



2024-2025 BIENNIAL REPORT





VISION

We envision a more sustainable and equitable future through strengthening and connecting science with action.

MISSION

We cultivate, inspire and connect emerging science leaders in Africa and Asia to work with societal partners in creating a more sustainable and equitable future.

Welcome

From START's Executive Director, Jon Padgham

Over 2,500 years ago, the Buddha taught humanity that impermanence is inescapable. Nothing lasts forever. And that includes START. After 34 years of, at times, groundbreaking work, START is stopping. Our organization, like so many in the US and beyond, has lost the crucial financial support that it receives through the US government; essential funding that provided the foundation for our operations. Alas, this biennial report is a record of the final two years of START's impact.

At START, we have been committed to advancing science that forges social connectedness and community resilience, and that builds agency towards creating a more just future. Over the last two years, we achieved this through strengthening capacities to generate actionable science around climate and global environmental change, using an approach that targets the ability and confidence of researchers to engage with communities in co-creating knowledge. Much of our effort in the 2024-2025 period was oriented towards that effort.

For example:

- Expanding our science leadership program: Fostering science leadership has been an important element of START's long-term impact, which we have achieved through a multi-pronged approach of strengthening interpersonal and technical skills, providing for experiential learning, and promoting connectivity. In 2024-2025, we expanded our science leadership program through the CASCADE project. Focused on climate change and health in African cities, CASCADE has advanced the skills and confidence of early-career researchers to engage with communities in co-creating actionable research.

- Elevating the role of universities in engaging local governments and communities: In 2024-2025, we continued our long-term partnership with EPIC, which is dedicated to advancing the efforts of universities in Africa and Asia to engage local governments and communities in co-creating actionable solutions to environmental challenges in cities. A core element of this work focuses on the ability of university students to gain practical skills for engaging local communities in co-producing effective responses to climate and environmental risks.
- Strengthening the capacities of universities to engage governments in mobilizing climate finance: In partnership with UNEP and the LDC University Consortium on Climate Change, START led a 13-country effort across Africa and South Asia to strengthen the ability of universities to advise their governments on how to more effectively mobilize climate finance. The effort included the creation of university think-tanks on climate finance that focused on elevating national and sub-national efforts to access finance for climate adaptation.

The common throughlines of these efforts — and where START's has had impact and staying power — revolve around fostering connections across regions, disciplines, and career levels, cultivating science leadership that is holistic and enables confidence to work in complex spaces, and bringing a spirit of experimentation that enables us to continue to innovate.

We are grateful for the support we received during this period from the US Global Change Research Program, the National Science Foundation of the US, NASA, the International Development Research Centre of Canada, the UN Environment Program, and others. We are also grateful for our strong partnerships with numerous universities, research centers, NGOs and government agencies in carrying out START's mission. We are not grateful to the current US president but are comforted by the truism that tyrants eventually fall, becoming victims of their own hubris, greed, and arrogance. May that day come soon.



