INSTITUTE OF CLIMATE AND ENVIRONMENT

Annual Impact Report 2025

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Mogadishu, Somalia

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Message from the Deputy Rector for Institutional Planning and Development

Climate change is no longer a distant environmental concern; it is a defining challenge shaping Somalia's development trajectory, institutional resilience, and human security. As a country facing recurrent droughts, floods, urban stress, and environmental degradation, Somalia must embed climate resilience at the core of its planning, education, and development systems.

SIMAD University established the Institute of Climate and Environment (ICE) to respond to this reality with seriousness, evidence, and long-term vision. ICE represents a strategic institutional commitment to integrating climate science, policy, innovation, and capacity development into Somalia's national transformation agenda. Through its research, training programs, policy engagement, and partnerships, the Institute is bridging the gap between academic knowledge and real-world solutions that matter for communities, institutions, and decision-makers.

I commend the ICE team for their dedication to building a credible, forward-looking institution that aligns with Somalia's National Transformation Plans, Vision 2060, and global frameworks such as the Paris Agreement and the Sustainable Development Goals. Their work demonstrates how universities can play a catalytic role in addressing complex national challenges through evidence, innovation, and collaboration.

Research and knowledge creation in the fields of climate change and environmental sustainability are a top priority for SIMAD University under its Strategic Plan 2026–2030, which is fully aligned with national priorities and global development agendas. In this regard, SIMAD University remains firmly committed to supporting ICE as a strategic platform for knowledge generation, institutional strengthening, and climate leadership contributing to a resilient, inclusive, and sustainable future for Somalia.

Dr.Amina Sheikh Omar
Deputy Rector, Institutional Planning & Development

Notes from the Director

As we conclude 2025, this year stands out as a period of remarkable growth, consolidation, and impact for the Institute of Climate and Environment. Marking our third year of operation, ICE has transitioned from an emerging initiative into a credible national institution, one that is increasingly shaping climate knowledge, policy dialogue, and youth engagement in Somalia and beyond.

Over the past year, we recorded significant progress across our core mandates. Our research portfolio expanded substantially, with a growing body of peer-reviewed publications and policy-relevant outputs that strengthen Somalia's climate evidence base. We introduced professional certification and training courses to bridge the gap between academic knowledge and practical climate skills. Institutionally, we deepened strategic partnerships, including formal collaborations with the Ministry of Youth and Sports and Action for Environment, reinforcing our commitment to youth leadership and community-driven climate action.

2025 was also a milestone year for ICE's global recognition and institutional credibility. We achieved accreditation with the United Nations Convention to Combat Desertification (UNCCD), accreditation with the United Nations Environment Programme (UNEP), and secured membership in the Adaptation Research Alliance (ARA). These milestones position ICE as a legitimate Somali voice in global climate governance and adaptation research, while strengthening our ability to translate international frameworks into local action.

As a knowledge generator committed to accessibility and inclusion, we translated UNDP's Climate Promise Dictionary into the Somali language to ensure climate concepts are understood by all. We developed and launched the Climate Action Toolkit for Somali changemakers and produced our inaugural State of Climate in Somalia report, key contributions to national climate literacy, policy dialogue, and public awareness.

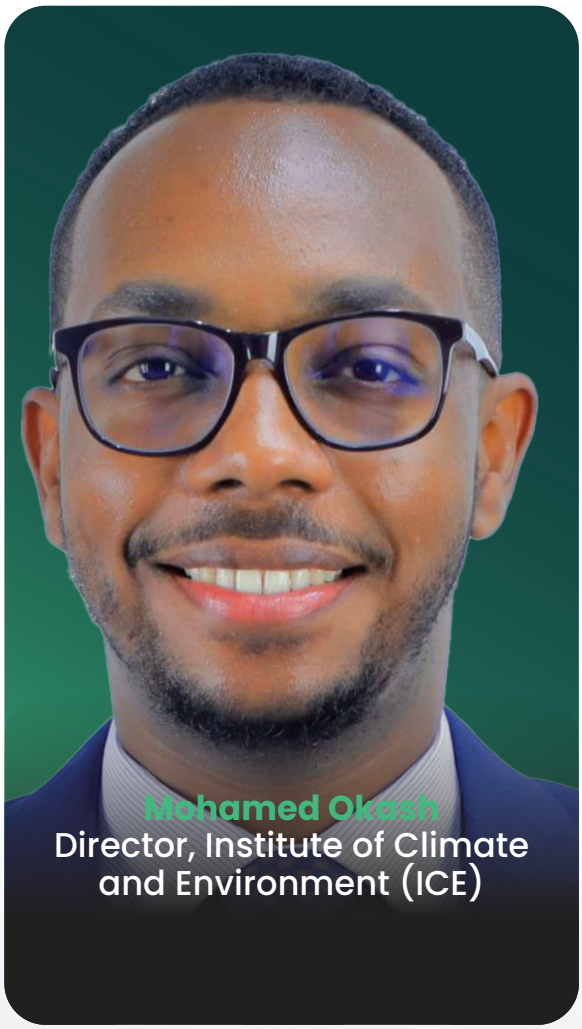
This year also marked important achievements for our team. Our Geospatial Engineer, Liban Hassan, commenced a Master of Science in Geographic Information Systems (GIS) with ESRI, strengthening ICE's technical capacity in spatial analysis and climate data. Our Head of Research, Abdikafi Hassan, was formally recognized and awarded Best Researcher of SIMAD University for 2025, reflecting both individual excellence and the growing strength of ICE's research culture.

At the global level, our participation in the important platforms including the World Economic Forum's Global Future Council on Climate and Nature Governance has enhanced ICE's credibility and visibility, enabling us to elevate Somali perspectives in global discussions while bringing foresight, governance, and innovation insights back into our local work.

We continued to deliver impactful programs in partnership with both long-standing and new collaborators. Together with Oxfam, we successfully implemented the Climate Justice Incubator II, benefiting over 200 young people with the skills, knowledge, and leadership capacity needed to address climate challenges in Somalia. We also hosted the Fourth Mogadishu Environmental Summit, focusing on a clean, green, and smart Mogadishu, an event that demonstrated strong public engagement, cross-sector collaboration, and growing environmental leadership in the capital.

A defining achievement of 2025 was ICE's successful coordination of an Erasmus+ Capacity Building in Higher Education (CBHE) project funded by the European Union. Leading a consortium of eight partner institutions across Africa and Europe, this initiative places Somalia at the center of a continental effort to advance renewable energy education, research, and the energy transition in Africa.

As we look ahead to 2026, our ambition is clear: to consolidate our gains, scale our impact, and deepen our contribution to building a greener, more resilient, and inclusive Somalia. We remain committed to bridging global climate commitments with local realities, empowering youth and institutions, and ensuring that evidence, innovation, and partnership drive Somalia's long-term transformation.



Mohamed Okash
Director, Institute of Climate and Environment (ICE)

Executive Summary

In 2025, the Institute of Climate and Environment (ICE) consolidated its role as a leading national platform for climate action, policy-relevant research, and capacity development in Somalia. Marking its third year of operation, ICE demonstrated measurable growth in institutional credibility, research output, youth engagement, and global connectivity positioning the Institute as a critical actor in Somalia's transition from climate vulnerability toward resilience and sustainable transformation.

Throughout the year, ICE advanced an integrated approach that connects rigorous research, practical capacity building, digital innovation, and policy engagement. Flagship initiatives in climate literacy and communication including the Climate Dictionary translated into Somali, the Climate Action Toolkit for changemakers, Doog Debates, and the Aaran Podcast—expanded public understanding of climate issues and ensured that climate knowledge is accessible, culturally grounded, and actionable for Somalia's predominantly young population. In parallel, ICE directly trained over 1,000 youth, students, educators, and community members in climate justice, geospatial mapping, climate governance, and climate finance, strengthening the human capital required for locally led adaptation and mitigation.

ICE significantly deepened its national policy contribution in 2025, providing technical input, research support, and stakeholder engagement to key climate governance processes. The Institute contributed to the development and public understanding of Somalia's Nationally Determined Contributions (NDCs 3.0), supported dialogue and evidence generation around the National Adaptation Plan (NAP), and engaged in emerging discussions on carbon market frameworks and climate finance mechanisms. Through policy briefs, public forums, and expert engagement, ICE helped translate global climate commitments into nationally relevant pathways, reinforcing coherence between climate policy, development planning, and institutional capacity.

The Institute's research portfolio expanded substantially, with a growing body of peer-reviewed publications, policy briefs, and national assessments addressing agriculture, energy transition, governance, inequality, urbanization, and environmental sustainability in fragile contexts. The release of the State of Climate in Somalia 2025 marked a major milestone, offering evidence-based insights and actionable recommendations aligned with national priorities. This research excellence was further reinforced by institutional recognition, including the award of Best Researcher of SIMAD University to ICE's Head of Research.

At the institutional and global level, ICE achieved landmark milestones that elevated Somalia's presence in international climate governance. These included accreditation with UNEP and UNCCD, membership in the Adaptation Research Alliance (ARA), active participation in global platforms such as the World Economic Forum's Global Future Council on Climate and Nature Governance, and representation at major regional and international forums, including COP30. Most notably, ICE successfully coordinated Somalia's first multi-country EU-funded Erasmus+ CBHE project (READ), leading an eight-partner consortium across Africa and Europe to advance renewable energy education and inclusive energy transition.

