

## Information Paper for Consideration by SCUFN

### Undersea Feature Names Project Team (UFNPT)

<b>Submitted by:</b>	Canadian Hydrographic Service of Fisheries and Oceans Canada, Undersea Feature Names Project Team
<b>Executive Summary:</b>	This document reports on the progress made by the Undersea Feature Names Project Team (UFNPT) since SCUFN-32.
<b>Related Documents:</b>	B-6
<b>Related Projects:</b>	Standardization of the undersea feature definitions in B-6, and development of S-100 and S-300

### Introduction / Background

The Objectives of the Undersea Feature Names Project Team (UFNPT) are:

- Consider the development of an S-100 Product Specification for Undersea Feature Names and Register SCUFN terms in the IHO GI Registry
- Establish procedures for the management and registration of undersea feature names approved by SCUFN and the management of proposals made to SCUFN
- Provide recommendations to SCUFN on the management of undersea feature names and the use of registers to record the proposals made to SCUFN and the names approved by the Subcommittee.

The members of this team are:

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The focus of the group is on the generic terms definition as presented in B-6 and how best to include this information in a geospatial standard. Korea had already developed a simplified version of a potential standard for undersea features (Annex 1) and this year they provided a direction to follow through with the development (Annex 2).

The Project Team organized 3 online meetings, during the past year, to discuss and complete the 2019-2020 work plan, as approved by SCUFN32

## Status of Work Plan 2019-2020

Task	Work Item (SCUFN 32)	Priority	Start Date	End Date	Status	Contact Person (s) *Indicates leader
		H-High M-Medium				
1	Hold an online workshop, to discuss the steps to continue the development of the product specification. <ul style="list-style-type: none"> <li>- Assign a Minute Taker</li> <li>- As per the recommendation of HSSC11, we need to assess the practical consequences of the implementation of an S-100 compatible specification for UFN.</li> <li>- Consider, with the Generic Term Working Group, the progress of the Undersea Feature Discovery Project, presented by Canada, and its applicability for interoperability and standardizing UFN</li> <li>- Explore within existing product specifications in S-100, the expansion of textual description to include <ul style="list-style-type: none"> <li>- Associated Features</li> <li>- Reason for choice of name</li> <li>- Discovery facts</li> <li>- Survey Data information</li> </ul> </li> <li>- Set project milestones and project plan</li> </ul>	H	November 2020	August 2020	Completed	UFNPT* and Chair of Generic Terms WG
2	Prepare minutes of the online meeting and send them to the participants for approval	M	January 2020	August 2020	Completed	Minute Taker
3	Proceed with the project according to the plan discussed during the online workshop	H	February 2020	October 2020	Ongoing	UFNPT* and Chair of Generic Terms WG
4	As per the recommendation of HSSC11, we need to consolidate into one report for HSSC12 (May 2020), the status of work of the UFNPT, including the results of the online meeting, the approved work plan for the year 2019-20 (this table), and a new request for a product specification number that should include the new project milestones and project plan.	M	March 2020	June 2020	Completed	UFNPT
5	Prepare update report and presentation for SCUFN33	M	August 2020	October 2020	Completed	Canada*, UFNPT and Generic Terms WG

## Analysis/Discussion

During this year, we continued the discussion about retaining the present Category of Sea Area attribute, from the Sea Area object in S-101 to provide minimal information for Navigation purposes. However, for scientific analysis and research, an extended specification for Undersea Features could be developed under the S-3XX range of numbers allotted by the Hydrographic Services and Standards Committee (HSSC), to the Intergovernmental Oceanographic Commission (IOC).

The standard model would continue to provide the information that is common to all features (from the current submission form), and add fields for scientific data that is specific to individual generic terms (some of this information is already stored in text fields). A prototype list of all the current "scientific" attributes was created previously by CHS students (figure 1). It is a list of the current classification criteria used in the B-6, and could be a starting point for creating these new attributes for each feature. The Scientific group of attributes will be different for each generic undersea feature. These are common scientific traits of specific undersea features that are predetermined to be significant to the feature development and are exclusive to these features. There would be as many as necessary for each feature.

The GEBCO database would be the international model of storage of information about undersea features, in a standardized naming dataset. The rest of the databases in the world that followed the international standard, would align to GEBCO.

