eData: A format and toolset for FAIR exposure data

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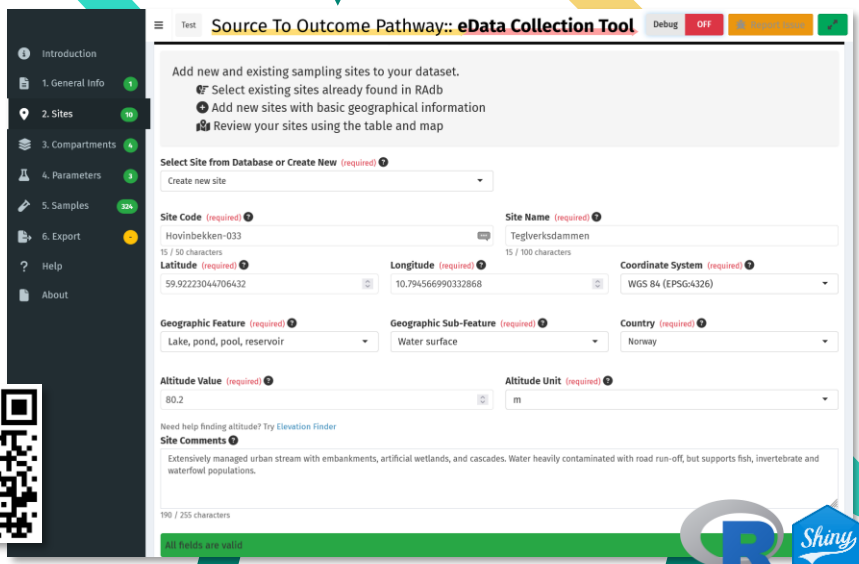
- **Good environmental science requires good environmental data.**
- With time, we forget the details of our data, making it harder to use well.
- The **FAIR principles** charge us with making our data **Findable, Accessible, Interoperable** and **Reusable** and so maximise value to data owners, the scientific community, and society **(who are generally the ones paying for it).**
- But making your data FAIR is **yet another chore**, and the benefits can be **long-term and diffuse.**
- We're developing **eData, a standardised format** and **interactive formatting tool** to help you **start the journey of FAIRifying your data** with the **minimum of upfront costs.**

- **Existing exposure and monitoring data is a treasure trove** of environmental and historical insight.
- But as we move from project to project, we naturally forget what isn't **immediately relevant.**
- We're developing R-based data formatting and QC tools to make aquatic ecotoxicology datasets **easier to use, remember, reuse and share.**

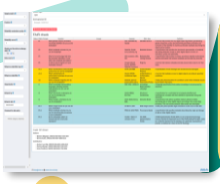
- Differences in format, terminology, language, structure, and methodology make data significantly **less interoperable.**
- We're developing a **common, harmonised Data Reporting Format** (DRF), based on PARC P7.7.2, to capture biological, chemical and geographical exposure data.
- This makes data easier to **understand, compare, and synthesise, and use for risk assessment.**

- Reformatting data by hand isn't **reproducible**, but code-based reformatting workflows can be **impractical**.
- RShiny adds **interactive, modular app design** to the widely used programming language.
- This lets us optimise a data formatting workflow for **time efficiency** *and* **standardise use of language and format.**
- We need your help **testing and expanding** the toolset.

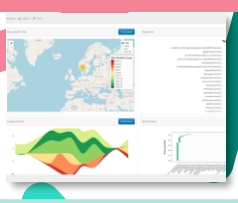


See the demo and poster!

What's next after data formatting?



Archiving
FAIR can be intimidating, so we're making a module to help upload to **Zenodo.**



Analysis
eData can easily be quickly explored with standardised tools.

Reuse
You still own your data but reuse by you or others is faster and easier.

Is it ready to use?

- **Our prototypes work** and we use them internally, but development, testing, and improvement is an involved process.
- Building the kind of **high-quality, user-friendly** solutions that **ecotoxicology deserves** requires testers and contributors.
- We're always **looking for collaborations** and ways to help us help you — **get in touch at saw@niva.no!**

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