Anchored within SIMAD University and aligned with Somalia's National Transformation Plans, Vision 2060, Agenda 2063, the Paris Agreement, and the Sustainable Development Goals, ICE's 2025 achievements reflect a maturing institution that effectively bridges research and action, local realities and global processes. Looking ahead to 2026 and beyond, ICE remains committed to scaling impact, strengthening partnerships, and advancing evidence-driven solutions for a resilient, greener, and more inclusive Somalia.

Institutional Overview

The Institute of Climate and Environment (ICE) is a leading policy and action research institution established by SIMAD University to respond to Somalia's accelerating climate and environmental risks through evidence, innovation, and inclusive engagement. Founded as a platform that connects rigorous research with real-world solutions, ICE integrates climate, environment, and sustainable development into a single, coherent agenda recognizing that Somalia's climate challenges are inseparable from governance, livelihoods, displacement, urbanization, health, and long-term economic transformation.

Mandate and Institutional Role

ICE's mandate is to advance a resilient, greener, and sustainable Somalia by generating policy-relevant research, strengthening institutional and human capacities, convening multi-stakeholder dialogue, and catalyzing innovative solutions that can be adopted at community, national, and regional levels. The Institute serves as both a national knowledge hub and an action-oriented convener, ensuring that climate evidence informs decision-making while communities particularly youth and vulnerable groups are empowered to actively participate in climate solutions. ICE's work spans climate resilience, renewable energy transition, water systems, food security, land and biodiversity, ocean ecosystems, climate governance, and equity.

Vision, Mission and Value

ICE's institutional direction is guided by a clear vision and mission grounded in Somalia's realities and aligned with global sustainability commitments.

OUR MISSION

To support building a climate resilient, greener, and sustainable Somalia through action research, policy engagement, and capacity building in partnership with others.

OUR VISION

Towards a resilient, greener, and sustainable Somalia.

ICE is driven by **four core values** that shape how it collaborates, delivers impact, and safeguards credibility: **integrity**, **innovation**, **inclusivity**, and **impact**.

Approach and Impact Pathways

ICE applies a structured institutional approach that moves from diagnosing complex climate challenges to co-designing solutions and delivering measurable results. This approach follows three integrated stages: defining and discovering challenges through rigorous research; designing and co-creating solutions with communities, government, academia, and the private sector; and deploying and disseminating solutions through partnerships, learning systems, and public communication. These efforts are operationalized through five impact pathways: building local capacities; providing evidence-based research and policy support; incubating green solutions and innovation; facilitating dialogue and partnerships; and engaging policymakers and practitioners.

Core Functions and Program Architecture

ICE delivers its mandate through an integrated portfolio of programs and platforms organized around five core functions: research and knowledge generation; capacity building and training; innovation and digital transformation; policy engagement and advocacy; and partnerships and convening. This integrated architecture enables ICE to translate complex climate knowledge into practical tools, skills, policies, and collective action.

Strategic Direction & Alignment

ICE's institutional strategy is guided by three strategic priorities: equipping the Institute for impact, building strong national and global partnerships, and catalyzing change through evidence and dialogue. This direction is firmly aligned with the Paris Agreement, supporting adaptation, resilience, renewable energy transition, and evidence-based implementation of Somalia's Nationally Determined Contributions. ICE also advances the Sustainable Development Goals, particularly SDGs 7, 11, 13, 15, and 17, by bridging research and practice.

At the national level, ICE's work directly supports Somalia's National Transformation Plans (NTPs) and long-term development trajectory under Vision 2060, contributing to pillars related to climate and environmental resilience, sustainable economic transformation, human capital development, and governance. Regionally and continentally, ICE aligns with Africa's Agenda 2063, particularly aspirations for climate-resilient economies, sustainable natural resource management, green growth, and youth leadership.

Since its establishment, ICE has rapidly emerged as a credible national institution, reflected in strong research outputs, expanding policy engagement, youth-centered flagship programs, and a growing network of partnerships with government institutions, civil society, academia, and international organizations. Collectively, these foundations position ICE as a critical bridge between global commitments and local implementation, enabling Somalia to move from climate vulnerability toward resilience, and from resilience toward long-term, inclusive transformation.

Flagship Initiatives 2025

Throughout 2025, the Institute of Climate and Environment (ICE) intensified its commitment to embedding innovation, youth-centered creativity, and digital transformation into its climate action work. These efforts reflected the Institute's understanding that Somalia's climate challenges require more than traditional responses they demand accessible digital tools, localized communication platforms, and inclusive public engagement mechanisms that resonate with one of the world's youngest populations.

ICE's innovation and digital transformation portfolio in 2025 consisted of four flagship initiatives: the Climate Dictionary, Doog Debates, the Climate Action Toolkit for Somali changemakers, and the Aaran Podcast. These platforms were conceptualized and delivered to expand climate awareness, simplify complex information, and inspire civic participation ensuring that Somali youth, students, community members, and educators can meaningfully engage in climate dialogue and environmental stewardship.

Taken together, these programs contributed to a growing national climate knowledge ecosystem, one that integrates cultural familiarity, digital accessibility, and clear climate communication. Each initiative served a distinct purpose while collectively advancing ICE's goal of ensuring that climate information is not only technically correct but also understood and used by the public.

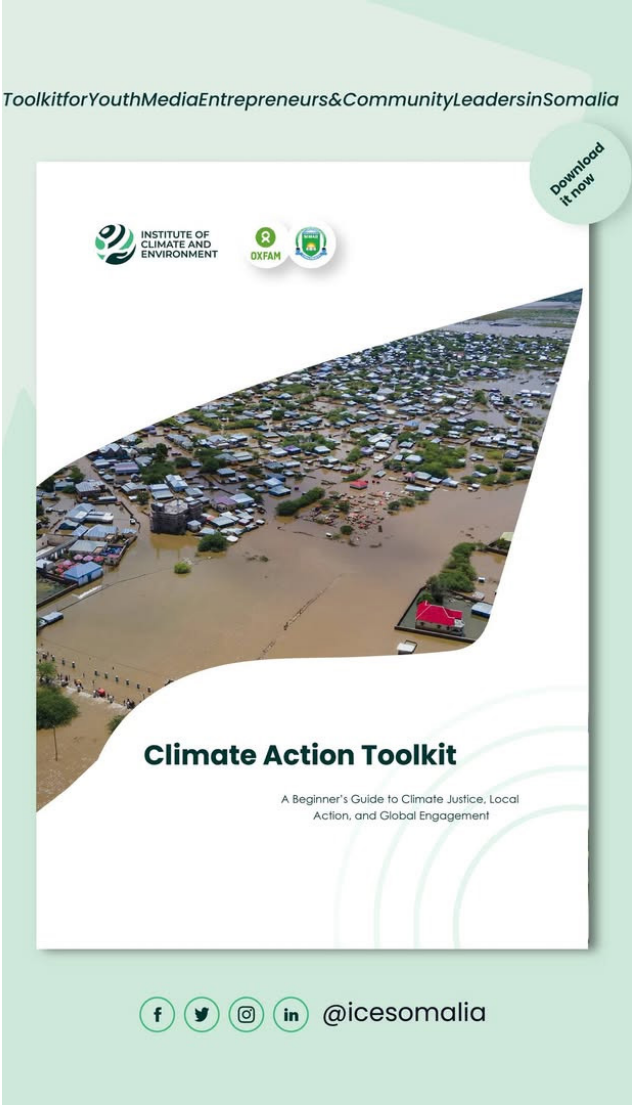
Climate Dictionary:
Speak Climate Fluently

The Climate Dictionary emerged in 2025 as one of ICE's most impactful contributions to climate literacy and public knowledge. Recognizing that climate terminology is often filled with scientific and technical language that may be unfamiliar or intimidating, ICE designed the Climate Dictionary as an accessible entry point for students, youth, teachers, and community groups seeking to build foundational climate vocabulary.

The Dictionary was developed through a careful process that involved identifying the most commonly used climate-related terms appearing in discussions, workshops, reports, and policy dialogues. ICE's team focused on terms that frequently arise in national conversations such as adaptation, mitigation, climate resilience, greenhouse gases, climate finance, biodiversity, land degradation, drought cycles, and food security. Each term was then rewritten into a simple, clear explanation that avoided jargon and instead used plain language rooted in Somali realities.

What made the Climate Dictionary particularly transformative is that it was dual-language offering definitions in both English and Somali. This bilingual approach addressed two key national needs. First, it improved technical vocabulary for youth and students who are reading global climate materials written in English. Second, it ensured that Somali-language speakers including teachers, high school students, and community elders could also access the same scientific knowledge without language barriers.

ICE integrated the Climate Dictionary into virtually every educational activity conducted in 2025. Trainers used it in climate literacy workshops, school outreach programs, mapping sessions, and public dialogues. Students relied on it to better understand new concepts and participate confidently in discussions. Youth leaders used it when preparing speeches, writing proposals, or presenting climate projects. The Climate Dictionary had become a foundational tool for the Institute's communication strategy. It helped standardize climate vocabulary, ensured clarity in all training programs, and empowered participants to "speak climate fluently" understanding not just the words but their significance in Somalia's environmental context.



Doog Debates: A New Voice for Climate Dialogue in Somalia

Doog Debates represented one of ICE's most innovative communication initiatives of the year a culturally grounded, discussion-based platform created to encourage open conversations about climate change among young Somalis. The name "Doog," connected to Somali traditions of gathering in circles for open dialogue, was intentionally chosen to make the platform accessible, familiar, and rooted in local culture.

