Yale BGC Center Spring 2023 Newsletter
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Tamara Rudic <terudic@gmail.com>
To: bgc@mailman.yale.edu
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Yale Center for Biodiversity and Global Change

Spring 2023 Newsletter

Main News

**COP15 Indicators Adopted in Global Biodiversity Framework**

After two weeks of negotiations and meetings in December of 2022, nearly 200 parties at COP15 signed into effect the Kunming-Montreal Global Biodiversity Framework. Our Map of Life biodiversity indicators – the Species Protection Index, Species Habitat Index, and
Species Information Index – were formally adopted into the [GBF Monitoring Framework](https://mail.google.com/mail/u/0/?ik=7f9bfc7f0c&view=pt&search=all&permthid=thread-f:1760646367620139905&simpl=msg-a:r1861278427124878394) as tools offering measurement and decision-support for the following targets and goals:

- **Species Habitat Index**
  - **Goal A**: The integrity, connectivity and resilience of all ecosystems are maintained, enhanced, or restored, substantially increasing the area of natural ecosystems by 2050;
  - **Target 4**: Ensure urgent management actions to halt human induced extinction of known threatened species and for the recovery and conservation of species, in particular threatened species, to significantly reduce extinction risk;

- **Species Protection Index**
  - **Target 3**: Ensure and enable that by 2030 at least 30 per cent of terrestrial, inland water, and of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem functions and services, are effectively conserved and managed through ecologically representative, well-connected and equitably governed systems of protected areas and other effective area-based conservation measures, recognizing indigenous and traditional territories;

- **Species Information Index**
  - **Target 21**: Ensure that the best available data, information and knowledge, are accessible to decision makers, practitioners and the public to guide effective and equitable governance, integrated and participatory management of biodiversity;

The BGC Center's guiding mission is to support global conservation decision making with cutting-edge scientific tools and data. The adoption of the GBF is a long-awaited, crucial turning point for global species conservation, and we are ecstatic that our tools, data, and platform will be supporting conservation leaders and managers around the world in their efforts to halt the biodiversity crisis.

Throughout COP15, BGC Center members manned booths with our partners GEO BON and Future Earth to talk with environmental leaders from around the world. We took the opportunity to discuss the applicability of our indicators with country representatives and forge relationships with these conservation leaders to help them put our tools into practice.
Last November, the BGC Center hosted the first symposium of the NASA Internet of Animals Initiative, bringing together leaders in animal movement research from federal agencies, research institutions, and conservation organizations to discuss the future of space-based animal tracking. Over the three-day symposium, the attendees gave a set of talks on the exciting and innovative applications of animal tracking technology and met in focus groups to address key questions for the future of the field: what technological advancements are required? What kind of data do we need to gather from tracked animals? How can the implications of animal tracking research spread beyond just animal ecology, with the tracked animals becoming sentinels of global environmental change?

This symposium was an exciting first step for the NASA Initiative in building connections across sectors and stimulating conversations on ambitious future goals.

Check out our article exploring the exciting new connections and questions developed at this symposium and our highlights video featuring interviews with some of the attendees. Several talks are also available to view online.
Center Values and Policy Documents Now on Website

We have added several documents outlining our Center’s values and policies on workplace culture, authorship guidelines, and data sharing to our website. We are proud to have co-developed these as a Center and make them publicly available. We are consistently reviewing and updating our best practices to strive for the highest standards.

BGC in the News

New York Times: Are Animals Running Out of Places to Live?

The MOL Species Habitat Index was featured in a recent New York Times article detailing global habitat loss and its dire implications for many vertebrate species. Scroll through the interactive article to see the faces of those species who have faced the most serious habitat loss in the last two decades, according

Google Earth Blog: MOL Indicators adopted in UN Biodiversity Framework

We recently contributed an article on the Google Earth Engine Medium Blog about our suite of biodiversity indicators and their recent formal adoption by the UN Global Biodiversity Framework. Check out the post to learn about how our indicators can help countries reach the
Looking Ahead

XPrize Rainforest Semifinals

Several Center members are headed to Southeast Asia in May to engage with regional partners. We'll also participate in the semi-finals of the XPrize for Rainforest Biodiversity. The Map of Life Rapid Assessments team is implementing novel methods for rapid rainforest biodiversity sampling, which combine our comprehensive Map of Life species distribution data with drone sampling procedures to generate local biodiversity lists.

Guest Article in ArcNews

We were invited to contribute a guest authored column in the Scientific Currents section of Esri's ArcNews magazine. Look out for our column in the Spring 2023 issue of ArcNews where we discuss the aftermath of COP15 and how our biodiversity indicators – the SHI, SPI, and SII – help provide a measurable and actionable framework to meet the goals of the Global Biodiversity Framework.

Other News

Here are some new papers published by Center affiliates this year:

Positional errors in species distribution modelling are not overcome by the coarser grains of analysis

*Methods in Ecology and Evolutionary Biology. 2022.*

Read the Paper
Scale-sensitivity in the measurement and interpretation of environmental niches


Read the Paper

Genetic diversity and IUCN Red List status


Read the Paper

Find all our recent publications on the [BGC website](#).

**BGC Seminar Series**

We hosted Dr. Marta Jarzyna, a former postdoc at the BGC, and Dr. John Fieberg for our BGC Spring Seminar Series this year. Dr. Fieberg also hosted a workshop with Dr. Johannes Singer on step selection functions. Thanks to all who tuned in, and we look forward to Dr. Laura Pollock rounding out our spring series in April! Stay tuned for registration information.

Dr. Marta Jarzyna

Dr. John Fieberg

Dr. Laura Pollock

See all BGC Events

**New BGC Center Medium Blog**
We created a Medium blog to share our work more widely, accessibly, and frequently! Follow along at our BGC Center account to stay up to date on the latest science and happenings.

Read our first BGC blog post by the Modeling Group on citizen science.

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**BGC Center Youtube Channel**

We’ve created a [Youtube Channel](https://www.youtube.com/channel) to share our past and upcoming video products, which will highlight some of our biodiversity products and aim to make our conservation tools more understandable and accessible. Check out two of our first videos all about the Species Habitat and Protection Indices, which we showed to country environmental representatives at our booth at COP15 in December.

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**Member News**
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<th>Congratulations to Dr. Muyang Lu!</th>
<th>Diego Ellis-Soto Wins Sidnie Manton Award</th>
<th>Fabiola Iannarilli Wins Marie Curie Fellowship</th>
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<td>Muyang Lu successfully defended his PhD to the Ecology and Evolutionary Biology Department last October to officially earn the title of Dr. Lu! Muyang spent his PhD diving into theoretical ecology and questions of species niches and spatial scaling. He will continue his work as a postdoc at the UCL Center for Biodiversity and Environment Research.</td>
<td>BGC PhD student Diego Ellis-Soto and YSE PhD student Kristy Ferraro won the Sidnie Manton Award for early-career ecologists for their review paper on animal-vectored ecological subsidies. In this paper, they outline a novel methodology to account for the often overlooked role of animals in nutrient transport, which the Editors considered a “rich roadmap for future studies.”</td>
<td>BGC Postdoc Fabiola Iannarilli has been awarded the prestigious Marie Skłodowska-Curie Actions European Postdoctoral Fellowship! We will be sad to see her go this summer but so excited for her to continue her work with camera trap data and species distributions in Germany.</td>
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Muyang’s BGC Feature  
Read the Paper  
MSCA Fellowship

Thank You For Reading!

https://bgc.yale.edu