



UNU-INRA AT A GLANCE

**United Nations
University**
Institute for Natural Resources
in Africa



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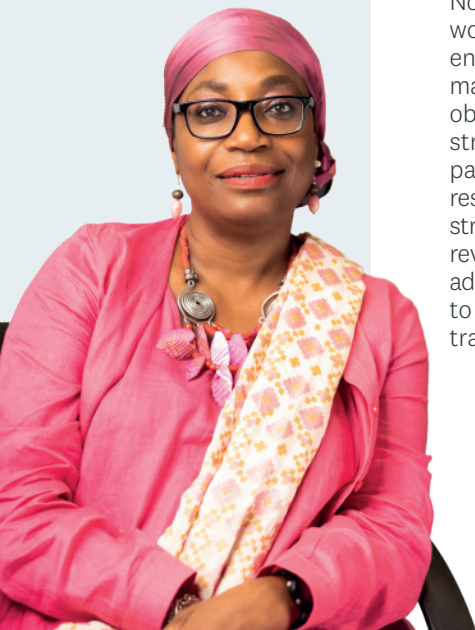
DIRECTOR'S MESSAGE

Today, more than ever, we are confronted with multiple challenges in a world that is drowning in information but that is seemingly ill-prepared for the enormous impending challenges associated with resolving the climate crisis and, in the case of Africa, maximizing the continent's growth potential and resource endowment.

Nowhere is the promise of a climate-resilient world more urgent than in Africa, a vastly endowed region struggling to overcome its many structural challenges. As if these obstacles weren't enough, there is the stress associated with the recent global pandemic and the war in Europe. The resulting challenges are placing an additional strain on the resources available to continue reversing environmental degradation and addressing climate change whilst attempting to maintain a sustainable development trajectory.

Nevertheless, it is undeniable that our challenge is to view our current crisis not as a series of never-ending catastrophes, but as a set of opportunities and constraints that the region is eager to address in order to enable its resilient development.

This is why an institute such as UNU-INRA is well positioned to use knowledge as a crucial lever to reframe the debate and situate the task within a natural-resource sector that can facilitate innovation, economic growth, and environmental stewardship. INRA's mission is to base its work on foresight research and to disseminate crucial evidence-based findings that will inform decision-making and strategic planning, particularly as we move into uncharted territory pertaining to green development. No guideposts exist for navigating the numerous climate-related dilemmas, from fossil-fuel dependence to the transition to renewable technologies. We must urgently avoid the slippery slope associated with unsustainable resource extraction. Instead, much needs to be done to harness proactive measures to achieve energy efficiency, effective resource governance, and environmental sustainability.





INRA has demonstrated three decades of leadership in thinking about natural resources from its headquarters in Ghana and its network of five operating units in Cameroon, Côte d'Ivoire, Namibia, Senegal, and Zambia. These provide essential extensions to ground truth in knowledge and utilize research findings as policy validation to promote 'made in Africa' solutions.

The Institute is part of the United Nations University, a reputable think tank and the academic arm of the United Nations. INRA occupies a unique position as the only UNU institute based in Africa in a sector where the world's problems and their solutions are both apparent. INRA's vision of realizing the transformative potential of Africa's natural resources for an inclusive and sustainable future stems from a profound recognition that natural-resource management is where Africa's transformative potential resides. If you discount this, you risk stunting growth, and if you lose the momentum to shape resilient development, you break faith with the society that holds the key to fostering and sustaining the conditions for growth to flourish.

When UNU-INRA's researchers produce knowledge on stranded assets (i.e. resources that remain in the ground due to a gradual loss of value); when they point to how informal groups are being left out of the green equation; and when they mention green minerals and the need to enable a transformational change of direction in Africa's checkered governance and extractive history, they demonstrate how knowledge findings regarding Africa's natural resources can serve policymakers at critical junctures.

However, INRA is not only concerned with the production of knowledge, but also with the creation of spaces in which that knowledge can be debated and contested. INRA's foresight research is about having the intelligence to think through new trends to determine how intermediate capacity can be built. It can thus provide policy advice to policymakers and create a dialogue by convening spaces to keep civil society, the private sector, and scientists primed and engaged, and debating solutions outside the mainstream.

