# Belmont Forum Collaborative Research Action

# Tropical Forests: Global Implications and Pressing Actions
# FORESTS 2024

# Call for Proposals

## CALL THEME

This CRA recognises the pressing challenges and opportunities to meet the targets under the Sustainable Development Goals and the Kunming-Montreal Global Biodiversity Framework in tropical forests worldwide. This CRA aims to coordinate actions and projects with a transdisciplinary approach to develop innovative solutions to the challenges faced in tropical forest regions, Amazonia being the largest and most populated. Acknowledging the differences in governance, cultural diversity, and territorial configuration, this CRA spans tropical forests worldwide that face similar challenges.

### *Background and Rationale*

The Inter-American Institute for Global Change Research (IAI) and the São Paulo Research Foundation (FAPESP) are co-leading a new Belmont Forum funding call entitled "Tropical Forests: Global Implications and Pressing Actions."

The Belmont Forum (BF) comprises 39 science funding institutions and partners worldwide. These agencies jointly develop and fund Collaborative Research Actions (CRA). These transdisciplinary research funding calls address global environmental change issues that require global coordination to accomplish scientific goals, increase synergies, and avoid duplication.

This CRA addresses all tropical forests worldwide and the interconnected ecosystems that influence them. Tropical ecosystems are located between the Tropic of Cancer and the Tropic of Capricorn (latitudes 23°26' north and south of the Equator) at any altitude.

The CRA FORESTS 2024 recognizes the growing threats to those ecosystems and their inhabitants, such as climate change, deforestation, unregulated agroindustry and land conversion, illegal activities, pollution, and environmental/climate injustices. In the global

tropical forest regions such as the Amazon, Central America, Asia, and Africa, the well-being and survival of indigenous peoples and local communities depend on the local ecosystem under pressure. Other immediate concerns include human health, threats associated with the emergence of zoonotic pathogens, and environmental degradation. The challenges tropical forest regions face vary depending on governance, local ecology, cultural diversity, and territorial configuration.

The CRA aims to coordinate transdisciplinary, participatory research to develop innovative solutions to these challenges. The transdisciplinary approach is transversal to the call process and project development stages.

**Ten pressing actions:**

The following statements regarding pressing actions were identified and consolidated following feedback from local communities, government agencies, and research programs in tropical forest regions.

1. Generate evidence to support actions that reduce or control deforestation, including stopping the rapid expansion of the agricultural frontier and other megaprojects, supporting and understanding sustainable production, and developing command and control systems and strategies to regenerate degraded lands with local and participatory practices.

2. Generate evidence for building public policies using subsidies and incentives for the public and private sectors to maintain ecosystem services, including promoting bioeconomy, entrepreneurship, locally-led innovations and economies, and equitable and fair implementation of carbon and chain markets.

3. Generate and advance the knowledge about ecosystem functioning, ecophysiology (including biomass production and storage), biogeochemical cycles, forest-people relations and interconnections, greenhouse gas emissions, water cycles, biodiversity, etc. Recognize ways to reduce impacts on ecosystem services and functions such as disaster risk reduction, early warning systems, adaptation strategies, controlling disease vectors, identifying and controlling sources of pollutants, etc., and its potential scalability.

4. Further understanding of organized crime and illegal activities in the regions, including illegal deforestation, illegal mining, and trafficking of plants, animals, drugs, and people, mapping the potential and means for the articulation between states, transnational institutions, and within countries.

5. Characterize and analyze land tenure, unplanned rural and urban development (roads, other infrastructure, electricity services, mining, oil, natural extraction, etc), and related

conflicts to develop sustainable and fair territorial management and increase ecosystem connectivity.

6. Promote the knowledge and ancestral practices of indigenous peoples and local communities, bringing them into dialogue with other knowledge systems to solve urgent societal and environmental problems. Investigate local governance models and best practices seeking recognition and protection of indigenous territories and other communal lands.

7. Generate research and evidence to support actions that decrease the vulnerability of local populations related to essential services such as food security, public health, education, energy, and communication services. Research should privilege data generation and recognition of underrepresented groups such as women, ethnic minorities, older adults, and young people.

