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LDE-Nairobi Interdisciplinary Master's Thesis Lab

Are you passionate about addressing real-world challenges in Nairobi and Kenya? Do you want to collaborate with students from diverse disciplines and engage with local communities, policymakers, and practitioners?

The LDE-East Africa Research Network (LEARN) Interdisciplinary Master's Thesis Lab is your chance to make an impact through your research while gaining hands-on experience in a dynamic, cross-cultural environment.

The 2026/7 thesis lab will focus on the following core themes:

- (i) Carbon removal technologies,
- (ii) Clean cooking and energy planning,
- (iii) Urban heat and digital technologies, and
- (iv) Climate mobility and housing.

Theme 1: Carbon Removal Technologies – Community Governance of Carbon Projects

Our planet's urgent need to limit global warming has driven unprecedented efforts to reduce greenhouse gas emissions. Some argue that an aggressive decarbonization trajectory will not be enough to stabilize the climate; we must also actively remove carbon dioxide from the atmosphere through a suite of biological and technical Carbon Dioxide Removal (CDR) approaches. Sub-Saharan Africa—endowed with abundant land, solar and geothermal resources, and rich biomass—is perceived as having immense potential for CDR deployment. At the same time, nascent regulatory frameworks, financing gaps, technological uncertainties, and questions around social and environmental justice create a complex landscape for scaling CDR in the region.

A growing number of carbon removal projects are being developed in Africa, yet questions remain about how local communities participate in, benefit from, and exercise governance over these projects. This lab invites master's students to explore the governance dimensions of carbon removal. Projects may examine how communities engage with project developers and investors, how benefit-sharing mechanisms are designed and implemented, how free, prior and informed consent processes function in practice, and what institutional arrangements support accountable and equitable carbon project governance. Students will engage with government agencies, policy experts, NGOs, researchers, private sector actors and communities to generate critical insights that contribute to equitable and practical climate solutions.

Students from backgrounds in environmental science, climate policy, economics, governance, law, sociology, sustainable development or related fields are especially encouraged to apply.

Theme 2: Clean Cooking and Energy Planning

Access to clean, affordable and reliable energy remains a significant challenge in many low-income urban areas. Households in informal settlements of Nairobi largely depend on traditional fuels such as charcoal, firewood and kerosene that are not only inefficient and costly but also detrimental to human health, air quality and the environment. Charcoal production and consumption have far-reaching impacts on deforestation, carbon emissions and public health.

The lab offers students the opportunity to investigate key aspects of the clean energy transition, including household energy access, barriers to adopting clean cooking solutions, energy stacking practices, and the viability of alternative energy sources such as biogas, briquettes, and solar-powered systems. Students could also explore energy planning and modelling, health perceptions in relation to traditional fuels and air pollution generally, innovative community-based energy provision models, gender and social inclusion (GESI) dimensions of energy access and use, and policy gaps that hinder wider adoption of sustainable energy solutions.

Through field-based assessments, stakeholder engagement and policy analysis, students will generate evidence to inform practical and policy-oriented solutions for inclusive energy access and low-carbon development in urban and peri-urban settings.

This research opportunity is ideal for students with backgrounds in energy policy, environmental studies, urban development, anthropology, public health or climate change and related fields.

Theme 3: Urban Heat and Digital Technologies

Rapidly growing African cities face intensifying urban heat as the combined effects of climate change, urban heat island dynamics, and inadequate green infrastructure converge on densely populated neighbourhoods. In Nairobi, informal settlements are particularly exposed to heat stress, with residents experiencing health impacts, reduced productivity, and disrupted livelihoods. At the same time, the proliferation of digital and geospatial technologies is opening new possibilities for monitoring, mapping, and responding to urban heat.

This lab invites students to explore the intersection of urban heat and digital innovation. Research projects may focus on applying remote sensing, satellite data, or low-cost sensor networks to map heat distribution across urban landscapes, assessing community experiences of heat and their coping strategies, evaluating the effectiveness of nature-based and engineered heat mitigation interventions, or investigating how digital platforms and decision-support tools can be used by planners and communities to improve heat resilience. Students will engage with urban planners, climate scientists, community members, technology developers, and policymakers to generate actionable insights.