INRA's flagship programme, AFTER Carbon, is the first of its kind to provide a set of solutions for policymakers to discuss their most compelling post-carbon challenges and to facilitate the emergence of solutions through a matchmaking service involving civil society and the business and scientific communities. INRA's strength lies in identifying new terrains in the ecosystem of resource management and posing the question, 'What's in it for Africa?' 'Why should Africa pursue a green development trajectory, and how can the continent create its own green deal master plan?'

As UNU-INRA's tagline suggests, 'we know, we connect, and we contest'. Furthermore, we do this in a world where natural-resource management is under attack from multiple stressors and where the prospect for Africa is to recognize the unique opportunity it has to design and take control of a development pathway that constitutes a 'no-regret' option, one where resilient growth is woven into its resource capital. The region's survival is intricately tied to its land, its vast array of energy resources, its waters, aquifers, and dams, as well as its people. Africa's natural resource landscape awaits bold, innovative new breakthroughs that will paint a vibrant picture of hope, resilience, and sustainability.



ABOUT US

UNU-INRA is a leading voice in Africa's natural resource knowledge base. As a think tank, our thought leadership is grounded in research and evidence. We bridge the gap between science and policy and promote sustainable development through natural resource governance that is sensitive to climate change. We harness African talent and empower African researchers, entrepreneurs and policymakers with knowledge to sustainably manage the continent's natural resources.

Established in 1985 with a mandate to strengthen African national institutions' capacity to manage natural resources, UNU-INRA has become known across the region for thought leadership, pioneering research and innovative solutions in support of natural resource management policy, research infrastructure and capacity-building.

Our head office in Ghana and our network of five operating units in Senegal, Cote d'Ivoire, Cameroon, Namibia and Zambia give us a strong presence across Africa. UNU-INRA is also one of the 14 institutes of the United Nations University, a global think tank and academic arm of the UN.

OUR VISION

To realise the transformational potential of Africa's natural resources for an inclusive and sustainable future.

OUR MISSION

To amplify African perspectives, promote made-in-Africa solutions and cultivate African natural resource management capacity.



PROJECT HIGHLIGHTS

UNU-INRA has consistently worked towards developing 'Big Ideas' and foresight analysis research. Here are some of our flagship projects:

- After Carbon
- Justis
- Stranded Assets
- Publication Highlight



AFTER CARBON

The African Facility for Transitions Research (AFTER Carbon), aims to support long-term sustainability and low-carbon development in Africa.

To avoid further catastrophic climate change effects and keep global warming below 1.5 degrees Celsius, energy systems must be deeply decarbonized. However, enabling low-carbon development and achieving net-zero economies, is a difficult task, particularly for countries with a limited and depleted resource pool for just and green transitions. Decarbonizing Africa's energy systems has the potential to reverse gains in energy access and reduce government revenues, with serious implications for a variety of development outcomes. As a result, the transition presents a complex challenge that, if not managed carefully, will exacerbate existing developmental challenges and increase social and economic vulnerabilities. In Africa, insufficient capacity-building assistance has resulted in increased institutional, financial, and technical requirements.

Given the current situation and the need to improve our preparedness for a world without fossil fuels, UNU-INRA proposed establishing a post-carbon policy research hub that will bring together a consortium of scientists, civil-society groups, and public-sector officials in a research program that will respond to the most compelling priorities of the Global South, those with implications for the economy, society, and infrastructure.

The facility creates a knowledge dashboard on which policymakers and researchers can collaborate and plot net-zero trajectories. Fostering greater alignment between research needs and research producers in the global South, will guide funding and enable value-for-money research. If we are to achieve net-zero energy, we must pool our resources to bring together technologies and expertise to shape capabilities locally.



JUST ENERGY TRANSITIONS IN THE INFORMAL SECTOR (JUSTIS)

The global push toward net-zero emissions requires a swift transition to clean energy systems. Existing injustices in the current energy systems will be exacerbated in the absence of specific efforts to ensure an equitable transition, including the need to manage the use of Africa's fossil fuel resources as an integral part of the transition, resulting in winners and losers.

This is especially true for the informal sector, where women constitute the majority. The informal sector in Africa is one of the continent's largest productive sectors, accounting for 80% of urban employment.

Given the diverse socioeconomic repercussions and outcomes of a transition for various stakeholders, it is imperative to investigate how the informal economy will respond to the transition and potential strategies for enhancing resilience to stranding risks and other future energy crises.