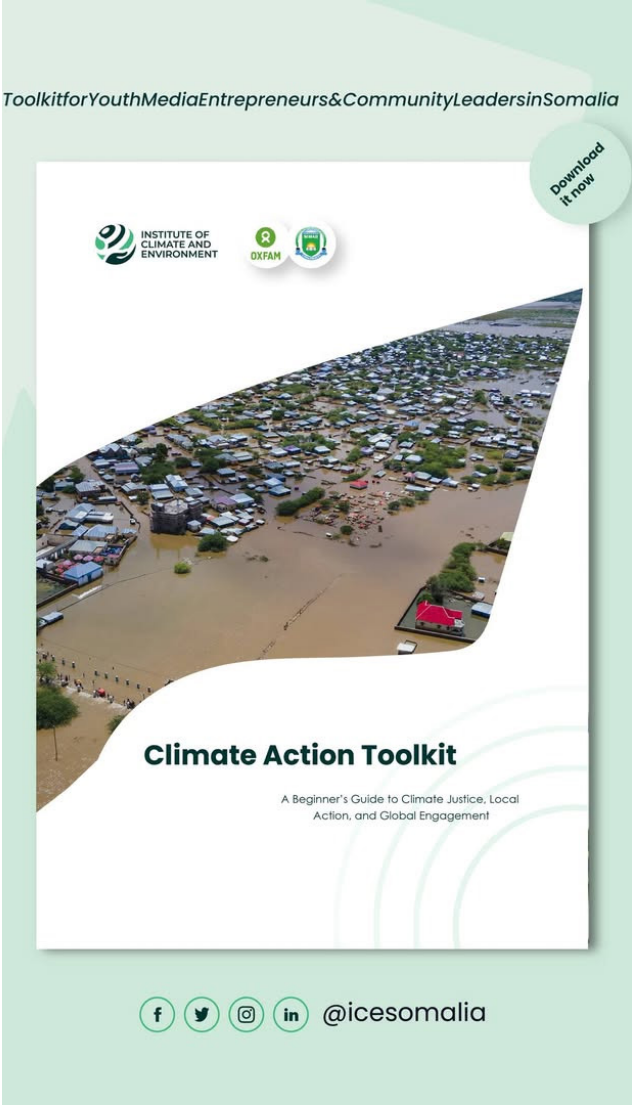
The purpose of Doog Debates was not to deliver lectures or presentations, but to facilitate meaningful, balanced conversations between young people, students, researchers, climate practitioners, and community voices. ICE recognized that Somalia's climate challenges can only be addressed through collective thinking and shared perspectives and Doog Debates provided exactly that space.

One of the most impactful sessions held in 2025 focused on "Is Somalia Ready for an Energy Transition?", bringing together representatives from SIMAD University, the Somali National University (SNU), and the University of Somalia (UNISO) for a dynamic, youth-centered dialogue. The discussion explored Somalia's vast renewable energy potential, persistent energy access gaps across regions, structural barriers to energy infrastructure development, youth participation in the transition, equity and risk considerations, and the critical role of education in accelerating green energy adoption. Designed in a debate format, the session encouraged open exchange, critical questioning, and diverse perspectives, with ICE facilitators ensuring the dialogue remained inclusive, respectful, and solution-oriented. Audience interaction through questions, polls, and reflections further enriched the discussion, prompting participants to connect climate and energy choices to real community impacts. The session concluded with remarks from SIMAD University's Deputy Rector, ustaad Abdillahi Ahmed Abdirahman, who underscored the centrality of youth engagement in national sustainability efforts and commended ICE for creating a platform that amplifies voices often excluded from policy spaces. Overall, Doog Debates emerged as a powerful model for youth-led climate dialogue in Somalia, demonstrating that climate communication can be intellectually rigorous, culturally grounded, participatory, and inclusive at the same time.

ICE Institute Launches Climate Action Toolkit for Somali Changemakers

The Climate Action Toolkit was developed in 2025 to address a critical gap: many young Somali changemakers are motivated to take climate action but lack the practical guidance needed to start. ICE created the Toolkit as a structured, easy-to-understand resource that outlines the essential steps, knowledge, and skills required for climate engagement. The Toolkit titled ***"A Beginner's Guide to Climate Justice, Local Action and Global Engagement"*** was intentionally designed for first-time climate actors. It includes tailored guidance for students, youth networks, teachers, environmental clubs, and community leaders seeking clear direction on how to contribute meaningfully to national climate efforts.

The Toolkit covers several core areas, beginning with a clear and accessible introduction to climate basics, including simple explanations of climate change, local environmental challenges, and the science behind climate impacts in Somalia. It also explores climate justice principles, highlighting issues of fairness and inequality and explaining why certain communities face greater risks, with a strong focus on Somali realities such as displacement, drought-affected populations, and urban vulnerabilities. In addition, the Toolkit provides practical guidance on designing local projects, helping young people plan small initiatives, organize community activities, establish school climate clubs, and lead awareness campaigns. It outlines national and global opportunities by showing how youth can engage with Somalia's climate processes, youth networks, and international platforms such as COP, while offering ready-to-use tools, templates, and action plans to support project planning, activity design, and communication. ICE launched the Toolkit during a major training session with 100 high school graduates, combining the materials with guided exercises that encouraged students to reflect on climate issues in their own neighborhoods and identify entry points for youth-led solutions. By the end of its rollout, the Toolkit had become one of ICE's most welcomed educational resources, particularly because it translated climate knowledge into clear, practical, and immediately actionable steps that young people could replicate in their communities.



Aaran Podcast

The Aaran Podcast marked a significant expansion of ICE's digital communication strategy, designed to reach Somali youth through accessible and engaging modern media while blending educational content with personal storytelling, interviews, and clear explanations of climate issues. Each episode explores climate themes deeply relevant to Somali communities, ranging from extreme weather events, water scarcity, waste management, renewable energy, and food systems to youth leadership using a conversational style that connects scientific information to everyday lived realities, making climate learning relatable and approachable. The podcast intentionally amplified diverse voices, featuring youth activists, students, community organizers, educators, and local environmental practitioners, reinforcing the message that climate action in Somalia is inclusive and not confined to experts alone. Short "Climate Essentials" segments further strengthened impact by breaking down key climate terms and concepts through familiar, real-life examples, helping listeners build foundational climate literacy. The inaugural edition featured Dr. Abdullahi Khaliif, Somalia's Nationally Determined Contributions (NDCs) National Representative and Principal Advisor to the Ministry of Environment and Climate Change, in an in-depth, over one-hour conversation with Mohamed Okash, Director of the ICE Institute, where they unpacked Somalia's pathway to climate resilience under the newly submitted NDC 3.0, the country's climate vulnerability context, implementation challenges, and the role of NDCs as a driver for climate finance. Widely disseminated across digital platforms including YouTube, Facebook, and Instagram, the episode attracted strong engagement and positioned the Aaran Podcast as a powerful tool for sustaining youth interest in climate issues while extending ICE's educational reach far beyond traditional classrooms and workshops.

This inaugural edition was recorded on 26 July 2025, marking a timely and strategic moment to engage public dialogue around Somalia's newly advanced climate agenda and the rollout of NDC 3.0, while reinforcing ICE's commitment to sustained, youth-centered climate communication through digital platforms.

Capacity Building and Skills Development

In 2025, the Institute of Climate and Environment (ICE) positioned capacity building as a central pillar of its climate action mandate, recognizing that Somalia's long-term resilience and transformation depend on human capital, skills development, and informed leadership. Beyond policy engagement and research, ICE invested deliberately in equipping youth, students, educators, and community actors with the knowledge and practical competencies required to understand climate risks, participate in decision-making, and implement locally grounded solutions.

Throughout the year, ICE delivered structured training programs, technical workshops, and school- and community-based outreach initiatives across Mogadishu and beyond. These interventions were designed to be inclusive, practice-oriented, and responsive to Somalia's climate realities bridging the gap between scientific knowledge, policy processes, and everyday community action. Collectively, these efforts strengthened climate literacy, leadership, technical capacity, and civic engagement, reinforcing ICE's role as a leading national provider of climate education and skills development.

Training Programs Delivered

ICE implemented a diverse portfolio of training programs covering climate literacy, climate justice, geospatial mapping, climate governance, climate finance, and environmental data management. Across all programs, the Institute adopted a learning-by-doing approach, emphasizing participation, dialogue, and applied problem-solving. In total, over 1,000 individuals were directly trained through ICE-led capacity-building activities in 2025.

Climate Justice Incubator II

The Climate Justice Incubator II (CJI II) marked the second phase of ICE's flagship youth empowerment initiative. Implemented in partnership with Oxfam Somalia, the program engaged over 200 young people from universities, youth networks, and civil society organizations. Participants examined how climate change intersects with inequality, displacement, gender, poverty, and governance in Somalia. Using locally grounded case studies, the incubator strengthened understanding of climate justice principles and equipped participants with leadership and advocacy skills.

Key thematic areas included:

- Climate justice concepts and relevance to Somalia
- Unequal exposure to droughts, floods, and climate shocks
- Institutional and social barriers to adaptation
- Designing inclusive and community-centered climate interventions
- Youth leadership, storytelling, and public communication

The program concluded with participant-led project ideas and presentations, enabling youth to articulate justice-based climate solutions for their communities. Many participants emerged as confident advocates, contributing to public dialogue, school initiatives, and community-based actions.

Mapthone Water Somalia Points and Mapping Workshops

ICE delivered multiple hands-on mapping and geospatial capacity-building initiatives in 2025, including the Mapthone Water Somalia Points and introductory mapping workshops implemented both online and in person.

