REQUIREMENT

The IUCN wishes to award a consultancy contract to an experienced software development agency to:

- Implement the new design of the visualisation module of the *Contributions for Nature* Platform (CfNPlatform), following the technical specification provided in this TOR.
- Implement further developments to answer IUCN needs on the CfNPlatform
- · Provide technical support and maintenance for the CfNPlatform for the duration of the contract

The Contractor will be required to work according to the detailed Terms of Reference contained in the following sections. The Contractor must uphold high standards of professionalism in its work and interactions with IUCN communications team and the *Contributions for Nature* platform leadership.

1. BACKGROUND

1.1. Background to IUCN

The IUCN consists of three primary components: IUCN Member organizations, IUCN Commissions, and the IUCN Secretariat. Each component has distinct roles, responsibilities, and relationships within the Union, sometimes functioning as individual entities. With over 1400 Member organizations, including states, government agencies, non-governmental organizations, and indigenous people's organizations from over 160 countries, the Union's reach is extensive. The seven Commissions have over 16,000 volunteer experts organized into numerous specialist groups, while the Secretariat operates offices in over 50 countries and oversees projects in more than 150.

The 2011 "One Programme Charter" established a mandate for the IUCN to execute its Quadrennial Programme in a manner that incorporates contributions from all Union components, including Members, National and Regional Committees, Commissions, and the Secretariat.

1.2. Background to the IUCN Contributions for Nature Platform

The currently operational *Contributions for Nature* platform launched in October 2022. It comprises of three distinct—but interacting—modules:

- <u>Data Entry Module</u>. This module allows IUCN constituents to submit and document the locations where they are undertaking—or planning to undertake—conservation or restoration actions over the timeframe 2021–2030. It is accessible only to those with IUCN login credentials from across the IUCN constituency. The Data Entry module is the entry point where users enter contributions.
- <u>Validation Module</u>. Conservation actions submitted via the data entry module sit in the validation module until IUCN staff can validate submitted contributions. If/when approved, contributions are

viewable within the public-facing visualisation module. The Data and validations API is the interface with the IUCN systems, databases and validation rules.

• <u>Visualisation Module</u>. This module allows the public to view validated contributions towards global goals for nature. This module is arguably the most important as it's the window into the Union's work towards conservation actions. On the public Data Visualization Application, it's possible to review contributions on a map with charts and filter by various attributes of the contributions.

The Public and Private applications are built using a blend of JavaScript, React, Redux, HTML, CSS, ArcGIS API for JavaScript, TerraFormer, Turf, is Highcharts. is and other libraries.

The Data and Validations API are built with JavaScript, Node.js, SQL and other libraries.

The primary data store for the applications is Esri ArcGIS Online.

The Data and validations API utilizes functionality and hosting from Amazon Web Services.

The IUCN Contributions for Nature platform integrates with a custom IUCN authentication system as well as with IUCN's CRM to retrieve user information through custom webservices.

IUCN (iucncontributionsfornature.org)

Although the existing version of the visualization module incorporates all essential features, it was not easily accessible or transparent for individuals without specialized knowledge to navigate and comprehend. To address this, the IUCN collaborated with an external design agency to enhance the user interface and experience of the visualization module, aiming to simplify navigation and comprehension for all users.

2. TECHNICAL REQUIREMENTS

We have split these requirements into 3 distinct components:

- (2.1) Implementation of the new visualisation module
- (2.2) Further development
- (2.3) Basic support and maintenance.

Please note that this division is merely for the sake of clarity. In your proposal, feel free to group or re-arrange these topics in way that better represents your work methodology, but make sure that budget and resource allocated for each of this topic is clear.

2.1 Technical specification on the design of the future visualisation module

The interactive prototype of what needs to be implemented is available at the links below:

Interactive Prototype Design Annotations

Scope of work and activities:

This topic relates to the implementation of the newly designed User Interface (UI) for the IUCN Contributions for Nature platform's visualization module. Specifically, the tasks include:

- Implementing the new design based on the validated prototype and technical description.
- Ensuring all previous links and functionalities are maintained.
- Guaranteeing that the updated UI sustains or enhances the platform's overall performance and loading speed.

As an initial step, the Contractor should familiarize themselves with the existing technology and functionality of the Visualization Module, along with the prototype of the new design. A thorough understanding of the interactions between different views and functionalities in the prototype versus the actual visualization module is essential for proper implementation.

Subsequently, the contractor will proceed to implement the new visualization module. During the UI implementation, it may become evident that amendments to the functionality of the visualization module would be beneficial. These should be documented separately for future enhancement efforts and will need IUCN validation before being potentially implemented through the "further development" topic of this RfP.

The final deliverables will include:

- A test version of the new visualization module for IUCN Contribution for Nature team leads to evaluate navigability before final deployment.
- The final version of the new visualization module online.
- A summary report outlining the main complexities and suggestions for improvement to facilitate future substantial changes in the visualization module.

2.2 Technical specification for further development of the Contribution for Nature platform

The IUCN CfNPlatform is constantly evolving as new needs arise and new functionalities are needed. The selected contender will work together with the IUCN to understand and clarify the needs, define the specific requirements and finally implement the needed solution.