8. Understand the cross-scale (local to global) connections of and among tropical forests worldwide, including systems beyond the bounds of tropical forests: biodiversity loss, climate change implications, links between drivers and outcomes of deforestation, consequences of tipping points, large-scale connectivity with other tropical forests and other biomes, evolution of function and structure of tropical forests.

9. Generate evidence on the institutional landscape of tropical forest regions to identify gaps and best practices that could be replicated, including strengthening state and regional-level agencies and informed decision-making at all levels, enhancing local teaching, research, and development institutions, and promoting internal and transnational cooperation in diverse topics.

10. Research to develop open and FAIR (findable, accessible, interoperable, and reusable) data systems with artificial intelligence tools related to global environmental change processes in tropical forests, for example, open access, real-time, and interrelational databases on participatory monitoring of land use change, conflict (illicit activities), biological processes, and economics.

Based on the above recommendations, proposals should encompass elements from at least two of the three areas listed below.

**AREA 1: Reduce deforestation, and promote sustainable development and locally-led economies** through one or more of the following approaches:

- **Information systems**: Command and control systems to halt deforestation linked to strategies to regenerate degraded lands with local and participatory practices.
- **Local knowledge**: Indigenous peoples and local communities' knowledge and ancestral practices for sustainable relations with forests and land.
- **Bioeconomy**: Models of locally-led innovations and economies that sustainably use of forest and non-forest land that reduce pressure on forests.

- **Equitable and just markets**: Equitable and fair implementation of carbon and chain markets.
- **Territorial management**: Sustainable rural and urban territorial management.

**AREA 2: Ecosystem Function, Connectivity, and Climate Change Science** through one or more of the following approaches:

- **Environmental cycles:** Encompassing carbon, nitrogen, phosphorus, water, and other cycles essential for understanding nutrients and energy flows within interconnected ecosystems that extend beyond tropical forests. These cycles can interact with climate patterns, renewable energy production, and climate change adaptation and mitigation efforts.
- **Ecological connectivity and wildlife behaviour:** Understanding the connections, fluxes, or movement between the natural and transformed ecosystems spanning the population, community, and ecosystem scales within and among tropical forests worldwide.
- **Biodiversity and ecosystem functions loss:** How to cope with biodiversity loss, conservation strategies, and maintenance of ecosystem functions and services to the local communities.
- **Identifying pollution sources** includes pinpointing the origins of pollutants in air, water, and soil to implement pollution prevention and control measures.
- **Indigenous peoples, local knowledge, and territories:** Fostering indigenous and local knowledge, local practices, and land rights to preserve biodiversity, cultural heritage, and sustainable land use practices.
- **Linkages to human health:** Understanding the connections between ecosystems and human health is critical since air, soil, water quality, access to green healthy spaces, and pollution exposure can significantly impact human well-being. This includes research in emerging infectious diseases such as vector-borne diseases, water/soil/air-borne diseases, zoonotic spillover, nutrition/malnutrition, and other impacts of environmental degradation and climate change on human health.
- **Understand the cross-scale connections of the Tropical Forests**: Biodiversity loss, climate change implications, links between drivers and outcomes of deforestation, consequences of tipping points, large-scale connectivity with other tropical forests and other ecosystems, long-term assessment and monitoring, the evolution of function and structure of tropical forests.
- **Disaster risk reduction and resilience**: Activities, processes, and systems based on integrated disaster risk management with emphasis on vulnerability reduction and resilience enhancement enable individuals, communities (with inclusive focus), governments, or the private sector to take action to adapt and reduce risk of hazardous events at different local to regional scales.

