S-100WG05-4.2

Paper for Consideration by S-100 WG

Specification Number for S-100 compliant Undersea Features

Submitted by:	Sub-Committee on Undersea Feature Names (SCUFN); Undersea Feature Names Project Team (UFNPT), Canada, Australia, Korea, Belgium and China.
Executive Summary:	GEBCO Committee, through SCUFN is developing a standard for undersea features that will be compatible with the S-100 standard. This proposal is to request a specification number under which to develop the standard for Undersea Features.
Related Documents:	GEBCO Guiding Committee meeting 33 (GGS33/12), SCUFN28-06B, Technical Sub-Committee on Ocean Mapping (TSCOM) Terms of Reference (TOR), HSSC11-07.1D
Related Projects:	GEBCO Technical Sub-Committee on Ocean Mapping (TSCOM) and Sub-Committee on Regional Undersea Mapping (SCRUM)

Introduction / Background

The GEBCO Guiding Committee has tasked SCUFN with the development of an S-100 Product Specification for Undersea Feature Names and Register SCUFN terms in the IHO GI Registry.

The ideal of having a pushbutton solution to transfer undersea feature data within and from a proposer country, to the proposal database to the gazetteer database, can be achieved if there is a standard that all proposer countries could follow. The Sea Area feature in S-101 fulfils the safety to navigation requirements of the ENC. However, there are scientists that have the requirement of having access to more names of undersea features than the few that are added to and ENC. Furthermore, there are requirements such as: grouping the 49 types of undersea features, in sub-types according to their morphological characteristics, also are those who would like to see information about the proposer, and the status of approval; examples of other requirements are if the feature is of volcanic origin and if it is active or not.

Justification and Impacts

This information is already available in most Gazetteers, the standard would identify a method to organize the data, in a manner where the information required will not be embedded in long text fields and will be easily filtered for analysis. The morphological characteristics will be valuable to scientists who will already be using other S-100 standards (S-100, 200, 300 …) for analysis and correlation to other marine information available for their area of study. Other justification and impacts include:

- Undersea Features are big and they could extend over the sovereign waters of two or more countries. It would be easier to discuss issues about that feature, if everyone was looking at the data with the same standardize data model.
- It would be easier to interpret proposals for naming from different countries, if all of the datasets were following the same standard.
- If the standard for undersea features was compatible with the S-100 standard, then it could be displayed with other marine data that had been developed with the same model.
- New standards could find data gaps in the previous dataset of names.

The object Sea Area, where the Undersea Feature Names are currently stored, would not be changed. Both Sea Area and UFN could co-exist. Sea Area would be used for nautical charts, and the standardized UFN Gazetteer would be used for storing undersea features, their attributes and also the name. The attribution that is of interest

to the scientific community and irrelevant for safety to navigation, is listed in B-6. This is an example of a potential classification criteria that standardized Gazetteer would follow.

There are minimal costs associated to the development, other than the work time dedicated to conference calls, and travel to sporadic workshops, when required by the SCUFN work plan.

The work is expected to be completed by 2021, guidance from the S-100 WG will be sought after as needed, through the S-100 WG representatives that are national colleagues of the members of SCUFN's Undersea Feature Name Project Team.
This work could be considered of medium priority, given that it isn't needed for safety to navigation. However, it can't be considered of low priority, because there are many undersea features being discovered and understanding and sharing their environments, increases our ability to make wise decisions in order to take care of our oceans and the life that depends on its health. Furthermore, the Seabed 2030 Project is expected to increase the amount of unnamed undersea features that will be discovered and stored into Gazetteers. Having an operational international standard for gazetteers, by when GEBCO will map 100% of the Oceans, would be a good target.

Conclusions
There are scientists that wish to have standardized information about undersea features. The required information is often included in text fields of Gazetteers. The development of an Undersea Feature standard will consist in finding suitable specifications for the storage, maintenance and retrieval of Undersea Feature information that is required by the science community, who are consumers of this information. New terms included in the development of this standard, will be listed in the IHO GI Registry.

Recommendations
We recommend that the S-100 WG supports the development of a product specification for Undersea Features, and recommend a number under which SCUFN could develop such specification.

Action Required of S-100 WG
The S-100 WG is invited to consider this request, and take any other actions that S-100 WG would deem necessary to provide a product specification number under which to advance the development of the S-100 compliant specification for undersea feature