Scope of work:

- Provide a technical proposal, including an effort estimation, to respond to IUCN's needs for new functionality
- Implement technical solutions to add new functionality to the platform based as agreed with IUCN suggested improvements
- During active developments, conduct regular meetings with IUCN to clarify scopes and objectives, to provide situation points and define next steps.

Foreseeable development needs (to be confirmed):

- Propose and develop a solution for easier user / role management on the platforms (i.e. identify validators; provide access to regional reports, etc)
- Implementation of "Contribution of the Month" functionality, a system whereby new contributions can be highlighted for inclusion on the IUCN website or social media channels. CfNPlatform administrators should be able to select the contribution they wish to highlight.
- Identify a solution to allow identifying contributions as by non-IUCN members (i.e. submitting a contribution on behalf of another organisation)

2.3 technical specification for basic support and maintenance

The selected contractor will provide maintenance and support for the Contributions for Nature Platform, including:

Monitor AWS infrastructure for error messages, required updates, performance issues

- Perform infrastructure upgrades as necessary
- Perform application / library security upgrades as necessary
- Ensure regular backups are maintained and accessible
- Perform a full site recovery if needed
- Update the platform in response to changes in IUCN systems (integrations)
- Update the platform in response to changes in the ArcGIS Online system
- Perform small bug fixes as requested

The selected contractor must be pro-active about security upgrades, to both the infrastructure and application, and alert IUCN in case of need for upgrading. Security standards must be guaranteed, such as basic general security and privacy configuration, user roles and permission configuration, restriction of certain files and sensitive documents.

3. PROJECT MANAGMENT

The Contractor will lead the project coordination including managing discussions, feedback and delivery schedules to meet deadlines. The Contribution for Nature Platform team leads will assist with internal IUCN coordination, but it will be the overarching responsibility of the Contractor to manage the operations of the project to ensure quality and on-time delivery. Should IUCN require adjustments to the timeline, it will be the responsibility of the Contractor to adjust the project workflow accordingly to maximise the efficiency and delivery under the new deadlines.

4. PREFERRED COMPETENCIES

The selected Contractor must possess relevant experience in developing web interfaces tailored for scientific and/or policy organizations. Additionally, the contractor should have a thorough understanding of the incumbent languages and frameworks currently in use (i.e. Node.js, AGOL, SQL etc). They must adapt these technologies to meet the requirements of the new visualization module, ensuring the retention of all existing operational functionalities while incorporating new functions specified in the design documentation.

5. DURATION OF THE ASSIGNMENT AND BUDGET

The maintenance and development contract will have the duration of 1 (one) year and will be renewed yearly at IUCN's discretion for the maximum duration of 5 (five) years.

Implementation of the new visualisation module- priority development

A deadline has been set in alignment with the forthcoming IUCN Regional Conservation Fora scheduled for the latter half of 2024. The implementation of the new visualization module must precede these events to encourage active participation from IUCN members on the platform and to effectively showcase a comprehensive representation of the Union's initiatives at the subsequent IUCN World Conservation Congress in 2025. A specific effort on implementing the new design of the visualisation module is expected in the first months of this contract with the aim to have the newly implemented visualization module ready for presentation by September 2024 and, if possible, a draft version for mid-June 2024.

When submitting your offer, please make sure that you clearly define time, resources and budgets aimed towards implementing the new look visualisation module. Further development and maintenance tasks not directly related to the new visual look of the platform should be budgeted for and scheduled accordingly.

Further Development

The contract will include a yearly number of development hours to implement new functions (in addition from the implementation of the visualisation module). The package of hours dedicated for each development task

as well as the timeline will be agreed in advance between IUCN and the contractor once clearly defined. Please provide rate per hour for different package of time.

Maintenance

The yearly budget for maintenance should remain stable over time.

6. LANGUAGE

English will be the working language during the consultation meetings. The Contractor and its project staff should have a working understanding of English as it will not always be possible for IUCN to provide instructions or updates in other languages.

Annexe: Description of the new visualisation module

A detailed description of the enhancements between the actual and the future visualisation module is also available below:

Primary Navigation

As a central element in the experience, the primary navigation menu has been redesigned to better represent the full suite of features available to a user within the platform.



Enhancements

Language Selection Behavior

To help users immediately understand the tool, we have proposed a system where the languageselect dropdown automatically updates based on the language a user has set their browser to display in, if possible. For instance, if a user has set their browser to display in French, the Contributions for Nature platform should load in French.