This study is to provide a clearer understanding of effective strategies for addressing energy shortages, stimulating energy entrepreneurship, and bolstering adaptation and resilience in the informal sector.

Through the creation of a digital information portal, the project highlights the contributions of green entrepreneurs, to green transition efforts and provide supporting infrastructure for green businesses to flourish.





STRANDED ASSETS

African nations and governments must be cognisant of the challenges and opportunities posed by stranded assets to their financial and political stability and continuous socioeconomic transformation.

In response, UNU-INRA has spent the last four years undertaking research to evaluate the socio-economic risks that African states may suffer as a result of asset stranding caused by policy actions and the implementation of the Paris Agreement. Consequently, two publications titled "Africa's Development in the Age of Stranded Assets" and "Blind Alleys and Bright Prospects: Africa Navigating Stranded Assets and Just Transitions" have been published.

Stranding risk is the danger of an asset losing significant economic value before the end of its expected usable life. In view of current discussions on decarbonization and the necessity for countries to diversify away from fossil fuel use to fulfill global warming targets, this may occur (1.5oC). It is projected that, the necessity for African states to meet these global demands, will lead to a depreciation of oil and gas sector assets in a number of countries.

Aside the obvious impact of stranding on energy access, there are underlying hazards for African states that rely heavily on fossil fuels for export profits and employment. The oil, gas, and mineral industries already account for approximately half of Africa's exports and contribute significantly to the continent's government finances.

However, the effects of stranded assets across the continent, particularly countries with relatively recent fossil fuel discoveries, have not been assessed comprehensively. African nations and governments must be cognisant of the challenges and opportunities posed by stranded assets to their financial and political stability and continuous socioeconomic transformation.

As a further step, UNU-INRA is performing a complete economic analysis and predictions that will enable governments to assess and manage the risk of stranded assets, avert future losses, and advance green transition planning. An empirical study will collect primary data from several crucial nations, including the Democratic Republic of the Congo, Nigeria, Ghana, Tanzania, Uganda, Zambia, Namibia, Mozambique, and South Africa.



PUBLICATION HIGHLIGHT

EARTH-SHATTERING: OPPORTUNITIES FOR FINANCIAL SECTOR ENGAGEMENT AT THE NEXUS OF MODERN SLAVERY AND NATURAL RESOURCES IN GHANA

The Earth-Shattering project, aimed to gain insights into the nexus between modern slavery and natural resources, in the context of the COVID-19 and climate change mega trends, in order to identify new evidence, raise awareness, and catalyse new ways in which the financial sector, governments, and multilateral actors could coordinate their efforts to combat risks and abuses in these sectors.

To accomplish this, it analysed the driving forces of modern slavery in the gold-mining and cocoa-growing regions of the Ashanti and Western Regions of Ghana, in order to identify opportunities for the financial sector to (1) improve identification of the illicit flow from slavery and trafficking in these sectors and (2) increase protection for vulnerable communities.

The research found that not only were the gold and cocoa industries geographically linked, but they also intertwined with environmental challenges, pandemic policy responses, and climate change in ways that together worsened the vulnerability of local people to modern slavery.

These vulnerabilities were discovered to be supported by two important drivers: Labour Rights and Practices and Financial Exclusion. Through effective collaboration with governments, the private sector, civil society, and multilateral actors, the recommendations of this report demonstrate how the financial sector can synchronise action to successfully identify illicit flows, assist victims in gaining access to remedies, and combat and prevent modern slavery in communities affected by high-risk agricultural and extractive sectors.



Our New Projects



DARE TO SHARE KNOWLEDGE PLATFORM (DTOSKP)



The Dare to Share Knowledge Platform (DtoSKP) is an initiative aimed at expanding spaces and amplifying the voices that are crucial to meeting the increasing demand for a just and equitable transition towards greater sustainability. UNU-INRA recognises the unique challenges faced in the global South, where the informal economy plays a dominant role in employment. Therefore, we focus on identifying solutions that genuinely embrace the insights of a diverse range of stakeholders, each grappling with distinct structural obstacles and consequently, experiencing varying impacts.