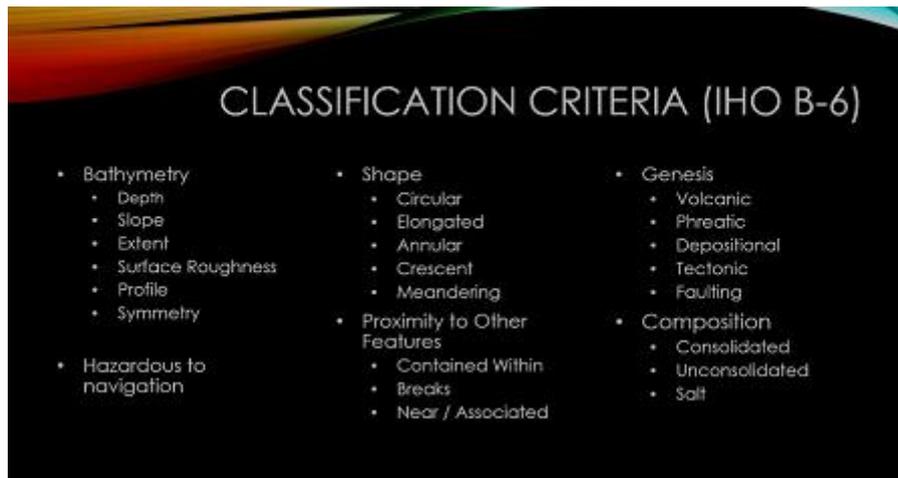


Figure 1. Common classification criteria that is currently in use in the B-6 document.

The development of the potential S-3XX standard for undersea features, would be associated to an updated version of the submission form. The information to be extracted from the UF naming database, would populate the S-101 Sea Area layer during chart production to code only the names of the undersea features. It would also populate S-3XX Undersea Feature layer. We discussed that the standard could be developed to store all of the information that is requested in the B-6 submission form plus, other fields to store scientific information (volcanic, active or not; media such as underwater images, fly-through, video); links to information about marine life; path to national database that hosts the information; ...) This information is usually found in the “comments” or “text” fields useful to geomatics analysis and science research.

The information that would be populated into the standardized database, would be obtained by means of a submission form for naming. The current SCUFN proposal form for naming would need to be updated to include the new attribution/metadata. There are several ways to do it. No serious thought has been given to this, at this point.

We included the result of these discussions, in another proposal (Annex 3) sent to the Hydrographic Service and Standards Committee (HSSC) hoping that an S-XXX number under which to develop the standard for undersea features, would be assigned to this project. They met in October 2020, and due to online meeting restrictions posed by COVID and business priorities of the HSSC, it was deferred to a later date.

## Recommendations

To request an S-3XX number from IOC and continue the development of the standard for UFs. In that regard, this is the proposed work plan for 2020-2021

### Next steps, Work Plan 2020-2021

Task	Work Item	Priority	Start Date	End Date	Status	Contact Person (s)
		H-High M-Medium				
1	Request from the Intergovernmental Oceanographic Commission (IOC), support and/or approval to use one of their S-3XX specification numbers under which to develop the standard for undersea features.	H	June 2021	September 2021		UFNPT* and Chair of SCUFN
2	Expand UFN data model from Korea to show which scientific attributes would be applicable to each undersea feature	M	May 2021	September 2021		UFNPT* and Chair of Generic Terms WG

3	Request from the HSSC, support and/or approval to use a specification number under which to develop the standard for undersea features.	H	October 2021	October 2021		UFNPT and Chair of SCUFN
4	Prepare update report and presentation for SCUFN34	M	August 2020	October 2020		UFNPT and Generic Terms WG

### Justification and Impacts

There will be no impact on existing named features.

### Action Required of SCUFN32

SCUFN 33 is invited to note the report and approve the proposed work plan for 2020-2021 of the SCUFN UFN PT, and take any other actions that SCUFN would deem necessary to advance the UFNPT work plan



## Annex 2



Description of UFN  
Data Model\_2020101

**Paper for Consideration by S-100 WG**

**Specification Number for S-100 compliant Undersea Features**

<b>Submitted by:</b>	Standing Committee on Undersea Feature Names (SCUFN); Undersea Feature Names Project Team (UFNPT), Canada, Australia, Korea, Belgium and China.
<b>Executive Summary:</b>	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.
<b>Related Documents:</b>	GEBCO Guiding Committee meeting 33 (GGS33/12), SCUFN28-06B, Technical Sub-Committee on Ocean Mapping (TSCOM) Terms of Reference (TOR), HSSC11-07.1D
<b>Related Projects:</b>	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 and shared by those who will be following the same standard. 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.

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.

### **Conclusions**

There are scientists that wish to have standardized information about undersea features. The required information is already included in the 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 features