

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. The main facts about the 2020 updates are explained in the following sections below.

1. GEBCO update

141 new features added to Marine Regions, mainly from SCUFN-32 but also from SCUFN-30 and SCUFN-31.

Issues found:

- a. Since last year, twelve features have been deleted from the GEBCO gazetteer. For some of these features, a similar feature (similar in name or geometry) is still present in the GEBCO gazetteer. Were these features replaced by the present ones, or are they unrelated (see table below)?

featureId (deleted)	feature (deleted)	featureId (present)	feature (present)
1373	Hukutoku Seamount	1061	Fukutoku Seamount
1374	Hukuzin Seamount	5561	Fukujin Seamount
1680	L'Hirondelle Norte Bank	no present feature in GEBCO?	no present feature in GEBCO?
1681	L'Hirondelle Sul Basin	no present feature in GEBCO?	no present feature in GEBCO?
2515	Príncipes de Avis Terrace	no present feature in GEBCO?	no present feature in GEBCO?
2872	Siribesi Seamount	5984	Shiribeshi Seamount
2914	Sorygin Guyot	2848	Shorygin Seamount
3040	Syoyo Seamount	5985	Shoyo Seamount
3137	Tolstoy Seamount	1754	Lev Tolstoy Seamount
3298	Walker Seamount	3321	Welker Guyot
6245	Soseki Seamount	6763	Soseki Ridge
931	Ermak Plateau	3395	Yermak Plateau

- b. The geometry of New Caledonia Trough (featureId = 2163) seems to differ substantially from the geometry for the feature with the same name in the New Zealand gazetteer (feat_id = 40416). In the New Zealand gazetteer, the coordinates seem cut off at 23.986°S, while the GEBCO feature stretches out further north. On the other hand, the New Zealand feature stretches out further south than the GEBCO feature. Could these geometries represent the same feature, and if so, what could cause the difference in these geometries?

- c. The geometries of Pukeroro Trough (featureId = 6711) and Glendhu Trough (featureId = 33602) are overlapping in the New Zealand gazetteer (respectively feat_id = 40531 and feat_id = 40200), while they do not overlap in the GEBCO gazetteer. Both features were proposed by the New Zealand Geographic Board to the Sub-Committee on Undersea Feature Names. Could these geometries be erroneous in one of both gazetteers?

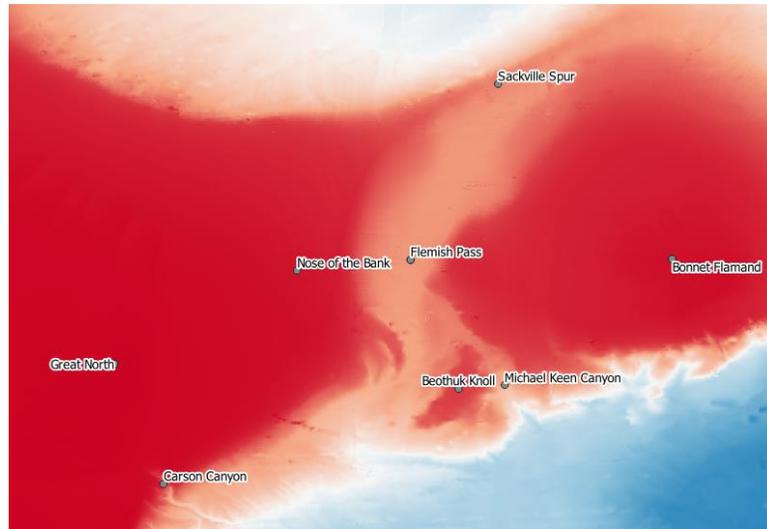
2. ACUF update

19 new features added to Marine Regions.

