Ocean Health Index: an open data science experience for handling local marine and coastal resources

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Abstract:

The Ocean Health Index (OHI) (https://ohi-science.org/) is a scientific framework to evaluate the health of the oceans globally, by using multiple data sources from national and international agencies as well as modeled data from all coastal nations. These assessments have been taking place since 2012 and include several models representing the short- and long-term benefits delivered by oceans to humans, which are called **goals** in the OHI framework jargon. The OHI framework has been developed within an open data science context, in such a way that a collaborative and open platform of data files and computing resources can be shared among project leaders and involved institutions, which represents a unique opportunity for guiding data collection and data organization among all interested parties. We describe the process of setting a project up within the OHI open data science collaborative framework looking at an example in Ecuador; highlighting the main interactions among policymakers and local actors to build and organize the required data. We also uncover the key role of data scientists in translating available data from disparate sources into the main project goals.

Keywords:
Ocean Health Index; open data science; reproducibility; sustainability; ocean services