

Report on Marine Regions activities

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Undersea features

GEBCO-SCUFN and ACUF gazetteers were both integrated in Marine Regions in 2014. Both gazetteers are regularly updated and the issues found are reported yearly to SCUFN. Besides, Marine Regions has recently completed the integration of the New Zealand gazetteer. The main facts about the 2018 updates are explained in the following sections below.

GEBCO update:

130 new features added to Marine Regions, mainly from SCUFN-29 but also from SCUFN-24, 26, 27 and 28.

Issues found:

- Grand Banks of Newfoundland: this feature (featureid = 1186) does not contain a value for the field typeid (no generic term).
- Polarstern Canyon: a duplicate in the gazetteer with mirror coordinates:
 - Featureid: 28046-> LINESTRING (-27.3167 -74.3817, -26.195 -73.7817, -25.385 -72.52, -23.3833 -71.9867, -23.0883 -71.685)
 - Featureid: 22984 -> LINESTRING (27.3167 -74.3817, 26.195 -73.7817, 25.385 -72.52, 23.3833 -71.9867, 23.0883 -71.685)
- New multipoint features not yet in the WMS service.
 - Wanhui Hills (featureid = 6793)
 - Shuangfengxi Hills (featureid = 6792)
 - Shixing Seamounts (featureid = 6790)
- Reinga Ridge (featureid = 2569) not in the WFS service.
- Pinne Marine Bank (featureid = 2443) has been given a termination date by ACUF: bathymetry no longer indicates a feature in these coordinates.
- Lee Seamount (featureid = 1742): current longitude coordinates are
 - SCUFN18 report -> Lee Seamount (41°06'S, 179°31'E)

- Coordinates in GEBCO: POINT (-179.533333333333 -41.116666667)
- Kaiwhata Bank (featureid = 1511):
 - SCUFN18 report: Position: Lat. 41°28'.0 S, Long. 175°53'.0 W; Lat. 41°19'.0 S, Long. 176°16'.0 W
 - Coordinates in GEBCO: LINESTRING (175.88333 -41.46667, 176.26667 -41.31667)
- Hayes Bank (featureid = 5600):
 - SCUFN19 -10.2A: The following positions are suggested for the proposed Hayes Bank: 76°40' S, 172°30' W; 77°40' S, 172°00' W
 - Hayes Bank in GEBCO: LINESTRING (172 -75.5, 173 -79)
 - New Zealand Gazetteer has also West coordinates.
- There is a general issue with the instability of web services: base url and layer names are often changed, which causes display issues in the Marine Regions website.

ACUF update

7 new features added to Marine Regions.

During the intersessional period, Marine Regions was in contact with Trent Palmer from NGA-ACUF to take action with regards to the issues found in the 2017 update. Feedback from ACUF was received:

- Deleted features: these features are no longer classified by ACUF as “undersea features” (UF), and appeared to have been deleted. There are two possible causes:
 - Some have been assigned a "termination date". This has been done for features for which bathymetry no longer indicates that there is a feature at the reported coordinate position. Marine Regions has kept the placetype as “historical undersea feature” , and added a note with the ACUF termination date, the cause and the previous feature designation code.
 - Some have been assigned to specific country files, when features fall within a country’ s territorial sea and are not permanently submerged. The ACUF unique identifier (UFI) has been updated in Marine Regions, but the features have not been deleted from the system.
- New duplicates: in the 2017 a total of 60 new duplicates were found. This were features with the same attributes (name, coordinates and type) but with different UFI. The difference between the duplicates’ UFI was always a constant value. These duplicates were reported to ACUF to be examined.

- Synonym duplicates: a list of 40 synonym duplicates was reported to ACUF, who took action. One of this synonym duplicates was considered as an accepted spelling variant.
- Probable duplicates: a list of potential duplicates was reported to ACUF to be examined. This was based on features with very similar attributes: with the same designation code, similar coordinates and / or names.

Agenda item 5.4. Action for MR to report by beginning of 2018 a full list of inconsistencies between ACUF and GEBCO gazetteer.

Marine Regions elaborated a spreadsheet with the different inconsistency issues that have been found between GEBCO and ACUF. The following lists were provided and distributed amongst the SCUFN members for feedback:

Sheet	Comment
gebco_issues	Issues found in GEBCO gazetteer
acuf_gebco_definitions	Match and differences between the term definitions in ACUF and GEBCO
acuf_gebco_place_types	List of features that have been assumed to be the same between GEBCO and ACUF although the coordinates are different. To identify potential errors done by Marine Regions (features that are actually not the same).
Place_types_summary	An overview of the feature types that are used differently in GEBCO and ACUF
Coordinates	An overview of the differences in coordinates for features assumed to be the same. Very often there is a mismatch between GEBCO and ACUF in longitudes around the antimeridian (positive vs. negative)
ACUF_duplicates	A list of potential duplicates in the ACUF gazetteer
ACUF_xy_on_land	A list of features in ACUF for which the lat/lon falls on land

Integration of New Zealand Gazetteer of Place Names.

1968 features have been integrated, of which 1356 features were new in Marine Regions. These includes undersea features (718 records) as well as other geographical features in the marine or coastal environment. Records of undersea features previously existing in MR are coming from GEBCO, ACUF and SCAR gazetteers.

Comments:

- There is not a consistent pattern in the use of “/” to name features in two different languages. For future updates, Marine Regions would like to know if the names in the New Zealand Gazetteer are altered or not. Examples:
 - o Avon River/Ōtakaro
 - o Kō hatupapā / Ranfurly Bay

General overview Undersea Features in Marine Regions

There are in total 8875 undersea features records in Marine Regions. The main sources for these features are GEBCO, ACUF, SCAR and New Zealand gazetteers. Some features belong into more than one context:

Gazetteer - context	Total
ACUF Gazetteer	5289
GEBCO Gazetteer	4222
SCAR-MarBIN	765
New Zealand Gazetteer	718
Other	516

Other gazetteer updates

Mineral rights areas from UK and Norway: Over 6,000 blocks and quads from the UK and Norway have been added to Marine Regions, providing stable unique identifiers and geometries.

Global contourite distribution: based on literature review, Marine Regions developed a geodatabase of the distribution of contourite depositional systems in 2013. This resource is regularly updated with new publications and contains now over 460 records.

Data products updates

Maritime Boundaries version 10: in this new release, Marine Regions updates the global Exclusive Economic Zones (EEZ) (version 10), and launches version 2 of the datasets for Territorial Seas (TS), Contiguous Zones (CZ), Internal Waters (IW) and Archipelagic Waters (AW).

IHO Sea Areas version 3: a new version of the IHO Sea Areas was published. This version is based on version 2, with high resolution coastline, and includes the correction of a topology error. This product is based in the IHO S-23, Limits of Oceans and Seas (1953).

Intersection of EEZ V10 and IHO V3: the intersect product combines the information from the maritime boundaries (the Exclusive Economic Zones) with the IHO Sea Areas (IHO, 1953). This allows to create national marine regions of the Global Seas and Oceans.

Short-term future activities

Undersea features: the Geographical Names Board of Canada (GNBC) is Canada's national coordinating body responsible for standards and policies on place names. There is a list of 3492 Undersea Features with a total of 3708 names. VLIZ and Marine Regions work closely with different scientists from the Canadian Department of Fisheries and Oceans in the framework of OBIS (Ocean Biogeographic Information System). It has been requested that Marine Regions incorporates the Canadian undersea features in the gazetteer to increase the accuracy of biodiversity records for the Canadian node of OBIS.

Areas Beyond National Jurisdiction: Marine Regions will soon make a product with ABNJ available to download.