How certification process is helping SOCIB to improve Data Quality Management

Juan Gabriel Fernández, SOCIB (Spain), jfernandez@socib.es
Inmaculada Ruiz, SOCIB (Spain), iruiz@socib.es
Joaquín Tintoré, SOCIB and IMEDEA (Spain), jtintore@socib.es

Background

The Balearic Islands Coastal Ocean Observing and Forecasting System (SOCIB) is a Marine Research Infrastructure, a multi-platform and integrated ocean observing and forecasting system that provides streams of data, added value products, and forecasting services from the coast to the open ocean (Tintoré et al., 2013).

Through the different stages of the data lifecycle, SOCIB follows international ocean data management recommendations and best practices as described in UNESCO-IODE, OceanSites or EuroGOOS.

Link between Data Quality Management and accreditations

SOCIB is an established IODE Associated Data Unit (ADU) since February 2018. The IODE Committee (within the Quality Management Framework) strongly encourages to develop, implement and manage a quality management system to ensure that ADUs can prove their capabilities to provide data and services in compliance with established standards and responsibilities. Once the quality management system is operational and has stabilized, a formal application for accreditation can be made. This accreditation requires that the ADU performs a minimum set of requirements to ensure compliance with IODE standards and to establish a mechanism to regularly monitor and assess the quality of data and services.

Moreover, the "Fostering FAIR Data Practices In Europe" (FAIRsFAIR) project aims to supply practical solutions for the use of FAIR data principles. Under this framework, the SOCIB repository was selected in September 2019 as one of the Data Repositories to be supported towards achieving CoreTrustSeal certification. The process to obtain the certification follows two clear steps: (1) Self assessment based on 16 Requirements and (2) Peer review by two expert and independent reviewers under the responsibility of the CoreTrustSeal Standards and Certification Board.

The preparation procedures for these two accreditations will help SOCIB Data Center:

- to recognize the stakeholders and user needs in terms of products and services through satisfaction measurements
- to self-assess the internal procedures and activities regarding the repository
- to check all the current state of the repository documentation and resources
- to identify all the people in SOCIB that need to be involved
- to determine the strengths and weaknesses
- to understand the level of maturity needed to meet our organizational needs
- to document the gaps and major issues
- to create the steps that must be taken to reach the objective, identifying the key activities, tasks and risks

- to focus on the continuous improvement of data quality, but taking into account not disrupting the day-to-day operations of managing data

The certifications obtained (Figure 1) will guarantee the trustworthiness of the SOCIB digital repository giving confidence for stakeholders and increasing the reputation of the repository, and thus will also optimize and maximize the data sharing for contribution to global knowledge, fully in line with the challenges of the 2030 UN Decade for Ocean Sciences.

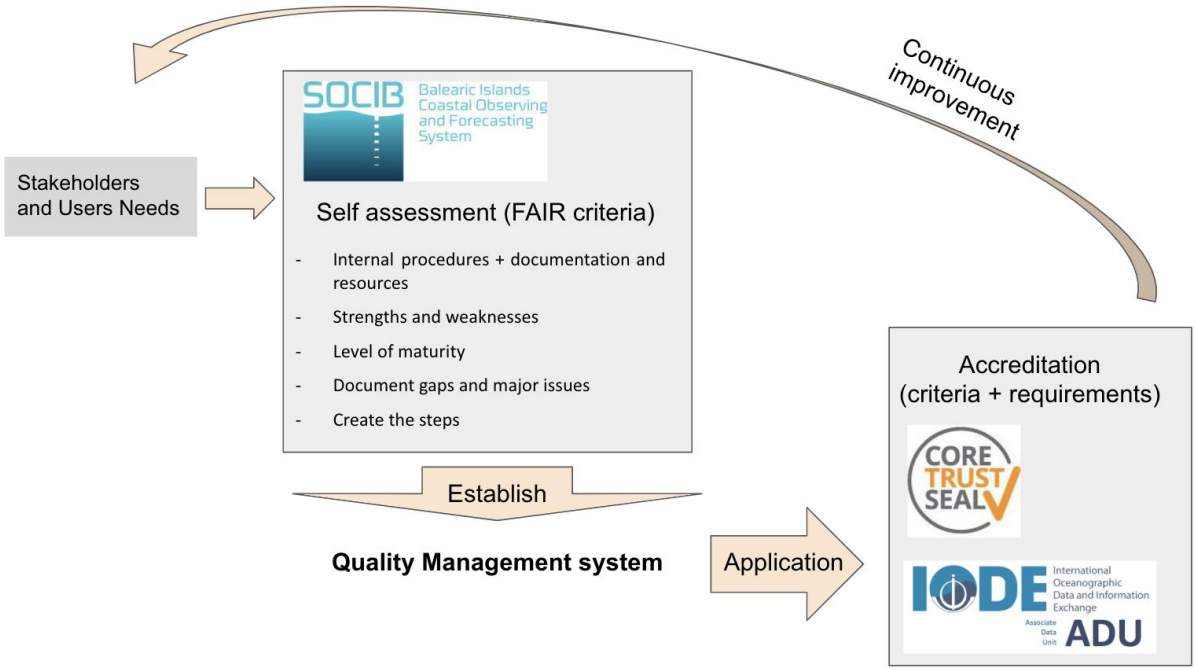

Figure 1:. Quality Management system and accreditation procedures

Conclusions

Going through a certification process is a very productive process since it will clearly help SOCIB to revise, list, update and document all activities. It encourages the whole team to identify the weaknesses and missing documentation and protocols. Finally, it is very useful in identifying where to put the efforts.

References

Dillo, Ingrid & Leeuw, Lisa. (2018). CoreTrustSeal. Mitteilungen der Vereinigung Österreichischer Bibliothekarinnen und Bibliothekare. 71. 162. 10.31263/voebm.v71i1.1981.

Paris. Intergovernmental Oceanographic Commission of UNESCO. 2019. IODE Quality Management Framework for National Oceanographic Data Centres and Associate Data Units (Revised edition). (IOC Manuals and Guides 67, rev. ed.) 34 pp. (English) (IOC/2013/MG/67 Rev.)

Tintore, J. et al. (2013), The Balearic Islands Coastal Ocean Observing and Forecasting System Responding to Science, Technology and Society Needs, Marine Technology Society Journal, 47 (1), doi: 10.4031/MTSJ.47.1.10