The Dare to Share Knowledge Platform (DtoSKP) is to provide a unifying platform, bringing together a diverse array of stakeholders, including scientists, civil society representatives, entrepreneurs, and communities.

This platform endeavours to identify and address complex socio-economic challenges in critical sectors, including energy, food, and urban development, through collaborative dialogue and collective endeavours. The ultimate objective is to foster the principles of sustainability and equity by achieving a plurality of voices and viewpoints on critical climate and energy transition issues.





We place a strong emphasis on giving voice to underrepresented perspectives, particularly those from the global South, fostering an environment where diverse insights and experiences converge for a more sustainable future.

Objectives:

1. To create a space for multiple stakeholders to discuss just transitions from varied perspectives.
2. To analyse the nuances of just transitions across and within regions to appreciate power-asymmetries between the global North and South as well as South/South power differentials.
3. To identify barriers experienced to the emergence of multiple voices on just transitions and diversity.
4. To act as an incubation for DtoSKP to identify the strengths and weaknesses, how to garner better support and understanding, and how to operationalise.
5. To develop a network of knowledge sharing and access to critical information on Just Transitions across the Global South.

Approach

1. Convening through sharing of experiences and best practices on post-carbon opportunities and challenges
2. Organising of thematic webinars and in person capacity building workshops of groups including: governmental officials, journalists, private organisations, NRM experts, Climate and Energy professionals
3. Written thematic articles on Just Transitions by Environmental/Climate Journalists across Africa.
4. OPEDs and human interest stories on grassroots perspectives and realities in relation to Energy/Just transitions. These will be in both written and video form(vlogs).

Expected Outcomes

1. Enlarged spaces and amplified voices to enable enhanced representation in Just transition Dialogues
2. Centering social and economic considerations in the shift towards post-carbon transitions.
3. Better understanding of NRM, Climate and Energy transition nexus in Africa (challenges and opportunities)
4. Providing a basis to extend experiences and best practices of vulnerable groups in Just Transitions policy making
5. Enhanced capacities around NRM and Energy Transition in Africa
6. A strong, dynamic and inclusive 'Dare to Share' network within the African continent.



Dare to Share Knowledge Platform (DtoShare) on Just Transition



INFOCAT

(Innovate for Clean Agricultural Technologies)

AIM OF THE SCOPING STUDY

The primary goal of the INFOCAT project, is to advance women's and youth economic empowerment in rural areas of selected African countries, by promoting low-cost clean energy-powered technology solutions that increase agricultural productivity and income for smallholder rural farmers.

OBJECTIVES

1. To support the development of affordable, labour-saving clean energy agriculture technology solutions to save time, reduce drudgery and enhance women's and youth economic opportunities and well-being in a way that reduces gender imbalances in clean energy agriculture technology innovation.
2. To support clean energy agriculture technology start-ups with a focus on women-led companies where possible, to refine and expand their product offering to meet the needs of small-holder rural farmers through market intelligence. This will be done in a way that reduces gender imbalances in clean energy agriculture technology use and access to clean energy in agriculture.
3. Inform gender sensitive policy reforms that, recognize the contribution of clean energy agriculture technology start-ups to the energy transition and provide the necessary incentives for them to thrive and grow.



APPROACH

1. The project will be implemented in four stages:
2. Stakeholder engagement and Team Formation
3. Research and Development (idea incubation)
4. Implementation of best solutions
5. Policy influence and technology uptake

EXPECTED OUTCOMES

1. Increased women's access, adoption and utilisation of agritech innovations to improve agricultural efficiency and sustainability
2. Enhanced economic opportunities for youth and women in clean agritech start-ups.
3. Evidence-based gender-sensitive policy reform to enhance enabling environment for women and youth entrepreneurs and agritech start-ups.
4. Transfer of knowledge and skills to improve gendered informational asymmetries and develop women's capacities.



REDAA

(Reversing Environmental Degradation in Africa and Asia)

AIM OF THE SCOPING STUDY

This study is to identify key priority research-to-action areas for addressing the challenge of environmental degradation in West and Central Africa by improving the condition of ecosystems and natural landscapes in ways that enable people and nature to thrive together and build resilience to the impacts of climate change.

OBJECTIVES

To identify one key research-to-action priority that does the most to reverse environmental degradation in each of the three following output areas (Evidence, Tools and Governance systems).