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START's Impact Areas

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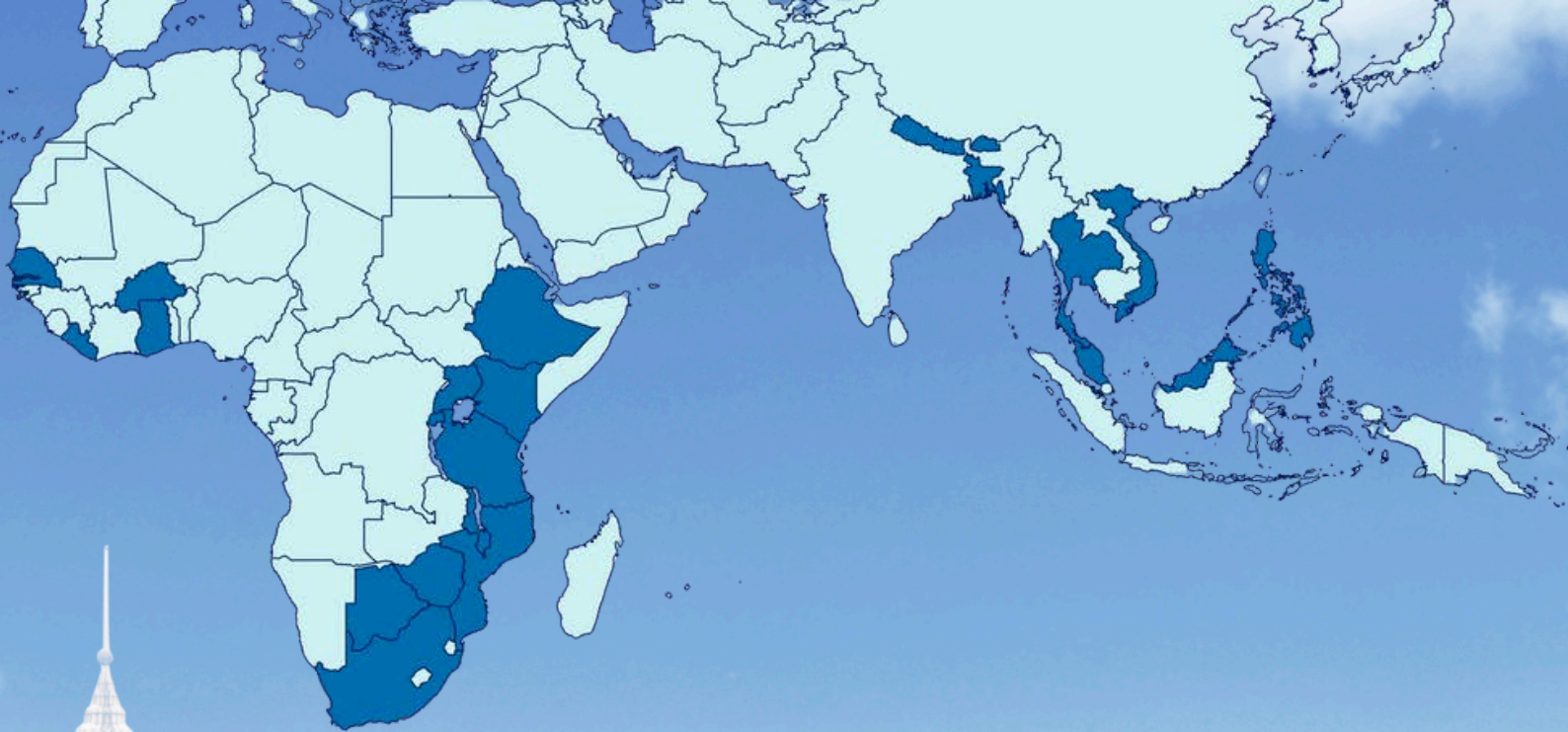
We foster connections across sectors, disciplines and geographic boundaries. Our programs provide a space for scientists to co-develop solutions with practitioners and decision-makers; and for early-career researchers to connect with experts and networks at regional and international scale.

2. Cultivating leadership in science

We focus on holistic science leadership development - including by providing opportunities for experiential learning, connections, career development and wellbeing - so that early-career researchers from different backgrounds may advance and become leading voices in their field.

3. Innovation through experimentation

We are driven to explore opportunities that foster growth, spark new learning and embrace change in order to innovate. We believe that such change is most effective when it is informed and driven by regional needs, priorities and contexts.



OUR PROGRAMS

- **Cascading Climate Health Risks in African Cities (CASCADE)**
- **Educational Partnerships for Innovation in Communities – Network (EPIC-N)**
- **Addressing climate vulnerability through nature-based solutions using transdisciplinary engagement of wetland communities (AV-STEAC)**
- **LDC University Leadership for Catalyzing Climate-Adaptation Finance (UNI-LEAD)**
- **Global Observation of Forest Cover and Land Dynamics (GOFC-GOLD)**

Cascading Climate Health Risks in African Cities (CASCADE)

Urban areas across the African continent are experiencing extraordinary growth, with 60% of the population anticipated to reside in cities by 2050. Simultaneously, African cities are witnessing unprecedented climatic shifts accompanied by changes in temperature and rainfall patterns, bringing extreme weather events that can be difficult to predict. These rapid changes are exacerbating existing challenges related to urban infrastructure, sanitation, transportation, and health systems, resulting in multiple and cascading risks for people residing in these areas.