Tutorial Experience Trigger

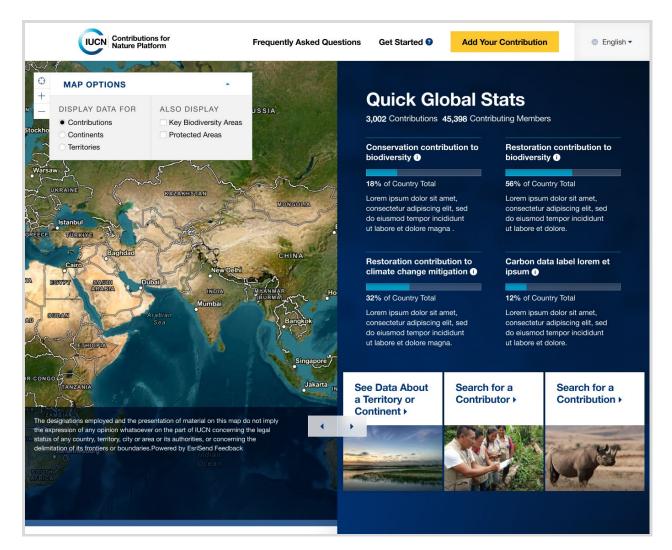
As part of the newly proposed tutorial experience, the navigation menu has been updated to include a button labeled "Get Started" that allows users to recall the <u>tutorial</u> that would appear when a new user accesses the platform for the first time.

"Add Your Contribution" Button

To highlight that viewers of the platform can submit their own contributions, the navigation menu has been updated to include a highly visible "Add Your Contribution" link.

Default View

Due to the <u>removal of the introductory landing page</u> that all users must currently navigate before interacting with the platform data, the Default View has been enhanced with new features intended to orient new audiences to the platform and the data housed within it. The Default View will now be the first thing that users see when they access https://www.iucncontributionsfornature.org/.



Additional Indicator Metric

The Default View will contain a fourth indicator metric under the "Global Stats" heading. Consistent with the other metrics, the new metric will be displayed as a "Battery Chart."

Data Visualization Style Updates

To more clearly represent how contributions contribute to global conservation and restoration goals, the existing pie charts that currently appear under the "Quick Global Stats" header have been redesigned as "Battery Charts." The new datavisualization style displays the percentage of total beneath a single bar and can include a descriptive sentence.

Contributions and Contributor Counts

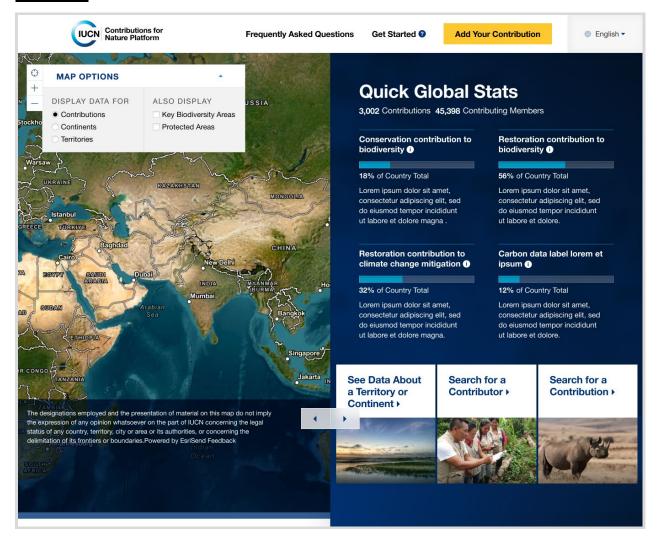
These two metrics—derived from the submission data—have been added beneath "Quick Global Stats."

Enhanced Search Options

To better showcase the different types of data available within the platform, the Default View has been enhanced to more clearly present three distinct search options: one for contributions, one for contributors, and one for territories/continents. By clicking any of these options, a user can launch the corresponding search experience. More information on each search experience is provided in the appropriate sections below.

- Contribution Search
- Contributor Search
- Territory/Continent Search

Map View



The crux of the platform experience, the Map View allows users to see a visual representation of contribution data. The map experience has been enhanced with consolidated filter options, a more flexible viewport, and a more logical integration of the Map View and the adjacent data panel.

Enhancements

Location Detection

To help orient users upon their arrival, the platform will detect each user's location based on their IP address (if the user agreed to share it with their browser) and center the Map View on the user's location. Location detection can be triggered manually by clicking the icon located above the zoom buttons in the top left corner of the map interface.

Simplified Filter Options

To help users better understand the filter options available to them in the platform, map filters have been consolidated under a single menu titled "Map Options." The menu has two sections:

 The "Display Data For" menu's functionality changes the visual representation on the map, allows users to decide what data is plotted on the map. Upon page load, the "Contributions" option will be selected. In this state, the Map View displays the polygons that have been drawn to represent Contributions data. When a Contributions polygon is clicked, the corresponding Contribution Profile is shown within the data panel. When set to either "Continents" or "Territories," the contributions polygons are hidden, and the borders of continents or territories are highlighted to indicate to the user that they can be clicked. When clicked, the corresponding territory or continent report is shown within the data panel.

• The "Also Display" menu includes checkboxes that add visual overlays indicating key biodiversity areas and protected areas. Neither of these options will be selected by default, and, when selected, neither will affect a user's ability to click the contributions, continents, or territories data that is being displayed concurrently.

The menu has been redesigned as an accordion element that allows users to expand or collapse the menu to better focus on the map itself. The accordion will be expanded by default; when collapsed, it will include a status indicator that shows which options have been selected.

