Report on Marine Regions activities

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Britt Lonneville, Salvador Fernandez Bejarano, Lennert Schepers, Bart Vanhoorne (VLIZ)

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 2021 updates are explained in the following sections below.

1. GEBCO update

75 new features added to Marine Regions, mainly from SCUFN-34 but also from SCUFN-31, SCUFN-32 and SCUFN-33.

Issues found:

a. Since last year, two features have been have been deleted from the GEBCO gazetteer. For one of these features (Joseph Gilbert Seamount), a similar feature (in name and geometry) is still present in the GEBCO gazetteer. Was this feature replaced by the present one, or are they unrelated (see table below)? For the feature Medio-Atlantica Ridge, is it possible that this is/was meant to be a part of the Mid-Atlantic Ridge? Can this feature be replaced by the Mid-Atlantic Ridge, or are they unrelated since the geometry is different?

featureId (deleted)	feature (deleted)	featureId (present)	feature (present)
1490	Joseph Gilbert Seamount	6170	Joseph Gilbert Seamount
1936	Medio-Atlantica Ridge	no present feature in GEBCO OR 1990?	no present feature in GEBCO OR Mid-Atlantic Ridge?

b. For the feature Monowai Caldera (featureId = 889160), it is not entirely clear if the Generic Type of the given feature can be considered similar to the Feature Designation (seamount) for the feature with identical name in the ACUF gazetteer (UFI = 14988298), and if the features are the same. For now, we have integrated them under the same MRGID. Could you please confirm or deny?

c. For the feature Ciluo Guyots (featureId = 888971), it is not entirely clear if the Generic Type of the given feature can be considered similar to the Feature Designation (tablemount) for the feature with identical name in the ACUF gazetteer (UFI = 14988603), and if the features are the same. For now, we have integrated them under the same MRGID. Could you please confirm or deny?

2. ACUF update

8 new features added to Marine Regions.

Issues found:

a. The Generic Type of Sars Seamount (UFI = -155351) has been altered in the GEBCO gazetteer to Guyot.
b. The feature Navarin Canyon (UFI = -154616) was listed with UFI 14792392 in our previous download of the ACUF database (2020-07-06). Is this still the same feature?
c. The features Tianqing Knoll (UFI = 14962048) and Tianxian Knoll (UFI = 14962049) have the exact same coordinates and Feature Designation. The GEBCO gazetteer contains two separate features with the same name, but different coordinates. Could the coordinates be erroneous for (one of) these features?
d. There are now two features named Wrangel Abyssal Plain (UFI = -155018, -156143) with different Feature Designation. Are these indeed two separate features?
e. The GEBCO gazetteer contains a feature named Bedaoch Ridge with similar geometry and Feature Designation as the ACUF feature Bedoach Ridge (UFI = 14961870). Could the spelling be erroneous for this feature?
f. For several features, there are now two instances in the ACUF gazetteer in close proximity of each other (see table below). Are these indeed separate features?

feature	UFI (original)	UFI (new)
Matheson Bank	-154363	14962000
Taranaki Terrace	-153274	14962044
North Bounty Channel	-154734	14988302
South Bounty Channel	-155589	14988334
Papanui Canyon	-154877	14988703
Bahama Ridge	-152628	15034453
Blake Ridge	-152628	15034454

g. The feature Kaimei Escarpment (UFI = 14988577) has the same description as the feature Kaimei Escarpment in the GEBCO gazetteer, but significantly different coordinates. Could the coordinates be erroneous for this feature?
h. The feature Kounoashi Seamount (UFI = 14988632) has the same description as the feature Kounoashi Seamount in the GEBCO gazetteer, but significantly different coordinates. Could the coordinates be erroneous for this feature?
i. There are now two features named Whenuanuipapa Plain: one with coordinates similar to the feature in the GEBCO gazetteer (UFI 14962060) and one close to the dateline (UFI 9092933). However, the description of the latter does not match its coordinates. Are these indeed separate features?
j. The GEBCO gazetteer contains a feature named Walter Munk Guyot with the same coordinates as the ACUF feature Munk Guyot (UFI = 15034452), but these coordinates

are on opposite sides of the dateline. Could the coordinates be erroneous for this feature?

k. See issue 1.b.
l. See issue 1.c.

General overview Undersea Features in Marine Regions

There are in total 11622 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	5374
GEBCO Gazetteer	4530
Canada Gazetteer	2257
SCAR-MarBIN	773
New Zealand Gazetteer	822
Other	680

Other gazetteer updates

Linked Open Data & Linked Data Event Stream: a Marine Regions ontology has been created, the Marine Regions gazetteer has been mapped to Linked Data in subject pages and a Linked Data Event Stream has been generated that can be used for replication and synchronization.

Data products updates

Global Oceans and Seas v1: Marine Regions released the first version of the Global Oceans and Seas. This dataset represents the larger oceans and seas including the seas lying within each of them.

Short-term future activities

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

Update of mregions R package: The mregions R package, which combines Marine Regions gazetteer and data product functions, will be reviewed and updated. The updated package will – among others – include all (new) RESTful services provided for the gazetteer.

Maritime Boundaries v12: In this new release, Marine Regions will tackle known issues for version 11.