

Pesticides in rivers, lakes and groundwaters ETC/ICM Technical report 1/2020



**Thanks for very useful
feedback during the Eionet
consultation (Jan 2020)**

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<https://www.eionet.europa.eu/etcs/etc-icm/products/etc-icm-report-1-2020-pesticides-in-european-rivers-lakes-and-groundwaters-data-assessment>

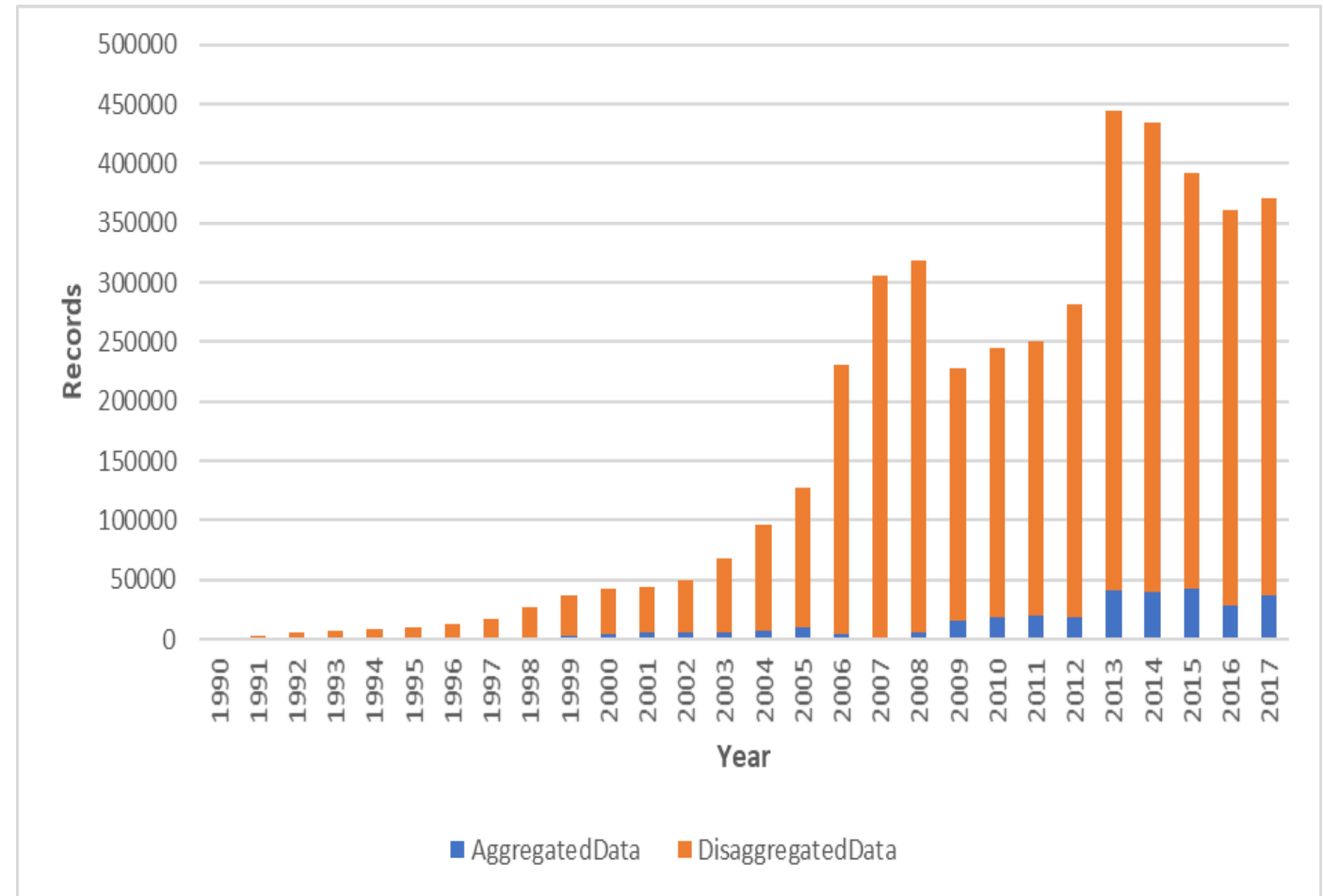
European Environment Agency



WISE water quality - Hazardous substances subset

- **466 hazardous substances**, including 188 pesticides
- **4.6 million annual average records** (39 % of the whole dataset)
- **Period: 1990-2017**

