

BELMONT
F O R U M



ANNUAL REPORT



2023





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A MESSAGE FROM LEADERSHIP

For the Belmont Forum, 2023 has been a wonderful year of exploration and discovery, of pushing boundaries and finding new opportunities! Through this we benefited from different perspectives and continue to develop the Belmont Forum - working with our communities to deliver world class, societally relevant, transdisciplinary research.

Our annual report provides highlights and some of our favorite stories. We invite you to think about and explore the many languages of knowledge and join us as we experiment with new ways to engage with our global community, including welcoming insights and recommendations from Indigenous and local communities enabling greater participation in Belmont Forum calls.

Above all, this annual report celebrates our community. The members, partners, and transdisciplinary researchers who make the Belmont Forum great.

We are committed to continue to support and deliver on the Belmont Challenge through multilateral, co-developed, equitable and inclusive research. Come join us this year as we launch two collaborative research actions (CRAs): Tropical Forests and Africa Regional and begin the co-production of an innovative global science policy leadership program.

We look forward to working with all of you in 2024.

A blue ink signature of Nicole Arbour on a light background.

NICOLE ARBOUR

EXECUTIVE DIRECTOR

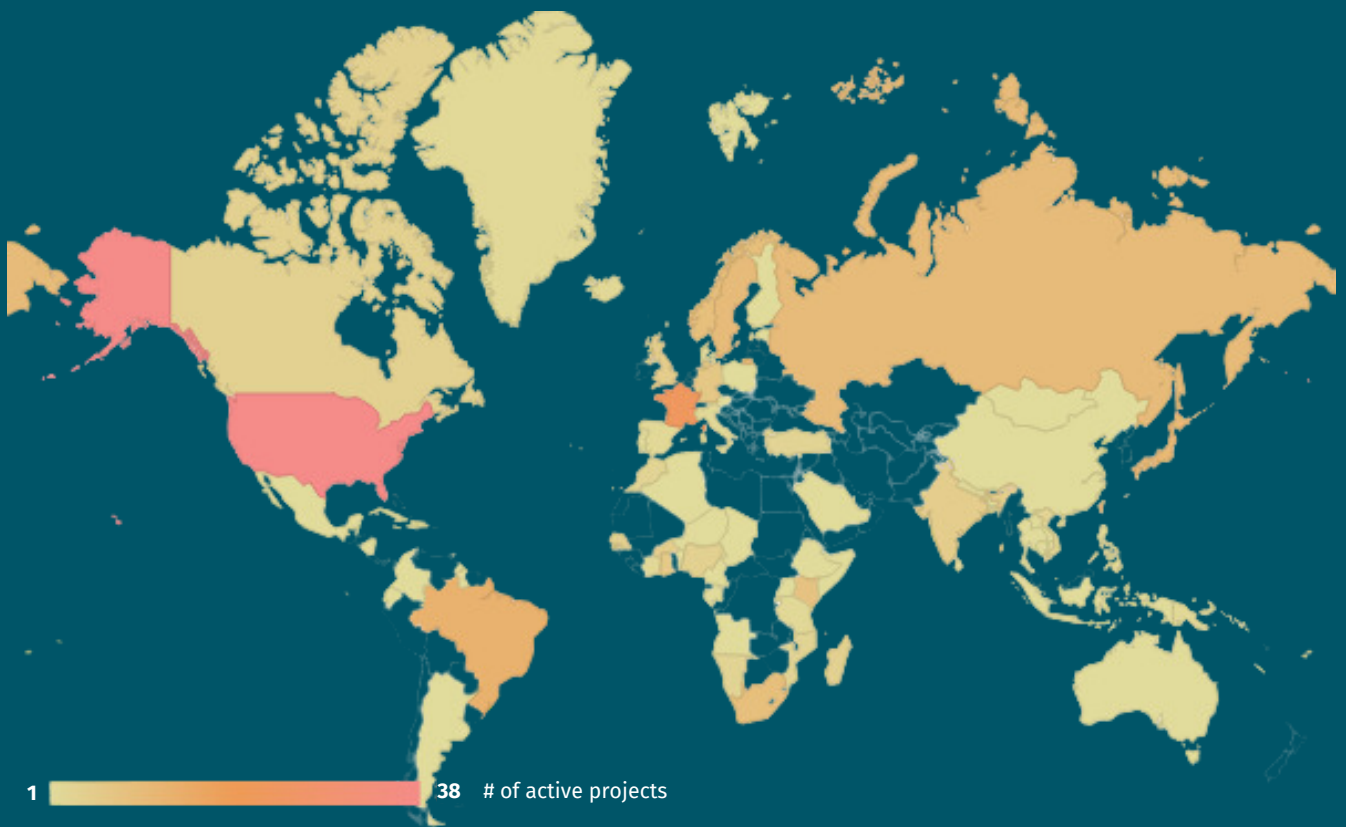
on behalf of

ANNE-HÉLÈNE PRIEUR-RICHARD &

ANNA STEWART IBARRA

CO-CHAIRS, STEERING COMMITTEE

Images from cover are the SRI 2023 Photo Contest Winners. Top: Sarah Loudin, *Seudre salt marsh* (Soils 2020); Middle: Sara Kollberg, *Inside* (Oceans 2018); Bottom: Shibaji Bose, *Photovoice* (T2S 2016)



33 institutions funded **57** projects*
operating in **87** countries in 2023

571

stakeholders
involved

445

K-12 students
engaged

365

undergraduate
students trained

460

graduate students
engaged

*actively funded for all of 2023

Growing a Transdisciplinary Community of Practice

New Belmont Forum members & partners

Two new **members**, National Research Fund Kenya (**NRF, Kenya**) and Santa Catarina State Research and Innovation Support Foundation (**FAPESC**), expand our network in Africa and South America. Two new **partners**, Canadian Foundation for Innovation (**CFI**) and **EPIC-N** both bring with them a wealth of experience in facilitating transdisciplinary and collaborative research, providing our community additional resources and tools. New members and partners enable us to reach more parts of the globe, helping us uplift more voices, especially those often not centered in the research community.