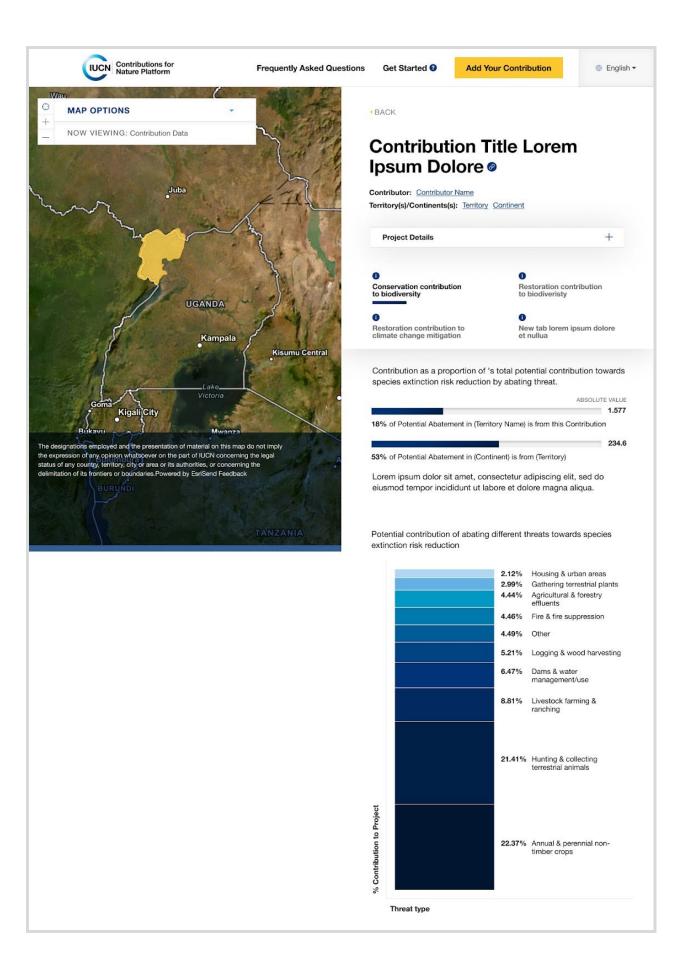


Redesigned Base Map Styles

To streamline the options available to the user, the Map View will use the ArcGIS "NAME" style, and the existing "Map Styles" menu will be removed. Additionally, to improve contrast with the base map, the polygons representing contribution spatial data and territory and continent borders will be yellow instead of blue.

Contribution Profile

As a central element of the experience, the Contribution Profile has been redesigned to improve content and data hierarchy and enhanced legibility. In addition to styling updates found throughout the designs, the profile header will now provide additional contextual detail while helping users can access the most relevant data more effectively.

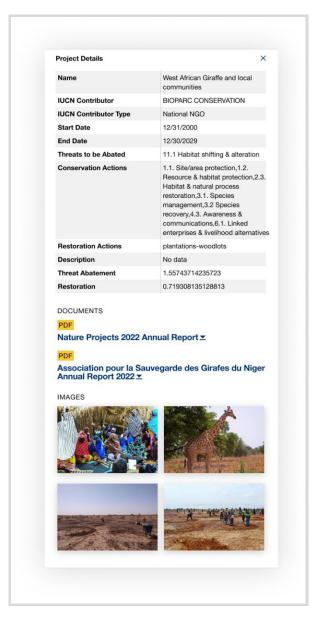


Updated Header

To connect the profile with the rest of the experience, the header has been updated to include new functionality (i.e., a "Back" button and "Share" button) while surfacing relevant details like the contributor name and the associated territories and continents. To allow users to continue their journeys through the tool, references to the related contributors, territories, and continents will now link to the associated profiles.

Project Details Accordion

Because of the inconsistent availability of the data related to budget, staff size, and beneficiaries, this information has been consolidated into an interactive accordion element labeled "Project Details." Because users are more likely to be looking for the indicator data found lower in the data panel, the accordion element will be collapsed upon page load and expanded upon a user's click or tap.



Indicator Metric Redesign

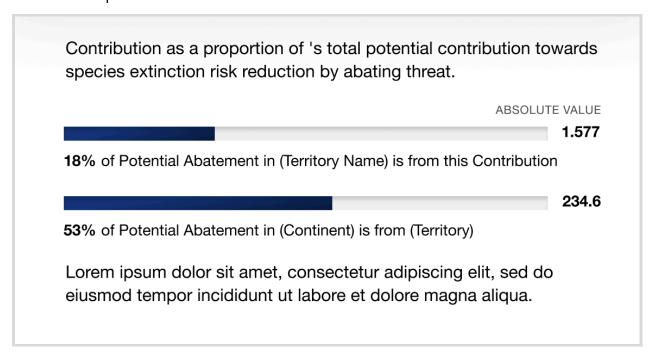
To accommodate a fourth indicator metric across the platform, the data panel's tab system has been redesigned to more easily display labels of a variety of lengths while ensuring users are able to scan all available tabs quickly.

