

*underlined terms to be deleted  
pending decisions of Law of the Sea Conf.*

Eighth session of the  
United Nations Group of Experts  
on Geographical Names

New York, 26 February - 9 March 1979

Item 10. (b) of the  
provisional agenda

Report of activity by the working groups since the seventh session

REPORT OF THE UN WORKING GROUP ON UNDERSEA AND MARITIME FEATURES

Submitted by Convenor of the Working Group  
Richard R. Randall, United States of America

Since the Eighth Session of the Group of Experts, the Convenor has worked with representatives of the International Hydrographic Organization/ Intergovernmental Oceanic Commission General Bathymetric Chart of the Ocean (GEBCO) to develop further agreement regarding terms and definitions of undersea features and other matters of concern. This work was done in compliance with recommendations made at the Third UN Conference on Geographical Names, specifically Resolution No. 22.

He met with GEBCO people in April, 1978, in Victoria, British Columbia, Canada; in August, 1978, in New York; and in September in Washington, D.C. Also in July he met with Messrs. Komkov (USSR), Meynen (Federal Republic of Germany), and Radó (Hungary), who were in Washington, D.C. area to attend the Ninth International Conference on Cartography, to review progress made in elaborating a common list of terms and definitions.

After these meetings, the Convenor circulated letters to members of the Working Group to inform them of progress made and to seek their advice. The last letter, sent out December 8, 1978, contained terms and definitions approved by GEBCO and those provisionally approved by the Group of Experts on Geographical Names. Members were asked to compare the terms and definitions and to select the ones they preferred. They were asked to carry out this task and to send the Convenor their decisions by early February 1979, so he could collate the results and make recommendations at the Eighth Session of the UNGEGN regarding the acceptance of terms.

In contrast to the continuing work still required to reach agreement on a single list of terms and definitions, complete consensus was attained on guidelines for naming undersea features and on a form for proposing new names. Much work went into the revision of an original draft of the guidelines and it is to the credit of all concerned that an acceptable statement was finally produced. Equal credit is due them for reaching agreement on a proposal form.

Presented with this paper are materials on which members of the Group of Experts should express their views at the Eighth Session. Attachment 1 is the circular letter disseminated to the Working Group December 8, 1978, which contained the lists of undersea feature terms and definitions. Attachment 2 is "Undersea or Maritime Feature Names Proposal." Finally, Attachment 3 is the paper, "Guidelines For the Standardization of Undersea Feature Names."

The Convenor hopes that by the time of the Eighth Session, he shall have heard from members of the Working Group concerning the terms and definitions and can propose the adoption of terminology acceptable to all.

With regard to maritime features, the Working Group has taken no specific action since the Seventh Session. According to the relevant documents of the Athens Conference (report of the Working Group and Resolution 21), the International Hydrographic Organization (IHO) has begun work to update Special Publication No. 23 ("Limits of the Oceans and Seas") and has constituted a committee to recommend procedures for naming maritime features. In view of these activities, the Working Group, in the opinion of the Convenor, should not initiate work independently, but should cooperate with IHO at the appropriate time. Because UN efforts on maritime features thus is being deferred, the Convenor agreed to omit reference to such features in the Guidelines cited above.

3 Attachments as stated

UNITED NATIONS  
Group of Experts on Geographical Names

Working Group on Undersea &  
Maritime Features  
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TO: MEMBERS OF UNITED NATIONS WORKING GROUP ON  
UNDERSEA AND MARITIME FEATURE NAMES

FROM: Richard R. Randall, Convenor

SUBJECT: Circular Letter No. 3, 1978

December 8, 1978

1. This letter summarizes my work as convenor since Circular Letter No. 2. It also asks for your guidance on the matter of approving undersea feature terms and definitions.
2. On August 1, I met with three members of the Working Group who were attending the Ninth International Conference on Cartography that took place near Washington, DC. The purpose of the meeting was to review progress of the Working Group, in collaboration with the International Hydrographic Organization - Intergovernmental Oceanographic Commission of UNESCO (IHO/IOC), to develop principles, terms and definitions, and a names proposal form for undersea features. Members participating were Prof. Komkov, Dr. Meynen, and Dr. Rado. The chief item of our concern was a list of terms and definitions that represented, in my opinion, the results of a meeting I had with IHO/IOC representatives in Victoria, British Columbia, Canada, last April; I described this meeting in Circular Letter No. 2. While progress was made at the Victoria meeting, the IHO/IOC and the UN terms and definitions continue to differ. When I met with members of the UN Working Group in August, I pointed out the areas of disagreement, and I asked the members to review the lists and to provide comments at a later date.
3. Since then, I again met with IHO/IOC representatives to discuss how we could make further progress. This meeting took place in New York on August 30, and included Mr. G. N. Ewing, Chairman of the joint IHO/IOC Subcommittee on Geographical Names and Undersea Nomenclature, and Rear Admiral D.C. Kapoor (Royal Indian Navy, Retired), Secretary of the Subcommittee and a director of the Directing Committee of the IHO. (This subcommittee is concerned with nomenclature to be used on the 5th edition of the IHO/IOC General Bathymetric Charts of the Ocean (GEBCO) at 1:10,000,000.)

