

# Report by NOAA/NCEI on maintenance of the GEBCO Gazetteer (NOAA) & interoperability with SCUFN Operational Web Services SCUFN 37-07.1A

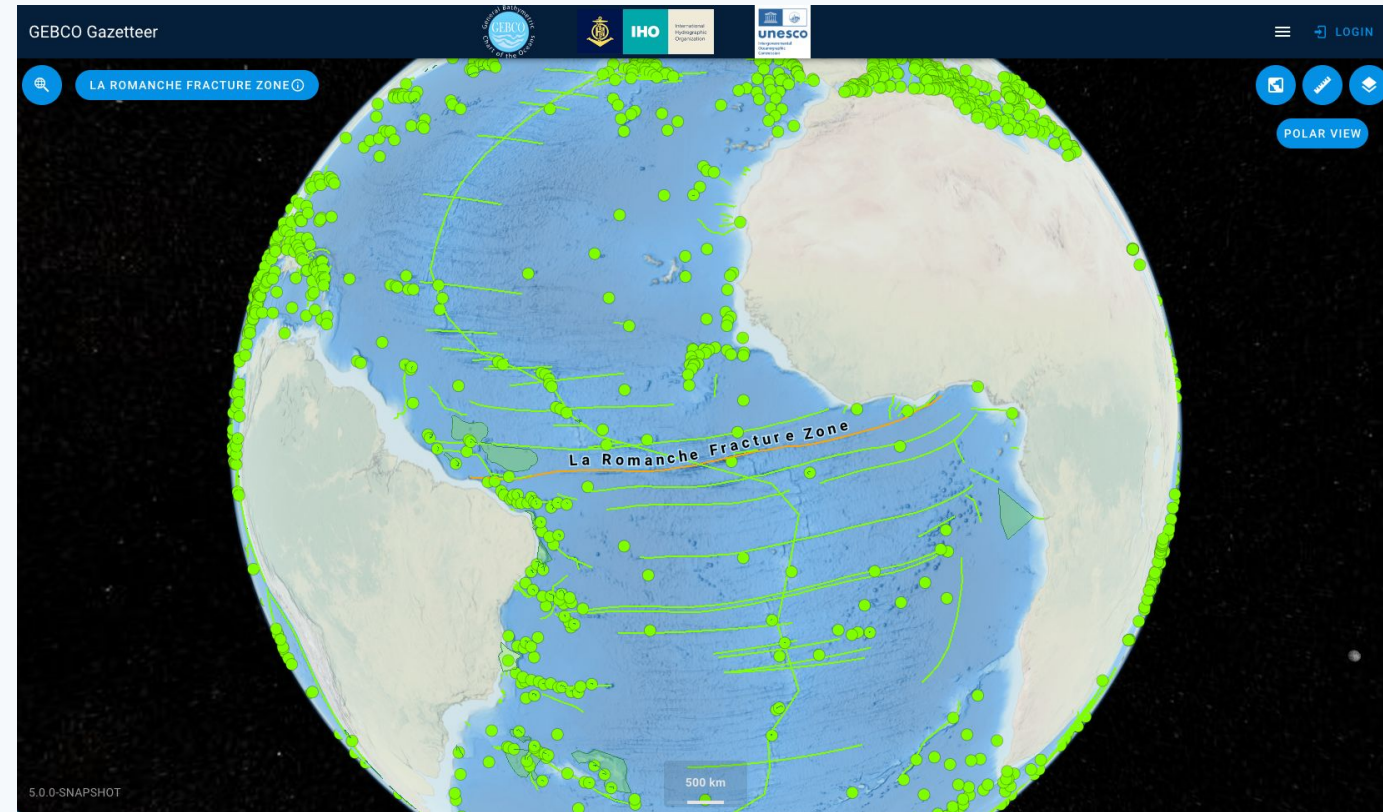
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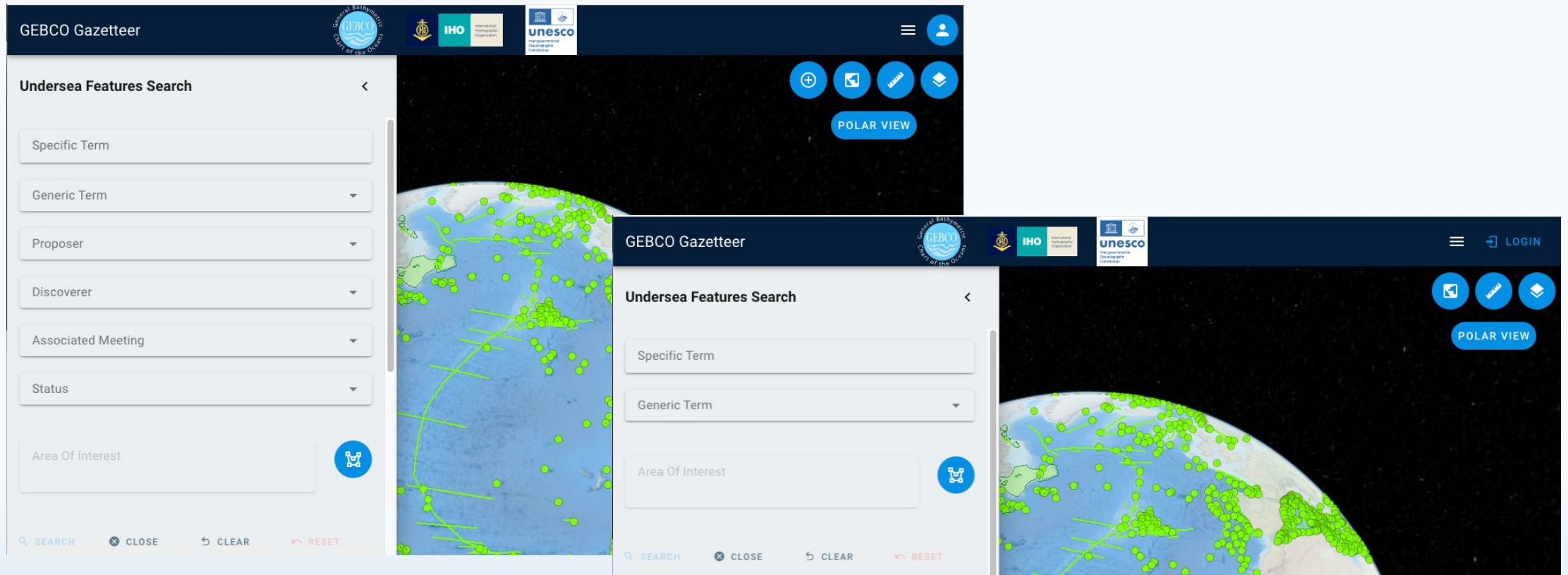
# Introduction

1. The NCEI/DCDB software development team continues to make enhancements to Gazetteer 5 based on feedback from SCUFN members and internal testing
2. 8 enhancements and 9 fixes were made since SCUFN 36
3. Gazetteer v5.0.4 will be deployed to production after SCUFN 37 to prevent disruption during critical SCUFN activities
4. [ngdc.noaa.gov/gazetteer/](https://ngdc.noaa.gov/gazetteer/)



# Enhancement #1: Limit Feature Search For Public Users

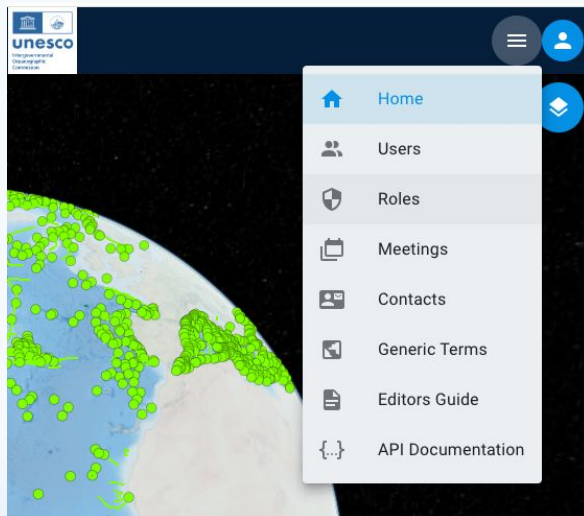
Feature search options are limited to specific term, generic term, and area of interest for unauthenticated users.