Participants were trained in:

- Digital mapping and GIS fundamentals
- Use of GPS-enabled devices and mobile mapping tools
- Open-source platforms such as OpenStreetMap and QGIS
- Water point data collection and validation

Field-based exercises enabled participants to collect and visualize real-time data on water access points, contributing to a growing national dataset. These programs strengthened technical skills while demonstrating the practical role of geo-spatial data in climate adaptation, water resource management, disaster prepared-ness, and planning.

Climate Literacy Workshops

ICE conducted a series of Climate Literacy Workshops across universities, reaching hundreds of students throughout the year, including over 100 students in a single session in October 2025. The workshops targeted participants with limited prior exposure to climate science and focused on building foundational understanding using accessible language and Somali-context examples.

Key topics included:

- Weather versus climate
- Drivers of climate change and green house gas emissions
- Somalia's vulnerability to climate impacts
- Links between climate change, food security, and livelihoods

Interactive discussions, scenario exercises, and group work enabled participants to connect scientific concepts to lived experiences. Many participants developed small-scale action plans for awareness campaigns, water conservation, and environmental stewardship within their institutions and communities.

Pre-COP Workshops

ICE organized Pre-COP Workshops to prepare Somali youth and civil society actors for engagement in global climate negotiations. These sessions demystified international climate processes and strengthened participants' ability to follow, interpret, and contribute to discussions around COP, NDCs, and climate finance.

Participants were trained on:

- The structure and purpose of the UNFCCC and COP
- Roles of national delegations and observer organizations
- Common negotiation terms and processes
- Somalia's climate priorities and NDC 3.0
- Pathways for youth participation and advocacy

The workshops fostered a sense of ownership over global climate processes and strengthened participants' confidence to engage in national and international climate dialogue.

Climate Finance Workshops

ICE delivered multiple Climate Finance Workshops in 2025, reaching more than 120 participants across different sessions. These trainings responded to a critical national gap in understanding climate finance mechanisms and access pathways.

For many participants, this was their first structured introduction to climate finance, strengthening their ability to engage with funding opportunities and policy discussions.

Participants gained practical exposure to:

- Fundamentals of climate finance
- Global and regional funding mechanisms
- Somalia's climate finance challenges and opportunities
- Concept note development and donor requirements
- Accountability and transparency considerations

School and Community Outreach Programs

ICE extended climate education beyond higher education institutions through targeted school and community outreach initiatives.

Climate Justice and Climate Action for High School Graduates

In July 2025, ICE conducted a one-day seminar for approximately 100 high school graduates in Mogadishu, introducing climate science, climate justice, and youth leadership. The event also marked the official launch of ICE's Climate Action Tool-kit, which participants expressed interest in using for school clubs and community initiatives.

Outreach to Vulnerable Groups

ICE implemented focused environmental awareness sessions for vulnerable groups, including orphan girls in Bondhere District. These sessions emphasized basic environmental knowledge, personal agency, and simple actions for environmental protection, reinforcing ICE's commitment to inclusive and equitable climate education.

PDRC Annual Peace Conference Participation

On 22 September, the Director of the Institute of Climate and Environment (ICE), Mr. Mohamed Okash, was invited as an expert speaker at the PDRC Annual Peace Conference in Garowe, which this year was held under the theme "Climate-Peace Nexus." His participation highlighted ICE's growing role in linking climate change research with peacebuilding and governance discussions in Somalia.

During the conference, Mr. Okash presented a research paper examining the relationship between climate change, government stability, and internal conflicts. He emphasized how climate-induced shocks such as droughts and floods intensify resource scarcity, undermine livelihoods, and, when combined with weak governance structures, increase the risk of instability and conflict. His analysis provided a valuable evidence base for integrating climate adaptation into peacebuilding frameworks.

The presentation generated strong interest and opened an engaging dialogue on how climate resilience and peacebuilding efforts can be better coordinated across Somalia. Participants discussed the urgent need to invest in sustainable natural resource management, strengthen governance institutions, and promote inclusive community-based adaptation strategies. Key development partners at the conference included the Somali Stability Fund, Swiss Embassy, Swedish Embassy, and several local actors, all of whom expressed commitment to supporting integrated approaches that address both environmental and peace challenges.

World Cleanup Day Participation

On 20 September 2025, the Institute of Climate and Environment (ICE) actively participated in World Cleanup Day by organizing a campus-wide cleanup at SIMAD University's main campus. The initiative brought together 30 participants, including university students, staff, Xajsi members, and community volunteers, who worked side by side to improve and beautify the campus environment.

The cleanup was not only about collecting waste but also about building a sense of shared responsibility for protecting the environment. Participants engaged in discussions on the importance of proper waste management, recycling, and reducing single-use plastics. The event emphasized that small, community-driven actions can collectively create a significant impact toward a cleaner and healthier Somalia. To strengthen coordination, participants utilized WhatsApp live location sharing, which made it easier to organize teams across different campus areas. Progress was also captured through photos, serving both as documentation and as a way to inspire others to join similar initiatives.

Beyond cleaning, the activity provided a valuable platform for raising environmental awareness and encouraging sustainable practices. ICE reaffirmed its commitment to mobilizing youth, fostering community engagement, and advancing the vision of building a greener, climate-resilient Somalia.

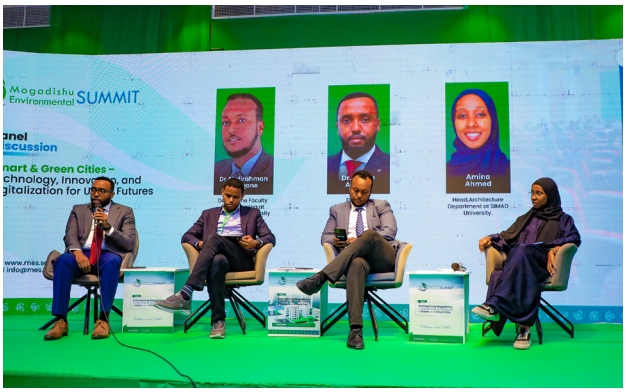
ICE and Mogadishu Environmental Summit 2025

The Mogadishu Environmental Summit 2025 (MES2025), held on 29–30 November 2025, brought together national leaders, policymakers, researchers, youth groups, development partners, and private sector actors to advance a shared vision for a greener, smarter, and more climate resilient Mogadishu. Under the theme “Reimagining Mogadishu: Collaborative Solutions for a Green & Smart City,” the Summit served as a key platform for dialogue on urban resilience, climate governance, and sustainable development.

The Institute of Climate and Environment (ICE) at SIMAD University co-led the Summit, providing scientific and technical leadership, research expertise, and strong youth mobilization. ICE also played a central role in coordinating stakeholders and establishing the Summit as a recurring national platform.

The Pre-Summit Forum focused on youth engagement, smart city innovation, and community-based environmental solutions. The Main Summit featured high-level discussions on urban infrastructure, hydro-urban vulnerabilities, climate-resilient planning, and Somalia’s National Adaptation Plan.

The Summit concluded with a declaration committing stakeholders to sustainable urban development, climate finance mobilization, and data-driven decision-making, positioning Mogadishu toward a more resilient and sustainable future.



Research and Knowledge Generation

In 2025, the Institute of Climate and Environment (ICE), in collaboration with SIMAD University, continued to strengthen its role as a leading hub for rigorous, policy-relevant, and context-specific research on climate change, environmental sustainability, and socio-economic transformation. ICE's research agenda combines academic excellence with practical relevance, ensuring that evidence generated contributes directly to policy dialogue, development planning, and community resilience in Somalia and comparable fragile contexts.

Peer-Reviewed Publications

Advancing Somali agriculture through digitalization: assessing the impacts of ICT and foreign direct investment on food production
(Published 26 March 2025).

Using ARDL and Kernel-based Regularized Least Squares (KRLS) methods and data from 1990–2022, this study examines how ICT (especially mobile phone usage), foreign direct investment (FDI), trade openness, agricultural labour and land area influence food production in Somalia. The results show that mobile phone usage significantly increases food production in both short and long run, while internet usage unexpectedly has a negative effect; agricultural labour cropped land area, and trade openness are strong positive drivers. Capital and FDI had minimal or even negative impacts in many scenarios, highlighting inefficiencies or misalignment of investments. The authors argue for optimizing land use, fostering ICT adoption, improving capital investment efficiency, and promoting trade openness to enhance agricultural productivity and food security.

Modeling the impacts of energy consumption, ICT, industrialization, and urbanization on Somalia's environmental sustainability: a hybrid approach using dynamic ARDL and KRLS methods
(Published in 14 April 2025).

This research applies both dynamic econometric modeling and machine learning to explore links between energy consumption, ICT, industrialization, and urbanization on Somalia's ecological sustainability. The study finds that while long-term economic growth may ease some environmental pressures, increasing energy consumption and rapid industrialization exacerbate ecological stress. Importantly, greater ICT integration reduces the environmental footprint, underlining the potential of digital solutions for sustainability. The study also acknowledges that rapid urbanization imposes resource strains, but with good planning, urban growth could support resilience. The authors recommend investments in renewable energy, sustainable industry practices, expansion of ICT-driven innovation, and green urban planning.

Poor governance and weak social cohesion in Somalia's climate stressed settings: the mediating effects of economic inefficiencies and limited human development (Published 06 Mar 2025)

Using Structural Equation Modeling (SEM), the study examines how governance failures in Somalia's climate-stressed areas worsen economic inefficiencies and human development deficits; these in turn erode social cohesion and social trust, leading to fragmented communities. The study presents a conceptual model linking governance, economic policy, human development, and social resilience in fragile/post-conflict contexts, arguing that governance reforms, equitable resource distribution, anti-corruption, and community-driven investments are essential for rebuilding social bonds and enabling climate-resilience.