Issues found:

- a. The name of Egmont Terrace (UFI = -153274) has been altered in the New Zealand gazetteer to Taranaki Terrace. The name 'Egmont Terrace' has been indicated as 'unofficial'.
- b. The feature Tuscarora Bank (UFI = -1309771) was listed with UFI -155883 in our previous download of the ACUF database (2019-05-14). Is this still the same feature?
- c. In the latest version of the ACUF database, there are two features named 'Inanudak Canyon' (UFI = 14792611, UFI = -153856) in close proximity to each other. Are these indeed two separate features?
- d. There are two features named Irving Seamount (UFI = 9163059, -153071) which are located on opposite sides of the central meridian (respectively 27.45° E and 28° W) at approximately the same latitude. The note of the feature with UFI = 9163059 reads '*A seamount located south of the Azores (Portugal) in the eastern Atlantic Ocean; name origin unknown.*'. With the current coordinates, this feature would be located in the Mediterranean Sea. Could these coordinates be erroneous for this feature?
- e. Following up issue 2.g mentioned in the Marine Regions report presented at SCUFN-32 and communication with the Canadian Hydrographic Service, bank feature Grand Bank/Banc was deleted from the Canadian Geographical Names Database, as this feature was nearly identical coordinate-wise to another feature named The Grand Banks of Newfoundland. Could it be that a similar issue exists in the ACUF gazetteer with the features Grand Bank/Banc (UFI = -153573) and Grand Banks of Newfoundland (UFI = -153574)?
- f. Following up issue 2.f mentioned in the Marine Regions report presented at SCUFN-32 and communication with the Canadian Hydrographic Service, the coordinates of bank feature Great North/Le Grand Nord have been changed in the Canadian Geographical Names Database. However, in the ACUF database it seems that the coordinates of this feature (UFI = 213852) remain the same and that these coordinates are identical to those of spur feature Sackville Spur (UFI = 213855). Given the B-6 definition of a spur ('*subordinate ridge protruding from a larger feature*') and the bathymetric image presented

below (provided by the Canadian Hydrographic Service), this seems unlikely. Could these coordinates be erroneous for this feature?



3. New Zealand update

69 new features added to Marine Regions.

Issues found:

- a. See issue 1.b
- b. See issue 1.c

General overview Undersea Features in Marine Regions

There are in total 11515 undersea features records in Marine Regions. The main sources for these features are the GEBCO, ACUF, SCAR, New Zealand and Canada gazetteers. Some features belong into more than one context.

Gazetteer - context	Total
ACUF Gazetteer	5366
GEBCO Gazetteer	4447
Canada Gazetteer	2257
SCAR-MarBIN	773
New Zealand Gazetteer	822
Other	728

Other gazetteer updates

Marine Collaborative Australian Protected Area Database 359 offshore protected areas in both Australia's state and Commonwealth waters were added to the Marine Regions gazetteer, providing stable unique identifiers and geometries.

Data products updates

Maritime Boundaries version 11: in this new release, Marine Regions updates the global Exclusive Economic Zones (EEZ) (version 10), and launches version 3 of the datasets for Territorial Seas (TS), Contiguous Zones (CZ), Internal Waters (IW) and Archipelagic Waters (AW).

Intersection of EEZ and IHO v4: 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.

Union of EEZ and countries v3: this product merges together these two administrative areas. The countries are based on the ESRI World Country database (2014), modified by the MarineRegions team to meet the proposed standards.

High Seas v1: Marine Regions released the first version of the High Seas, the last addition to the Maritime Boundaries dataset. This dataset represents all parts of the sea that are not included in the exclusive economic zone, in the territorial sea or in the internal waters of a State, or in the archipelagic waters of an archipelagic State, according to the definition provided by the United Nations Convention on the Law of the Sea (UNCLOS).

Emission Control Areas: coordinates for Emission Control Areas (both NO_x and SO_x and particulate matter emission control) have been digitized and made available through the Marine Regions download page.

Short-term future activities

Continental shelves: Marine Regions plans to make a product with continental shelves available to download.