Data Visualization Style Updates

As part of the redesign of the data presentation throughout the platform, the existing pie charts found on all tabs of the Contribution profile will be replaced with the new "Battery Chart" datavisualization pattern. The charts, which are similar to single-bar horizontal bar charts, will include a label displaying the data count within the bar itself, a descriptive label beneath the bar that includes the percentage value of the data, and an optional descriptive sentence that can add further context as needed.

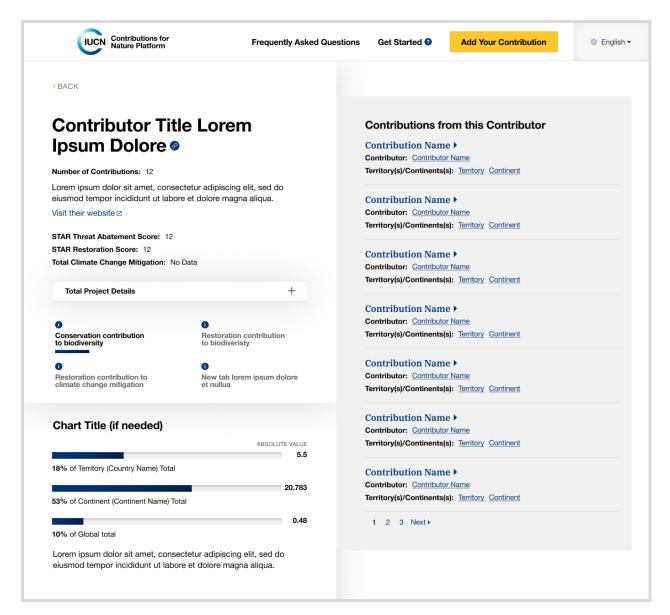
Within the Contributions profile, the Battery Charts will appear above the stacked bar chart and consolidated to two charts on each tab rather than the current three charts.

- The first chart will show the percentage of the contribution's potential abatement compared to the total potential of the related territory.
- The second chart will show the percentage of the territory's potential abatement compared to the total potential of the related continent.



Contributor View

Formerly known as the "Constituent" profile, this view presents data about the IUCN constituents who have contributed data to the platform. Because contributor data cannot be displayed on a map, the map view will instead be replaced within the contributor view with a list of links. These links will direct users to the existing contributions associated with the current contributor.



Updated Header

To connect the contributor view with the rest of the experience, the contributor profile header has been updated to include new functionality (i.e., a "Back" button and "Share" button) while surfacing relevant details like the number of contributions associated with the contributor, an optional descriptive bio, and a link to the contributor's website, if available.

Total Project Details Accordion

Similar to the redesigned "Project Details" accordion on the contribution profiles, a new accordion will appear within the contributor view titled "Total Project Details." The accordion will contain optional data such as "Total Budget," "Total Budget Needed," and "Total Number of Staff."

Indicator Metric Redesign

To accommodate a fourth indicator metric across the platform, the data panel's data tab system has been redesigned to more easily display labels of a variety of lengths while ensuring users are able to scan all available tabs quickly.

Data Visualization Style Updates

As part of the redesign of the data presentation throughout the platform, the existing pie charts found on all tabs of the Contributor profile will be replaced with the new "Battery Chart" datavisualization pattern. The charts, which are similar to single-bar horizontal bar charts, will include a label displaying the data count within the bar itself, a descriptive label beneath the bar that includes the percentage value of the data, and an optional descriptive sentence that can add further context as needed.

Although the number of charts may vary based on the availability of data from each Contributor, in general:

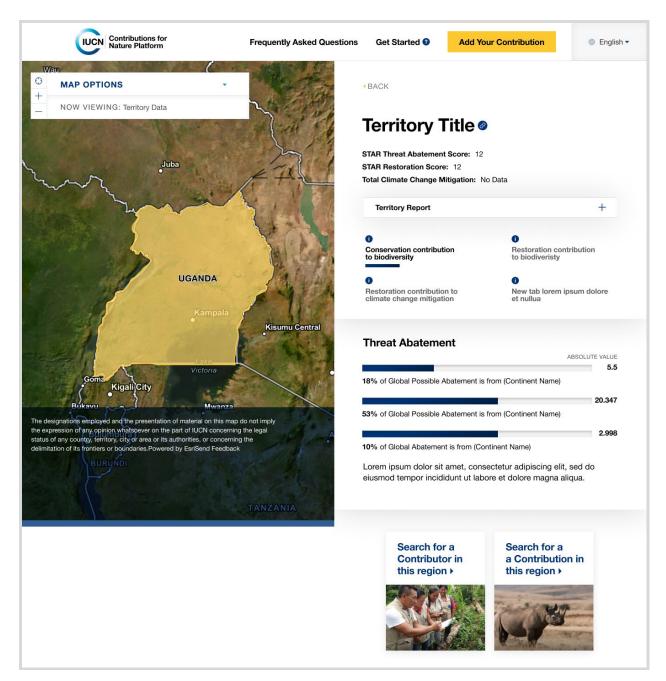
- The first chart will display the percentage of a Contributor's total contributions' potential abatement compared to the total potential of the related territory.
- The second chart will display the percentage of the territory's potential abatement compared to the total potential of the related continent.
- The third chart shows the percentage of the continent's potential abatement compared to the total global potential.