Within this context, the Cascading Climate Health Risks in African Cities (CASCADE) project was launched in late 2023. With five participating cities (Accra, Cape Town, Johannesburg, Harare, and Kampala), the project focuses on advancing understanding of critical urban health challenges faced by African cities using transdisciplinary research methods toward finding practical and effective interventions to address these challenges.

This project is part of the broader Developing Excellence in Leadership, Training and Science (DELTAS II) program. The DELTAS Africa program supports African-led research and scientific leadership to address health and development challenges on the continent. It is funded under the Science for Africa Foundation, with support from Wellcome Trust and the UK Foreign Commonwealth and Development Office (FCDO).

“Writing my positionality statement brought to light the ways in which my experiences, including my educational background, gender, and socioeconomic status influence my perspectives and interactions within the research context.”



Cultivating Leadership in Science

Capacity building is a core component of the CASCADE program, and as such, emphasizes the leadership and empowerment aspects of early career researchers, ensuring practical experiences on the ground across the continent. Working together with the Red Cross Crescent's Climate Center, START is co-leading the capacity-building and learning components of the project, including the Scholars Research program, which targets up to 50 early to mid-career researchers enrolled as post graduate students across the five universities.

Over five months in 2024, START led the CASCADE leadership course, which served as a learning journey for exploring early career researchers to explore concepts of systems thinking, gender, intersectionality, empathy, reflexivity, positionality, agency, and the value of stepping out of one's comfort zone. The researchers were also prompted to think about how these concepts underpin the deeply collaborative and transdisciplinary work that is at the heart of CASCADE.

Fostering Connections

Together with other project partners, START is helping to facilitate city learning-action labs, which are a core component of the CASCADE program. These labs create opportunities for fostering collaboration and relationships, prioritizing transdisciplinary methods and co-creation, and building connections across city departments, civil society, student researchers and university experts. By providing spaces for mutual learning, learning labs serve as a catalyst for new ideas, learning, and co-produced solutions for complex problems facing cities across Africa.

During 2024 and 2025, START staff participated in CASCADE city learning labs in Harare, Kampala, and Accra. These interactive engagements brought together diverse perspectives from city stakeholders including government officials, planners, civil society, the private sector, and media together with university-based partners to closely examine interlinked climate-related risks and impacts and to think critically about persistent challenges facing the cities. The learning labs provide a rich foundation for deeper exploration by the project research clusters and student researchers on the key project questions relating to urban climate-health risk pathways, urban climate health interventions and, urban climate health governance.



EPIC-N

Local universities offer significant potential to work collaboratively with local governments and communities to address place-based sustainability challenges. The Educational Partnerships for Innovation in Communities (EPIC)– Network provides an innovative way to link universities with communities and governments. Over the past several years, START has helped to advance this effort through a partnership with EPIC. . The EPIC model harnesses both university and municipal resources to address pressing local needs related to climate adaptation and resilient development, through fostering collaboration between local universities, communities and governments.

START is partnering with EPIC-N to expand the EPIC approach in Africa and Asia, utilizing START’s networks and experience to strengthen capacities for more robust engagement between universities, local governments and communities. The EPIC model promotes learning-centered approaches that enable university students to develop practical skills alongside academic training, and that match cities’ needs with learning priorities of university and college students allowing for a broad spectrum of sustainability issues to be addressed in a mutually beneficial relationship.



Fostering Connections

The EPIC model helps foster partnerships and connections between universities, local governments and communities in Asian and African cities. The model offers a holistic approach to solving problems in city communities, with students, researchers, city practitioners, and communities working together to co-produce solutions within a multi and trans-disciplinary framework.