4. At the New York meeting, we agreed that the best action to take now would be to prepare a list that showed IHO/IOC and UN terms and definitions, and to ask members of the Working Group to chose the ones they preferred. This list is attached as Annex I. I urge each of you to review the terms and definitions and to send me your comments as soon as possible. It would be indeed gratifying if we could settle this matter during the next meeting of the Group of Experts scheduled for March 1979 in New York.

5. The IHO/IOC representatives have asked me to call attention to the fact that the IHO/IOC list has been carefully worked out by a committee of internationally recognized scientists and oceanographers active in the fields of marine geology, hydrography, and oceanography. They also requested me to quote the text which accompanies the terms and definitions proposed by IHO/IOC in a paper circulated at the Third UN Conference on the Standardization of Geographical Names, E/CONF.69/L.100). This is found as Annex II. (Since circulating the paper at Athens, the IHO/IOC has changed some terms and definitions. These changes are the result of collaboration with the UN, and are reflected in Annex I.)

6. As Convenor of the Working Group, I have attempted to put forward for your consideration terms and definitions that incorporate those of the IHO/IOC to the maximum degree feasible. While undertaking this action, I recognize that in some cases I have preferred terminology applied by the U.S. Board on Geographic Names. Nevertheless, I have continued to study the terms and definitions presented by IHO/IOC with the intention of working out final agreement; and I know the IHO/IOC has done the same. But now it is appropriate for the UN Working Group to provide me with direct guidance and recommendations. In this task, I urge you to consult with persons in your respective countries who are experienced in the fields of oceanography and sea-bottom nomenclature.



Richard R. Randall  
Convenor

LIST OF UNDERSEA FEATURE TERMS AND DEFINITIONS

(ANNEX I to Circular Letter 3, 1978, to members of United Nations Working Group on Undersea and Maritime Features)

I. AGREED TERMS AND DEFINITIONS

<u>Term</u>	<u>Definition</u>	<u>Term</u>	<u>Definition</u>
APRON	(Archipelagic Apron) A gentle slope with a generally smooth surface of the sea floor, particularly found around groups of islands and seamounts.	LEVEL	An embankment bordering a canyon, valley or deep-sea channel.
BASIN	A depression more or less equidimensional in plan and of variable extent.	MEDIAN VALLEY	(Rift, Rift Valley) The axial depression of the mid-oceanic ridge system.
BORDERLAND	(Continental Borderland) A region adjacent to a continent, normally occupied by or bordering a shelf, that is highly irregular with depths well in excess of those typical of a shelf.	MOAT	(Sea Moat) An annular depression that may not be continuous, located at the base of many seamounts, islands and other isolated elevations.
CANYON	(Submarine Canyon) A relatively narrow, deep depression with steep sides, the bottom of which generally has a continuous slope.	PINNACLE	Any high tower or spire-shaped pillar of rock, or coral, alone or crenating a summit.
CONTINENTAL RISE	A gentle slope rising from the oceanic depths towards the foot of a continental slope.	PROVINCE	A region identifiable by a group of similar physiographic features whose characteristics are markedly in contrast with surrounding areas.
ESCARPMENT	(Scarp*) An elongated and comparatively steep slope separating flat or gently sloping areas.	RIDGE	(The word RIDGE has several meanings:) (a) A long, narrow elevation with steep sides. (b) A long, narrow elevation often separating ocean basins. (c) The major oceanic mountain system of global extent.
FAN	(Cone; Deep Sea Fan; Deep Sea Cone; Submarine Fan; Submarine Cone) A relatively smooth feature normally sloping away from the lower termination of a canyon or canyon system.	RISE	A broad elevation that rises gently and generally smoothly from the sea floor.
FRACTURE ZONE	An extensive linear zone of irregular topography of the sea floor, characterized by steep-sided or asymmetrical ridges, troughs or escarpments.	SADDLE	A low part resembling in shape a saddle in a ridge or between contiguous seamounts.