# Enhancement #2: User Role Edit Page

Custom roles besides ADMIN and EDITOR can be created.

This is necessary to support KHOA OWS and GEBCO Gazetteer interoperability.



GEBSCO Gazetteer

SEARCH SORT + NEW ROLE

ID	Role	Editable	Authorities	Actions
3	CUSTOM_ROLE	Editable	["FEATURE_CREATE", "FEATURE_HOLD", "FEATURE_DELETE", "FEATURE_DELETE_ANY", "FEATURE_HOLD_ANY", "FEATURE_SUBMIT_ANY", "FEATURE_UPDATE_ANY", "GENERIC_TERM_UPDATE", "MEETING_CREATE", "MEETING_DELETE", "MEETING_READ", "MEETING_UPDATE", "ROLE_DELETE", "ROLE_READ", "ROLE_UPDATE", "ROLE_WRITE"]	
1	ROLE_ADMIN	Fixed	["CONTACT_CREATE", "CONTACT_DELETE", "CONTACT_READ", "CONTACT_UPDATE", "FEATURE_DELETE", "FEATURE_DELETE_ANY", "FEATURE_HOLD", "FEATURE_HOLD_ANY", "FEATURE_READ", "FEATURE_SUBMIT", "FEATURE_UPDATE", "FEATURE_UPDATE_ANY", "GENERIC_TERM_UPDATE", "MEETING_CREATE", "MEETING_DELETE", "MEETING_READ", "MEETING_UPDATE", "MEETING_WRITE", "ROLE_DELETE", "ROLE_READ", "ROLE_UPDATE", "ROLE_WRITE"]	
2	ROLE_EDITOR	Editable	["FEATURE_CREATE", "FEATURE_HOLD", "FEATURE_DELETE", "FEATURE_DELETE_ANY", "FEATURE_HOLD", "FEATURE_HOLD_ANY", "FEATURE_READ", "FEATURE_SUBMIT", "FEATURE_UPDATE", "FEATURE_UPDATE_ANY", "GENERIC_TERM_UPDATE", "MEETING_CREATE", "MEETING_DELETE", "MEETING_READ", "MEETING_UPDATE", "MEETING_WRITE", "ROLE_DELETE", "ROLE_READ", "ROLE_UPDATE", "ROLE_WRITE"]	

New Role

Role: CUSTOM\_ROLE

Authorities: FEATURE\_CREATE, FEATURE\_HOLD, FEATURE\_SUBMIT

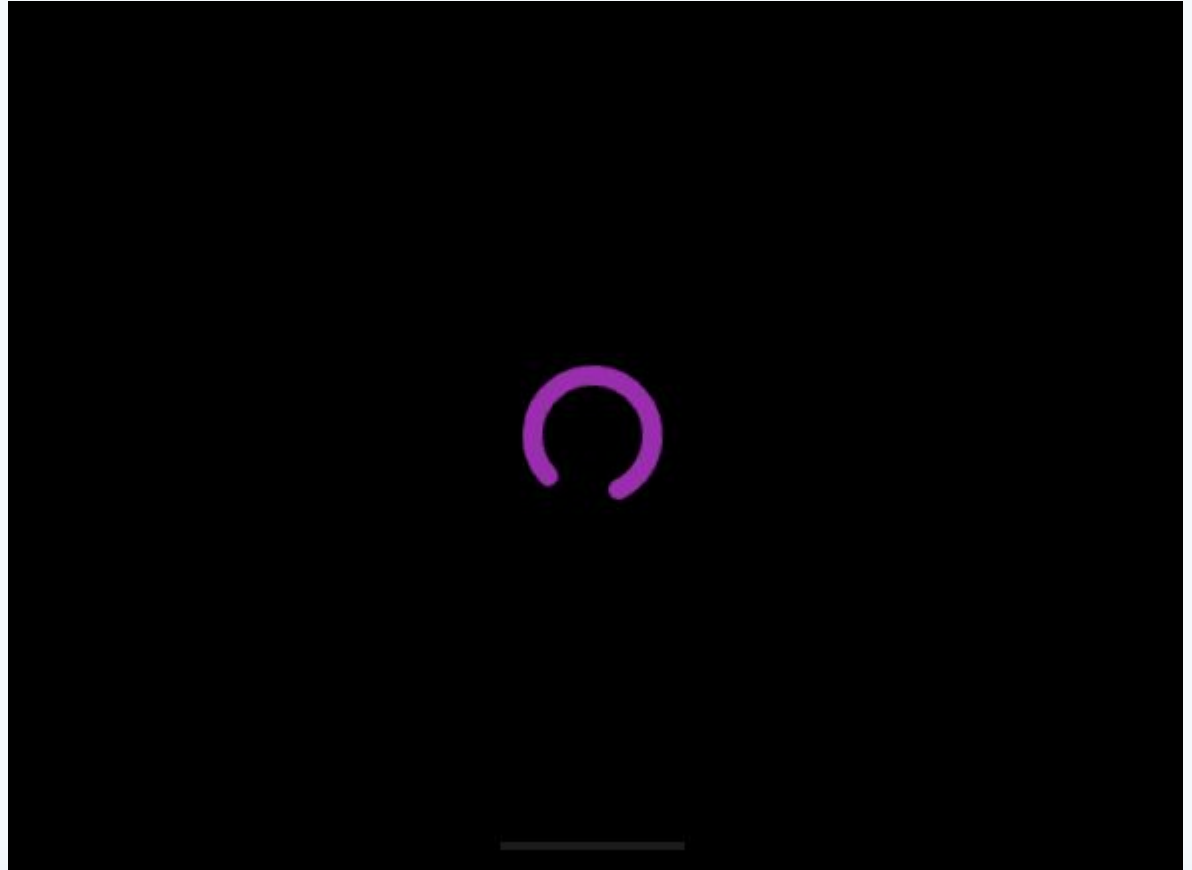
- CONTACT\_READ\_PRIVILEGED
- CONTACT\_UPDATE
- FEATURE\_APPROVE\_ANY
- FEATURE\_CREATE
- FEATURE\_DELETE
- FEATURE\_DELETE\_ANY
- FEATURE\_HOLD



# Enhancement #3: Map Loading Spinner

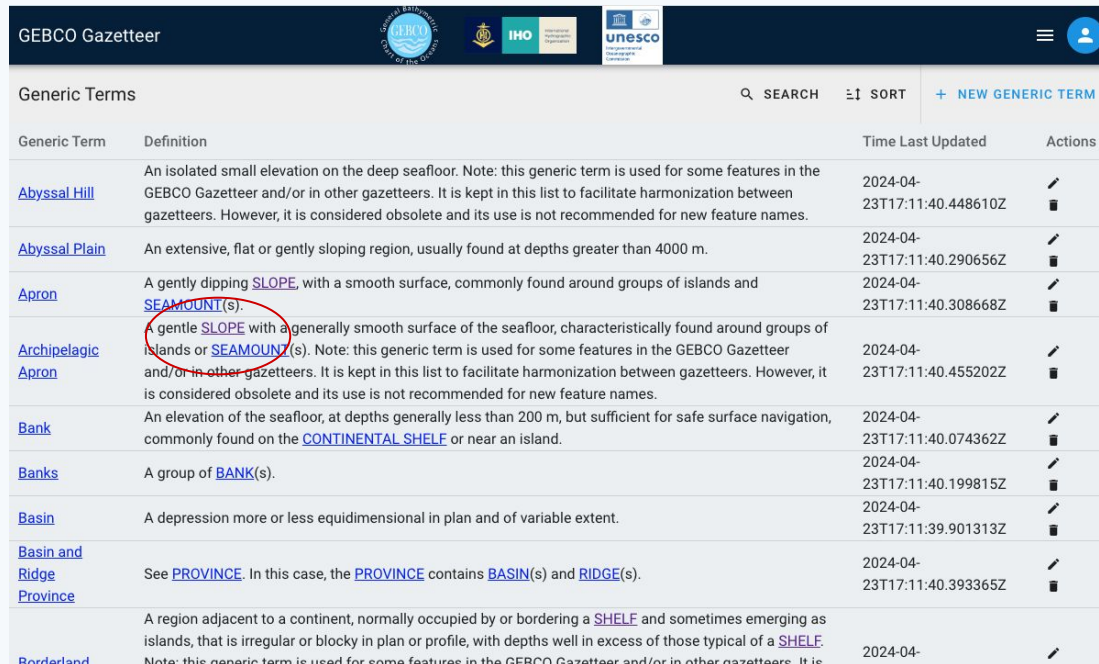
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Progress spinners were added to indicate when server resources are being loaded.