In Asia, 11 city-specific projects have helped support the EPIC Asia network, focusing on urban green development, water quality monitoring, solid waste management, disaster preparedness & early warning systems, biodiversity conservation, and climate-smart farming.

In Africa, as part of the work of the [EPIC Africa Network](#), training sessions on the EPIC model were convened for three African countries — South Africa, Guinea, and Senegal. The trainings were co-designed with city partners, enabling tailor-made products, the sharing of experiences and lessons, and deeper connections between EPIC coordinators, researchers, and city partners.

In February 2024, START, in collaboration with EPIC-N and funding from the US National Science Foundation, hosted two learning events- one in Bangkok, Thailand, and the other in Pretoria, South Africa. These network-wide events were convened to foster learning, sharing of best practices, and innovations from members and partners.

Both the EPIC Africa and Asia networks participated in the Science, Research, and Innovation (SRI) annual Congress through some training and presentations of their collaborative, community-based work.



Innovation through experimentation

The EPIC approach fostered innovation by creating scalable, place-based networks that directly connect university research with local government challenges. In Africa, this has built a self-sustaining model for collaborative, data-driven urban solutions, particularly solid waste management and reuse using data and research-based evidence on the ground, while in Asia, it has enabled rapid adoption of context-specific projects such as smart water management. The core innovation lies in its structured yet flexible framework, which systematically translates academic expertise into practical, on-the-ground implementation.

With the EPIC model, university students have been able to work alongside local government, NGOs, and conservation organizations to enhance community climate resilience through [mangrove restoration at Lake Piso in Western Liberia](#).

Beginning with a seed grant administered through START, various city departments and agencies collaborated with the University of the Philippines Los Baños to employ the EPIC Model on the “Enhancing Disaster Preparedness of Lakeshore Communities in Calamba City, Laguna, Philippines” project. [The important work continues today.](#)



U.S. National
Science
Foundation



AV-STEC

Human- and climate-induced land degradation undermine the well-being of local communities who depend on natural resources for their livelihoods. Thoughtful and sustained transdisciplinary and transboundary research and interventions are needed to develop locally relevant and appropriate responses. Working in wetlands and riparian zones of the Volta basin, at the border of Ghana and Burkina Faso, the Addressing climate vulnerability through nature-based solutions using transdisciplinary engagement of wetland communities (AV-STEC) project seeks to build actionable knowledge for climate resilience using transdisciplinary, gender and socially equitable approaches. The project emphasizes prudent transboundary water resource management, enhanced climate consciousness, and improved local capacity and livelihood strategies.

START is partnering with the University of Ghana's Centre for Biodiversity Conservation Research (CBCR), Naturama in Burkina Faso, and York University in Canada as part of the Climate Adaptation and Resilience (CLARE) initiative, a UK-Canadian research program that is enabling socially inclusive and sustainable action to build resilience to climate change and natural hazards in Africa and the Asia-Pacific region. The AV-STEC project is focused on the multi-dimensional challenges wrought by the episodic floods associated with the annual spillage of the Bagré Dam in Burkina Faso. The research includes a diverse mix of disciplinary and methodological approaches that include qualitative and collaborative methods, water resource and climate modeling, GIS mapping techniques, as well as in-depth engagement with local government officials, civil society organizations, and communities.



Cultivating Leadership in Science

In 2025, START led the AV-STEC Capacity Strengthening Course for graduate student researchers from Ghana and Burkina Faso. The course focused on strengthening internal capacities and traits that are essential for doing complex, collaborative work, and that are foundational for understanding the value and core components of transdisciplinary research. Offered in French and English, students journeyed through three modules: 1) Power, Gender, and Intersectionality; 2) Empathy and Reflexivity; and 3) Systems Thinking and Transdisciplinary Methods and Approaches. These modules helped the student researchers think critically about the way they engage with stakeholders, how they convene people of different perspectives and backgrounds, and how their own perspectives and power as researchers can influence the engagement process.