INNOVATION
Canada Foundation
for Innovation

Fondation canadienne
pour l'innovation

fapesc

NRF
KENYA
NATIONAL RESEARCH FUND

epic-network



Workshops

We partnered with the Inter-American Institute for Global Change Research (IAI) to deliver workshops on Transdisciplinary Research as part of the 2023 **AAAS Annual meeting** and the Science Summit at the UN General Assembly.

Building upon the 2022 online training on transdisciplinary (TD) approaches at the SRI, a TD Workshop report was published in the **Journal of Science Policy and Governance**. The report included the proceedings and reflections of the participant experiences with transdisciplinary research. During the two day workshop, key insights shared included: managing power imbalances, conflicting priorities and timeframes, enhancing communication and consolidating contextual awareness. We envision continuing to deliver meaningful TD training in partnership with our Belmont Forum community.



#FORESTS2024 in-person scoping

In July 28 and 29, over 50 academics, civil society leaders, local government officials, regional international organizations, funders, representatives of small producers, Indigenous Peoples and Local Communities leaders from the Amazon region gathered together in Leticia, Colombia to jointly identify research needs and pathways to co-develop the CRA FORESTS 2024.

The scoping workshop was organized under the leadership of the Inter-American Institute for Global Change Research (IAI) and the São Paulo Research Foundation from Brazil (FAPESP) and co-hosted by the **SINCHI Institute**, the **Alexander von Humboldt Institute** and the **XIV SALSA Biennial Conference**.



June Plenary Highlights

Our members and partners gathered in a two-day plenary during SRI 2023. The meeting allowed us to continue exploring the research landscape with **IPBES** through their assessment reports on **values of nature** and **sustainable use of wild species**.



What priorities should be considered?



We engaged with our wider community of researchers, as they also helped us to review the annual plan, the coordination practices review, and evaluation of the kickoff, mid term and end term meetings, as well as scoping activities.

During 2023 we went through some changes in our Steering Committee. We are very grateful for the very valuable contributions by our former co-chair Marcos Regis de Silva, and are excited to be working with our new co-chairs Anne-Hélène Prieur-Richard and Anna Stewart Ibarra. We also thank Ida Ulleberg Jensen, who acted as interim Co-Chair between July and December 2023.





Biodiversa+ Data Management Guide

This guide, originally developed in the context of our BiodivScen programme, updated to reflect the rapidly evolving landscape of data management. This guide is your indispensable companion, tailored to support researchers who are engaged in funded projects through joint calls. It aims

to help researchers create and implement Data Management Plans (DMPs) effectively.

Biodiversa+ advocates for openness in research data while respecting confidentiality needs, including EU privacy laws. We believe that this living document, co-developed by Biodiversa+ and the Belmont Forum, holds the key to transforming the way research projects handle, store, and share their research data over the long term. Download the updated guide [here](#).



SSUNGA78

Our secretariat organized 9 sessions with the participation of more than 15 organizations representing different societal groups as part of the Science Summit at the 78th UN General Assembly (**SSUNGA78**). Topics spanned: Equitable Partnerships

for Open Science in the AI era; Science Capacity Building for the Future; Heat and Health Data Resources; Transdisciplinary approaches across different contexts; South-North perspectives on Climate Justice; Inclusivity in biodiversity assessments; Indigenous and Western legal frameworks related to Environmental Challenges; Amazon and Tropical Forests; The COIBA experience in Research, Conservation & Education.



Multilingual online scopings

This year we had the challenge and the opportunity to deliver Scoping workshops in Spanish and French to enhance the participation of researchers from countries in Latin America, the Caribbean, and Africa. These workshops would not be possible without the support of our members and partners who co-hosted the events, in particular IAI and ANR.



COORDINATION PRACTICE REVIEW

BY FANY RAMOS QUISPE

The Transdisciplinary approach of the Belmont Forum considers research to be part of a socially and ethically responsible value chain that fully involves all societal actors in the co-construction of innovative solutions. The Belmont Forum community is committed to facilitating international calls for research that are well-scoped and coordinated under a cross-community framework. This framework ideally meets the needs of civil society, policymakers, the private sector and considers principles of equity, diversity and inclusion (EDI).

The complex landscape of Collaborative Research Actions (CRAs) brought resources from over 40 institutions from across the globe for implementation, through funding and/or in-kind contributions (2012-2023). Over 150 projects have been developed, involving more than a thousand academic and non-academic actors working on a variety of environmental change-related themes using a transdisciplinary approach.

Each CRA was developed and implemented to meet the Belmont Forum challenge in a way

that could be supported by the resources provided by the Thematic Program Office(s) and met the context-relevant requirements. Based on those rich experiences, during 2022-23, a review and assessment of the coordination practices throughout the life cycle of the CRA was conducted via survey and semi-structured interviews with those involved. This review aims to identify good practices that facilitated synergies between and within CRAs. Each funding agency contributed using their institutional strengths and their funding schemes throughout the CRA Lifecycle to implement coordination tasks, which resulted in three main CRAs' coordination modes:

- **Mode 1:** CRAs have no specific coordination committee. The coordination tasks are mainly carried out by the TPO with some support from their agencies for specific activities. e.g., CEH 2019, DR3 2019.
- **Mode 2:** CRAs have a Post Award coordination committee composed of Project PIs and in some cases external staff, who support the TPO to carry out scientific

and communication activities, but not non-administrative activities (e.g., Oceans 2018, Soils 2020).