All parenthetical terms may also be found in the literature.

I. AGREED TERMS AND DEFINITIONS (Continued)

<u>Term</u>	<u>Definition</u>	<u>Term</u>	<u>Definition</u>
<u>SHELF</u>	(Continental Shelf) A zone adjacent to a continent (or around an island) and extending from the low water line to a depth at which there is usually a marked increase of slope towards oceanic depths.	TRENCH	A long, narrow, characteristically very deep and asymmetrical depression of the sea floor, with relatively steep sides.
<u>SILL</u>	The low part of a gap or saddle separating basins.	TROUGH	A long depression of the sea floor characteristically flat bottomed and steep sided and normally shallower than a trench.
<u>SLOPE</u>	(Continental Slope; Island Slope) The slope seaward from the shelf edge to the beginning of a continental rise or the point where there is a general reduction in slope.	VALLEY	(Submarine Valley) A relatively shallow, wide depression, the bottom of which usually has a continuous gradient. This term is generally not used for features that have canyon-like characteristics for a significant portion of their extent.
<u>SPUR</u>	A subordinate elevation, ridge, or rise projecting outward from a larger feature.		
<u>TABLEMOUNT</u>	(Guyot*) A seamount having a comparatively smooth, flat top.		
<u>TERRACE</u>	(Bench; Deep Sea Terrace) A relatively flat horizontal or gently inclined surface, sometimes long and narrow, which is bounded by a steeper ascending slope on one side and by a steeper descending slope on the opposite side.		

\* May be used for naming.

II. AGREED TERMS, BUT SIMILAR DEFINITIONS

<u>Term</u>	<u>UN Definition</u>	<u>IHO/IOC Definition</u>
BANK	An elevation, typically located on a shelf, over which the depth of water is relatively shallow but sufficient for safe surface navigation.	An area of positive relief over which the depth of water is relatively shallow, but normally sufficient for safe surface navigation.
GAP	A narrow break in a ridge or rise.	(Abyssal Gap) A narrow break in a ridge or rise or separating two abyssal plains.
PEAK	A prominent elevation, part of a larger feature, either pointed or of very limited extent across the summit.	A prominent elevation either pointed or of a very limited extent across the summit.
PLAIN	A flat, gently sloping or nearly level region.	(Abyssal Plain) A flat, gently sloping or nearly level region at abyssal depths.
PLATEAU	A comparatively flat-topped feature of considerable extent, dropping off abruptly on one or more sides.	A flat or nearly flat area of considerable extent which is relatively shallow, dropping off abruptly on one or more sides.

III. AGREED TERMS, BUT DIFFERENT DEFINITIONS

The definitions of the UN list presume that general references to numerical values are helpful for identifying features. The IHO/IOC believes that references to shape and relative size are sufficient.

<u>Term</u>	<u>UN Definition</u>	<u>IHO/IOC Definition</u>
<b>KHOLL</b>	An elevation rising generally more than 500 meters and less than 1000 meters and of limited extent across the summit.	A relatively small isolated elevation of a rounded shape.
<b>REEF</b>	A hazard to navigation with a least depth of 20 meters or less, composed of consolidated rock.	Rocks lying at or near the sea surface that may constitute a hazard to surface navigation.
<b>SEAMOUNT</b>	An elevation rising generally more than 1000 meters and of limited extent across the summit.	A large isolated elevation characteristically of conical form.
<b>SHOAL</b>	A hazard to navigation with a least depth of 20 meters or less, composed of unconsolidated material.	An offshore hazard to surface navigation composed of unconsolidated material.

IV. SIMILAR TERMS AND SIMILAR DEFINITIONS

<u>Term</u>	<u>UN Definition</u>	<u>Term</u>	<u>IHO/IOC Definition</u>
SEA CHANNEL	A continuously sloping, elongated depression commonly found in fans or plains and customarily bordered by levees on one or two sides.	CHANNEL	A continuously sloping elongated depression commonly found in fans or abyssal plains and which may be bordered by one or more levees.