“I had not fully considered how overlapping identities like gender, age, and migration status influence others' access to resources and voice in adaptation planning.”



**Centre for Biodiversity
Conservation Research**



**UNIVERSITY OF GHANA
INSTITUTE FOR ENVIRONMENT AND
SANITATION STUDIES**



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UNI-LEAD

Financing for adaptation lags far behind the growing threat of climate change, with the gap between finance and need particularly acute in the Least Developed Countries. LDCs have significant capacity development needs related to accessing international climate finance given that: i) their governments largely rely on international experts and multilateral intermediaries to develop climate finance proposals, ii) these external consultants lack understanding of national contexts that is needed to ensure sustainability of adaptation finance investments, and iii) LDC universities have unrealized potential to play a much more visible role in advising their governments on accessing climate finance.

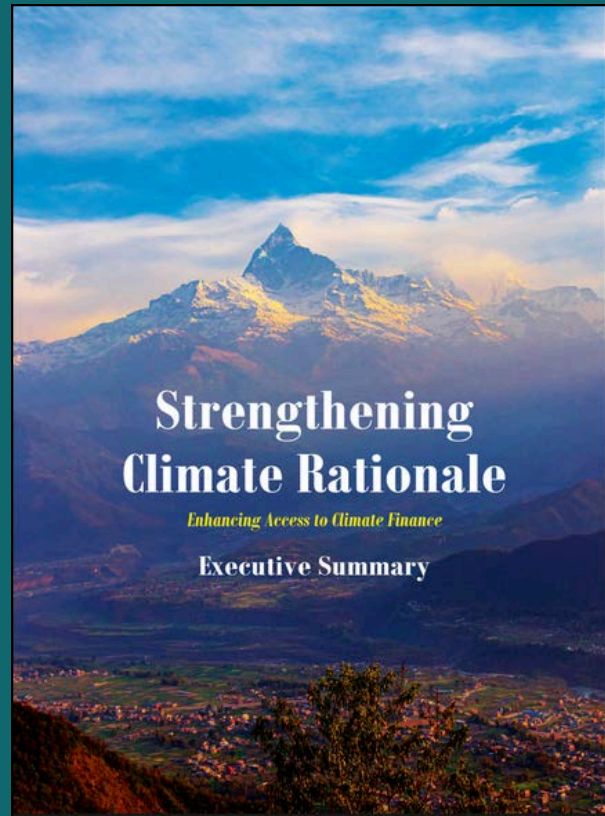
START is helping to address this challenge through the [LDC University Leadership for Catalyzing Climate-Adaptation Finance \(UNI-LEAD\)](#) project. In partnership with UNEP and 13 universities within the LDC University Consortium on Climate Change (LUCCC), the UNI-LEAD project developed a series of short courses on climate finance, contextualized to LDC needs and priorities, and established climate finance think-tanks in Nepal (Pokhara University), Uganda (Makerere University), Mozambique (Eduardo Mondlane), and Senegal (University of Cheikh Anta Diop). These climate-finance think-tanks have developed training and advisory services to their governments to enhance access to climate finance.

The think-tank priorities were shaped through extensive consultations with their governments.

- **Nepal:** the thinktank prioritized evidence-based project development through creating two resource books specific to the Nepali context: one on formulating robust climate rationales, and another on integrating gender equality and social inclusion into climate finance.
- **Uganda:** the think-tank engaged with the Government of Uganda's Climate Finance Unit in developing a national climate finance tracking tool aligned with Paris Agreement reporting needs, while also producing short films and awareness materials to communicate climate finance priorities.
- **Mozambique:** the thinktank worked closely with subnational governments to update their Local Adaptation Plans and to support the creation of Provincial Adaptation Plans that would clarify the roles of subnational authorities and enable them to independently develop funding proposals.
- **Senegal:** the thinktank focused on closing data and capacity gaps in key sectors identified in the country's National Adaptation Plan, including agriculture, renewable energy, coastal zones and urban resilience.