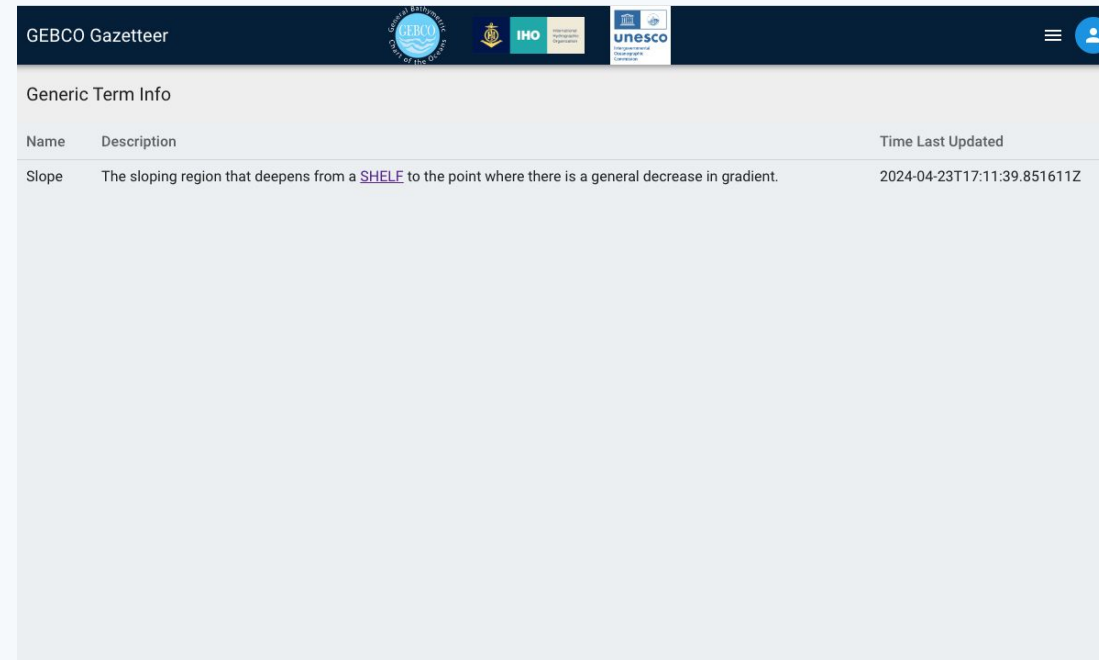


# Enhancement #4: Generic Term Links

Related generic terms listed in the admin page links to a description of that term.



Generic Term	Definition	Time Last Updated	Actions
<a href="#">Abyssal Hill</a>	An isolated small elevation on the deep seafloor. Note: this generic term is used for some features in the GEBCO Gazetteer and/or in other gazetteers. It is kept in this list to facilitate harmonization between gazetteers. However, it is considered obsolete and its use is not recommended for new feature names.	2024-04-23T17:11:40.448610Z	
<a href="#">Abyssal Plain</a>	An extensive, flat or gently sloping region, usually found at depths greater than 4000 m.	2024-04-23T17:11:40.290656Z	
<a href="#">Apron</a>	A gently dipping <a href="#">SLOPE</a> , with a smooth surface, commonly found around groups of islands and <a href="#">SEAMOUNT(s)</a> .	2024-04-23T17:11:40.308668Z	
<a href="#">Archipelagic Apron</a>	A gentle <a href="#">SLOPE</a> with a generally smooth surface of the seafloor, characteristically found around groups of islands or <a href="#">SEAMOUNT(s)</a> . Note: this generic term is used for some features in the GEBCO Gazetteer and/or in other gazetteers. It is kept in this list to facilitate harmonization between gazetteers. However, it is considered obsolete and its use is not recommended for new feature names.	2024-04-23T17:11:40.455202Z	
<a href="#">Bank</a>	An elevation of the seafloor, at depths generally less than 200 m, but sufficient for safe surface navigation, commonly found on the <a href="#">CONTINENTAL SHELF</a> or near an island.	2024-04-23T17:11:40.074362Z	
<a href="#">Banks</a>	A group of <a href="#">BANK(s)</a> .	2024-04-23T17:11:40.199815Z	
<a href="#">Basin</a>	A depression more or less equidimensional in plan and of variable extent.	2024-04-23T17:11:39.901313Z	
<a href="#">Basin and Ridge Province</a>	See <a href="#">PROVINCE</a> . In this case, the <a href="#">PROVINCE</a> contains <a href="#">BASIN(s)</a> and <a href="#">RIDGE(s)</a> .	2024-04-23T17:11:40.393365Z	
<a href="#">Borderland</a>	A region adjacent to a continent, normally occupied by or bordering a <a href="#">SHELF</a> and sometimes emerging as islands, that is irregular or blocky in plan or profile, with depths well in excess of those typical of a <a href="#">SHELF</a> . Note: this generic term is used for some features in the GEBCO Gazetteer and/or in other gazetteers. It is	2024-04-	



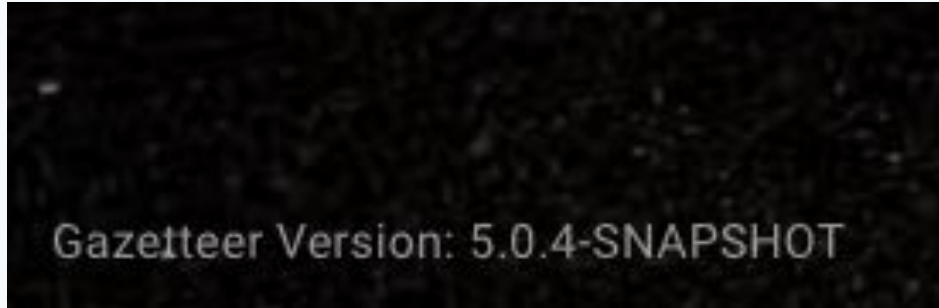
Name	Description	Time Last Updated
Slope	The sloping region that deepens from a <a href="#">SHELF</a> to the point where there is a general decrease in gradient.	2024-04-23T17:11:39.851611Z



# Enhancement #5: Build Version Automatically Added In Build

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The build number is now automatically added when the Gazetteer is built, removing a manual step in configuration.