- **Mode 3:** CRAs have a specific coordination staff who support activities from the scoping phase through the end of the life cycle. This staff provided operative and administrative support to the TPO and maintained constant communication with GPC and PIs to organize activities. (e.g., Nexus 2016)

Good coordination is critical to operationalizing the CRAs effectively and crucial for enhancing synergies, communication, outreach, conflict resolution, and fostering community within and among CRAs; to increase their collective impact. This review suggests that coordination of transdisciplinary collaborations includes skilled and dedicated staff working from the beginning of the CRA lifecycle, who are not part of the research team due to possible data use conflict of interests. When possible funding for coordination should be stipulated in the call text or at least as part of the grant agreements.

	Advantages	Disadvantages
Mode 1:	<ul style="list-style-type: none"> • CRAs have a clear plan set by the TPO 	<ul style="list-style-type: none"> • The TPO is often lacking the resources for any additional activities
Mode 2:	<ul style="list-style-type: none"> • Additional activities, the CRA community tend to be more synergetic • More visibility of the CRA impacts • Communication with PIs is more fluent 	<ul style="list-style-type: none"> • Challenging to avoid conflicts of interests when researchers have dual roles • Lack of resources to support admin tasks (e.g. logistics)
Mode 3:	<ul style="list-style-type: none"> • Scientific and admin support to the TPO • Good communication from the beginning • More additional activities and impact visibility 	<ul style="list-style-type: none"> • Many of the Belmont Forum member institutions do not work within a policy structure that allows coordination activities



The **Sustainability Research and Innovation Congress (SRI2023)** was held online and onsite in Panama, Panama on June 26 to 30, co-hosted by **IAI** and **SENACYT**. This joint initiative of Future Earth and the Belmont Forum was full of vibrant and thought-provoking keynote speakers, thoughtful sessions, and opportunities to meet colleagues and share experiences; including over 30 events led by the Belmont Forum Secretariat and many more led by our Belmont Forum community members.

We welcomed researchers from 12 new projects to the Belmont Forum through the Migration & Mobility (Migrations) and Sustainable Systems of Production & Consumption (SSCP) CRAs Kick-Off Meetings, with many project team members attending the SRI in person. Researchers associated with the Oceans and Soils CRAs communicated their findings, strengthened their networks, and shared resources through their Mid-Term meetings. Researchers and funders also came together to celebrate the successful collaborations fostered via the Climate Environment & Health, Pathways towards Sustainability, and Disaster, Risk, Reduction & Resilience CRAs.



Scoping events were held throughout the week for several CRAs (Future Leaders, Tropical Forests, Environmental Peacebuilding, Pathways to Sustainability II) provided space for us to gather additional insight from the transdisciplinary community present at the SRI2023.

Members of the Belmont Forum Secretariat also organized and facilitated sessions at SRI on a variety of topics supporting the values and goals described in the **Belmont Challenge** including Demystifying International Funding, Research Integrity, Building Equitable Partnerships, Science Communication, and Intercultural Dialogues for Science.

If you missed any of the sessions, you can watch the congress recordings [HERE!](#)



35

Belmont Forum events at SRI, including a storytelling event, photo competition, plus 3 scoping & 7 valorization events for CRAs

ONE DECLARATION

Indigenous Peoples, Local Communities, and Afro-descendants co-produced a **statement** outlining 15 actions SRI & its organizers can take to ensure more effective participation in future congresses.

A EXPERIENCIA DE LOS ESTUDIANTES DEL CENTRO REGIONAL UNIVERSITARIO DE DARIÉN EN EL CONGRESO DE INVESTIGACIÓN E INNOVACIÓN EN SOSTENIBILIDAD 2023

POR RUTH RODRIGUEZ

El congreso de Investigación e Innovación en Sostenibilidad 2023, ha incorporado a nuestras vidas un conocimiento más amplio, en el cual ha despertado en nosotros como estudiantes poder desarrollarnos de una manera más eficaz en el desarrollo de nuestra carrera como futuros Ingenieros Agroforestales. Podemos resaltar que los investigadores en el SRI 2023 brindaron sus conocimientos para hacernos comprender

que busquemos siempre la mejor manera de contribuir a la sostenibilidad de nuestro medio ambiente y biodiversidad.

Dicho congreso con su amplia gama de conocimientos nos ha motivado e impulsado a querer convertirnos en investigadores a sabiendas, de que para poder llegar a lo que hoy ellos han logrado conlleva mucha responsabilidad y dedicación. Es necesario que nosotros la juventud del Darién en Panamá seamos los primeros en alzar nuestra voz en el cuidado y conservación de nuestro medio ambiente.



El Congreso nos ha impactado de una manera positiva ya que, como estudiantes de Darién no habíamos comprendido el valor tan grande que tiene nuestra provincia en el mundo entero. Muchas de las conferencias trataron de nuestra provincia y de cómo podían incrementar una ayuda más directa hacia ella; demostrando el valor e importancia que esta tiene con todos sus recursos naturales. Esta experiencia nos ha animado a seguir con toda la dedicación en nuestros estudios y esperamos algún día ser nosotros los que presentemos nuestros trabajos de investigación a la sociedad académica que se reúne en el SRI.