Redesigned Listing Style

To better utilize available space, increase design system consistency, and help users scan a Contributor's contributions, the listing style for contributions has been redesigned to match the listing style found within the redesigned contribution search experience.

Territory View

The enhancements to the view used to present data for territories are intended to align the user experience of this data with the presentation of similar data throughout the platform. Additional design updates have optimized the use of space and introduced new components to allow users to to find similar content, as needed.



Updated Header

To connect the territory view with the rest of the platform experience, the territory header has been redesigned to include new functionality (i.e., a "Back" button and "Share" button). Additionally, top-level metrics for "STAR Threat Abatement Score," "STAR Restoration Score," and "Climate Change Mitigation" have been moved from the territory report into the header.

Data Visualization Style Updates

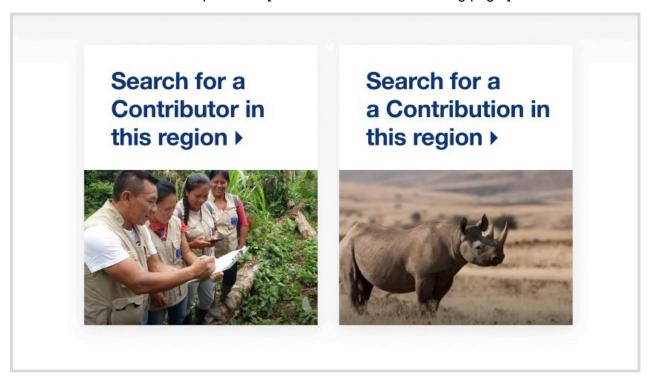
As part of the redesign of the data presentation throughout the platform, the existing pie charts found on all tabs of the Territory profile will be replaced with the new "Battery Chart" datavisualization pattern. The charts, which are similar to single-bar horizontal bar charts, will include a label displaying the data count within the bar itself, a descriptive label beneath the bar that includes the percentage value of the data, and an optional descriptive sentence that can add further context as needed.

Within the Territory Profiles:

- The first chart will display the total potential abatement of the territory.
- The second chart will display the territory's total potential abatement as a percentage of the continent's total potential abatement.
- The third chart will display the percentage of the continent's total potential abatement compared to the total global potential.

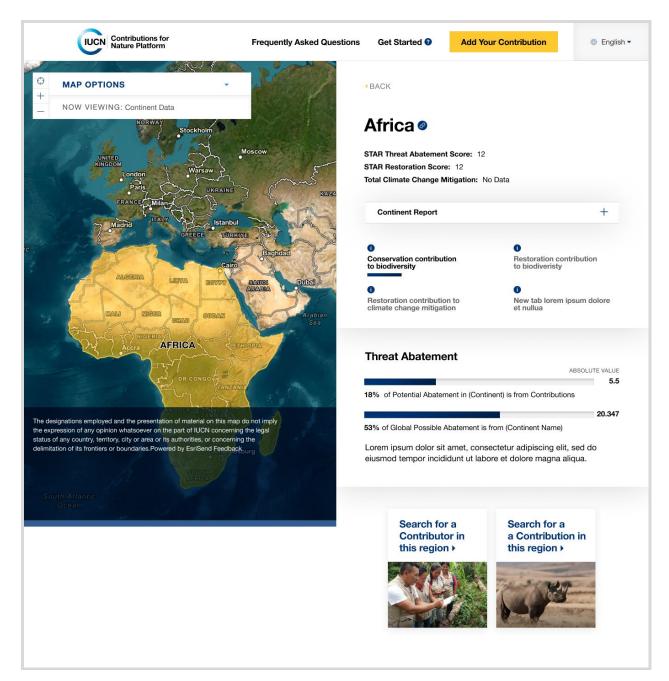
Enhanced Search Options

To encourage a user to continue their journey and find content related to the current territory, new links have been added for "Search for a Contribution in this Territory" and "Search for a Contributor in this Territory." When clicked, these links open the corresponding search experience with the query set for the title of the current territory. For example, selecting "Search for a Contribution in this Territory" while viewing "Malta" would direct a user to a search results page for "Malta" in the "Search for a Contribution" experience. [Screenshot is on the following page.]



Continent View

The enhancements to the view used to present data for Continents is intended to align the user experience of this data with the presentation of similar data throughout the platform experience. Additional design updates have optimized the use of space and introduced new components to allow users to to find similar content, as needed. [Screenshot is on the following page.]



Updated Header

To connect the territory view with the rest of the platform experience, the territory header has been redesigned to include new functionality (i.e., a "Back" button and "Share" button). Additionally, top-level metrics for "STAR Threat Abatement Score," "STAR Restoration Score," and "Climate Change Mitigation" have been moved from the continent report into the header.