Do globalization, foreign direct investment, and inflation drive income inequality? Evidence from Somalia within the Kuznets curve hypothesis(published August 2025).

This study analyses 1990–2020 data to test the classical Kuznets curve hypothesis in Somalia. It finds that during early stages of economic growth income inequality tends to rise; globalization also strongly increases inequality both short- and long-run. Inflation and unemployment are important drivers of inequality, especially impacting low-income households. While FDI and institutional quality help reduce inequality in the short-run, their long-term effects are negligible. The authors recommend policies promoting inclusive growth, stable macro-economic environment, targeted employment, and institutional strengthening to address inequality.

Approaches to Ecological Sustainability in Sub Saharan Africa: Evaluating the Role of Globalization, Renewable Energy, Economic Growth, and Population Density (published January 2025)

This regional study (covering many SSA countries including Somalia) explores how globalization, renewable energy adoption, economic growth, trade openness, and population density impact ecological footprint and CO_2 emissions. The results provide comparative context, helping situate Somalia's sustainability challenges in broader regional dynamics.

Determinants of agricultural exports in Somalia: the impacts of exchange rates, foreign direct investment, and institutional quality (published DEC 2025)

Globally, the exportation of agricultural products plays a critical role in driving economic growth and stability, often acting as a substantial contributor to gross domestic product (GDP), employment, and foreign exchange earnings in agrarian economies. As a vital pillar of many developing countries' economies, the agricultural sector's export dynamics have remained understudied, particularly in integrating climatic, economic, and institutional-related factors. Thus, this study explores the determinants of agricultural exports in Somalia between 1985 and 2017. While the evidence from the ARDL bounds-testing cointegration analysis indicates that precipitation improves agricultural exports in the long-run, the role of agricultural production was insignificant. The analysis indicates that currency depreciation can boost export competitiveness in the long-run, whereas currency depreciation may lead to reduced exports in the ...

Institutional quality, economic growth, and environmental sustainability: A long-run Institutional analysis of the ecological footprint in Somalia (published JUNE 2025)

This study investigates the complex linkage between economic growth, institutional quality, urbanization, trade openness, and Somalia's ecological footprint from 1990 to 2020. To ensure reliable results, we initially conducted an assessment of the order of integration of our variables through the use of the augmented Dickey-Fuller (ADF) and the Phillips-Perron (PP) stationarity tests, which indicated a mixed order of integration. Following this, we employed the autoregressive distributed lag (ARDL) technique, in combination with the fully modified ordinary least squares (FMOLS) and canonical cointegrating regression (CCR) methods, to investigate the long-term relationships and causal connections between these variables, further supported by the application of the Granger causality test. Our findings indicate that a 1% increase in GDP per capita increases the ecological footprint by 3.79%, while a 1% increase in.

Approaches to ecological sustainability in sub-Saharan Africa: evaluating the role of globalization, renewable energy, economic growth, and population density (published JUNE 2025)

Addressing the intertwined challenges of economic growth and environmental sustainability is essential to mitigate the worsening impacts of climate change in sub-Saharan Africa (SSA). Promoting clean energy adoption and understanding the role of globalization have been identified as critical strategies to enhance environmental quality while fostering sustainable economic progress. However, empirical focus on the SSA context remains limited, particularly regarding ecological footprints as a measure of environmental sustainability. This study investigates the effects of globalization, renewable energy consumption, economic growth, trade openness, and population density on SSA nations' ecological footprint and CO2 emissions from 1994 to 2021. To ensure robust and reliable findings, advanced econometric techniques—namely Panel-Corrected Standard Errors (PCSE), Feasible Generalized Least Squares.

Assessing the energy-economy-environment nexus in Somalia: the impact of agricultural value added on CO_2 emissions (published 2025)

This study assesses the environmental impact of the agricultural sector's contribution to Somalia's economy within the energy-economy environment nexus. While the agriculture sector is a central pillar of Somalia's economy, its environmental costs remain underexplored. By addressing this gap, the research utilizes time series data spanning from 1990 to 2020, including variables such as CO2 emissions, real GDP, renewable energy use, agricultural value-added, and population growth. The data analysis employs the autoregressive distributed lag (ARDL) model, Canonical Cointegrating regression (CCR), dynamic ordinary least squares (DOLS), and fully modified ordinary least squares (FMOLS). The results reveal a strong positive relationship between economic growth and environmental degradation in Somalia, supporting the environmental Kuznets curve (EKC) viewpoint. While economic growth initially exacerbates environmental pollution, the effect diminishes as income levels rise. Renewable energy consumption significantly mitigates environmental degradation. However, agricultural value-added is found to increase environmental deterioration in the long-term. The findings suggest that Somalia's path to sustainable development will require concerted efforts to reform agricultural practices and embrace renewable energy adoption. Despite Somalia's considerable solar energy potential, owing to its abundant solar radiation, this resource remains underutilized. A strategic focus on expanding solar energy infrastructure could not only mitigate environmental harm but also enable the country to leapfrog traditional energy development ...

Transitioning to sustainable energy and enhanced environmental quality in Somalia through renewable energy, globalisation and trade openness (published FEB 2025)

A balanced approach that combines trade policies, renewable energy promotion, and robust environmental regulations is crucial for improving ecological sustainability. Although the literature suggests that trade openness facilitates the transfer of cleaner energy technologies to developing nations, existing empirical studies have produced inconclusive results, particularly in Somalia's context. Therefore, this study explores the dynamic relationships between renewable energy, trade openness, economic growth, globalisation, and environmental degradation using annual time-series data from 1990 to 2019. Employing advanced econometric methods, including the autoregressive distributed lag (ARDL) model and dynamic OLS analyses, the findings reveal significant long-run cointegration among the variables. The essential insights of this study affirm that renewable energy strengthens environmental quality in both ...

Accelerating sustainable transformation in sub-Saharan Africa: the role of clean energy, digitalization, foreign direct investment, and industrialization
(published AUG 2025)

Sub-Saharan Africa (SSA) faces growing pressure to align economic progress with environmental sustainability, as the region contends with climate stress, industrial expansion, and resource-driven growth. Yet, there remains a limited understanding of the combined influence of clean energy, digitalization, FDI, and industrial development on the region's sustainable transition. Accordingly, this study explores the association between clean energy usage, foreign direct investment (FDI), economic growth, digitalization, industrialization, urbanization, and environmental sustainability across 38 SSA countries from 2001 to 2020. Drawing on econometric techniques-including the pooled mean group estimator and method of moments quantile regression-the analysis affirms the transformative potential of renewable energy, which significantly reduces both ecological footprints and environmental pollution. FDI demonstrates dual effects while fostering technological improvements, yet it amplifies ecological footprints through resource intensive investments. In addition, economic growth is consistently related to increased emissions and ecological impact. Strikingly, digitalization proposes promising pathways for sustainability, while industrialization and urbanization exacerbate environmental challenges. The quantile regression results reveal that the magnitude of these effects varies across different levels of environmental impact, and the Dumitrescu-Hurlin panel causality test affirms bidirectional causalities in at least one cross-section. Considering these findings, sustainable development in SSA requires prioritizing renewable energy adoption, regulating ...

Modelling the marginal effects of energy consumption, ICT, industrialization, and urbanization on environmental sustainability in Somalia: dynamic ARDL and KRLS approaches (published APRIL 2025)

As environmental degradation increasingly threatens ecosystems and economies, understanding the factors shaping ecological sustainability is more urgent than ever. Economic development, technological progress, industrial expansion, and urbanization play a crucial role in determining environmental outcomes, particularly in fragile regions. In Somalia's vulnerable economy, the balance between fostering economic growth and minimizing ecological footprints remains underexplored. This study addresses this gap by analyzing the effects of economic growth, energy consumption, adoption of information and communication technologies (ICT), industrialization, and urbanization on ecological footprints in Somalia using time-series data from 1990 to 2020. Through a dynamic autoregressive distributed lag (ARDL) model, the study captures both short- and long-term impacts, as well as the shocks of the regressors ...

Advancing Somali agriculture through digitalization: assessing the impacts of ICT and foreign direct investment on food production (published MARCH 2025)

The integration of information and communication technology (ICT) into Somali agriculture has the potential to transform traditional practices, which enhances efficiency and increases production. Despite ICT's transformative potential, comprehensive empirical studies analysing its combined influence with foreign direct investment (FDI) on food production in Somalia remain scarce. Employing the autoregressive distributed lag (ARDL) technique and Kernel-based regularised least squares (KRLS) methodology, this study examines these relationships using time series data from 1990 to 2022. The findings reveal that agricultural labour, cropped land area, and trade openness significantly enhance food production in the short-and long-run. Remarkably, mobile phone usage exhibits a positive association with food production in Somalia, which reinforces the critical role of digital communication. Conversely, internet .

Building food security through rural development: estimating climate change and crop production linkages in sub-Saharan Africa
(published MARCH 2025)

The agriculture sector in sub-Saharan Africa (SSA) is a lifeline for millions, yet it is under relentless threat from climate change and environmental degradation. Despite its importance, rural development has often been overlooked in climate-agriculture research, with much of the existing literature failing to adequately explore how improvements in rural infrastructure and technological access can buffer agricultural productivity against climate shocks. Therefore, this study investigates the relationships between climate variables, rural development, and crop production in SSA from 1999 to 2020. Employing advanced econometric techniques—panel-corrected standard errors (PCSE), feasible generalized least squares (FGLS), and pooled mean group (PMG) estimators we address cross-sectional dependence and slope heterogeneity. In the long-run, higher rainfall and CO2 emissions are associated with greater ...