THE EXPERIENCE OF THE STUDENTS OF THE DARIÉN REGIONAL UNIVERSITY CENTER AT THE SUSTAINABILITY RESEARCH AND INNOVATION CONGRESS 2023

BY RUTH RODRIGUEZ

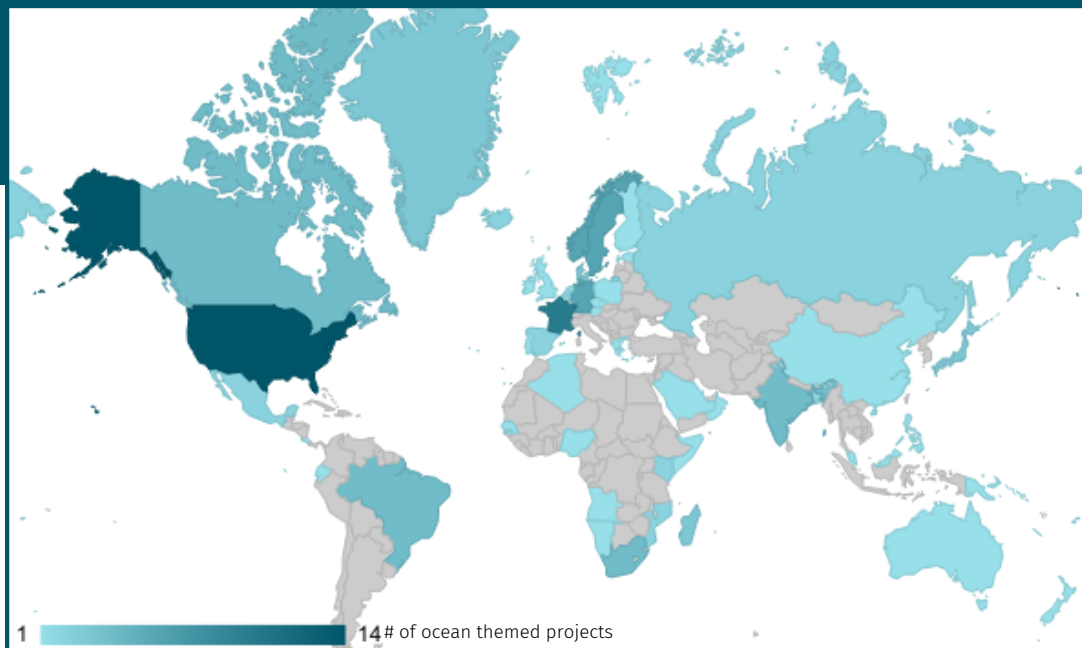
The Sustainability Research and Innovation Congress of 2023 has broadened our knowledge and raised our awareness as students, which will help us to develop more effectively in our careers as future Agroforestry Engineers. The researchers at SRI 2023 provided us with valuable insights into the importance of contributing to the sustainability of our environment and biodiversity.

This congress, with its wide range of knowledge, has motivated and encouraged us to become researchers ourselves, knowing that it requires a lot of responsibility and dedication to achieve what they have accomplished. As the youth of Darién in Panama, we need to lead the way in caring for and conserving our environment.



The Congress has had a positive impact on us, as students from Darién, as we had not fully grasped the value that our province holds in the world. Many of the presentations focused on our province and how more direct help could be provided to it, demonstrating the importance of its natural resources. This experience has encouraged us to continue our studies and to strive to present our research work to the academic community at the SRI in the future.





Belmont Forum Ocean Themed Project locations (since 2014)

THE BELMONT FORUM OCEANSCAPE

BY REBECCA BARNES

Three years into the **UN's Ocean Decade**, we reflect on the ocean-related research facilitated by the Belmont Forum, including one of our earliest Collaborative Research Actions (CRAs) focused on Coastal Environments in 2012. Since then, multiple CRAs have had a focus on or included ocean processes and life, how to govern and use the ocean more sustainably, and the need for a systems approach to address resource challenges: Transdisciplinary Research on Ocean Sustainability (2018), Arctic Observing and Research for Sustainability (2014), Resilience in Rapidly Changing Arctic Systems (2019), Transdisciplinary Research for Pathways to Sustainability (2020). These efforts speak to the Belmont Forum's aim to facilitate use-based innovative research to address some of society's toughest challenges around global change, and to enable effective decision-making and support equitable economic and social development.

Over the last decade, 19 ocean themed transdisciplinary consortia have worked on a series of questions aimed at quantifying drivers of change ranging from extractive industries to shifts in the physicochemical properties of the ocean (e.g. temperature and salinity) and/or understanding the governance of these socio-ecological marine resources. These projects represent 123 PIs who coordinated research projects that engaged 245 stakeholders, trained 160 undergraduate, 351 graduate students, and 52 postdoctoral scholars on the value of societally driven research, in 61 countries funded by 22 institutions. Each project brings together scientists and stakeholders from multiple disciplines and countries to form multilateral, transdisciplinary teams to address policy relevant and/or solution driven use-based research questions. These 19 teams have produced over 150 scientific publications, given more than 80 conference presentations, presented their work to the

broader community over 30 times, and facilitated 12 workshops! Their work has increased our understanding of the ocean's ecosystems while also informing policy and management decisions and having an economic and societal impact. Below are some project accomplishments highlighting the range of ocean related research facilitated by the Belmont Forum over the last decade.

Transdisciplinary Approaches. The development of **Land2Sea's Decision Support Tool (DST)** took a transdisciplinary approach, including policy advisors and practitioners. The tool represents a new way of approaching decision-making in this area because it combines a range of ecological, social, economic and cultural considerations in one platform. The DST has the potential to promote and help operationalize more inclusive and comprehensive approaches to resource management.

Publication Highlight. A special issue of **Maritime Studies**, an international peer-reviewed journal on the social dimensions of coastal and marine issues, featured research by the OCEANS PACT and NO CRISES project teams discussing marine conflicts and pathways to sustainability in an era of blue growth and climate change. Their work points to the opportunities inherent in conflict that could be used to bring about sustainable societal change. In both cases the project teams explore conflicts around renewable energy development, illustrating just two of the innovative approaches taken by Belmont Forum supported researchers.



Photo: Miguel Angel Cardona Jr., Unsplash

Through a case study of offshore wind energy in Estonia, the OCEANS PACT team demonstrated how a multispecies blue justice approach acknowledges multiple value systems, including the intrinsic rights of nature and marginalized humans in the socio-ecological system around offshore wind energy (**Tafon et al 2023**).

The NO CRISES team found that the lack of social acceptance of deep seabed mining in local communities stemmed from a history of actions between global businesses and international institutions, mining disasters, and a lack of governance. The blue economy needs to understand the complex, often colonial, history of resource extraction in LMIC to better navigate future opportunities (**Putten et al 2023**).

