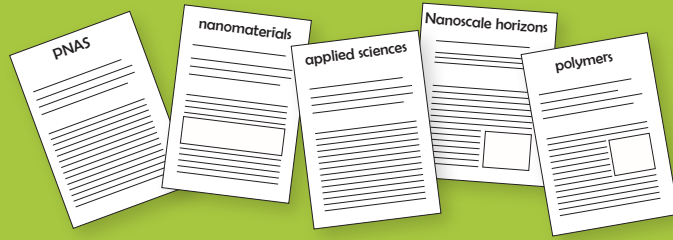


A mesocosm database management system for environmental nanosafety

A MISSING PART TO EVALUATE THE RISK OF NANOMATERIALS

To evaluate the environmental risk, scientists need information on environmental exposure and hazard. Nowadays most of the databases focus on the environmental hazard. There is a real lack of information concerning the environmental exposure.



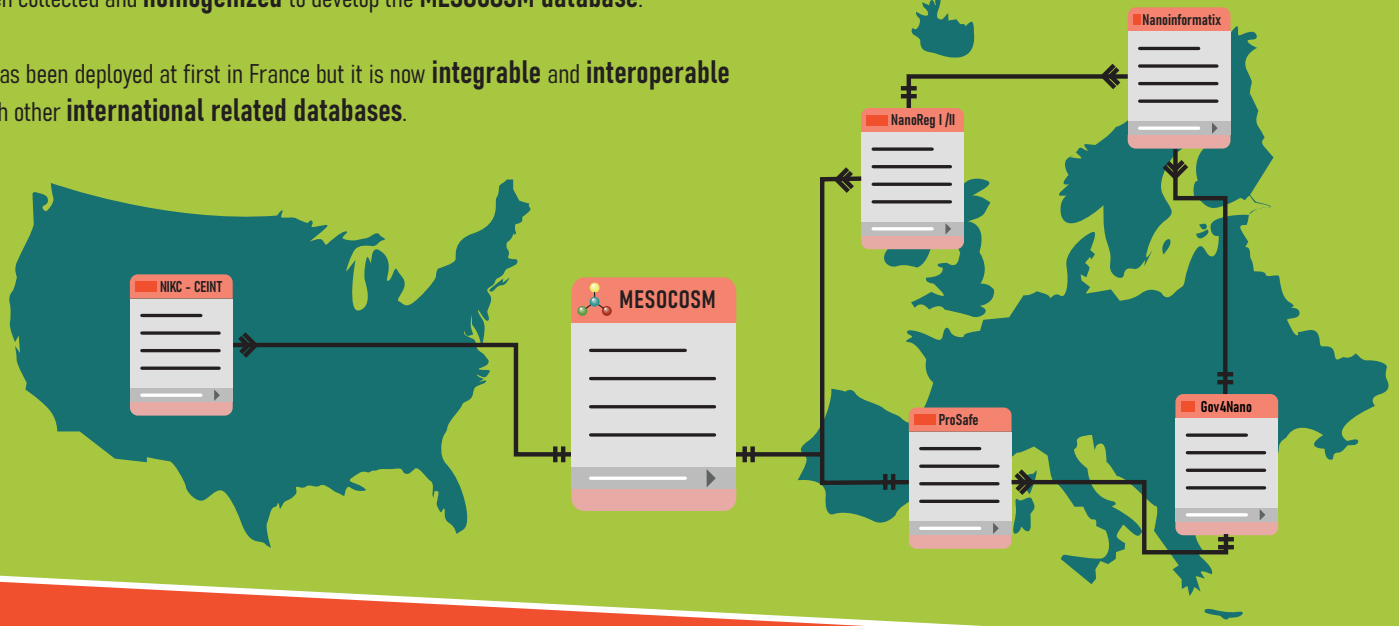
OBJECTIVE

Developing a **FAIR (Findable, Accessible, Interoperable, Reusable)** database for the environmental exposure of nanomaterials.

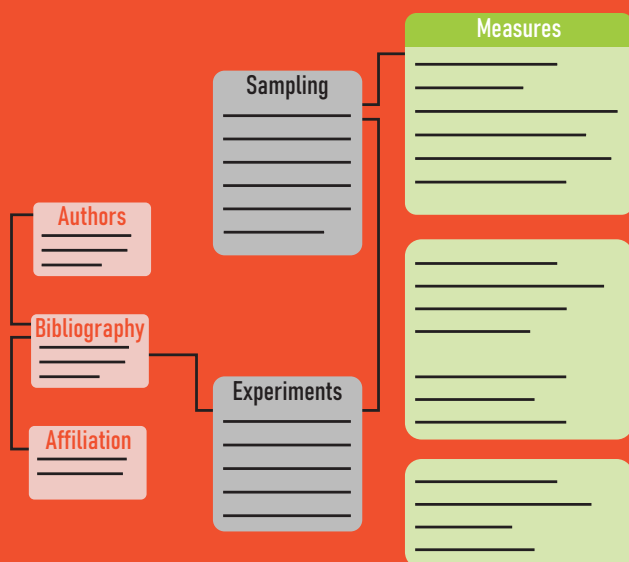
AN INTERNATIONAL NETWORK

All the data about **exposure of nanomaterials, obtained in mesocosms**, have been collected and **homogenized** to develop the **MESOCOSM** database.

It has been deployed at first in France but it is now **integrable** and **interoperable** with other **international related databases**.



RESULTS OF THE PROJECT



The MESOCOSM database contains 5200 entities covering tens of unique experiments in mesocosms investigating Ag, CeO₂, CuO, TiO₂-based NMs.

This database highlights that **indoor aquatic mesocosms are a robust experimental approach** and produce reusable data for assessing the environmental risks of NMs.

Using this database, researchers can now study and **predict the environmental risks of NMs at different stages of the lifecycle of nano-enabled products**.

Graphic design: Fanny Thavot - May 2021