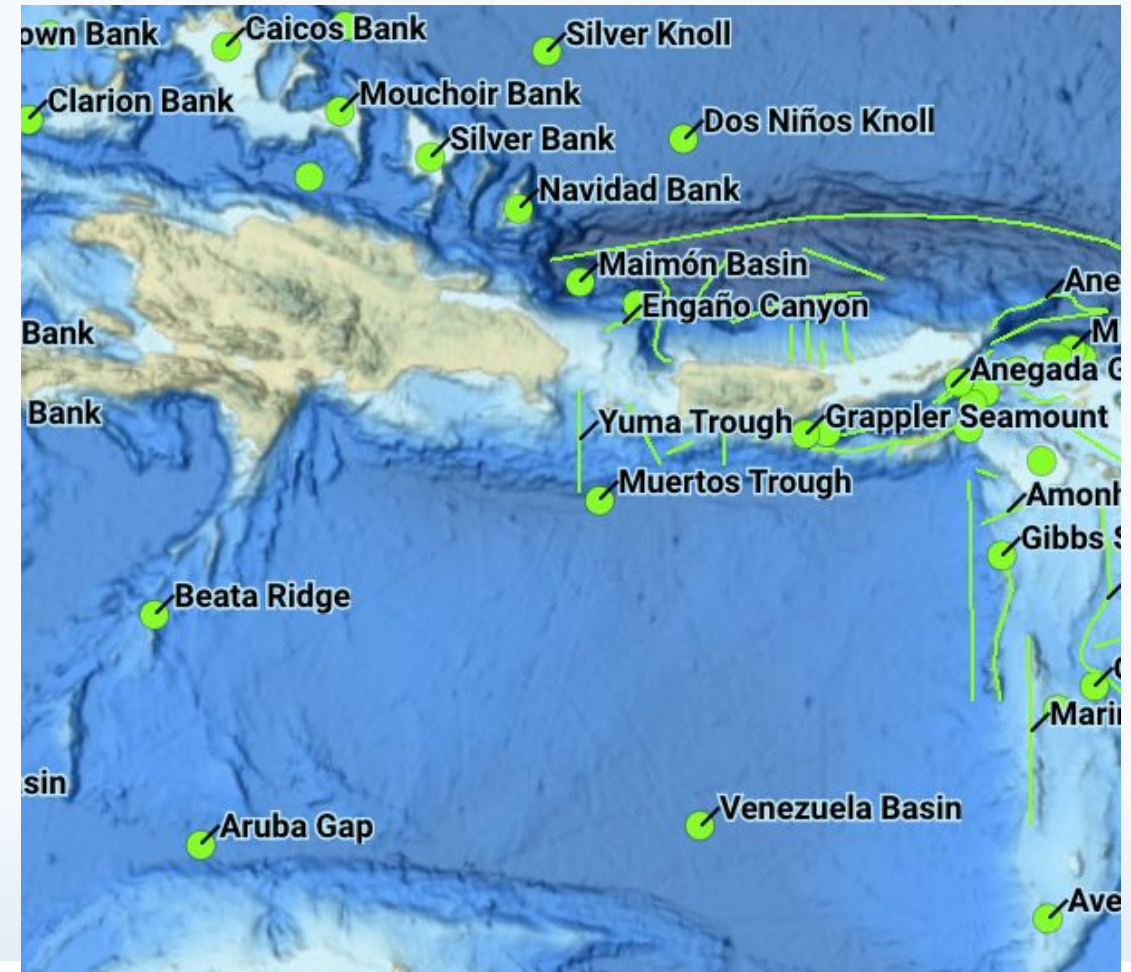
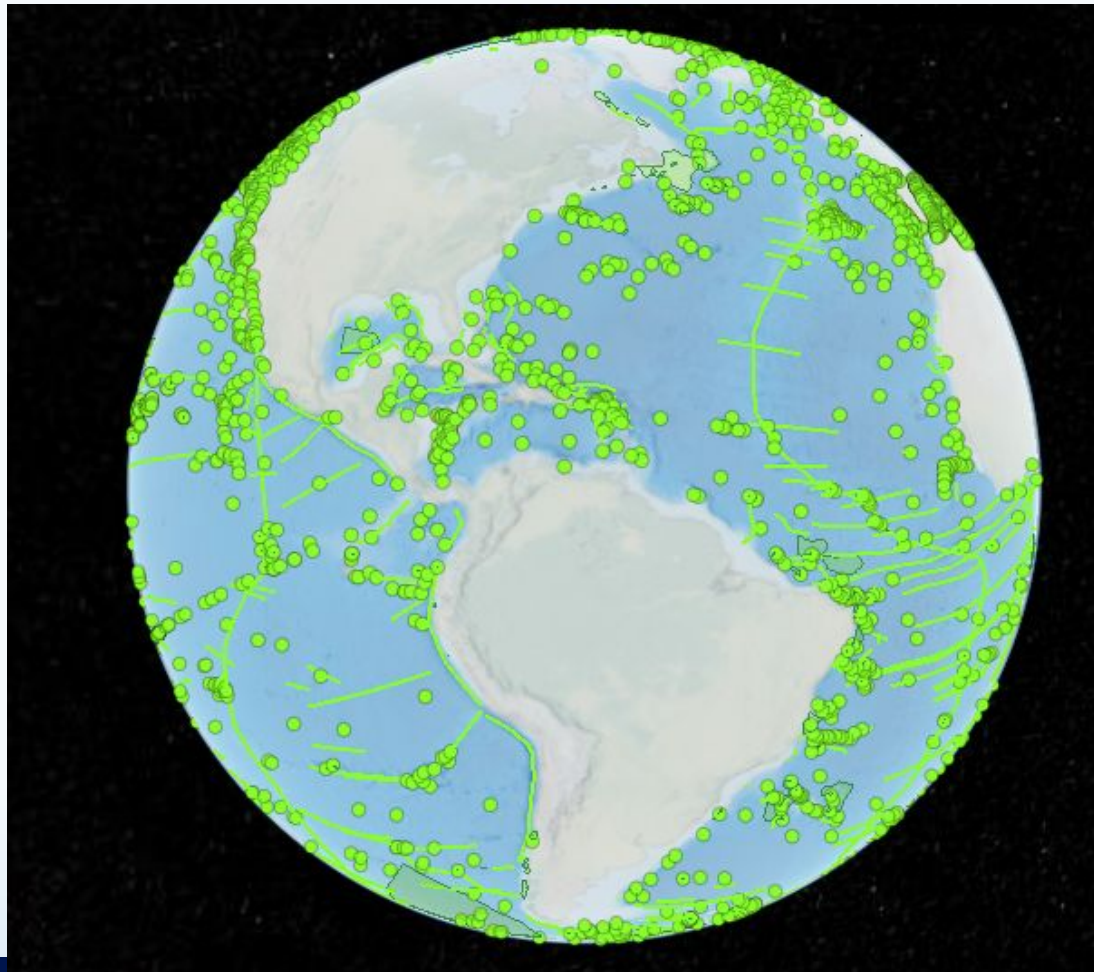


Gazetteer Version: 5.0.4-SNAPSHOT



# Enhancement #6: More Natural Feature Point Sizing

Features represented as points now scale up when zooming in, giving a more natural experience.





# Enhancement #7: API Only Service Users

A new type of user was defined that can only access the API and not the user interface with login.gov. This API Only user will make the KHOA OWS - GEBCO Gazetteer interoperability easier to configure.

The screenshot displays the GEBCO Gazetteer user management interface. On the left, the 'New User' form is shown with the following details:

- Username: KHOA\_OWS
- Roles: CUSTOM\_ROLE
- Enabled:
- API Service Account:  (highlighted with a red circle)
- Buttons: SAVE, CANCEL, RESET

On the right, the 'Users' table lists existing users:

ID	Username	Status	Type	Roles	Actions
5	edgar	Enabled	Standard	["ROLE_EDITOR"]	[edit, delete]
7	KHOA_OWS	Enabled	API Only	["CUSTOM_ROLE"]	[edit, delete]
3	sarah	Enabled	Standard	["ROLE_ADMIN"]	[edit, delete]
1	test.admin	Enabled	Standard	["ROLE_ADMIN"]	[edit, delete]
2	test.editor	Enabled	Standard	["ROLE_EDITOR"]	[edit, delete]
6	veronica	Enabled	Standard	["ROLE_EDITOR"]	[edit, delete]
4	willie	Enabled	Standard	["ROLE_ADMIN"]	[edit, delete]

A modal window titled 'Copy This Token' is overlaid on the table, displaying the token: sGARNN7RerFPwc4E6tn\_s4ZHIFV. The modal includes a 'CLOSE' button.



# *Enhancement #8: Disable Flyover View From Map*

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The globe used in the GEBCO Gazetteer supports a flyover view, which is like flying in a plane across the surface of the globe. This could accidentally be triggered, which could lead to a confusing experience. This behavior was disabled.