Policy Relevant. The ShipTRASE project produced **Climate Change in the Baltic Sea. 2021 Fact Sheet. Baltic Sea Environment Proceedings n°180**, quantifying the changes in multiple biophysical parameters (.e.g., dissolved oxygen and salinity) as well as the impacts on various sectors such as shipping, tourism, and fisheries. The report then links each variable to ongoing relevant policies ranging from the EU Strategy for the Baltic Sea Region to the UN Convention on biodiversity.

Solution driven. The risks from coastal flooding are increasing worldwide. The COAST project created a new set of trend change estimates for extreme precipitation for the coast of Lyon, France. Forecasters can in turn use this data to improve flood predictions, minimizing economic losses associated with the inundation of densely populated coastal regions.

Innovative ARMSRestore designed, built, and deployed 170 limestone ARMS (Autonomous Reef Monitoring Structures) units on coral reefs to be "seeded" with healthy reef biota prior to being moved to artificial reefs in the coastal waters of Madagascar. This work has the potential to provide nutritional benefits to one of the world's most food-insecure people by enhancing reef habitat, increasing fish abundance and thus fisheries productivity.

Future Opportunities. Given the increasing demands on our oceans will threaten marine biodiversity, economic livelihoods, and food security, the Belmont Forum, led by ANR & AllEnvi is scoping a new CRA: **Oceans 2**. This CRA aims to support scientific research and societal action on marine biodiversity and socio-ecosystems relying on oceans to mitigate and adapt to global environmental change, and achieve well-living by 2050. Please sign up on our **mailing list** if you are interested in helping develop this call.



Oceans CRA Meeting, SRI 2023 Panama City, Panama

WAYS OF KNOWING

BY REBECCA BARNES & FANY QUISPE RAMOS

Creating effective transformative solutions to global environmental change challenges requires us to take a pluralistic perspective, to consider multiple ways of knowing, to effectively work across and beyond national and disciplinary boundaries. Conducting, multilateral, inter- and transdisciplinary research is not easy; in many cases it even requires us to interrogate our own assumptions which is often uncomfortable. How do we bring together different ways of knowing in an equitable way? How do we recognize and encompass the knowledge brought by each societal actor in the research processes? These are key components of an effective transdisciplinary approach.

Drawing from lessons learned through the facilitation of over 200 projects led by researchers from around the world, the knowledge shared with us on panels hosted at Canadian Science Policy Conference (2022), the Sustainability, Research Innovation Congress (2023), and the Science Summit at the UN General Assembly (2023), and the scoping process of the upcoming CRAs FORESTS 2024 and ARC 2024, we distilled the following lessons to create a more equitable and welcoming research environment, leading us to greater understanding and innovative solutions.



Indigenous Leaders meet at the 2023 SRI Meeting in Panama, Photo: Fany Quispe Ramos

- **Pluralism.** Historically excluded groups want to actively and collaboratively participate throughout the research processes, from the problem framing to the evaluation of proposals. During the closing ceremonies of SRI 2023, the Indigenous Peoples, Local and Afro-descendent communities representatives, presented a **declaration (English translation)** co-developed over the duration of the conference, it included 15 recommendations of how to foster meaningful participation of local communities and Indigenous peoples, these should permeate the multiple levels and structures of our work.

COLLABORATIVE RESEARCH ACTIONS (CRAS)

Collaborative Research Actions (CRAs) are the mechanism used by the Belmont Forum community to fund multilateral transdisciplinary research around today's global environmental change challenges. In 2023, **28 projects** were recommended for funding through three CRAs. In addition, five CRAs were in the exploratory scoping phase in 2023, with three launching in 2024.

AWARDED



Integrated Approaches to Human Migration & Mobility in an Era of Rapid Global Change

Human migration and where we ultimately live are linked to the climate and climate related events (both slow and sudden). Environmental change, natural disasters, and conflict play a role in how the population is distributed on our planet throughout history. While migration is not a new phenomenon, the critical moment at which we stand with climate change means that migration is likely to become a more prominent challenge in the world, with wide-reaching repercussions. Led by members of the US National Science Foundation (NSF), twelve institutions collaborated to fund five transdisciplinary multilateral research teams approximately €6.2 million in research funds to

help characterize the intersection of global change drivers and human migration.

- **CHAIN:** Climate Hazards and Migration in Madagascar: Towards an Integrated Monitoring and Modeling for Mitigation and Adaptation (SE, FR, MG, UK, US)
- **Climate Change Migration Network:** International migration, climate change and network effects: A worldwide study (CL, AR, FR, US)
- **CLIMB:** Climate-Induced Migration in Africa and Beyond: Big Data and Predictive Analytics (TR, AT, SN, US)
- **ITHACA:** Immobility in a Changing Climate (SE, BR, GH, MZ, US)
- **PHOENIX:** Human Mobility, Global Challenges and Resilience in an Age of Social Stress (TR, AR, AT, BR, CL, SE, UY, ZA)



SSCP CRA Kick Off Meeting, SRI 2023, Panama



Systems of Sustainable Consumption and Production

Current patterns of global development based on people's continuous extraction and exploitation of natural resources are not sustainable, and a societal transition to systems of sustainable consumption and production (SSCP) is urgently needed. Led by members of the National Science and Technology Council (NSTC), eight institutions collaborated to fund seven International teams of researchers to take new transdisciplinary approaches to address sustainable consumption and production as a socio-technical system, rather than focusing on singular, micro-political issues. Nearly €8.7 million in funds for seven projects, looking towards better informed government and industry policies, more sustainable, resilient, and just systems of consumption and production, were awarded.