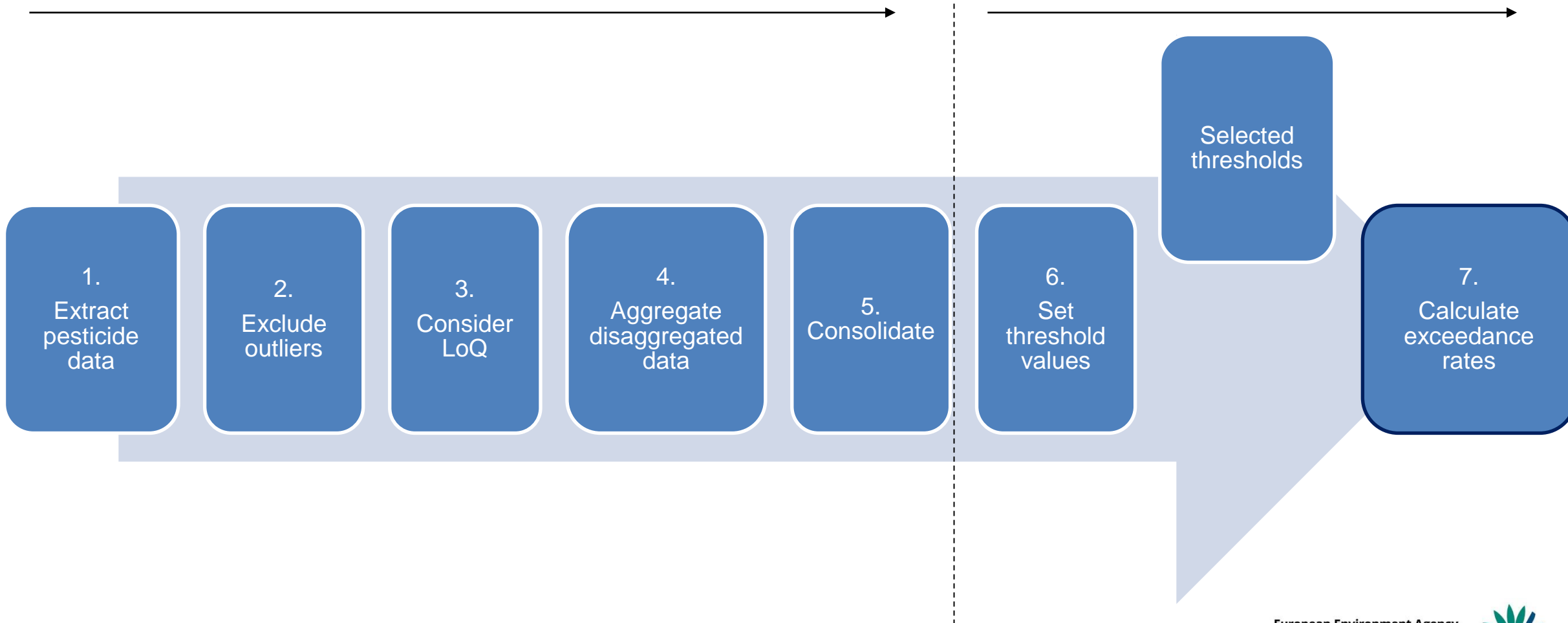
Aggregated vs Disaggregated Data



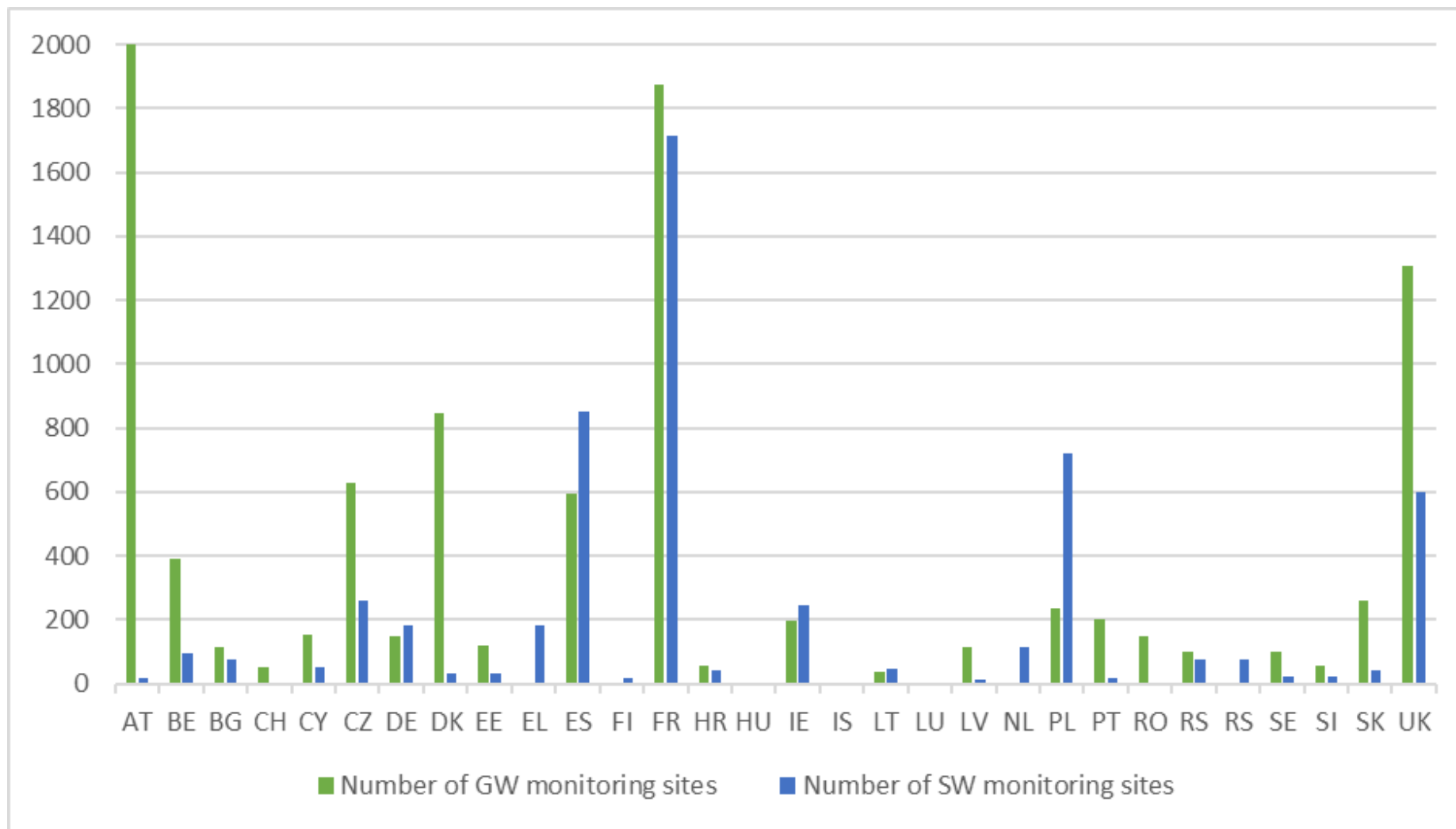
Stepwise approach using data from Waterbase – water quality (2007-17)