Fostering Connections

The UNI-LEAD project strengthened peer-learning across the 13 universities involved in the LUCCC network. The project promoted stronger connectivity between universities and governments through the numerous engagements that the universities held with their government counterparts, to establish priorities for accessing climate finance across varying contexts, and to identify ways that this project could enhance linkages between national and sub-national levels for mobilizing adaptation funding.



Innovation through experimentation

Establishment of the climate-finance think tanks in Uganda, Mozambique, Senegal, and Nepal revealed both the opportunities and obstacles inherent in developing service-oriented structures within academic institutions. The think tanks were able to successfully navigate this process and develop products and services that demonstrate their value in advancing national climate framework (i.e. NDC and NAP) priorities. These experiences affirmed that university-based think tanks can serve as credible and inclusive conveners in support of climate finance mobilization. Their ability to navigate both academic and policy spaces, while maintaining trust with civil society, positions them as essential connectors in the climate finance and adaptation ecosystem.



Land-use and land-cover change science

GOFC-GOLD

Satellite images and remote sensing data provide critical information to better understand complex dynamics between forest cover, land-use change and climate change. This science, in turn, helps to inform evidence-based decision making related to sustainably managing natural resources and developing appropriate climate adaptation and mitigation strategies. START has a long-term commitment to strengthening these capabilities through involvement in the Global Observations of Forest Cover and Land-use Dynamics (GOFC-GOLD) program administered by NASA. This program represents a comprehensive effort, across Africa, Asia, Latin America and Eastern Europe, to improve access to Earth observation data, strengthen capacities to generate and access new data, and foster an international network of scientific collaboration.

START provides a vital coordination role for the GOFC-GOLD regional networks, which enables capacity strengthening through early-career researcher training, regional meetings for sharing research results and establishing networks' research priorities, and skills enhancement on the use of new technologies and data analysis products to advance land-use and land-cover change research.

In 2024-2025, GOFC convened:

1. **South/Southeast Asia Research Initiative (SARI)** – International Meeting on Land Cover/Land Use Change (LCLUC) in South/Southeast Asia was hosted by the Vietnam National Space Center on 29-30 January, 2024 in Hanoi, Vietnam. The meeting had 68 participants from across South and Southeast Asia.
2. **South/Southeast Asia Research Initiative (SARI)** – Ashoka University co-hosted NASA's SARI meeting from April 9-11, 2024. The South Asia Regional Initiative leads research on land use land cover change in South Asian countries. This particular meeting synthesised the programme's research on Trees Outside Forests (TOF) as a policy tool for climate change mitigation.
3. **The South Central and Eastern European Regional Information Network (SCERIN) and the Mediterranean Regional Information Network (MedRIN)** held a joint meeting on Land Cover Change (LCC) and Extreme Events in the Context of Climate Change with 67 participants from July 16-19, 2024 in Chania Greece.
4. **The Latin American Remote Sensing and Forest Fires Network (RedLaTIF)** held its annual meeting on 3-5 December 2024 at the University of Medellin, Colombia. The meeting included a total of 240 registered participants (54 in-person, 186 virtual), spanning over 10 different countries in Latin America in addition to guest speakers from the United States, Spain and Italy. This year's meeting was co-sponsored by NASA and Amazonia+, who provided logistical support and travel assistance to 11 participants.

Fostering Connections

Although satellite data are readily available in northern countries, access remains a challenge for scientists in the global south. The GOFC-GOLD program addresses this critical need through a coordinated effort to broaden access to existing data and foster regional and international networks of scientists working on land cover and forest change issues. GOFC-GOLD acts as an international forum to exchange information, coordinate satellite observations and provide a framework for establishing long-term monitoring systems. To achieve its goals, GOFC-GOLD has developed regional networks of data providers, brokers and users, and one of the key ways that the GOFC program encourages cross-learning and sharing of findings is through symposium events that bring together representatives from across the networks.