# Fix #1: Fix “Rendering has stopped” error

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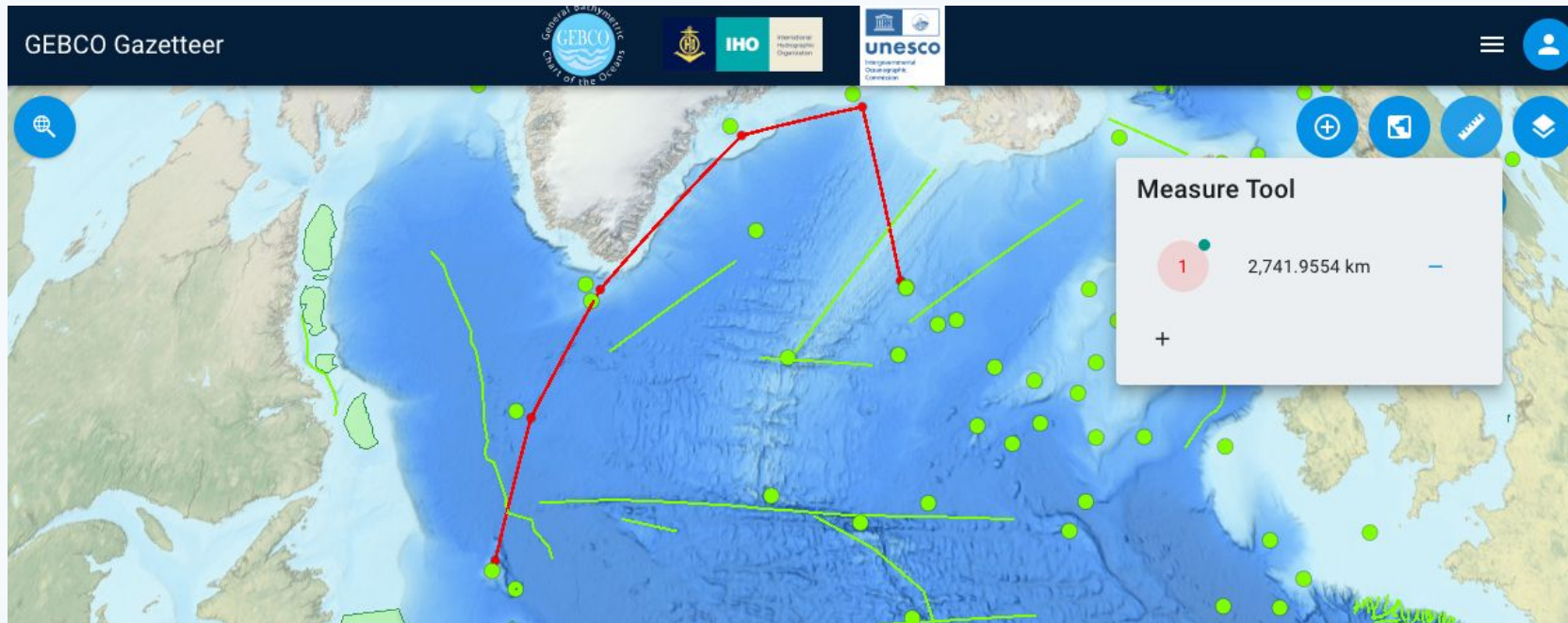
Occasionally, when navigating the globe, a rendering error would appear and the globe would no longer function.

The use of the Cesium map library was refactored to prevent this error.



# Fix #2: Unable To Use Measure Tool Near Top Of Window

The user was unable to place measure tool points near the top of the screen near the control area.



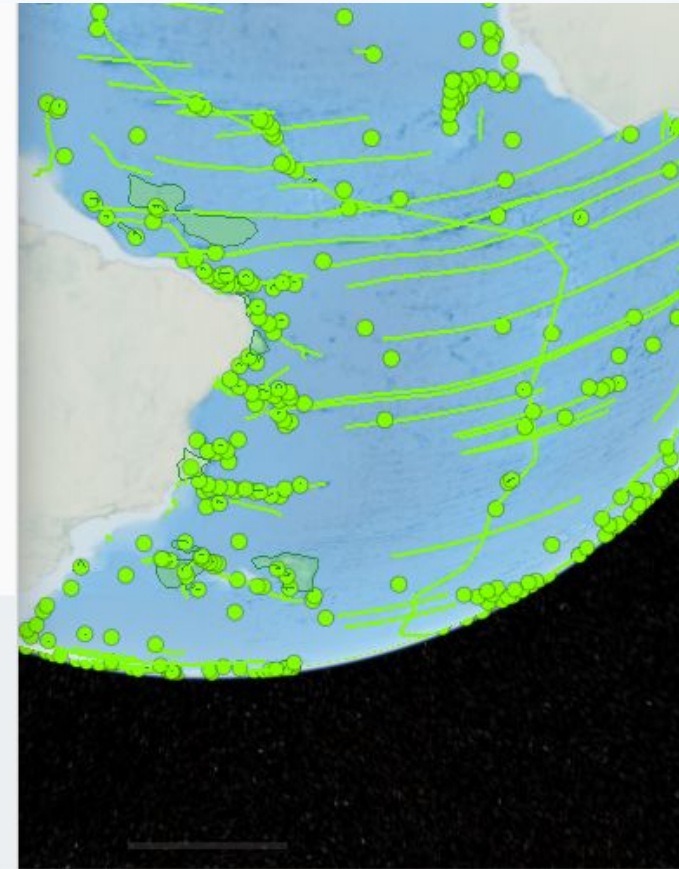
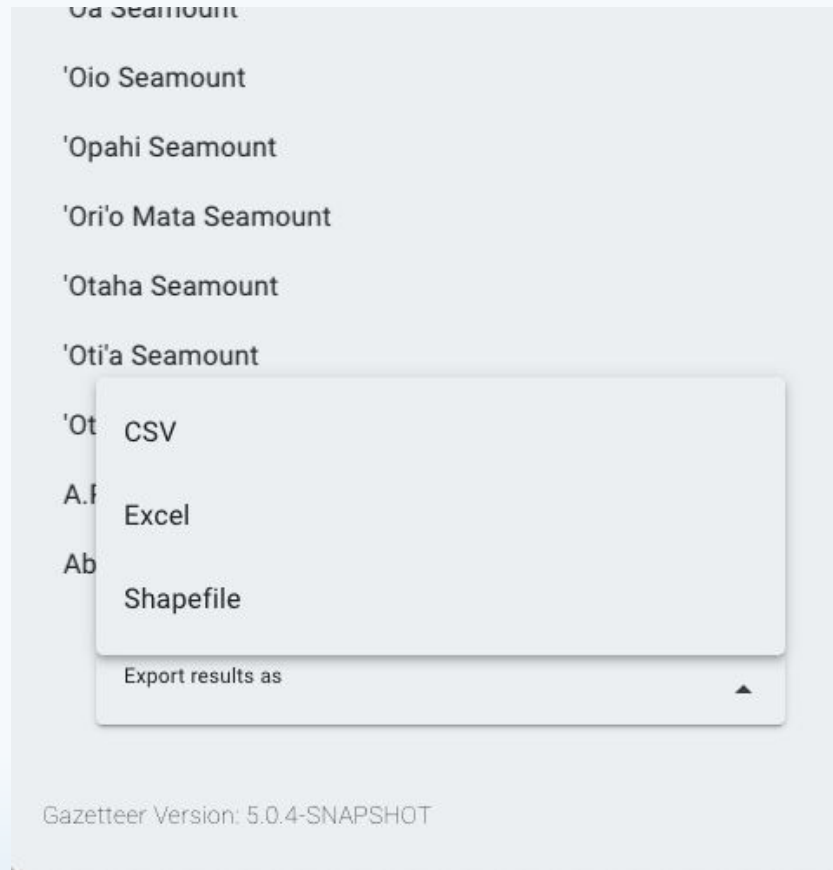
# Fix #3: Dropdown Deselection

In the feature workflow, once a dropdown was selected, it could not be deselected.