Datavisualization Style Updates

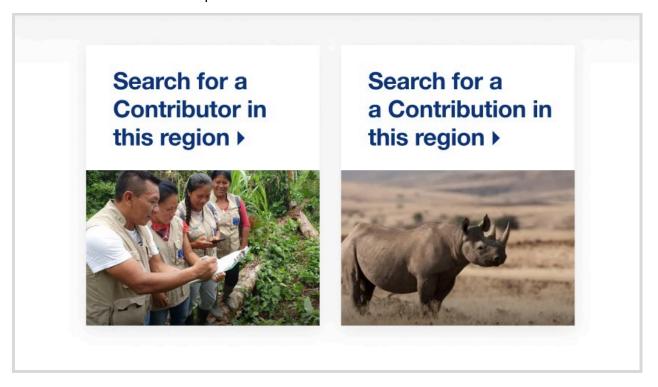
As part of the redesign of the data presentation throughout the platform, the existing pie charts found on all tabs of the Continent profile will be replaced with the new "Battery Chart" datavisualization pattern. The charts, which are similar to single-bar horizontal bar charts, will include a label displaying the data count within the bar itself, a descriptive label beneath the bar that includes the percentage value of the data, and an optional descriptive sentence that can add further context as needed.

Within the Continent Profiles:

- The first chart will display the total potential abatement in the continent.
- The second chart will display the continent's total potential abatement as a percentage of the total global potential.

Enhanced Search Options

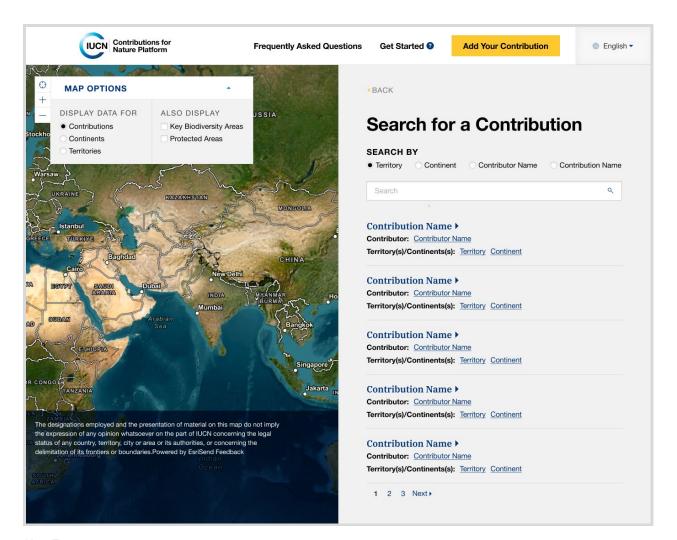
To encourage a user to continue their journey and find content related to the current territory, new links have been added for "Search for a Contribution in this Continent" and "Search for a Contributor in this Continent." When clicked, these links open the corresponding search experience with the query set for the title of the current territory. For example, selecting "Search for a Contribution in this Continent" while viewing "Africa" would direct a user to a search results page for "Africa" in the "Search for a Contribution" experience.



New Elements

Contribution Search

A new search experience was created as a part of the updates to the search experience within the existing default view of the platform. Contributions will now have a unique search experience that allows users to use the data panel to search for contributions in a similar way to how they could use the map to search.



Key Features

Faceted Search

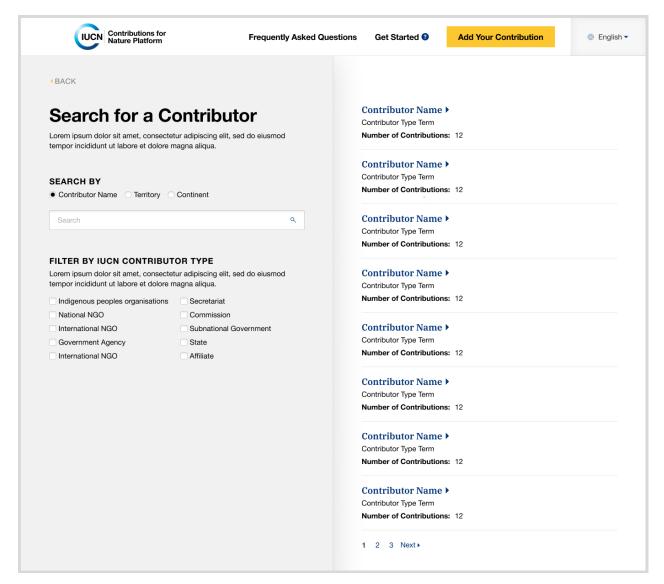
To better help a user find the Contribution they're looking for, a set of facets has been developed to allow a user to search for a contribution by different criteria, including: the location of the contribution (either the territory or the continent depending on which radio button is selected), the contributor name, or the contribution name. By default, the search will search by "Territory."

Contributions Listing Style

As part of the effort to help users understand the different ways they could search for a contribution, a redesigned listing style for search results will include a link to the associated Contributor profiles and the associated Territory and Continent profiles.

Contributor Search

A new feature created as a part of the updates to the search experience on the Default View, this new experience leverages both sides of the screen to allow users more space to search for a constituent, now referred to as a "Contributor." The map was removed from this view because contributor data cannot be plotted on the map in the same way as a contribution, territory, or continent.