**AREA 3: Environmental Justice and Governance,** through one or more of the following approaches:

- **Governance**: Further understanding the dynamics to promote the sustainable use of natural resources to avoid deforestation, illegal mining, oil-related conflicts, trafficking of plants, animals, drugs, and people, violence against environmental defenders; and negative impacts of large infrastructure projects.
- **Articulation to establish environmental/climate justices:** Mapping cases of environmental injustices, the needs, and potential means to promote collaboration within and between states, and transborder institutions to support existing indigenous peoples and local communities practices and to fight against violence and environmental/climate injustices.
- **Forest-local peoples relations:** Understanding and enhancing indigenous peoples' and local communities' knowledge and practices related to forests can help to address socioeconomic conflicts of forest-dependent communities. Such relations can inform alternative policies to enhance food security, public health, land tenure, local-based economies, energy services, education initiatives, and others related to environmental changes.
- **Recognition and protection of indigenous territories and other communal lands:** Environmental conflicts often arise due to insecure land tenure and land appropriation. Exploring conflicts that involve land-grabbing can contribute to better understanding and enhancing recognition and formalization of the rights of indigenous peoples and local communities to their traditional territories to enhance biodiversity, cultural heritage protection, and sustainable land use practices.

## PROJECT REQUIREMENTS

**Project requirements:**

Proposals should include a strong and deliberate linkage between the societal and environmental aspects of global environmental challenges to ensure that they meet the Belmont Challenge for international transdisciplinary research that generates knowledge for understanding, mitigating, and/or adapting to global environmental change.

Given the complexity and scope of these challenges, research consortia must be truly transdisciplinary, thus including researchers from a) social sciences/humanities/economics and b) natural sciences/physical sciences/engineering/technology, as well as c) societal partners (i.e., citizens, industry, or civil society organizations), using a participatory, co-designed and co-implementation approach. Additional knowledge holders are welcome to be part of the proposing consortium once this minimum criterion is met.

Successful proposals **must address the Call Theme** and deliver on at least two of the three Areas (with crosscutting linkages encouraged), clearly describing how the proposed project will accomplish it. Successful proposals will include well-justified budgets, partitioning of funds, and clear allocation of roles, responsibilities, and time.

**The CRA FORESTS 2024 approach:**

The following criteria are expected to be found in proposals that both attend the expectation of this Call for Proposals and the Belmont Challenge, a vision document that encourages "International transdisciplinary research providing knowledge for understanding, mitigating and adapting to global environmental change":

1. **Foster Transdisciplinary Research**: This includes science and technology and all interested societal actors (stakeholders); the proposal should clarify the processes to incorporate local and indigenous knowledge into scientific processes. Therefore, an active and permanent collaboration with local authorities, local communities, and indigenous peoples should be clear in building and implementing the research project. Also, proposals should consider international collaboration as a key tool to bring science to policy at different scales. The transdisciplinary approach should also encompass recommendations relevant for public policy and envision how the research project could enhance local institutions.

   Stakeholder engagement actions (described in methods sections or in equity, diversity and inclusion plans) should acknowledge and deal with local populations' varying degrees of vulnerability and resilience according to differential characteristics.

2. **Include detailed tools and processes to translate science to policy and action**: Build simple approaches to translate science to policy and action to reach community-scale positive effects (social implementation), as well as national and international impact. Indigenous Peoples and Local communities' representatives highlighted the importance of setting up monitoring systems and other tools that support committees in protecting and sustainably conserving tropical forests. The CRA is expected to support the use of new technologies developed by local residents or to support an interphase for research and development projects.

3. **Differentiate projects with an urban and rural focus:** As an example, many Amazonian cities have grown haphazardly, and newcomers to the region today settle in urban areas. Amazon conservation projects tend to emphasize natural areas and agroecosystems and include differentiated strategies for urban development and rural development for the entire region(e.g., cities vs. reserves).

4. **Project management and administration**: Undertaking a project in tropical forest regions presents logistical and administrative challenges. In remote areas, especially within indigenous communities, procuring official invoices for services or materials can be daunting. Furthermore, contracts must be tailored to indigenous employment practices when projects necessitate collaboration with local and indigenous communities. Traditional bookkeeping might prove difficult for principal investigators; hence, co-managing funds with local NGOs and universities could be a viable solution.