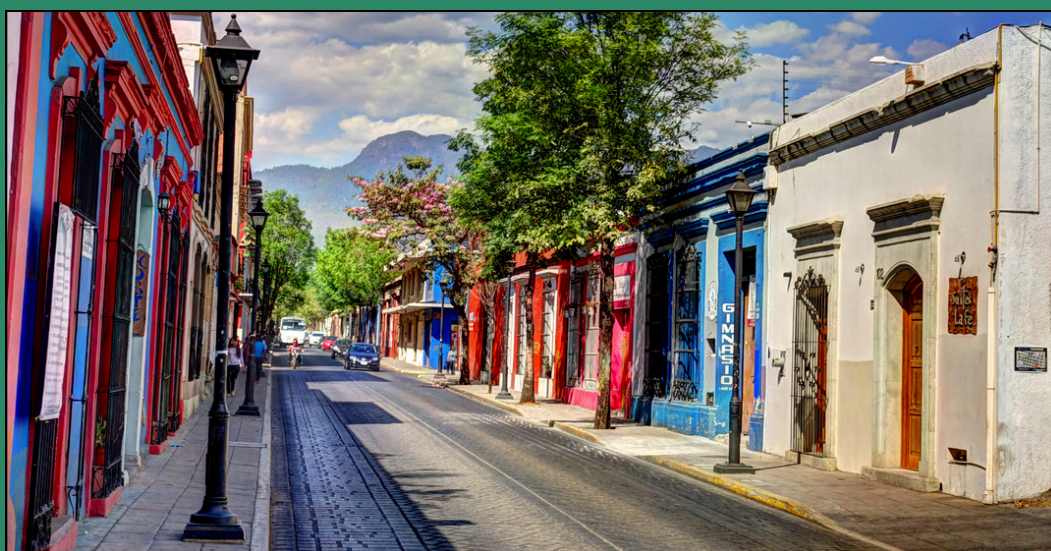
UNIVERSITY OF
MARYLAND

Global Land Programme

Through a partnership with the Global Land Programme (GLP) and support from the U.S. National Science Foundation, START enabled the participation of 35 early-career researchers in GLP's 5th Open Science Meeting in Oaxaca, Mexico. The event highlighted the latest research on land use, sustainability pathways, and global change, and included the launch of GLP's Early Career Network, and workshops led by its Working Groups.

Subsequent to the Oaxaca conference, GLP and START awarded research grants to early career scholars to advance knowledge and solutions-oriented land system science on the following topics:

- Assessing the effects of rotational and continuous grazing on mammals in a subtropical dry forest of South America.
- Effects of habitat modification and fragmentation due to urbanization on the riparian biodiversity of the Monte Desert.
- Predicting ecohydrological patterns in Patagonian wetlands using Machine Learning
- Sustainable cattle grazing: biodiversity, carbon stock, and livestock grazing trade-offs in threatened dry forests
- Travel support to the Transformations/ Earth system Governance Conference, and the 3rd Environmental and Climate Mobilities Network Conference.



Our Partners

African Population and Health Research Center
Belmont Forum
Chinese Academy of Sciences
Chinhoyi University of Technology
Climate Analytics
Climate Finance Action Network
Climate System Analysis Group, University of Cape Town
Educational Partnerships for Innovation in Communities Network
Eduardo Mondlane University
Future Earth
Future Science for Africa
Global Environment Facility (GEF)
Institute for Global Environmental Strategies
Inter-American Institute for Global Change Research
Intergovernmental Panel on Climate Change
International Development Research Centre
LDC University Consortium for Climate Change
Makerere University
National Aeronautics and Space Administration
National Science Foundation
Pokhara University
Red Cross Red Crescent Climate Centre
Reos Partners
Thammasat University
United Nations Environment Programme
United States Global Change Research Program
University of Ghana
United Kingdom Foreign Commonwealth and Development Office
University of Cheikh Anta Diop
University of Maryland
University of the Witwatersrand
Wellcome Trust
World Climate Research Programme

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