data set, or certain segments of that. Displaying the overall similarity of the various countries and/or water bodies based on all measured parameters might be illustrative as well. For example, in certain years or periods characterised by the average values of some years, multivariate analysis (i.e. cluster analysis or ordination techniques) would reveal the differences among samples or sample groups.	Yes, there are certainly many other ways the data could be analysed. Given the short format of the indicator, we have to keep it simple, and we have limited the statistical analysis to trend analysis, as changes over time is the main focus of the indicator. We are, however, always considering how the data are analysed and presented, and we will take into account your suggestions. Such ideas are also relevant for future, more in-depth assessments.

6.	Comment, Contributor: kueniani (Anita Künitzer), Date: 2023/08/29 18:06		
Paragraph URL: https://forum.eionet.europa.eu/nrc-eionet-freshwater/library/nutrients-freshwater-europe/eionet-consultations-nutrients-rivers-lakes-and-groundwater/2023-consultation-on-nutrients-in-freshwater-in-europe-wat003/3-general-comments-and-questions/000			
Section	Paragraph	Message	Reply
3 - General comments and questions	If you have further comments or questions on e.g. methodology, data availability, further improvement of the indicator, please provide your recommendations, expectations and ideas.	I received the following reply from my freshwater colleagues: Since the indicators have actually been known for years, we don't really understand the current need for comment. If the indicators are constantly changed, the comparability of the results suffers. It should also be mentioned that earlier comments from us were generally not taken into account. It would be helpful for such a consultation to list first which changes were made (so that Eionet members don't have to read everything again or search for the changes).	It is a good idea to include in the consultation which methodological changes we have made since the year before. Usually they are only minor for this indicator. The data will always change somewhat as e.g. the number of time series that fit the inclusion criteria may change when one more year is added. So it is always useful that the countries take a look at their data. We appreciate feedback and consider it, but it is not always possible to take it into account.

7. Comment, Contributor: schotkee (Kees Schotten), Date: 2023/08/30 08:49

Paragraph URL: https://forum.eionet.europa.eu/nrc-eionet-freshwater/library/nutrients-freshwater-europe/eionet-consultations-nutrients-rivers-lakes-and-groundwater/2023-consultation-on-nutrients-in-freshwater-in-europe-wat003/3-general-comments-and-questions/000

Section	Paragraph	Message	Reply
3 - General comments and questions	If you have further comments or questions on e.g. methodology, data availability, further improvement of the indicator, please provide your recommendations, expectations and ideas.	The indicator (and underlying data and assessment) Nutrients in freshwater 8EAP indicator should be identical to the Nitrate Directive indicators on this topic. Supporting a consistent set of policy conclusions for both 8EAP and ND and (the in WISE available ND) data is used more than once. For the countries perspective this coherence is very important as the policy implications and actions are triggered in the ND policy cycle and most likely not by the 8EAP. We leave the timing (8EAP or ND first) and its policy implications to the EEA experts. With regarding to data availability -and in line with the previous point- the NL provides (also in the future) information on nutrients within the reporting schema according to the Nitrates Directive. That data is also reporting via WISE. For nitrate no data was used for the Netherlands. This data is regurlary available though. Note: within the Nitrates Directive 50 mgNO3/L (11.3 mgNO3-N/L) is used based on winter averages.	We acknowledge the need for coherence across products. Please note that this indicator is for EEA member countries (which includes, but aren't limited to, EU27), and EEA cooperating countries, and is updated on annual basis. It is not an exhaustive directive implementation report. Checking the WISE 6 data, groundwater data from NL are only available from 2005 onwards, or for other WBs until 2009, so these can not be included given the current definition of time periods. Note that methodology may change, so the current indicator methodology should not dissuade from reporting. The river nitrate data from NL are excluded from the indicator because of some suspicious step changes across sites, possibly indicating possibly incorrect reporting of units. If NL checks previously submitted data and if some need for corrections are identified, it is possible to resubmit during the annual reporting.

8. Comment, Contributor: rothemat (Matthias Rothe), Date: 2023/09/01 10:44			
Paragraph URL: https://forum.eionet.europa.eu/nrc-eionet-freshwater/library/nutrients-freshwater-europe/eionet-consultations-nutrients-rivers-lakes-and-groundwater/2023-consultation-on-nutrients-in-freshwater-in-europe-wat003/3-general-comments-and-questions/000			
Section	Paragraph	Message	Reply
3 - General comments and questions	If you have further comments or questions on e.g. methodology, data availability, further improvement of the indicator, please provide your recommendations, expectations and ideas.	I would like to note that at least for the German groundwater data the EEA data are not suited to aggregate on the level of water bodies. For Germany, there are more groundwater bodies defined than there are sampling stations available in the EEA dataset - thus no valid conclusion can be drawn on the water body level. Instead, WFD related data (e.g. raw data for nutrients) on the chemical status of groundwater should be used, when aggregating on the level of water bodies. However, in this case EEA must adapt the SoE-reporting obligations specifying that (raw-)data from all those WFD sampling stations, upon which the chemical status for groundwater bodies is evaluated, are needed for SoE-reporting.	We would welcome more complete reporting of data used for evaluating WFD status assessments in the WISE SoE data flow and we acknowledge the issue of data representativity, as not all water bodies reported under the WFD are also reported for under the WISE SoE. Specifying in the WISE SoE reporting obligation that all raw monitoring data from WFD are needed is not, currently, something that is planned.

Thank you for your contributions.

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