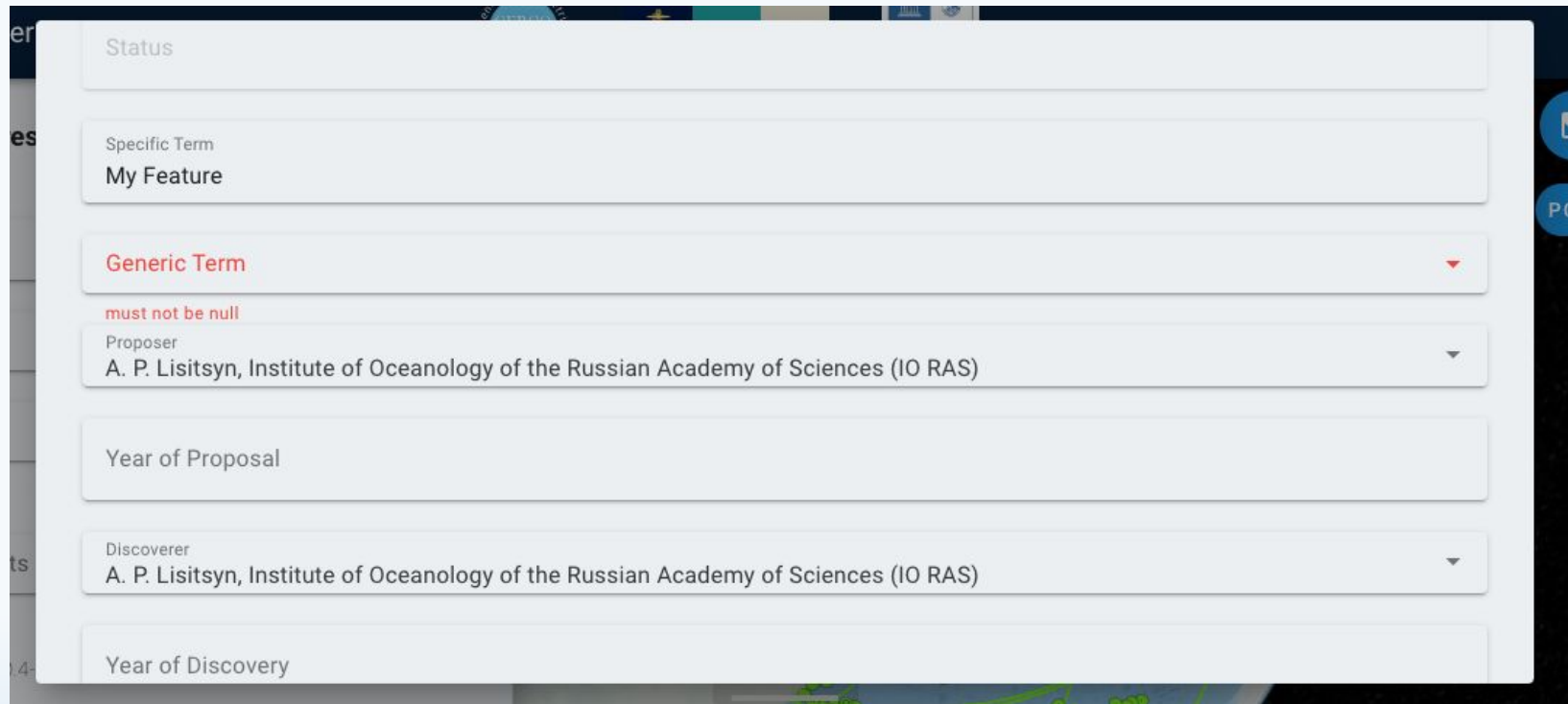
# Fix #4: Fix Feature Export

Feature export functionality was restored.



# Fix #5: Proposer And Discoverer Cleared On Error

In the feature workflow, the proposer and discoverer were cleared when an error was displayed on the form. This has been fixed.



The screenshot displays a web form with the following fields and values:

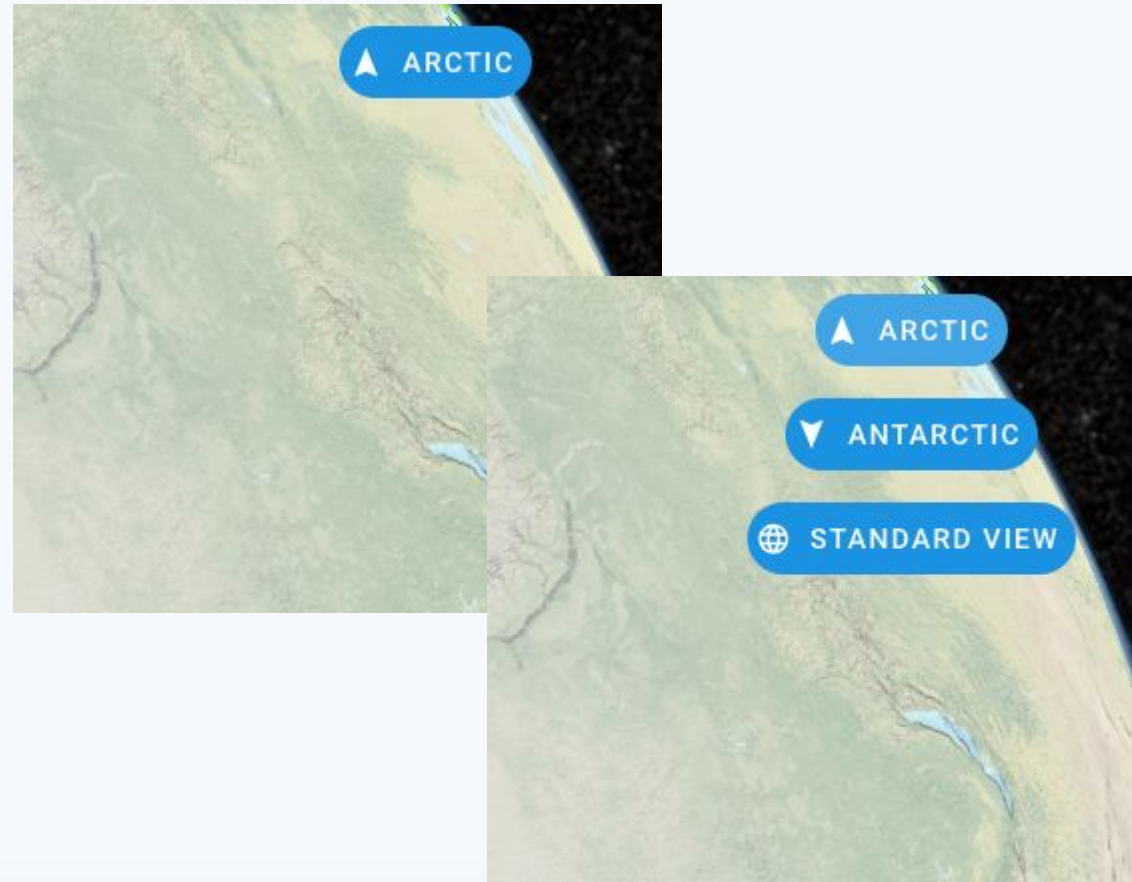
- Status: (empty)
- Specific Term: My Feature
- Generic Term: (empty, with a red error message "must not be null" below it)
- Proposer: A. P. Lisitsyn, Institute of Oceanology of the Russian Academy of Sciences (IO RAS)
- Year of Proposal: (empty)
- Discoverer: A. P. Lisitsyn, Institute of Oceanology of the Russian Academy of Sciences (IO RAS)
- Year of Discovery: (empty)



# Fix #6: Change Terminology On Polar View

It was commented that the polar view option, “Disable”, sounded permanent.