- **AquaponicsOpti:** Aquaponics optimization in a local climatic, economic and cultural context: maximizing the benefits of a circular bioeconomy for food production (SE, BR, DE, TR, TW, US, ZA)
- **BEDROCK:** Building an evidence-base for deforestation-free landscapes: supporting equitable outcomes in and beyond commodity supply-chains (SE, DA, NO)
- **DISCo:** Digital infrastructures for sustainable consumption: Redirecting, reorganizing, reducing and reimaging consumption (NO, JP, SE, TR, US)
- **Circularity3:** Conceptualizing, implementing and measuring the Circular Economy from the micro to the macro level (DA, JP, TH, TR, TW)

- **Co-SFSC:** Co-Creating Sustainable Transformations of Food Supply Chains through Cooperative Business Models and Governance (DA, SE, TH, TR, TW, US)
- **JUST GROW:** Co-designing justice-centric indicators and governance principles to intensify urban agriculture sustainably and equitably (US, DA, NL, NO, SE)
- **SuperSustain:** The role of supermarkets as key agents in systems of Sustainable Consumption and Production (DA, DA, TR, US)

RECOMMENDED FOR FUNDING



Climate and Cultural Heritage

This CRA aims to support transdisciplinary and convergent research approaches on cultural heritage and climate change, to foster collaboration among the research community across several regions, and contribute to knowledge advances and policy change at the global level. Led by Joint Programming Initiatives Connecting Climate Knowledge for Europe (JPI Climate) and Cultural Heritage and Global Change (JPI CH), this funding opportunity brought together fifteen funders, resulting in sixteen projects recommended for funding (~ €14.6 million total) to their national agencies in December 2023. The diversity in the projects reflects the complex challenges at the interface of cultural heritage and climate change.

- **Adaptation Traditions and Climate Change:** Biocultural adaptation of resource management traditions under the effects of climate change (CH, US, UK)
- **AGREE:** Advancing Cultural Heritage Governance for Resilient Climate Adaptation (IT, NO, UK)
- **ARCA:** Biocultural Heritage in Arctic Cities: Resource for Climate Adaptation? (AT, FR, NO, US)
- **ATLAS:** Studying symbiotic scenarios linking Heritage assets and green areas to prepare Historic Cities to face Climate Changes (FR, IT, ES)
- **Coastal TALES:** Telling Adaptations: Living Environmental Stories for Coastal Resilience (IE, US, UK)
- **CuHeMo:** Cultural Heritage in Motion: Indigenous Knowledge and Mobile Livelihoods in Changing Climates (AT, NL, TH)
- **FIRECULT:** Wildfire Resilient Cultural Heritage (IE, IT, TR, US, UK)
- **Pasture Adaptation:** Mitigation and Adaptation in Cultural Heritage Landscapes: Lessons from Transhumant Pastoral Systems for Managing Novel Climate Risks (FR, NO, ES, CH, US)
- **REFRESH:** Water cycle For RESilient Heritage (BE, FR, IT, UK)
- **RETRACE:** ResilienceS to climate risks: lessons from arctic and pacific communities (FR, NO, US)
- **ReVerDi:** Real Versus Digital: Sustainability optimization for cultural heritage preservation in national libraries (NL, CH, UK)
- **SASCHA:** Multiscale approaches and scalability within climate change–heritage risk assessments (IT, NO, US, UK)
- **SCENTinel:** Climate Changes and Scent Heritage: The Urgent Need for Capturing and Preserving Olfactory Landscapes in a Changing World (CZ, IT, NO)
- **SEA-CCHange:** Socio-Ecological Archiving: Coastal Communities' Heritage in times of climate change (IE, NL, UK)
- **SUSTHERIT:** Transformative urban heritage. Strategies for a sustainable European historic housing stock. (AT, CZ, FR, UK)
- **WRENCH:** Whispers of Time: Heritage as Narratives of Climate-Change (IT, ES, TR, UK)

IN PROGRESS



Climate Environment & Health II

This CRA addresses the nexus of climate, environment, and health around three themes: (1) Decision-science of environmental behavior and implementation, (2) Food, Environment, and Biological Security, (3) Climate Risks to Ecosystems & Populations. With researchers from over 100 countries eligible for funding, this CRA represents the broadest effort by the Belmont Forum community to fund transdisciplinary

multilateral global environmental change research. Approximately two-thirds of proposals submitted in Fall 2023 were selected to move forward to the full proposal round by the Panel of Experts. We are grateful for the efforts of the collaborative TPO, including members of NSF, NOAA, USGCRP and the IAI.

LAUNCHING IN 2024

Tropical Forests The functioning of tropical forests has global implications. Funding the generation of new knowledge or the synthesis of existing knowledge is urgent for the world's tropical forests through recognizing local communities and Indigenous Peoples' differences in governance, cultural diversity, ways of knowing, practices, stewardship, and territorial configuration. The Forests CRA is led by the InterAmerican Institute of Global Change Research (IAI) and São Paulo Research Foundation (FAPESP). The CRA aims to coordinate actions and projects with a transdisciplinary approach to address the similar challenges faced in tropical forests around the world: 1) Reduce deforestation, sustainable development, and locally led economy; 2) Ecosystem Function, Connectivity, and Climate Change Science; and 3) Environmental Justice and Governance. For more information on this exciting opportunity: [FORESTS2024](#).



Photo: FQ Ramos

Africa Regional Call Exposure and vulnerability to climate change in Africa are multi-dimensional with socioeconomic, political, and environmental factors intersecting; requiring a transdisciplinary approach and transboundary partnerships to address and provide comprehensive solutions to its associated challenges.