Do globalization, foreign direct investment, and inflation drive income inequality? Evidence from Somalia within the Kuznets curve hypothesis
(published APRIL 2025)

Understanding the dynamics of income inequality in Somalia is essential for diagnosing the structural barriers that impede inclusive economic growth and development. Recognizing these disparities can lead to more effective policies that foster equitable and sustainable progress. Therefore, this study explores the determinants of income inequality in Somalia from 1990 to 2020, utilizing the Dickey-Fuller test for stationarity and the ARDL approach for analysis. The bounds-testing approach validated the long-run cointegration relationship between economic growth, globalization, foreign direct investment (FDI), institutional quality, unemployment, inflation, and income inequality. The findings indicate that GDP per capita initially increases income inequality, supporting the Kuznets curve hypothesis, but this effect diminishes as the economy matures. Globalization consistently exacerbates income inequality in the long ...

Education for sustainable development in Somalia: do economic growth, energy consumption, and population density affect ecological footprints? (published APRIL 2025)

Somalia faces severe environmental challenges, including overdependence on nonrenewable energy, deforestation, and rapid population growth, exacerbated by poor governance and weak institutional capacity. As one of the most climate-vulnerable nations, Somalia's environmental sustainability is crucial for its long-term economic and social stability. Given this background, this study examines the dynamic impact of economic growth, energy consumption, education, and population density on Somalia's ecological footprint using annual data from 1990 to 2020. Employing ARDL and DOLS models, the findings confirm a long-run cointegration relationship among the scrutinized variables. The results indicate that energy consumption significantly increases ecological pressures. In contrast, education mitigates environmental impacts. Additionally, population density is found to intensify ecological stress in both the ...

Investigating the influence of humanitarian and development assistance on sustainable agricultural output in Somalia (published MARCH 2025)

In recent decades, foreign aid inflow in Somalia has increased. Yet, agricultural production and gross domestic product (GDP) are stagnant and have not made any tangible improvement. Therefore, this raises questions about the effectiveness of foreign aid in boosting agricultural productivity. To achieve this goal, this study assesses the role of total foreign aid, humanitarian aid, and development aid in Somalia's agricultural production. We utilized an autoregressive distributed lag (ARDL) cointegration method with annual time series spanning 1989–2019. In the long run, total aid is not cointegrated with agricultural production in Somalia, according to empirical results. But humanitarian and development aid are cointegrated to agricultural production in the long run. Moreover, development aid has a constructive role in enhancing agricultural production in the long run, whereas humanitarian aid is inconsequential in ...

Exploring the impacts of institutional quality, urbanization, and disaggregate globalization on environmental pollution in Somalia
(published DEC 2025)

Environmental pollution and its implications are widespread issues that require a comprehensive understanding of effective strategies to mitigate emissions. Given the unique challenges faced by Somalia, including social, political, and environmental factors, it is crucial to assess the effects of social and political globalization, urbanization, and institutional quality on greenhouse gas (GHG) emissions. Therefore, this study aims to examine the relationship between these variables and environmental deterioration in Somalia. The study employs the autoregressive distributed lag (ARDL) bound test, the fully modified ordinary least squares (FMOLS) method, and causality tests. The empirical results of the bound test indicated that institutional quality and socialglobalization enhance environmental quality by reducing environmental pollution in Somalia in the long run. On the contrary, economic growth impedes ...

Does food inflation exacerbate poverty in the Arab world? Assessing the impact of rural development and institutional quality
(published DEC 2025)

The rise in global food prices has significantly exacerbated hunger and poverty, particularly in low – and middle-income countries. While previous studies have explored various aspects of these issues, a critical gap remains in understanding their combined impact within the distinctive socio-economic and political landscape of Arab countries. Therefore, this study examines the joint effects of food inflation, rural development, and institutional quality on poverty levels in the Arab world from 2004 to 2021. Recognizing cross-sectional dependence and heterogeneity among the panels, the study employs advanced panel cointegration methods. The findings from panel-corrected standard errors (PCSE) and feasible generalized least squares (FGLS) analyses consistently indicate that food price inflation exacerbates poverty rates, particularly in low – and middle-income Arab countries, while its impact remains negligible ...

Dynamic and nonlinear effects of material footprints and raw material exports on load capacity factor: Do ICT and foreign direct investment matter? (published DEC 2025)

Environmental sustainability is a continual challenge for developing nations like Somalia, where rising material intensity, unregulated domestic extraction, and reliance on unprocessed primary exports intensify existing ecological vulnerabilities. Unlike conventional metrics, such as CO2 emissions, the load capacity factor (LCF) serves as a more robust indicator of ecological balance. Therefore, this paper examines the determinants of LCF in Somalia, focusing on material footprint, information and communication technology (ICT) development, foreign direct investment (FDI), raw material exports, and domestic extraction. The analysis utilizes annual time series data from 1990 to 2022 and applies the dynamic autoregressive distributed lag (ARDL) simulation model and Kernel-based regularized least squares (KRLS) estimator. The dynamic ARDL results indicate that material footprint and FDI are positively

Navigating Paths to Food Security in East Africa: Strengthening Rural Development Amid Climate Shocks, Political Instability, and Rising Food Prices
(published OCT 2025)

As the most food-insecure region in Africa, East Africa faces persistent challenges in ensuring adequate food supply, as climatic fluctuations, political instability, and economic hardships continue to undermine its ability to meet the dietary needs of its growing population. While previous research has predominantly examined climate change and political instability as primary drivers of food insecurity, the influence of rural development on food security outcomes remains insufficiently explored. Hence, this study investigates the relationship between rural development and food security while incorporating climatic and socio-economic factors using panel data from 12 countries between 2001 and 2020. Employing heterogeneous panel cointegration techniques, the findings derived from PCSE and FGLS estimators reveal that rainfall substantially improves food availability and utilization while diminishing food accessibility and stability. In contrast, higher temperatures negatively affect all four dimensions of food security. Moreover, population growth exerts a significant negative influence on food availability and stability, while food imports enhance food availability but simultaneously reduce accessibility and utilization. Furthermore, political stability is crucial in strengthening food availability and stability, whereas rural development significantly boosts food availability, accessibility, and utilization. Nevertheless, the Dumitrescu–Hurlin panel tests indicate bidirectional predictive linkages between population growth and food security, and a unidirectional linkage from temperature to food security. These findings propose targeted recommendations for East

Nexus between carbon emissions, economic growth, renewable energy, and innovation of BRICS: Kuramoto dynamic synchronization approach (published SEP 2025)

This study examines the dynamic synchronization among renewable energy sources, innovation and economic growth in their joint influence on carbon emissions, employing a Kuramoto-based oscillator framework alongside a cross-sectional nonlinear autoregressive distributed lag (CS-NARDL) model. Using annual panel data from 2000 to 2024 for the BRICS economies (Brazil, Russia, India, China, and South Africa), we quantify the degree of phase synchronization via the Kuramoto order parameter in Python to derive country- and variable specific synchronization indices and natural frequencies. Our results indicate that China, India, and Russia exhibit comparatively lower synchronization indices and correspondingly higher carbon emissions than Brazil and South Africa, suggesting less cohesive policy coordination in renewable-energy deployment. Moreover, both technological innovation and increased .

Policy Briefs & Reports

Beyond peer-reviewed journal publications, the Institute of Climate and Environment (ICE) released policy-relevant briefs and analytical reports in 2025, translating research evidence into actionable guidance for policymakers, practitioners, and communities in Somalia.

State of Climate in Somalia 2025 (Released: 19 May 2025)

The State of Climate in Somalia 2025 is a comprehensive national briefing documenting key climate trends affecting Somalia, including rising temperatures, erratic rainfall, increasing frequency and severity of droughts and floods, sea-level rise, saltwater intrusion, and deteriorating water security. The report highlights the cascading impacts of climate change on food security, livelihoods, health, displacement, and economic stability, warning that without the rapid adoption of climate-resilient policies, millions of Somalis face escalating humanitarian and development risks. It advances clear, evidence-based policy recommendations, including strengthening early-warning and climate-information systems, promoting climate-smart and sustainable agriculture, improving water resource management, accelerating renewable energy investments, supporting reforestation and ecosystem restoration, and expanding community-based climate education.

Investigating the Role of Sustainable Youth Employment in Combating the Climate Crisis in Somalia (Released: 7 April 2025)

Released on 7 April 2025, this policy report examines how youth-led green employment, entrepreneurship, and community-based environmental initiatives contribute to climate resilience in Somalia. Drawing on qualitative interviews with young leaders and practitioners, the study documents practical interventions such as solar powered irrigation, waste upcycling, and afforestation. It identifies key enabling factors—including innovation, community participation, education, and supportive policy environments alongside persistent constraints such as limited access to finance, weak policy prioritization, and low climate awareness. The report proposes a strategic support model centered on targeted grants, skills training, microfinance mechanisms, and awareness campaigns, positioning Somali youth as central actors in advancing climate action and green economic transformation.