Key Features

Faceted Search

To align the Contribution search experience with other new and enhanced search experiences, a redesigned faceted search approach will allow users to search for Contributors by name or the territory or continent they work in. By default, search will be set to "Contributor Name."

Contributor Type Filters

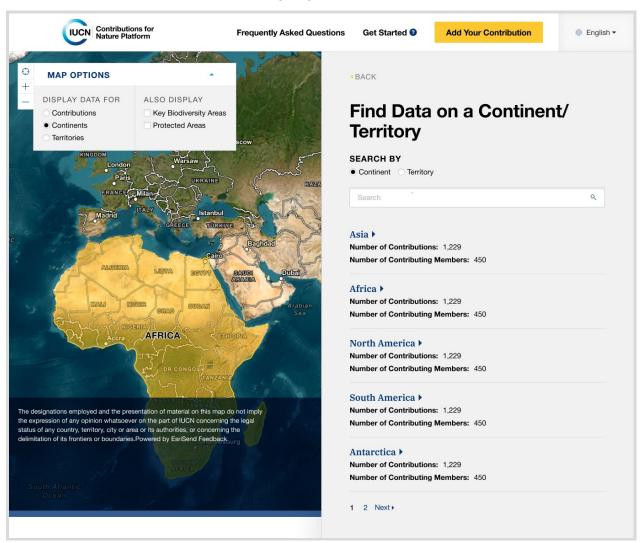
To better surface all available filters to a user at once, filters for "Contributor Type" (formerly known as "Constituent Type") have been moved out the existing accordion element.

Contributors Listing Style

The redesigned search results experience is intended to provide additional detail to help a user differentiate between potentially similar options. In addition to the Contributor's name and a link to their profile, search results will also include the associated "Contributor Type" terms associated with a Contributor and the total number of Contributions they have made.

Territory/Continent Search

Designed as part of updates to the Default View, this new experience allows users to search for Territory reports (formerly known as Land Regions) and Continent Reports within the same experience. [Screenshot is on the following page.]



Key Features

Faceted Search

Users will be able to search for a continent or territory by name by selecting the corresponding radio button. This will default to "Continent."

Territories/Continents Listing Style

As with Contributions and Contributors, the search results style for both Territories and Continents has been redesigned to show a territory or continent name and link, the number of contributions within the territory or continent and the number of contributors working in that territory or continent.

Global Enhancements

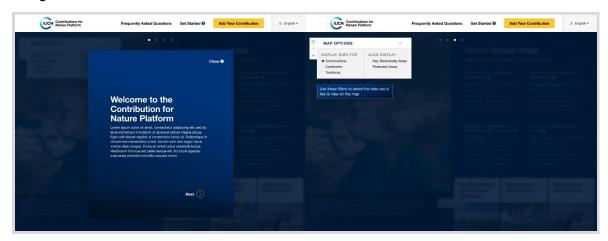
Visual Identity Alignment

Styles (colors, typography, UI element patterns) have been updated throughout the platform to better align with the IUCN institutional visual identity system and to improve the usability of features and functionality that are unique to Contributions for Nature. Interactive elements have been redesigned to more clearly convey their interactivity.

In-Context Tutorial

To provide direct and efficient access to the platform while still providing new users with guidance necessary to effectively navigate engage with data and content, a new tutorial experience will trigger upon page load for new users. The tutorial experience comprises a modal carousel, followed by contextual tooltips that animate to introduce users to the platform.

The tutorial can be summoned again by clicking the "Get Started" button in the redesigned navigation menu.



Flexible Default View

To provide users with more options for viewing platform data in the ways they prefer, users can expand either the data panel or the interactive map elements within the default view.

Data Visualization Updates

To ensure users are able to better understand the various data within the platform, every pie chart has been replaced with a "Battery Chart"—a single bar horizontal bar chart that has a label beneath it (often displayed as a percentage) with additional text, a count that can be shown or hidden, and an optional description sentence that can be added.



Unique URLs

As a priority for this experience, every search within the tool will be given a unique URL. This update will enable share button features in the profiles for contributions, contributors, territories, and continents and the back button found throughout the platform.

Back Button

The "Back" button, shown throughout the designs, will enable users to return to the previous stage of their journey. This is a requirement that will only be possible alongside the development of unique URLs for each view in the experience.

Removing Landing Page

As part of the updates to the platform, the current landing page that can be found at https://www.iucncontributionsfornature.org/ will be removed; instead this URL should now take users to the Default View.

"Please Narrow Your Selection" Screen for Overlapping Contributions

To help users more intuitively select between two contributions that may be overlapping on the map, we developed a new view titled "Please Narrow Your Selection". This view will appear when a user clicks a polygon corresponding to a contribution that overlaps with at least one other contribution on the map view. It will then present the overlapping contributions in the "Search for a Contribution" listing style within the data panel. When each contribution's name is hovered over, the corresponding polygon should appear in an active state to connect the listing in the data panel to the polygon on the map.