V. TERMS AND DEFINITIONS IHO/IOC BELIEVES ARE NECESSARY, BUT UN DOES NOT

<u>Term</u>	<u>IHO/IOC Definition</u>
ABYSSAL HILLS	A tract of small elevations on the seafloor.
<u>CONTINENTAL MARGIN</u>	The zone, generally consisting of the shelf, slope and rise, separating the continent from the abyssal plain or deep sea bottom.
SEAMOUNT CHAIN	Several seamounts in a line.
<u>SHELF-EDGE</u>	(Shelf Break) A narrow zone at the outer margin of a shelf along which there is a marked increase of slope.

VI. TERMS AND DEFINITIONS UN BELIEVES ARE NECESSARY, BUT IHO/IOC DOES NOT

<u>Term</u>	<u>UN Definition</u>
CORDILLERA	An entire mountain system including all the subordinate ranges, interior plateaus, and basins.
HILL	An elevation rising generally less than 500 meters.
HOLE	A small depression of the sea floor.
MOUNTAINS	A well delineated subdivision of a large and complex positive feature.
RANGE	A series of associated ridges or seamounts.

Foreword to "UNDERSEA FEATURE TERMINOLOGY,"  
Recommended for Use in GEBCO Fifth Edition.

The Joint IHO/IOC Guiding Committee on the General Bathymetric Chart of the Oceans (GEBCO) in 1974 appointed a Sub-committee on Geographical Names and Nomenclature of Ocean Bottom Features. The purpose of this Sub-committee is to advise on names and nomenclature to be used on the GEBCO 1:10 M series of charts.

This Sub-committee has made an exhaustive study of the many lists of definitions of undersea feature terms presently found in or historically used by National Boards of Geographic Names, international and inter-governmental organizations, marine geoscience and hydrographic literature and widely recognized glossaries of geological terms.

The list which follows is comprised of terms, that are defined as closely as possible to correspond to their usage in the cited references taken from literature of ocean science, hydrography and exploration. In developing the definitions, it was realized that modern investigations at sea have the advantage of using very advanced instrumentation and technology that enables a more precise description of certain features than was previously possible. There has also been an attempt to limit the usage of precise physical dimensions in the definition of features. In preference, words that indicate relative sizes such as extensive, large, limited and small have been used. In addition, the definitions are based almost exclusively on a geomorphological description of the features themselves rather than making use of their navigational connotation.

The Sub-committee recognizes that as ocean mapping continues, features will be discovered that are not adequately defined in this list and therefore new terms will have to be added. In the same sense, the Committee is aware that many named features such as "Gap", "Deep" and "Swell" have widely accepted historical usage. However, the Committee has not attempted to define them because the description of these particular features is included among the present definitions.

Contained in the list of definitions, and marked by an asterisk, are a number of synonymous and descriptive terms commonly used in literature. The underlined terms are defined and suggested for depiction on maps. The Sub-committee has also noted that many of the terms will appear on maps or charts prefixed by appropriate geographic names.

UNDERSEA OR MARITIME FEATURE NAME PROPOSAL

Ocean or Sea \_\_\_\_\_ Name proposed \_\_\_\_\_  
Location of midpoint: Lat. \_\_\_\_\_ (N) (S), Long. \_\_\_\_\_ (E) (W);  
\_\_\_\_\_ kilometers in \_\_\_\_\_ direction from \_\_\_\_\_

Description: Kind of feature: \_\_\_\_\_  
Identifying or categorizing characteristics (size, shape, dimensions, least depth, steepness, etc.--use additional coordinates for extremities of lineal features): \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Associated features: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Chart reference: \_\_\_\_\_  
Shown and named on chart (map) \_\_\_\_\_  
Shown but not named on chart (map) \_\_\_\_\_  
Not shown but within area covered by \_\_\_\_\_

Reason for choice of name: \_\_\_\_\_  
If for a person, state how associated with the feature to be named \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Discovery facts: Date \_\_\_\_\_; by (individuals or ship) \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

By means of (equipment): \_\_\_\_\_  
Navigation used: \_\_\_\_\_  
Estimated positional accuracy in nautical miles: \_\_\_\_\_  
Description of survey (track spacing, line crossings, grid network, etc.): \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Nature and repository of other survey activities (dredge samples, cores, magnetics, gravity, photographs, etc.) \_\_\_\_\_

Supporting material: Enclose, if possible, a sketch map of the survey area, profiles of the feature, etc. Reference to prior publication, if any: \_\_\_\_\_

\_\_\_\_\_  
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\_\_\_\_\_  
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\_\_\_\_\_  
\_\_\_\_\_

SUBMITTED BY: \_\_\_\_\_  
Date: \_\_\_\_\_

Address: \_\_\_\_\_

CONCURRED IN BY (if applicable): \_\_\_\_\_  
Address: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

PROPOSED GUIDELINES FOR THE STANDARDIZATION OF  
UNDERSEA FEATURE NAMES FOR INTERNATIONAL USE

I. General

A. International concern for naming undersea features is limited to those features entirely or mainly (more than 50%) outside waters under the jurisdiction of states.