Research Impact and Recognition

The body of research, policy engagement, and knowledge dissemination undertaken by the Institute of Climate and Environment (ICE) in 2025 reflects a maturing and increasingly credible research ecosystem in Somalia, one that integrates rigorous academic inquiry, policy relevance, youth engagement, and global connectivity. ICE's growing portfolio demonstrates that high-quality, methodologically sound research can be generated from fragile and climate vulnerable contexts and meaningfully contribute to both national and international climate discourse. The diversity of research themes—spanning agriculture and food security, renewable and sustainable energy, governance and social cohesion, inequality and economic structure, urbanization, migration, displacement, and climate risk assessment—underscores ICE's holistic understanding that Somalia's climate and environmental challenges are deeply intertwined with broader economic, social, and political dynamics. This systems oriented approach enables ICE to move beyond sectoral silos and generate insights that are relevant for integrated policy and development planning.

ICE's work in 2025 was further distinguished by its credible and innovative methodological approaches. The application of advanced econometric techniques, hybrid econometric machine learning models, long-run time-series analyses, and Structural Equation Modeling (SEM) enhanced the analytical depth, robustness, and policy relevance of research findings. These methodological strengths have contributed to a growing number of high-quality peer-reviewed publications in reputable international journals, reinforcing ICE's standing within global academic and policy research communities.

Equally important has been ICE's commitment to translating research into action. The conversion of academic studies into policy briefs, national climate assessments, public dialogues, climate literacy tools, and youth empowerment initiatives demonstrates a deliberate focus on impact beyond academia. This translation has ensured that evidence informs decision-making, public awareness, and community-level climate action.

The Institute's growing research excellence was formally recognized in 2026, when Ustad Abdikafi Hassan Abdi, Head of Research at ICE, was awarded Best Researcher of SIMAD University on 6 November 2026, during the official celebration of the establishment of SIMAD University. This recognition not only honors individual excellence but also signals institutional progress in building a credible, high-performing research culture within Somalia.

Given the scale and urgency of climate risks facing Somalia, ranging from recurrent droughts and floods to water scarcity, sea-level rise, and displacement, the achievements of 2025 offer both evidence and hope. At the same time, they highlight the pressing need to translate knowledge into policy reform, large-scale investments in renewable energy and sustainable agriculture, climate-resilient urban planning, and inclusive, community-led climate action. Moving forward, ICE remains committed to strengthening its research excellence, expanding partnerships, and ensuring that evidence-driven solutions contribute to a resilient, just, and sustainable future for Somalia.

Partnership and Community Engagement

In 2025, the Institute of Climate and Environment (ICE) significantly strengthened its role as a national and regional convener for climate action, expanding a diverse and strategic portfolio of partnerships spanning UN agencies, international organizations, research institutions, civil society groups, youth networks, and community-based organizations. Through carefully designed collaborations, high-level policy dialogues, joint projects, and community-driven campaigns, ICE advanced inclusive climate governance while deepening its engagement with both local communities and global stakeholders. These partnerships enabled ICE to co-design climate solutions, enhance the quality and relevance of research, participate in major global climate forums, amplify Somali voices in multilateral spaces, and implement initiatives with tangible, community-level impact. ICE's partnership approach is grounded in transparency, shared learning, capacity exchange, and a strong commitment to climate justice, particularly for vulnerable and marginalized communities across Somalia.

MoU between SIMAD University & the Ministry of Youth and Sports

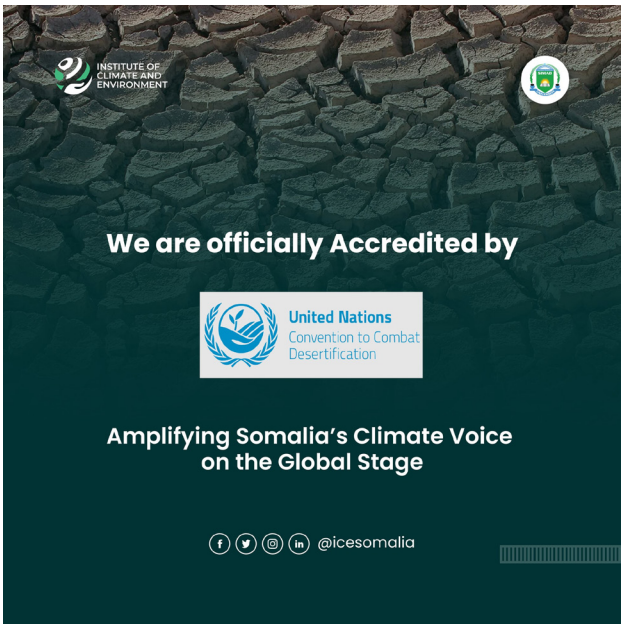
In 2025, SIMAD University, through the Institute of Climate and Environment, formalized a Memorandum of Understanding (MoU) with the Ministry of Youth and Sports. This partnership aims to advance youth engagement in climate action, leadership development, and environmental awareness across Somalia. Through the MoU, ICE supports the integration of climate literacy, green skills, and civic participation into youth-focused programs, strengthening the role of young people as active contributors to national climate and development priorities.

MoU with Action for Environment (A4E)

ICE also formalized its long-standing collaboration with Action for Environment (A4E) through a Memorandum of Understanding signed in May 2025. The partnership focuses on joint environmental advocacy, public engagement, and event management, most notably the Mogadishu Environmental Summit, which entered its fourth consecutive year in 2025. This collaboration represents a flagship example of sustained academic–civil society partnership, combining research, community mobilization, and public dialogue to advance environmental leadership and awareness in Somalia.

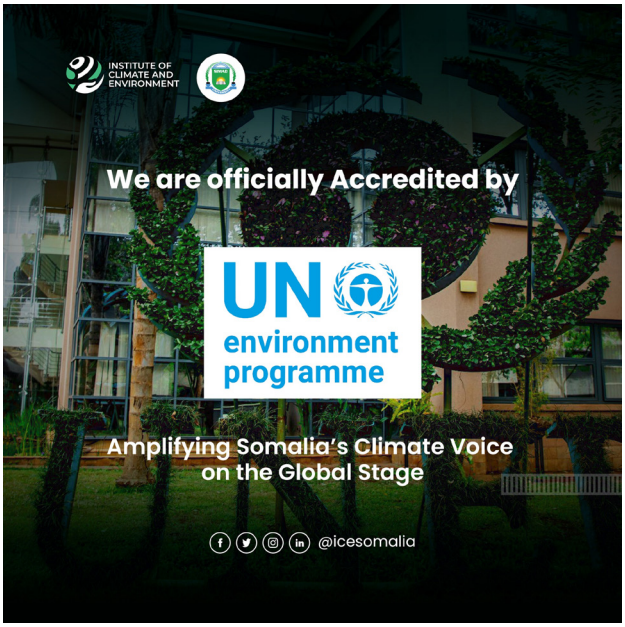
Accreditation with the United Nations Convention to Combat Desertification (UNCCD)

A major institutional milestone in 2025 was ICE's successful accreditation as an Observer Organization to the United Nations Convention to Combat Desertification (UNCCD) on Auagust 2025. This recognition positioned ICE as a legitimate Somali voice in global discussions on land restoration, desertification, and drought resilience issues central to Somalia's environmental and economic stability. UNCCD observer status grants ICE access to global policy forums and working groups, enables the Institute to contribute research and policy insights directly to UN processes, strengthens partnerships with international land restoration actors, and elevates Somalia's profile in global climate negotiations.



Accreditation with the United Nations Environment Programme (UNEP)

In June 2025, ICE achieved one of its most significant accomplishments by becoming the first academic institution in Somalia to receive accreditation from the United Nations Environment Programme (UNEP). This accreditation provides ICE with access to the UN Environment Assembly (UNEA), the ability to submit formal interventions and policy recommendations, and expanded opportunities to collaborate with UNEP-supported initiatives. It marked a turning point for Somali academic representation in global environmental governance and significantly enhanced ICE's credibility in climate research, capacity-building, and advocacy at regional and international levels.



Membership in the Adaptation Research Alliance (ARA)

Further strengthening its global engagement, ICE became a member of the Adaptation Research Alliance (ARA) in January 2025. Through this membership, ICE joined a global coalition of researchers, funders, policymakers, and community-based organizations committed to Adaptation Research for Impact. ARA membership enables ICE to build transdisciplinary Global South–North partnerships, share action-oriented adaptation research, engage in policy and finance dialogues, and access new opportunities for resource mobilization, reinforcing ICE's commitment to locally led adaptation and evidence-based climate action in Somalia.

Adaptation Research Alliance

ICE Institute
at the Global Stage

ARA–TLS Africa Knowledge Synthesis Symposium, Nairobi (March 10–12, 2025)

ICE contributed to continental adaptation discourse through its participation in the Africa Knowledge Synthesis Symposium convened by the Adaptation Research Alliance (ARA) in partnership with the African Centre for Technology Studies (ACTS). Bringing together over 30 African institutions, the symposium focused on climate and health, human settlements, and water and food systems resilience. Representing ICE, Ustad Abdikafi Hassan Abdi presented research on the interlinkages between political instability, malnutrition, human capital, and environmental degradation, underscoring the need for integrated policy approaches. ICE's engagement strengthened its role within the ARA community, reinforced Somalia's presence in adaptation research networks, and contributed to growing calls for locally led, evidence-driven adaptation grounded in youth and Indigenous knowledge.

The Third LDC Future Forum, Lusaka (April 1–3, 2025)

ICE elevated Somalia's voice in global resilience discussions through its participation in the Third Least Developed Countries (LDC) Future Forum in Lusaka, Zambia. Represented by Mohamed Okash, ICE contributed to the "Future Shapers of Resilience Building in LDCs" session with a policy-oriented research presentation on climate resilience of major crops in Somalia. The contribution offered empirical insights into agricultural vulnerability and proposed institutional reforms to strengthen food security in fragile contexts. Aligned with the Doha Programme of Action, ICE's participation enhanced its visibility as an LDC-focused research institution and expanded policy and research networks with UN agencies, development banks, and peer think tanks from the Global South.