   It should be emphasized that the leading entity possesses a track record in managing international resources, especially in politically and economically volatile contexts. Current conditions in some nations present risks such as fluctuating exchange rates, complications with international purchases, taxed international transfers, and potential inflation spikes, all of which can impact project execution.

5. **Ensure the participation of indigenous peoples and local communities in the projects:** For indigenous peoples and local communities, it is not easy to differentiate between scientific and development projects. For this reason, it is challenging to align research interests with the interests of the communities; however, it is important to remember that research priorities should be based on community priorities. Therefore, it is critical to have strategic allies with organizations with which communities had previous relationships. Pre-existing trust links should exist between communities and local universities, research institutes, and NGOs. This link can also be strengthened through regional and transboundary networks such as COICA, and the Congo Basin Community Conservation Consortium “C4”, among others. Not having experience working with local communities can generate high risks for the consortium when implementing the project.

   Attention must be paid to using prior informed consultations with communities and respecting their governance systems, as these communities express concern that the projects must not be taken as additional factors for the occupation of territories and the promotion of illegal constructions or works (See Research permits). If researchers plan to work with different communities in each country, it should be noted that different worldviews exist within countries.

   Indigenous Peoples and Local communities' engagement must commence at the project's inception, encompassing the definition of the problem to be addressed, the design of objectives, methodologies, communication, data collection conditions, security protocols, implementation plans, results longevity, and community benefit restitution. How will the effort and opportunity cost of participating in project preparation with the uncertainty of the selection process be recognized and compensated?

   It is imperative to deconstruct the term "participation" into discrete components. Participation encompasses the aptitude for project scoping, design, alliance organization, and proposal evaluation, among other aspects: 1) Definition of financing trajectories through collaborative efforts of academia and communities, 2) Project formulation, 3) Assessment, 4) Management, 5) Implementation, 6) Dissemination, 7) Advocacy for impact, and 8) Monitoring.

In the preliminary phases (defining financing trajectories and project formulation), a candid and direct dialogue must be established to reconcile the interests of academia and communities in a specific working domain, such as mining, and its pollution impacts. How can the interests of mining communities be aligned with research interests about mining-derived pollution?

The same dynamic dialogue should be taken to co-define the roles of each partner in the consortium, it is important to keep in mind that from the Belmont Forum perspective, it is encouraged that non-academic partners also take leadership roles as co-PIs. The team should also reflect on effective measures to prevent any form of exploitative or "extractive research" dynamics that could emerge between academic and non-academic partners of the consortium.

The design of project outcome measurement should be a collaborative effort involving the whole diversity of interested/involved actors. Monitoring frameworks should address inquiries posed by shared interests among those actors. IPs and LCs representatives highlighted the importance of setting up a monitoring and support committee to support their actions to protect and sustainably conserve tropical forests.

6. **Research permits and informed prior consultation with communities:** In many tropical forest countries, research permits are required to develop research projects with biological resources and human communities. It is recommended that participating organizations already have these permits when presenting the full proposal (e.g., framework permits) or a current permit to work with the community. The absence of such permits poses a significant risk to project execution.

   Funding will not cover the costs of applying for permits, consultations with the community, or bureaucratic procedures, nor will the project depend on future authorization. These permissions should not be confused with the co-production of knowledge. Evaluators and funding agencies must balance between possible projects due to their logistical complexity and projects capable of generating new knowledge.

7. **Encouraging continued research programs or the synthesis of existing knowledge**: Even with the presence of advanced information systems, databases, observatories, scientific networks, and datasets, the generation of scientific knowledge often remains fragmented or redundant, hindering both scientific advancement and effective decision-making. The CRA should prioritize supporting projects that stem from well-established research programs known for addressing intricate problems and upholding best practices. Efforts should be made to encourage synthesising and consolidating existing information and knowledge.

8. **Data management plans:** must address the implementation of open access policies and a reflection on the equitable and just access and ownership of knowledge and data produced by the project.

