**INTRODUCTION**

Sharing marine data through SeaDataNet is an optimal way of ensuring FAIR principles: Findable, Accessible, Interoperable and Reusable. However, submission of data to this infrastructure demands a set of technical tasks that cover quality control processing, adoption of common vocabularies, implement file format standards and preparation of associated metadata. These tasks are complex and time-consuming. Taking into account that data from CTD (Conductivity, Temperature and Depth) vertical profiles usually follows the same format and involves similar processing, a web application has been developed to perform all these tasks straightforward.

**An all-in-one web tool to apply CTD quality control, format data, and generate metadata under SeaDataNet criteria**

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The software parses a set of csv files and homogenise variables (names, column order, precision, etc.). Different quality test are applied based on recommendations from GTSPP and SeaDataNet manuals. Depending on the success during the test, a flag is assigned to each individual record and also an overall flag to each parameter and to the entire profile. Processed records are formatted to the SeaDataNet MEDATLAS auto-descriptive ASCII format. Finally, Common Data Index (CDI) metadata are generated, one per vertical profile by filling up a preexisting template.

**LIST OF TESTS**

- Date and time
- Location at sea
- Vessel speed
- Global range
- Regional range
- Climatologic range
- Gradient depth conditional
- Spike depth conditional
- Profile envelop
- Digit roll over
- Stuck value
- Density inversion test

**CONCLUSIONS**

A web tool has been created to speed up the FAIR process in CTD data under the SeaDataNet criteria. The tool is easy to use and performs tasks in minutes that could take hours by an experienced technician. While a web application avoids installation and update processes and is cross-platform, we have learned from this experience that it nevertheless requires high maintenance and is limited by server conditions.

The Instituto Español de Oceanografía (IEO) acts as National Oceanographic Data Center (NODC) and submits diverse datasets collected by the Spanish oceanographic fleet to SeaDataNet infrastructure. Until the present, more than 45,000 CTD vertical profiles have been submitted.

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**Example of plot to help users in the last step (final supervision).**

Temperature and salinity is plotted and compared to climatologic values (shaded areas). Records with 'bad' and 'probably bad' flags are highlighted.