4th IGAD Scientific Conference, Addis Ababa (May 19–21, 2025)

ICE strengthened its leadership in regional climate-migration research by contributing to the 4th IGAD Scientific Conference on Migration, Displacement, and Urbanisation. Ustad Abdikafi Hassan Abdi, Head of Research at ICE, presented an empirical study distinguishing climate-induced and conflict-driven displacement trends across East Africa, highlighting the need for differentiated and integrated policy responses. His participation in a high-level panel alongside senior IGAD leadership positioned ICE as a regional reference on displacement dynamics and reinforced its commitment to research-informed policymaking for urban resilience and social stability in the Horn of Africa.

Manenga Ndulo Conference on Economic Development, Lusaka (August 12–14, 2025)

ICE strengthened its engagement in continental development and policy dialogue through participation in the Manenga Ndulo Conference on Economic Development, hosted by the Southern African Institute for Policy and Research (SAIPAR) in Lusaka, Zambia. Represented by Ustad Abdikafi Hassan Abdi, ICE presented original research examining human capital development, digitalisation, and industrialisation as strategic pathways for economic diversification in transitioning African economies. The presentation highlighted how investments in skills, digital infrastructure, and innovation-oriented industrial policy can enable countries to move beyond narrow economic bases while supporting sustainable and climate-responsive growth. Through this contribution, ICE positioned itself as a thought partner in Africa-wide debates on long-term economic resilience, structural transformation, and inclusive development, reinforcing the link between climate action, economic diversification, and human development.

The World Economic Forum's Global Future Councils, Dubai (October 2025)

ICE elevated Somalia's presence in global governance and sustainability debates through active participation in the World Economic Forum's Global Future Councils. Representing SIMAD University and Somalia, Mohamed Okash, Founding Director of the Institute of Climate and Environment, served as a member of the Global Future Council on Climate and Nature Governance, contributing to high-level deliberations on integrating climate and nature considerations into corporate and public decision-making. The discussions underscored the importance of future-ready governance, highlighting the strategic role of boards as architects of resilience and the growing relevance of data, behavioural science, and artificial intelligence in strengthening sustainability and risk management. Insights and networks gained through this engagement are directly informing ICE's work on climate governance, institutional reform, and leadership development in Somalia, reinforcing the Institute's role as a bridge between global foresight and local climate action.

Dubai Future Forum, Dubai (November 17–20, 2025)

ICE significantly advanced its institutional learning on anticipatory governance and futures-oriented policymaking through participation in the Dubai Future Forum 2025, convened by the Dubai Future Foundation. Representing the Institute, Mohamed Okash engaged in high-level plenary sessions, thematic dialogues, and structured Learning Days that explored foresight tools, scenario planning, intergenerational equity, and the role of Global South leadership in shaping long-term development pathways. The Forum provided hands-on exposure to practical methodologies such as horizon scanning, systems mapping, and future scenarios, offering insights into how governments and institutions can better anticipate risks, manage uncertainty, and design resilient policies in the face of climate change, technological disruption, and demographic shifts. Beyond knowledge exchange, the engagement enabled strategic networking with global futurists, policymakers, and innovation leaders, opening pathways for future collaboration. The lessons and tools acquired through the Forum are informing ICE's efforts to embed futures thinking into climate research, policy engagement, and capacity-building programs in Somalia, strengthening the Institute's ability to support adaptive, forward-looking, and long-term development planning in fragile and climate-vulnerable contexts.

ICE Institute at COP30, Belém, Brazil (2025)

At COP30 in Belém, Brazil, the Institute of Climate and Environment (ICE) advanced Somalia's presence in global climate negotiations by bringing evidence-based research and frontline perspectives from a highly climate-vulnerable context into international policy discussions. Represented by Ustad Abdikafi Hassan Abdi, ICE engaged with negotiators, practitioners, researchers, and civil society actors within the Blue Zone, contributing insights on how recurrent droughts, floods, and insecurity are reshaping food systems, pastoral livelihoods, and access to markets across Somalia.

ICE's engagement aligned closely with COP30 priorities on agriculture and food systems, just and inclusive transitions, and climate finance for low-income and fragile states. By participating in dialogues related to the Global Stocktake, adaptation pathways, and emerging climate finance mechanisms, ICE helped articulate the practical realities faced by frontline communities and the urgent need for finance models that are accessible, equitable, and locally responsive. This participation strengthened ICE's role as a knowledge broker and advocate for climate justice, ensuring that Somali experiences and adaptation priorities informed global conversations on resilience, food security, and inclusive climate action.

Grants & Projects

READ Project – Renewable Energy Advancement for Inclusive Development in Sub-Saharan Africa (Erasmus+ CBHE)

READ

Co-funded by the Erasmus+ Programme of the European Union

The year 2025 marked a defining milestone for SIMAD University and the Institute of Climate and Environment (ICE) with the successful launch of the READ Project – Renewable Energy Advancement for Inclusive Development, funded under the European Union's Erasmus+ Capacity Building in Higher Education (CBHE) programme. Officially commencing in November 2025, the project is coordinated by the Institute of Climate and Environment (ICE) at SIMAD University and brings together a strong consortium of eight partner universities across Africa and Europe, positioning Somalia at the center of a transformative continental initiative on renewable energy education and innovation.

READ responds directly to one of Africa's most pressing development challenges: the urgent need for skilled human capital, applied research, and institutional capacity to drive a just and inclusive energy transition. While Sub-Saharan Africa holds immense solar, wind, and hybrid energy potential, higher education institutions across the region continue to face structural gaps, including outdated curricula, limited laboratory infrastructure, weak university–industry linkages, and insufficient integration of policy and climate considerations into energy education. READ was designed as a strategic, measurable, and scalable response to these challenges, placing universities at the heart of green transformation.

Under ICE's coordination, the project aims to modernize and co-design cutting-edge renewable energy curricula aligned with African realities, strengthen faculty teaching and research capacities, and establish hands-on renewable energy learning laboratories that enable practical training, experimentation, and innovation.

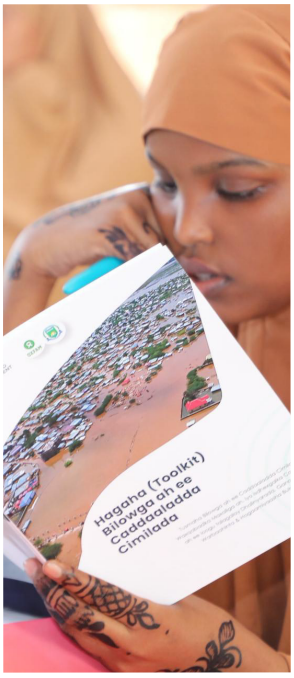
A core objective of READ is to empower students and young researchers through innovation pathways, entrepreneurship support, and cross-border learning platforms, ensuring that renewable energy education translates into employability, enterprise creation, and real-world impact.

Beyond academic reform, READ deliberately positions universities as active actors within broader energy ecosystems. The project strengthens partnerships with industry, policymakers, and civil society, facilitating internships, policy dialogue, research uptake, and evidence-based decision-making at national and regional levels. Through joint research, publications, policy briefs, and stakeholder engagement, READ contributes directly to national energy planning and climate action processes in partner countries.

The project is firmly aligned with Somalia's National Transformation Plan, Vision 2060, Agenda 2063, SDG 7 (Clean Energy), the Paris Agreement, and the EU Green Deal and Global Gateway, reflecting ICE's commitment to linking global frameworks with local implementation. As the first Somali-led, multi-country EU-funded renewable energy project, READ represents a historic achievement not only for SIMAD University, but for Somalia's higher education sector as a whole.

Through READ, ICE is advancing its long-term vision of building productive universities that generate skills, knowledge, innovation, and leadership for Africa's green future. The project stands as a flagship example of how strategic partnerships, youth-centered education, and climate-informed policy engagement can transform renewable energy potential into inclusive and sustainable development outcomes.

Photo Gallery



Partners & Networks

UNEP
United Nations Environment Programme

WASAARADDA DHALLINYARADA & ISBOORTIGA
MINISTRY OF YOUTH AND SPORTS
وزارة الشباب والرياضة
F.G.S

WASAARADDA DEEGAANKA & ISBEDDELKA CIMILADA
MINISTRY OF ENVIRONMENT & CLIMATE CHANGE
وزارة البيئة والتغير المناخي
MOECC

INTERGOVERNMENTAL AUTHORITY ON DEVELOPMENT
IGAD
AUTORITE INTERGOUVERNEMENTALE POUR LE DEVELOPPEMENT
PEACE, PROSPERITY AND REGIONAL INTEGRATION

OXFAM

A4E

Digital Earth AFRICA

AfronomicsLAW
Afronomicslaw.org

Adaptation Research Alliance

Mogadishu Environmental SUMMIT

LDC FUTURE FORUM

مؤسسة دبي للمستقبل
DUBAI FUTURE FOUNDATION

United Nations
Convention to Combat Desertification

WORLD ECONOMIC FORUM

GET INVOLVED

Who we work with is just as important as the work we do. Collaborating with partners is critical to driving and delivering change. Through our partnerships, we develop local solutions that can work for lasting impact. Want to contribute to our journey, Contact us.

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