**Proposals must include:**

1. **Data and Digital Outputs Management Plan (DDOMP),** including public accessibility of data, digital objects, results, and findings;

2. **Project Description** including background, research plan, and consortium composition with a detailed discussion of stakeholder engagement and co-production process;

3. **Management Plan** to describe the implementation of the project's overall coordination, monitoring, oversight, and evaluation;

4. **Impact, Engagement, and Dissemination Plan**, including the development of introductory and valorization videos for the kick-off and end-term meetings, planned social media activities as well as any other externally facing communication activities foreseen as a result of this work, capacity building activities foreseen as part of the co-development of the research;

5. **Funding Plan,** including funding to participate in coordinated activities throughout the project's lifespan, such as attending the CRA Kick-Off, Mid-Term, and End-Term meetings to be held preferably at the annual Sustainability Research and Innovation Congress (SRI). The expenses for these activities should be accounted for in the Funding Plan to allow participation from *at least* three Consortium members.

## PROJECT DURATION:

Projects are intended to be *three* years in length.

## ELIGIBILITY CRITERIA:

To be deemed eligible for this call, a Research Consortium should have **three or more participants** representing **at least three different countries,** requesting support from ***at least* three participating funding organizations,** including **academic and non-academic partners** in the team. Having at least one country/partner from a tropical region is recommended. Each funding organization's eligibility requirements can be found in their annex for this call on the Belmont Forum Website.

Consortium members can **request funding** or **in-kind support** as outlined in each Annex. Additional members may participate in a self-financed capacity *if* the minimum number of participants from three countries requesting funds from three funding organizations is met.

Each Research Consortium **must have a Consortium Lead**, who facilitates collaboration and communication across the team and submits the research proposal, and annual reports, which are due each June 15th for the project's lifetime. **Consortium Leads must request funding** from a participating funding agency and cannot participate in a self-financed or in-kind capacity. It is critical that each Consortium Member and Consortium Lead review the applicable funding agency annexes for this Call to determine whether their funding requests in the Funding Plan align with available support. Specific questions about eligibility should be directed to the

relevant point of contact listed at the bottom of each organizational Annex. We encourage the creation of a gender and geographically-balanced Research Consortium that provides opportunities for early career researchers to participate.

We seek proposals that demonstrate a robust transdisciplinary approach. For the first phase, we request a minimum of 8 hours of certificate in a transdisciplinary fundamentals course. Only one certificate is necessary per consortium and applies exclusively to the Principal Investigator (PI) or one of the Co-Principal Investigators (Co-PIs). We recommend researchers utilize these or elsewhere resources to bolster your proposal (*see* Capacity building).

**Evaluation Criteria:**

The proposals will be reviewed under the following selection criteria:

1. **Quality/Intellectual Merit**
    - What is the quality of the science proposed? How innovative are the team's project goals and objectives?
        - How well does the activity advance knowledge and understanding within its own field and across different fields?
        - To what extent does the proposed activity suggest and explore creative, original, and innovative concepts?

2. **Fit to call objectives (including user engagement & societal or broader impacts)**
    - Addressing at least elements of two of the call Themes
    - Engagement of research users/societal actors (relevant policymakers, regulators, NGOs, communities, local and Indigenous people organizations, or industry) and effectiveness of proposed knowledge exchange activities
    - Expected impacts: e.g. societal, policy-related, economical
        - What may be the benefits of the proposed activity to society (e.g. policy development, economies)?
        - How have users/societal actors been engaged and how effective are the proposed mechanisms for knowledge transfer to decision-makers?
        - Does the research collaboration focus on global challenges for which solutions can only be achieved by global scientific approaches?

3. **Personnel/Quality of the Consortium**
    - Competence and expertise of teams and complementarities of consortium members?
        - How well qualified are the proposers (Consortium Lead and team) in terms of science knowledge, expertise and experience to conduct the project?

