Data interoperability in the French Marine Environmental Information System (SIMM)

Clémence Rabévolo[1], Steven Piel[2], Armelle Rouyer[1]
1 : Ifremer (France)
2 : French Biodiversity Agency (France)

Why ?

SIMM ("Système d'Information pour le Milieu Marin") is the marine environmental information system set up to collect, structure and disseminate information gathered by numerous public and non-governmental partners. The aim is to support public decision-making, to provide information to citizens and scientists and to apply European data policies related to the marine environment such as:

- MSFD (Marine Strategy Framework Directive),
- Regional Seas Conventions,
- WFD (Water Framework Directive),
- MSP (Maritime Spatial Planning).

What ?

The perimeter of the SIMM covers the **entire French maritime** area

SIMM manages **environmental** and **human activities** data

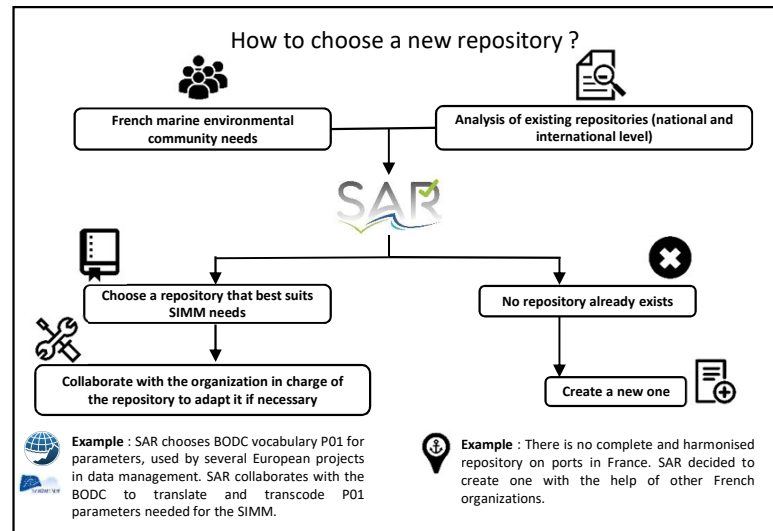**10.3 million km² : the second largest Exclusive Economic Zone of the world !**

How ?

In order to gather data from more than **20 information systems**, a **common language** has to be created between all stakeholders. This purpose is carried out by the **Repository Administration Service (SAR)**.

SAR's provides tools and services to reach **interoperability** at semantic and technical levels between national and international systems.

SAR works closely with other **French standardization organizations**, in particular with the **SANDRE** (equivalent of SAR for the French Fresh Water Information System) and **CARET** (equivalent of SAR for the French Biodiversity Information System). They create together innovative tools, integrate and promote international recommendations into their practices.

SAR provides **common vocabularies** to describe various concepts, such as a taxonomy for species as well as physics, chemistry or biology observation parameters. SAR is careful **not to re-create existing data repositories.**

How to choose a new repository ?

French marine environmental community needs

Analysis of existing repositories (national and international level)

Choose a repository that best suits SIMM needs

No repository already exists

Collaborate with the organization in charge of the repository to adapt it if necessary

Create a new one

Example : SAR chooses BODC vocabulary P01 for parameters, used by several European projects in data management. SAR collaborates with the BODC to translate and transcode P01 parameters needed for the SIMM.

Example : There is no complete and harmonised repository on ports in France. SAR decided to create one with the help of other French organizations.
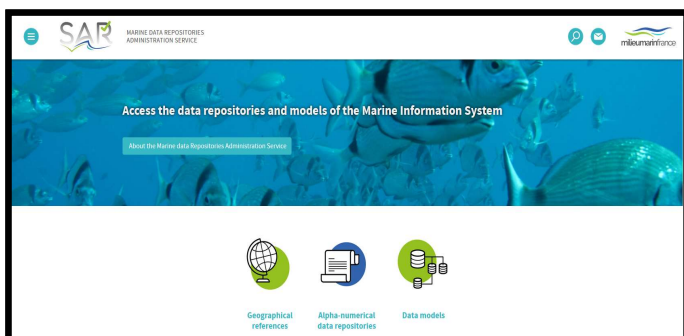
SAR is also in charge of **data models management** which helps data producers to share data in a form that can be re-used. SAR applies **ISO** and **OGC** standards, **INSPIRE** and **IHO** recommendations about data models. It also uses **European data policies** on standards, like TG DATA for MSFD.

Where ?

All the datasets of the SIMM are available as **open data** on website. Uploads and web services are developed to facilitate their access to everyone : general public, scientists, stakeholders…

Data repositories and models : "common language"

https://sar.milieumarinfrance.fr/en

Datasets

https://www.milieumarinfrance.fr/