APPROACH

The scoping research will be conducted in West and Central Africa using literature review and key informant interviews to identify 3 potential priorities each of the sub-regions.

EXPECTED OUTCOME

The scoping study will contribute to expand the technical knowledge and evidence base, on reversing environmental degradation in West and Central Africa.



I WASCAL

UNU-INRA is a partner in two projects that form part of the WASCAL Research and Action Plan WASCAL RESEARCH AND ACTION PLAN (WRAP) 2.0. These are: (1) Greenhouse gas (GHG) emissions and mitigation options under climate and land use change in West Africa: A con-certed regional modelling and observation assessment, (CONCERT) and (2) Land surface processes as a determinant of climate change in Africa – scenarios, high-resolution modeling and development of a stakeholder data portal (LANDSURF).

OBJECTIVES OF CONCERT PROJECT

1. The main objective is to identify emission mitigation options for the major greenhouse gases, carbon dioxide (CO₂), methane (CH₄) and nitrous oxide (N₂O), in parallel with improving food security. INRA's tasks on the project include;
 - Development of a standardized Land use- Land Cover (LULC) classification procedure for mapping current LULC and harmonising previous maps developed under WASCAL I,
 - Model future LC scenarios based on present and previous LULC maps,
 - establish approaches for deriving vegetation parameters (LAI, biomass, fractional cover), and
 - Provide vegetation parameter maps at different spatial scales.
 - Training of a PhD student.



APPROACH

The CONCERT project seeks to tackle this through, (a) the extension of WASCAL's current flux observation network, (b) estimation and projection of GHG emission budgets for the region, using a fully-coupled regional climate-hydrology-dynamic vegetation model (Earth System Model, ESM), specifically adapted to the WASCAL region, and (c) identification of Land use (LU) options suitable for mitigating GHG emissions, increasing soil C stocks and improving food security for the West African Sudan savanna. The project also aims to identify opportunities for a win-win land-use mosaic, which aims to achieve a) food security through enhanced yields, b) GHG emissions mitigation, c) growing soil C stocks, d) reduced land degradation thus, e) climate change (CC) mitigation in the WASCAL region.

EXPECTED OUTCOME

The empirical results from CONCERT will provide policy-relevant information, supporting decision-making for tackling climate change and for planning socio-ecological landscapes. CONCERT will contribute to developing strategies to tackle hunger (SDG2), climate change (SDG13) and to improve the quality of life on land (SDG15) of the United Nations Sustainable Development Goals.





OBJECTIVES OF LANDSURF PROJECT

INRA's main task is to compose a list of indicators of climate change, relevant to land management and agriculture, develop algorithms for their extraction from observational, climate model and remote sensing data and transfer knowledge to stakeholders. Sub-objectives include;

- Training of a PhD student
- Derivation of indicators from models and data
- Derive classical land surface parameters from Remote Sensing data to serve as input to WESM
- Collection and pre-processing of remote sensing data
- Assessment of historic land cover changes
- Projection of future land cover changes
- Transfer of knowledge integration, data and methods, through a series of capacity building activities tailored to the needs of different user groups and to participatory workshops in West African partner countries.
- Implementation of EasyREMO & WESM

APPROACH OF LANDSURF RESEARCH PROJECT

In partnership with some African and German institutions, this project seeks to develop a High-Resolution Regional Earth System Model for West Africa (WESM), coupled with an ocean model and a new fully interactive land surface scheme. UNU-INRA is contributing to 3 work packages with some specific tasks such as derivation of Remote Sensing based historical and future land use-land-cover and vegetation changes as input to the proposed West African Earth System Model (WESM) for high resolution longer-term transient climate change projections. We are also leading activities pertaining to knowledge transfer and the enhancement of capacities of local, national and regional partners on the products delivered by the project (WESM and EasyREMO).

EXPECTED OUTCOME

The LANDSURF project, is dedicated to support the development of human capital in the field of climate research, develop a planned web portal, which is a key instrument of climate and environmental services in the field of land management, agriculture and food production, and a modelling tool that accounts for all anthropogenic impacts, including radiative forcing and land use changes. The outcome of the project will be iterated with stakeholders and communicated to policymakers of the Economic Community of West African States (ECOWAS) for implementation.





We know, We connect, We contest

Learn more about our
Projects and Publications



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