Ideal candidates are those with backgrounds in urban planning, environmental science, geography, computer science, architecture, anthropology, public health or related fields, with an interest in applying digital tools to climate adaptation challenges.

Theme 4: Climate Mobility and Housing

Climate change is reshaping patterns of human mobility across East Africa. Droughts, floods, land degradation, and shifting agricultural viability are driving internal migration, with many climate-affected households relocating to urban centres including Nairobi. This influx places pressure on already strained urban housing systems, often leading to the expansion of informal settlements with inadequate access to water, sanitation, tenure security and basic services. At the same time, some urban communities face in-situ climate risks—from flooding, waterlogging, or extreme heat—that may necessitate planned or spontaneous relocation.

This lab invites students to investigate the linkages between climate-driven mobility and urban housing. Research projects may examine how climate migrants' access and experience housing in Nairobi, what barriers and enablers shape their settlement choices, how housing policy and land governance systems respond to climate mobility, and what role community networks play in facilitating or constraining settlement options. Students may also explore displacement risks within the city, examining how urban households in climate-vulnerable areas experience and navigate housing insecurity. The research will engage with urban households, community organisations, local authorities and housing policy actors.

This research opportunity suits students with backgrounds in urban planning, geography, development studies, sociology, architecture, housing policy, human rights or related disciplines.

Why Join?

- **Collaborate across borders:** Work alongside fellow students from various Kenyan universities and Dutch universities, specifically Leiden University, Delft University of Technology and Erasmus University Rotterdam. Form interdisciplinary teams combining social science, engineering, architecture, health, and more.
- **Engage with real stakeholders:** Partner with local communities, policymakers, and practitioners in Nairobi and in the Netherlands. Gain insights that will enrich your research and broaden your perspective.
- **Tailored supervision:** Benefit from the guidance of expert supervisors from Nuvoni Centre for Innovation Research and universities in Kenya, together with supervisors from The Netherlands.
- **Focus on impactful themes:** Choose from critical topics like carbon removal technologies and community governance, clean cooking and energy planning, urban heat and digital technologies, and climate mobility and housing. Shape your thesis around solutions that matter.
- **Joint learning:** Participate in preparatory online meetings and an intensive seminar week in Nairobi, with discussions and interdisciplinary exchanges tailored to your research theme.
- **Financial Support:** The selected students will have access to financial resources to support their research expenses and stipend through the period.

Programme Timeline:

- Online and physical preparatory meetings between November 2026 and January 2027
- 1 week thesis lab workshop in Nairobi, with mini-lectures, field visits and methods-labs
- 2–3-month fieldwork for MA/MSc thesis, with peer support from students and regular check-ins with Nairobi-based and the Netherlands-based supervisors.

Who Can Apply?

MA and MSc Students from LDE universities based in the Netherlands and Kenya from varied disciplines, among them, engineering, architecture and planning, social sciences, humanities, behavioural sciences, health, business, and other relevant disciplines. The student **must** be advanced in their masters, ideally at the point of almost starting their fieldwork.

The students should be available to focus on their thesis fulltime between February and July 2027 and deliver a knowledge product based on their research by end of July 2027.

Your supervisor may choose (voluntarily but very welcome) to provide some support for the Thesis Lab by attending meetings, providing one or two lectures on a related topic over the course of the 6-month Thesis Lab, and help guide the other students in your multidisciplinary team

How to apply?

If you are interested in taking part in this Thesis Lab, please send the following via email to thesislab@nuvoniresearch.org before or on the **2nd of October 2026**.

- A letter of motivation
- A letter of support from your thesis supervisor
- An approved concept note for your proposal
- CV and other academic credentials

For any additional queries, please write an email to thesislab@nuvoniresearch.org