B. "Undersea feature" is a part of the ocean floor or seabed that has measurable relief or is delimited by relief.

C. Names used for many years may be accepted even though they do not conform to normal principles of nomenclature.

D. Names approved by national names authorities in waters beyond national limits (i.e., international waters) should be accepted by other states if the names have been applied in conformance with internationally accepted principles. Names applied within the territorial limits of a state should be recognized by other states.

E. In the event of a conflict, the persons and agencies most directly involved should resolve the matter. Where two names have been applied to the same feature, the older name generally should be accepted. Where a single name has been applied to two different features, the feature named first generally should retain the name.

F. Names not in the writing system of the country applying the names on maps or other documents should be transliterated according to the system adopted by the national authority applying the names.

G. In international programs, it should be the policy to use forms of names applied by national authorities having responsibility for the pertinent area.

H. States may utilize their preferred versions of exonyms.

II. Principles for Naming Features

A. Specific Terms

1. Short and simple terms (or names) are preferable.

2. The principal concern in naming is to provide effective, conveniently usable, and appropriate reference; commemoration of persons or ships is a secondary consideration.

3. The first choice of a specific term, where feasible, should be one associated with a geographical feature; e.g., Aleutian Ridge, Aleutian Trench, Peru-Chile Trench, Barrow Canyon.

4. Specific terms for other features can be used to commemorate ships or other vehicles, expeditions, or scientific institutes involved in the discovery of the feature, or to honor the memory of famous persons. Where a ship name is used, it should be that of the discovering ship, or if that has been previously used for a similar feature, it should be the name of the ship verifying the feature, e.g., San Pablo Seamount, Atlantis II Seamounts.

5. If names of living persons are used (surnames are preferable) they should be limited to those who have made an outstanding or fundamental contribution to ocean sciences.

6. Groups of like features may be named collectively for specific categories of historical persons, mythical features, stars, constellations, fish, birds, animals, etc. Examples are as follows:

Musicians Seamounts	Bach Seamount, Brahms Seamount, Schubert Seamount
Electricians Seamounts	Volta Seamount, Ampere Seamount, Galvani Seamount
Ursa Minor Ridge and Trough Province	Suhail Ridge, Kochab Ridge, Polaris Trough

7. Descriptive names are acceptable, particularly when they refer to distinguishing characteristics (e.g., Hook Ridge, Horseshoe Seamounts).

8. Names of well-known or large features that are applied to other features should have the same spelling.

9. Specific elements of names should not be translated from the language of the nation providing the accepted name.

## B. Generic Terms

1. Generic terms should be selected from the attached list of definitions to reflect physiographic descriptions of features.

2. Generic terms applied to features appearing on charts or other products should be in the language of the nation issuing the products. In those cases where terms have achieved international currency in a national form, that form should be retained.

3. It should be recognized that as ocean mapping continues, features will be discovered for which existing terminology is not adequate. New terms required to describe these features should conform to the guidelines cited under B.1.

## III. Procedures for Naming Features

A. Individuals and agencies applying names to unnamed features in international waters should adhere to internationally accepted principles and procedures.

B. The attached form is recommended as a model for new proposals.

C. Prior to the naming of a feature, identification of its character, extent, and position shall have been established sufficiently for identification. Positions should be given in terms of geographic coordinates. If it is necessary to refer to a feature before such full identifiability has been established, it is suggested that the reference be by coordinates and generic term with the addition of (PA)--Position Approximate--after the coordinates if the position is not adequately established and (?) after the generic term if the nature of the feature is in some doubt.

D. New names should be approved by the appropriate national authorities before being published.

E. If a national authority has reason to change the name of a feature it named originally, information explaining the change should be circulated to other concerned authorities. If there is opposition to a name change, the involved authorities should communicate with each other to resolve the question.

F. National authorities approving names of features should regularly publicize their names decisions.

G. National authorities naming features within their territorial jurisdiction should conform to the principles and procedures stated above.