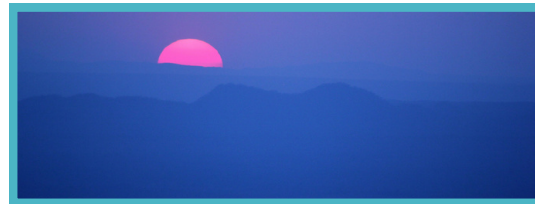


Photo: Craig Manners

This call aims to bring together international, transdisciplinary research teams led by African scientists or societal actors to focus on the following priorities to address climate change vulnerability across the continent: (1) Water-Energy-Food-Health Nexus, (2) Land and Ocean Pollution, (3) Disaster Preparedness, Responsiveness, and Recovery. This CRA hopes to support integrative, qualitative and quantitative analyses and the employment of systems-based methodological approaches, to enhance African research capacities. All research should include an open science and open data approach and prioritize community and youth-centered research. This CRA is led by the National Research Fund, South Africa (NRF). To learn more about this opportunity and to sign up for updates: [AFRICA2024](#).



Photo: R. Barnes

Future Leaders The Belmont Forum Leadership program, led by members of the US NSF and TSRI, will launch at SRI 2024. In the first year of the program a global group of fellows will co-produce a leadership

program needed to connect the next-generation of global transdisciplinary science leaders - recruiting, training, and bridging across generations, disciplines, sectors of society, cultures and nations. . The program aims to bridge generations, disciplines, sectors of society, cultures, and nations. The provisional goals are to (1) Provide the skills needed to lead & collaboratively work as a team; (2) Instill transdisciplinary knowledge and create global networks; (3) Develop hands-on learning experiences within the Belmont Forum community; (4) Amplify current training opportunities provided by various organizations to provide a suite of skills. To learn more about the program and sign up for updates: [LEADERS2024](#)

overexploitation of resources on sea, climate change, pollution, invasive alien species and the modification of the use of sea, notably through its artificialization. Within this context, this CRA aims to support scientific research and societal action on marine biodiversity and socio-ecosystems relying on oceans through the use of exploratory scenarios to mitigate and adapt to global environmental change. This CRA will include a special focus on marine protected areas, e.g. the Ross Sea, as they offer opportunities to better understand the effectiveness of different governance approaches. Approved for scoping in 2023, this CRA is led by members of ANR and **AlEnvi**, for more information please see our [website](#).

IN SCOPING



Photo: Matt Hardy

Oceans II

The Ocean has a central role in climate regulation, covers over 70% of the Earth's surface, and accounts for over 90% of the habitable volume for the living world. Billions of people around the world depend on marine and coastal biodiversity – from genetic to seascape levels – for the services it provides. Anthropogenic activity has considerably modified the composition, structure, and functioning of all the planet's ecosystems, including the oceans and coasts. The IPBES identified five direct drivers on biodiversity loss: the

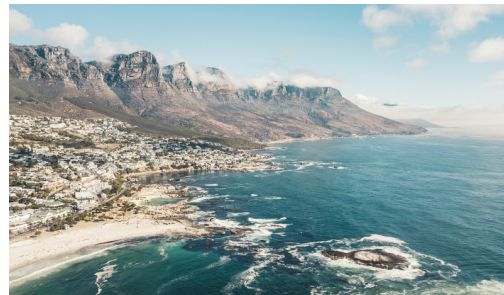


Photo: John O'Nolan

Vulnerability and Resilience Management for Socio-environmental Systems in Exposed Territories (Risk II)

Scientists and disaster experts have long worked together in the context of increasing global environmental risk. This CRA aims to inspire projects aimed at better integrating the complexity of socio-environmental systems, so as to define, formalize and implement a holistic risk science. By promoting “new” risks management concepts that better account for global environmental change challenges, this proposed CRA investigates the links between the vulnerability of socio-environmental systems in exposed territories and their resilience capacity. Expected outcomes include risk

science developments with a sustainability science and transdisciplinary perspectives and co-produced knowledge for informed governance in vulnerable territories, and the rise of a new generation of scientists and stakeholders able to better cope for ever-rising environmental risks. Approved for scoping in 2023, this CRA is led by members ANR, AllEnvi, and NTSC, for more information please see our [website](#).

earth system approaches. Proposals must address multiple SDGs while being cognizant of the synergies and trade-offs between potential pathways and different goals. This CRA is led by the US NSF with a goal to launch at SRI 2025 in Chicago. To stay up to date for opportunities to provide input, please sign up on our [website](#).



Pathways to Sustainability II

To meet UN Sustainable Development Goals (SDGs) by 2030, clear targets and pathways within a sustainable Earth system must be identified. We currently lack a truly integrated, comprehensive qualitative and quantitative understanding of sustainable development pathways that account for the inter-linkages between the economy, technology, institutions, environment, climate, and human development. To provide evidence to support SDG achievement, we need research that focuses on integrated qualitative and quantitative approaches to develop Earth system based targets and transformation pathways for sustainable development. International, transdisciplinary research bringing together natural and social scientists and societal partners is necessary to create sustainable pathways to achieve the SDGs through integrated



Photo: Marianne Falardeau, Arctic2019, project: MARAT

BELMONT FORUM MEMBERS

Members are legally allowed to mobilize resources from national or international research funds and are engaged in activities that address the Belmont Challenge. List reflects decisions made at the November 2023 Plenary.