- What is the quality of previous work in terms of past or potential contributions to, and impact on the proposed and other areas of research?
    - Is the Consortium Lead team (including any identified Co-Principal Investigators) able to lead the project, e.g. having strong management and leadership skills, or having complementarity of expertise and synergy of the members of the team?
- The Belmont Forum aims to increase the accessibility of research opportunities, especially to marginalised communities. In this spirit, the Belmont Forum encourages the diversity of the Consortium team considering multiple factors including geography, training or background as well as non-academic actors including but not restricted to Indigenous peoples and local knowledge holders.
- What is the added value of international cooperation? When appropriate please discuss the extent to which Partner Organizations' existing investments are leveraged in the proposed project
    - If these partnerships currently exist what does this new funding allow them to do that they could not do otherwise?

**4. Co-Production and Societal Relevance**

- Are there transdisciplinary approaches embedded throughout the planned project lifecycle? (co-construction, co-identify, co-develop). The transdisciplinary approach should also encompass recommendations relevant to public policy and envision how the research project could enhance local institutions.
- Were societal parties/stakeholders involved in the initial framing and development of the proposal?. Stakeholder engagement actions (described in methods sections or in equity, diversity and inclusion plans) should acknowledge and deal with the varying degrees of vulnerability of local populations according to differential characteristics.
- Do the proposed project outcomes exhibit genuine (on-the-ground) societal relevance/impact?
- Are provisions made so that all partners (including stakeholders/society) will share equitably in on-the-ground impacts/benefits as a result of this project?

**5. Resources and Management**

- Appropriateness of resources and funding requested
- Balanced cooperation
- How well conceived and organised is the proposed activity?
- Is there an operational plan with well-defined milestones in place?
- Is the coordination plan adequate?
- Is there sufficient access to resources?
- Are the requested investments well justified and relevant?

- Are the scientific and financial contributions requested of the Partner Organizations from each country well balanced?

**6. DDOMP and other required documents**

- Does the DDOMP conform to the Belmont Forum Open Data Policy and FAIR principles?
- Does the DDOMP consider CARE principles?
- Is the DDOMP appropriately detailed and resourced to be able to be taken forward effectively?
- Data management plans must address the implementation of open access policies and a reflection on the equitable and just access and ownership of knowledge and data produced by the project.

## HOW TO APPLY:

All call documents, including guidelines for applicants and national/regional requirements, and the submission portal can be found at the Belmont Forum Grant Operations website: http://bfgo.org.

This CRA has a two-stage submission process. Pre-proposal (mandatory for full proposal submission) and full proposals. **Proposals can be written in English, French, Portuguese or Spanish** and submitted online at www.bfgo.org.

Proposals submitted in languages other than English will undergo translation to English for evaluation by the panel. The proposal will be also be read in the original language by at least one of the members of the panel of experts. Translation will be facilitated through Amazon Web Services software, ensuring compliance with the EU General Data Protection Regulation (GDPR). Proposals will remain confidential within the Belmont Forum BFgo system and will not be shared externally.

Details of the call and the application process are presented on the Belmont Forum website: https://belmontforum.org/cras#open, where you can also find links to training modules for proposers on the Belmont Forum YouTube channel.

Before preparing proposals, applicants are advised to contact their National Contact Points as listed in the annex documents for the call.

## CALL TIMELINE:

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| 14 June 2024 | Opening of the call |
| June-Oct 2024 | Networking and capacity-building activities |
| 12 November 2024 (23:59h UTC ) | Pre Proposals Due |
| 30 May 2025 | Full Proposals Due |
| September 2025 | Funding of projects |

**CAPACITY BUILDING IN TRANSDISCIPLINARY APPROACH:**

Some training can be offered in generating transdisciplinary projects and knowledge co-production; for example, training on how to work across disciplines and with non-academic partners. Also, training or information in design spaces for effective participation of local communities, including robust identification and engagement processes. These capacities must be strengthened, especially in the teams of institutions outside large cities or institutes or universities.

Interested consortia can receive training through the virtual campus in the program titled "Climate, Environment, and Health Responders for the Americas: Mobilizing Transdisciplinary Knowledge and Training for Policy Action," which is available in Spanish and English. However, we will develop, collaborate, and promote our in-kind partner's workshops around Amazon and tropical forests, as well as on Data and Digital Outputs Management Plan (DDOMP), and Transdisciplinary Fundamentals.