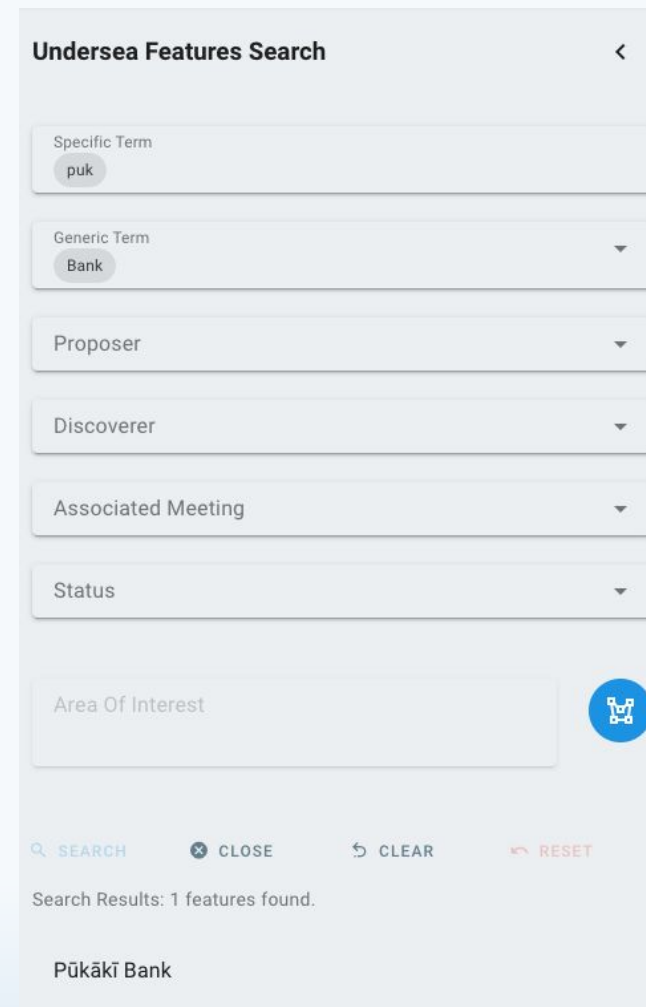
This was replaced with “Standard View”.





# Fix #7 - Search parameters not displayed when reopening search panel

When the search panel was reopened, the previous search parameters were not displayed. This has been fixed.



The screenshot shows a search panel titled "Undersea Features Search" with a back arrow in the top right corner. The panel contains several input fields and dropdown menus:

- Specific Term:** A text input field containing the value "puk".
- Generic Term:** A dropdown menu with "Bank" selected.
- Proposer:** A dropdown menu.
- Discoverer:** A dropdown menu.
- Associated Meeting:** A dropdown menu.
- Status:** A dropdown menu.
- Area Of Interest:** A text input field with a blue circular icon containing a map symbol to its right.

At the bottom of the panel, there are four buttons: "SEARCH" (with a magnifying glass icon), "CLOSE" (with an 'X' icon), "CLEAR" (with a circular arrow icon), and "RESET" (with a red 'X' icon). Below the buttons, the text "Search Results: 1 features found." is displayed, followed by the result "Pūkākī Bank".



# Fix #8: Link To IHO Was Broken

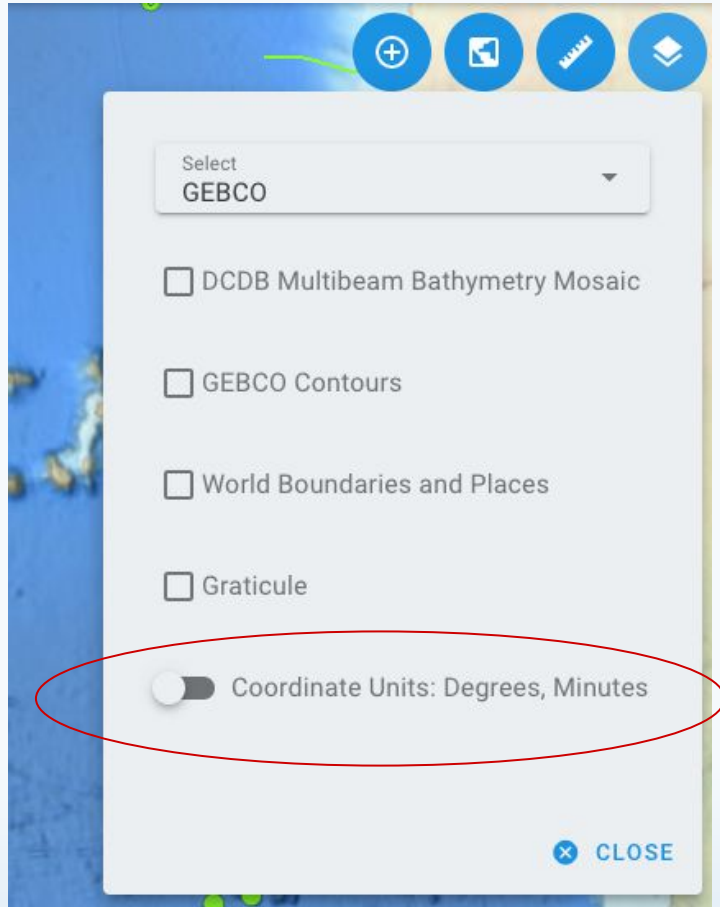
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The previous link was <https://iho.int/srv1/index.php>. This was changed to <https://iho.int/>.



# Fix #9 - Unable To Toggle Coordinate Units

The coordinate unit setting toggle was not working. This has been fixed



# KHOA OWS Interoperation Testing

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KHOA has been testing against the demonstration GEBCO Gazetteer instance running at <https://ccog.colorado.edu/gazetteer5>.

The Gazetteer software development team has been available for questions and server support.

One database failure occurred on the demonstration server and a backup was restored.

Communication and collaboration between the two teams allowed for testing to resume.



# The Future of SCUFN - Enhanced Naming

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Future enhancements to the GEBCO Gazetteer can be made to support:

1. Unique alphanumeric identifiers for undersea features (similar to star names)
2. Additional names for undersea features (multiple languages, variants)

Ref. SCUFN37-03.5A



# The Future of SCUFN - Enhanced Naming

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Changes required to support enhanced naming:

1. Update to relational database schema
2. Update to REST API
3. Update to public and administrator user interface
4. Possible updates to existing features to retroactively add unique identifiers (depending on SCUFN requirements)
5. Coordination with KHOA OWS developers to support interoperation

Estimated LOE: 1 developer month



# Any Other Items of Note

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**SCUFN Secretary to invite all proposers having ACCEPTED naming proposals to provide associated bathymetric data to the IHO DCDB**

- *Ref. SCUFN36/04.0/01, SCUFN36/10.2/01 and also from former SCUFN meetings*

To date, 2 datasets have been submitted:

1. Brazil - SCUFN34
2. Brazil - SCUFN32
3. China - SCUFN32

See: [ncei.noaa.gov/iho-data-centre-digital-bathymetry](https://ncei.noaa.gov/iho-data-centre-digital-bathymetry)