Selection of reference dataset

Assessment of data

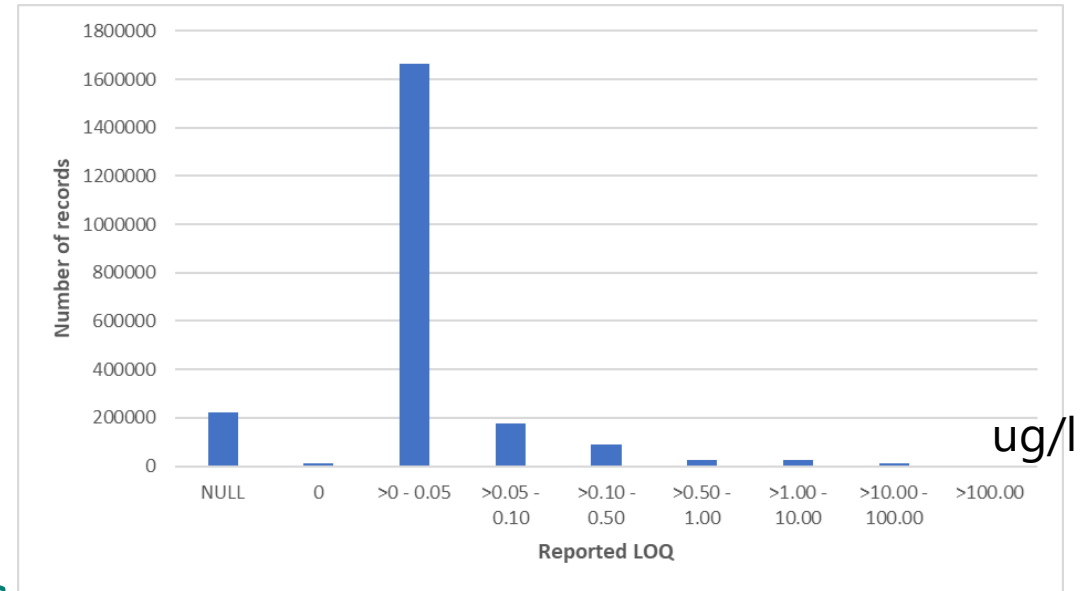


Spatial variability: Number of pesticide monitoring sites by country



Limit of quantification (LoQ)

- Provides confidence that the reported concentration has met the minimum analytical quality requirement at low concentrations
- 2009 QA QC Directive for water quality monitoring under Water Framework Directive provides useful reference
- Reporting LoQ for hazardous substances became more common from 2012 and is now mandatory
- Values $<LoQ$ common and important for assessing significance of substance occurrence at European scale



Number of pesticide records
(consolidated to an aggregated dataset)



Work in progress – the challenges

- Rules for assessment: Outliers, Limits of quantification, Thresholds
- Combined effects / mixture toxicity
- Visualisation of results:
 - substances, modes of action
 - temporal variation
 - spatial variation
- Large differences between Member States in data reporting
 - numbers of substance
 - numbers of monitoring sites
- Improvement of data monitoring and reporting to get a European-wide picture of the risks