Americas

Inter-American Institute for Global Change Research (IAI)

Principal: Anna Stewart Ibarra

<http://www.iai.int>

Argentina

Ministry of Science, Technology and Innovation (MINCYT)

Principal: Sofia Mormandi

<http://en.mincyt.gob.ar/>

Australia

The Commonwealth Scientific and Industrial Research Organisation (CSIRO)

Principal: Peat Leith

www.csiro.au

Austria

The Austrian Science Fund (FWF)

Principal: Georg Kaser

<https://www.fwf.ac.at/en/>

Brazil

São Paulo Research Foundation (FAPESP)

Principals: Jean Ometto, Alexandre Roccatto

fapesp.br

Santa Catarina Research Foundation (FAPESC)

Principal: Fabio Pinto

<https://fapesc.sc.gov.br/>

*Canada***Natural Sciences and Engineering Research Council of Canada (NSERC)**

Principal: Katie Wallace

www.nserc-crsng.gc.ca*China***National Natural Science Foundation of China (NSFC)**

Principal: Sheng YU

<http://www.nsf.gov.cn/publish/portal1/>*Chinese Taipei***National Science and Technology Council (NSTC)**

Principal: Minn-Tsong Lin

<https://www.nstc.gov.tw>**Academia Sinica**

Principal: Yue-Gau Chen

<https://www.sinica.edu.tw/en>*Côte d'Ivoire***Fonds pour la science, la technologie et l'innovation (FONSTI)**

Principal: Annette Ouattawa

<https://www.fonsti.org/>*Europe***European Commission**

Principal: n/a

ec.europa.eu*France***French Research Alliance for the Environment (AllEnvi)**

Principal: François Jacq

www.allenvi.fr**French National Agency for Research (ANR)/ Ministry of Higher Education, Research and Innovation (MESRI)**

Principal: Anne-Hélène Prieur-Richard

anr.fr/en/*Germany***Federal Ministry of Education & Research (BMBF)**

Principal: Andreas Schmidt

<https://www.bmbf.de/bmbf/de>*India***Ministry of Earth Sciences (MoES)**

Principal: M. Ravichandran

<http://moes.gov.in/>*Italy***National Research Council (CNR)**

Principal: Fabio Trincardi

www.isac.cnr.it*Japan***Ministry of Education, Culture, Sports, Science and Technology (MEXT)**

Principal: Hiroshi Ikukawa

www.mext.go.jp**Japan Science and Technology Agency (JST)**

Principal: Shigeo Morimoto

www.jst.go.jp*Kenya***National Research Foundation Kenya (NRF-Kenya)**

Principal: Prof. Chrispin Kowenje

<https://www.nrf.go.ke/>

Mexico (Observer)

National Council of Science & Technology (CONACYT)

Principal: na

www.conacyt.mx

The Netherlands

The Dutch Research Council (NWO)

Principal: Sebastiaan den Bak

www.nwo.nl

Norway

Research Council of Norway (RCN)

Principal: Ida Ulleberg Jensen

<http://www.forskingsradet.no/>

Qatar

Qatar Research Development and Innovation Council (QRDIC)

Principal: Omar Boukhris

www.qnrf.org

South Africa

National Research Foundation (NRF)

Principal's Representative: Michael Nxumalo

www.nrf.ac.za

Sweden

Swedish Research Council for Environment, Agricultural Sciences, and Spatial Planning (Formas)

Principal: Britta Fångström

www.formas.se/en/

Swedish Research Council (VR)

Principal: Kim von Hackwitz

<https://www.vr.se>

Switzerland

Swiss National Science Foundation (SNSF)

Principal: Laure Ognois

www.snf.ch

Thailand

Thailand Science Research and Innovation (TSRI)

Principal: Pongpan Kaewtatip

<https://www.tsri.or.th/>

Türkiye

The Scientific and Technological Research Council of Türkiye (TÜBİTAK)

Principal: Teslime Gurel

<https://www.tubitak.gov.tr/en>

United Kingdom

Natural Environment Research Council (NERC)

Principal: Duncan Wingham

<http://www.nerc.ac.uk/>

United States of America

National Science Foundation (NSF)

Principal: Maria Uhle

www.nsf.gov

BELMONT FORUM PARTNERS

Belmont Forum Partners are organizations that subscribe to the Belmont Challenge, but do not fund research and/or do not meet the criteria for membership.

Educational Partnerships for Innovation in Communities Network Inc. (EPIC-N)

Principal: Joel Rogers

<https://www.epicn.org/>

Canadian Foundation for Innovation (CFI)

Principal: Michael O'Neil

<https://www.innovation.ca/>

Adaptation Research Alliance (ARA)

Principal: Jesse Demaria-Kinney

https://southsouthnorth.org/portfolio_page/adaptation-research-alliance/

Global Development Network (GDN)

Principal: Francesco Obino

<https://www.gdn.int/>

Group on Earth Observations (GEO)

Principal: Yana Gevorgyan

<https://www.earthobservations.org/index.php>

The InterAcademy Partnership (IAP)

Principal: Peter McGrath

www.interacademies.org

International Science Council (ISC)

Principal: Salvatore Aricò

<https://council.science/>

International Institute for Applied Systems Analysis (IIASA)

Principal: Hans Joachim Schellnhuber

iiasa.ac.at

Mountain Research Initiative (MRI)

Principal: Carolina Adler

<https://www.mountainresearchinitiative.org>

System for Analysis, Research & Training (START)

Principal: Jon Padgham

start.org

United States Global Change Research Program (USGCRP)

Principal: Brian Leung

www.globalchange.gov



BELMONT FORUM SECRETARIAT

The Belmont Forum Secretariat facilitates the coordination of the Collaborative Research Actions, supports the Executive Director, Co-chairs, and Steering Committee to fulfill the Belmont Challenge, and serve as liaisons between the funding and research communities.

Nicole Arbour, Executive Director

Kasan Aksornthong, TSRI (Thailand)	2020 - present
Rebecca Barnes, AAAS STP Fellow at US NSF	2022 - present
Hilario Espinoza, IAI STeP Fellow at Belmont Forum	2023 - present
Brian Leung, AAAS STP Fellow at US NSF	2022 - 2023
Charles Nieuwkamp, European Commission	2021 - present
Fany Ramos Quispe, IAI STeP Fellow at Belmont Forum	2022 - present
Megan Roussy, Mitacs Canadian Science Policy Fellow at NSERC	2022 - 2023
Yiwei Zhang, NSFC (China)	2021 - present

Interns

Jihye Hwang, Ministry of Environment of Korea/Korea Environment Corporation
 Camellia Kodia, University of Ottawa

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