# Technical Side Meeting - 2024/06/24

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## Outcome

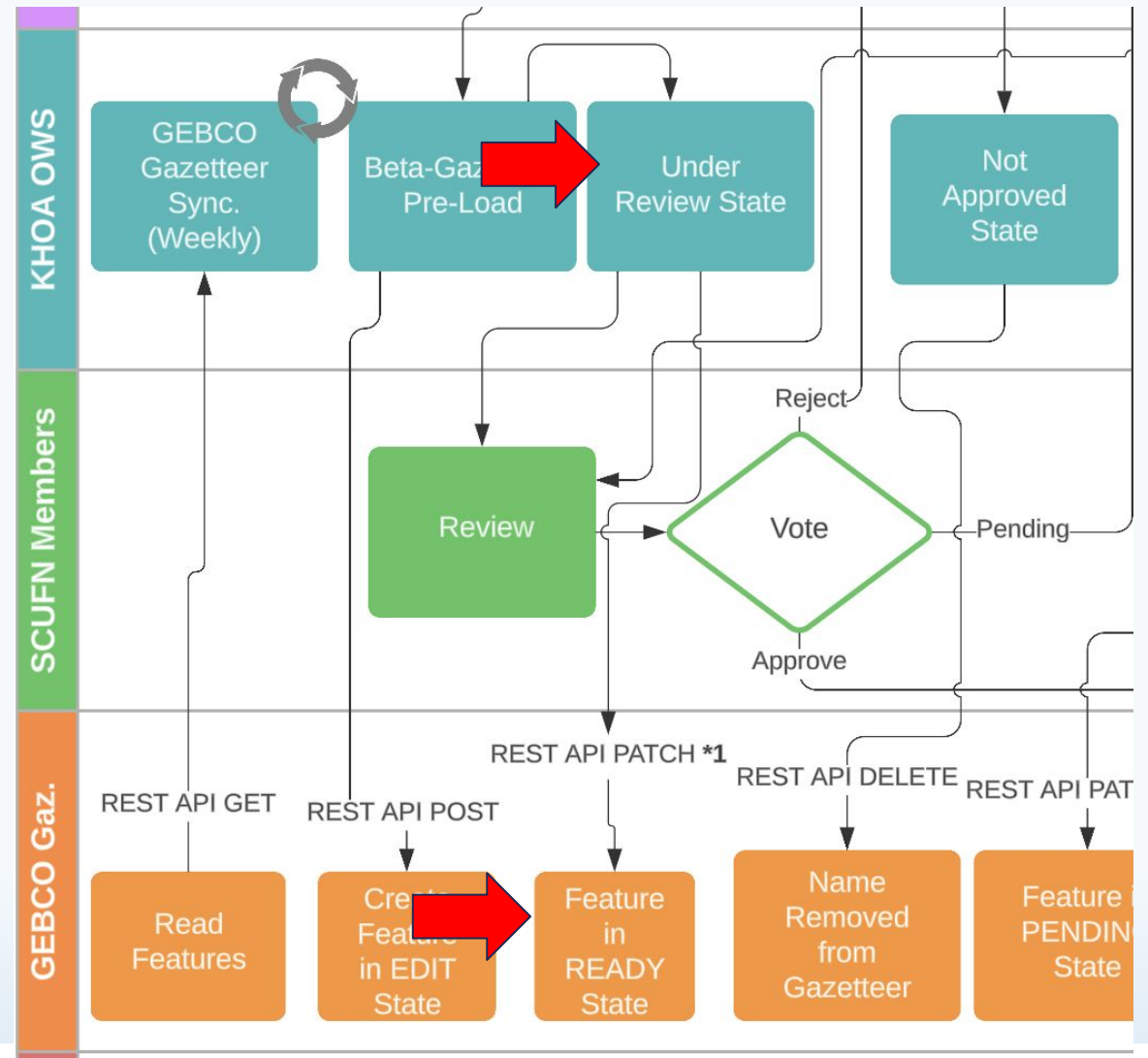
1. Answered questions related to managing features via the GEBCO Gazetteer REST API
2. Updated KHOA OWS -> GEBCO Gazetteer flow diagram
3. Generated new question about maintaining non-accepted features





# Technical Side Meeting - Updated Flow

KHOA SCUFN OWS will update Gazetteer to READY state when ready for review



Full flow chart:  
<https://lucid.app/lucidchart/c42d1ce4-791c-4e83-b9ae-0925d626095f/view>

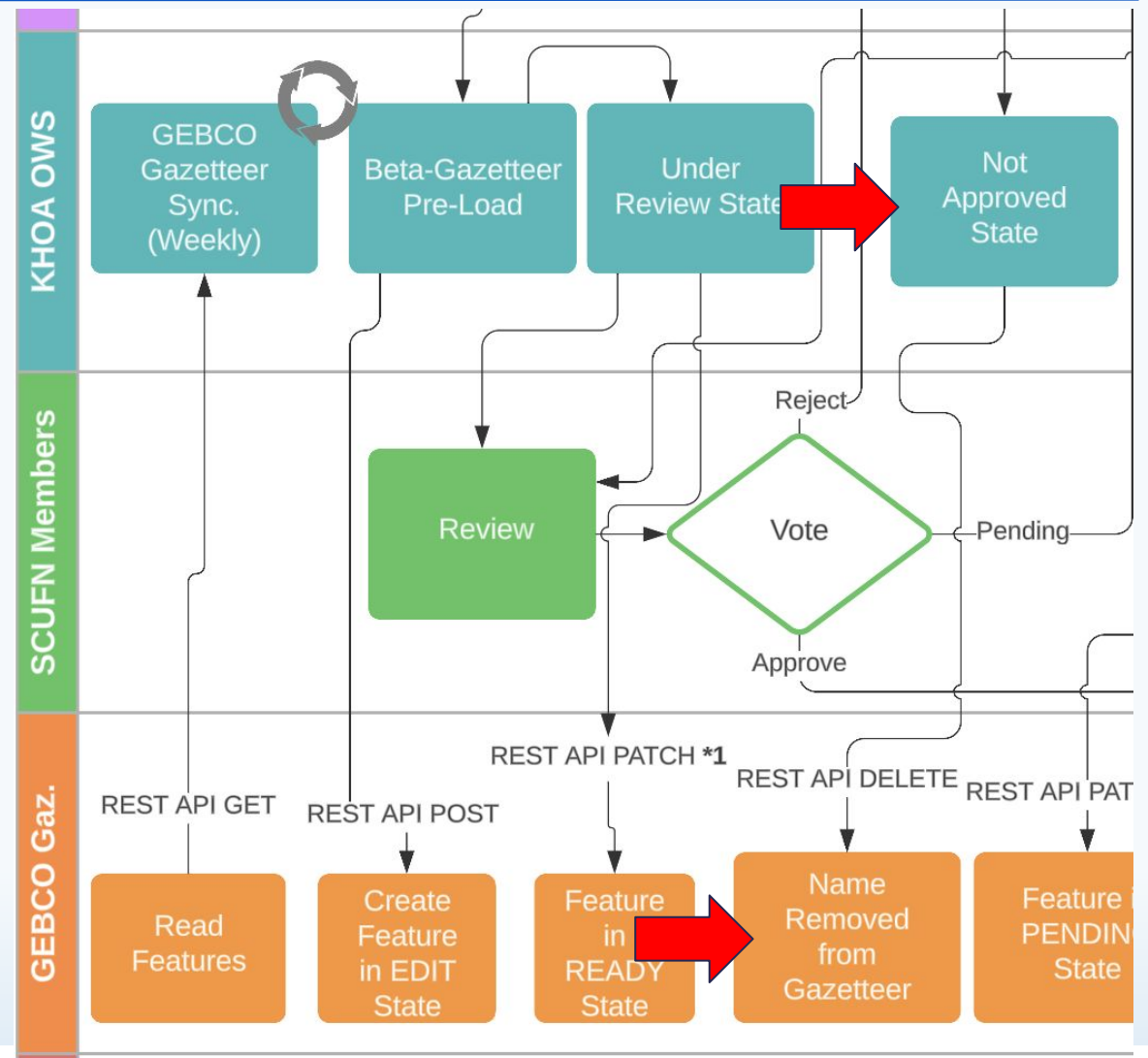


# Technical Side Meeting - Non-Accepted Features

Questions of SCUFN:

Should the GEBCO Gazetteer retain non-accepted features?

If so, should a new state in the GEBCO Gazetteer be defined?  
**NOT\_APPROVED?**



# Recommendations

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1. SCUFN Members test Gazetteer v5 and notify the IHO DCDB of any issues.
2. SCUFN members provide support and feedback when needed during development of the GEBCO Gazetteer and KHOA OWS interoperation.
3. KHOA OWS developers continue to test with the Gazetteer v5 test environment and let GEBCO Gazetteer developers know of any issues, changes, or questions.
4. Provide detailed requirements for implementation of enhanced feature naming
5. SCUFN Members provide guidance on matter of retaining non-accepted features within the GEBCO Gazetteer



# Justification & Impacts

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It should be understood that continued improvements and enhancements of the Gazetteer will remain incremental.

Annual funding will continue to be used to:

- a. Perform annual maintenance and upgrades (when necessary)
- b. Implement a limited number of requested enhancements
- c. Progress the development of the GEBCO Gazetteer and KHOA OWS interoperation



# Actions required of SCUFN

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SCUFN is invited to:

- a. note this paper;
- b. consider the Recommendations and Impacts listed.

