

Paper for Consideration by HSSC8

**Terms Of Reference of a SCUFN Project Team for the
Development of an S-100 Product Specification for Undersea Feature Names and
Registering SCUFN terms in the IHO GI Registry**

Submitted by:	Canada, SCUFN, IHB
Executive Summary:	GEBCO has proposed that its products and services should be available through GIS web map service, have an Improved data structure to make them interoperable, and definitions recognized by SCUFN should be included in the IHO GI Registry. The fulfillment of this proposal will be addressed by a SCUFN Project Team that will review definitions, enhancement, and consideration of symbology of undersea features. As well as, the development of an S-100 product specification for undersea features. SCUFN29 approved the Terms of Reference of this team, endorsement and direction is being sought from the HSSC8 to initiate this task in cooperation with the applicable HSSC working groups.
Related Documents:	S-100, S-99 and S-57 standards, SCUFN29-06C, Report of SCUFN29
Related Projects:	GEBCO Technical Sub-Committee on Ocean Mapping (TSCOM) and Sub-Committee on Regional Undersea Mapping (SCRUM)

Introduction / Background

At the joint TSCOM/SCRUM meeting that took place in December 2014, the Chair of the GGC proposed that GEBCO products and services should be available through GIS web map service, have an Improved data structure to make it interoperable, with definitions recognized by SCUFN, and included in the IHO GI Registry.

At SCUFN28, the IHB submitted a paper for the consideration of the development of an S-100 Product Specification for Undersea Feature Names and the registry of SCUFN terms in the IHO GI Registry. The completion of these tasks would fulfill the proposal from GEBCO.

The draft TOR of the S-1XX UFN Project Team (SCUFN29-06C) was approved on September 22nd, 2016 at SCUFN 29 and it was recommended that it be sent to HSSC8 for endorsement and direction.

Analysis/Discussion

The GEBCO Sub Committee on Undersea Feature Names (SCUFN) has converted the content of the gazetteer of undersea feature names (UFN) from a spreadsheet format into a GIS database. This has been used to create an online web map service - available at <http://www.ngdc.noaa.gov/gazetteer/>. As part of this process, SCUFN formalized the feature type definitions for describing undersea features. SCUFN has also produced an online dictionary containing these definitions (see <http://www.kosbidb2.co.kr:8080/recommend/>). The IHO has also produced definitions for undersea features and these are listed in the IHO Registry Feature Concept Dictionary (FCD) and the S-57 feature catalogue. The definitions are also referenced in the IHO hydrographic dictionary; publications S-32. In many instances, the definitions are the same but in those cases where they are not, SCUFN, as the competent authority for undersea features, should review the existing lists of definitions and propose changes as required.

The transformation of the SCUFN gazetteer into a GIS dataset/database is a positive development. The Chair of the GGC, in his opening address to the joint TSCOM/SCRUM meeting stated that GEBCO should endeavour to develop products and services that are relevant and respond to the needs of the user community. The undersea features database and web service go a long way to doing this, however it is proposed that there are several additional steps that need to be considered that would further enhance the UFN product and services; such as:

- the review of the definitions of undersea features used in different IHO publications and submission of a harmonized list in to the S-100 Working Group for inclusion in the IHO S-100 GI Registry Feature Concept Dictionary. This will enable other communities building S-100 based products to use them;
- Enhancement of the current data model for undersea feature names;
- Development, in cooperation with the IHO Nautical Chart Working Group (NCWG), symbols and an appropriate portrayal mechanism for undersea features;
- Formalise the property (attribute) types used in the UFN database, and register these in the IHO Registry. This task should take account of similar attribute definitions already in the Registry.
- Describe the UFN database in terms of an S-100 product specification, in liaison with the appropriate HSSC Working Groups;
- Consider whether the undersea feature definitions should be included with one of the existing domains (e.g. HYDRO), or whether the establishment of a domain specific to GEBCO should be considered – taking into account the guidance in S-99 and S-100 and the management implications.

During the annual face to face meeting that took place in Boulder, Colorado on September 22nd , 2016, SCUFN took the initial steps to create a Project Team to address the tasks pending to further enhance the UFN product and services. As well as

- assess the draft scope of work; develop timelines; estimate resources with key project milestones and designate the accountabilities of team members
- implement the project plan, track and monitor progress
- submit progress reports to SCUFN

Conclusions

SCUFN S1XXUFN-Project Team will work on the improvement of the USFN data model; consider the portrayal of UFN and review the SCUFN definitions used in IHO documents. The TOR of this group and a draft work plan has been approved by SCUFN29.

Recommendations

It is recommended that HSSC8 direct the applicable HSSC working groups to collaborate with the S-1XXUFN-Project Team in the development of an S-100 Product Specification for Undersea Feature Names and Registering SCUFN terms in the IHO GI Registry.

Justification and Impacts

The realization of an UFN S-100 data model and fulfillment of the GI requirements for standardized feature naming will increment the possibilities of sharing UF data at a global scale.

Action Required of HSSC8

The HSSC8 is invited to:

- a. Endorse the newly created S-1XX Undersea Feature Name Project Team (S-1XXUFN-PT).
- b. Provide feedback on the TOR of this project team.
- c. Direct the applicable HSSC working groups to collaborate with the S-1XXUFN-PT