



FEBRUARY 2024

CASE STUDY

BUILDING TECHNICAL CAPACITY FOR ENERGY ACCESS PLANNING

JULY 2023

Energy planners from Ghana, Kenya, Madagascar, Malawi, Mozambique, Nigeria, Rwanda, Senegal, and Uganda received specialized trainings on how to manage and apply geospatial data to bolster energy access planning efforts in their countries.

SUPPORTED BY



Government of Iceland
Ministry for Foreign Affairs

IN PARTNERSHIP WITH





ONE OF THE HIGHLIGHTS of the summer school was the diverse and amazing group of people I met, hailing from different countries. Despite our varied backgrounds, we worked together as a cohesive team, united by a common goal. This experience underscored the significance of collaboration among African countries in achieving shared objectives.



SUSAN AKINYI
STEM Trainee from Kenya



OBJECTIVE

A key takeaway from SEforALL's work developing Integrated Energy Access Plans with the governments of Madagascar, Malawi and Nigeria is that geospatial data and analytics are underutilized by planning units within government and local utilities due to a lack of capacity in best-in-class tools and techniques.

As part of our Integrated Energy Access Planning programme, we saw an opportunity to build the capacity of energy access planners by partnering in the Joint Summer School on Modelling Tools for Sustainable Development, hosted by the International Centre for Theoretical Physics (ICTP), which took place in Trieste, Italy in July 2023. The annual summer school is a platform that offers energy planners technical training on emerging modelling technologies and techniques, within a broader curriculum on sustainable development. In 2023, the school's Energy Access Track had 47 participants from 19 countries.

SEforALL co-created and delivered two trainings, with the specific goal of strengthening skills on geospatial data collection, curation, management, and governance; and the application of geospatial data for improving electrification and clean cooking access planning. These skills can bolster energy planners' work by identifying priority geographic areas for expanding energy access and the least-cost technology to be deployed.

PARTNERS

The ICTP-hosted summer school is a joint effort between diverse international organizations, academic institutions, research centres, and technical experts. The two trainings offered by SEforALL were co-created with KTH Royal Institute of Technology and Kartoza. We also worked with the International Energy Agency, Climate Compatible Growth, the World Bank and World Resources Institute to shape all trainings under the broader Energy Access Track.

The Global Energy Alliance for People and Planet (GEAPP), The Rockefeller Foundation, the Austrian Development Agency and Iceland's Ministry for Foreign Affairs supported our work developing trainings for the summer school or sponsored participants to attend.



I LEARNED THAT *good data management is the key to energy access planning.*



HAUWA MANZO
Energy Commission of Nigeria

TECHNOLOGIES SUPPORTED

The training we provided focused on how to manage and apply geospatial data to inform electrification and clean cooking access efforts. With these skills, national energy planners can model which energy solutions to deploy and where in an integrated manner. For electrification, energy planners will weigh options like grid extension, renewable energy mini-grids, and standalone solutions (e.g. solar home systems). All of these can also support the rollout of electric cooking solutions as an alternative to polluting fuels and cookstoves.



RECEIVING TRAINING IN ONSTOVE was a *golden opportunity for me. It is a very useful tool that supports cooking energy planning for governments, businesses, researchers as well as all stakeholders within the energy sector.*



**REJOICE NTIRIWAA
OSSEI-BREMANG**

Researcher, Sustainable Energy
Technologies (Clean Cooking)

OUR ROLE

We supported the participation of 17 participants from Malawi, Nigeria, Rwanda, Madagascar, Kenya, and Ghana in the summer school, including energy planners from countries where SEforALL has developed Integrated Energy Access Plans. Seven of the participants were also part of our Women in Science, Technology, Engineering and Mathematics (STEM) training initiative, which supports young women's professional development in the renewable energy sector.

The trainings we delivered focused on:

1. geospatial data collection, curation, management, and governance, and
2. the application of geospatial data for improving electrification and clean cooking access planning.

For both, we supported logistics for SEforALL-sponsored participants to attend and prepared the training material with KTH Royal Institute of Technology and Kartoza. We also worked closely with other partners involved in the school's broader Energy Access Track to ensure our programming was complementary and collaborative.



RESULTS

Our two trainings were delivered through online sessions in June 2023 and in-person at the summer school in July. Seven participants from Ghana, Kenya, Rwanda and Malawi participated in the clean cooking planning training, and 14 participants from Malawi, Nigeria, Rwanda, Madagascar, Ghana, Kenya, Mozambique, Senegal and Uganda participated in the data management training. They developed geospatial clean cooking access models using an open-source tool ([OnStove](#)) developed by KTH, strengthened their skills around Spatial Data Infrastructures (SDIs), and developed draft data management and governance plans for their countries.

Participants have carried their summer school projects over to their daily energy planning work in their respective countries. For example, a participant from Madagascar is working with the country's Energy Planning Unit to formalize the data management and governance plan he developed during the summer school. This aligns with SEforALL's work with the Madagascar government to develop an Integrated Energy Access Plan that will guide the country's energy access efforts, set to launch in Q2 2024.

Having data management and governance standards in place will help maximize the plan's uptake across government institutions.

The Ministry of Energy in Malawi is similarly building out a data governance plan based on the learnings from the summer school. Meanwhile, the participants from Rwanda are applying their acquired knowledge on clean cooking access modelling to support the development of Rwanda's National Integrated Clean Cooking Plan.



THE TRAINING SET a good foundation for spatial data management in Malawi's energy sector. We will use the skills acquired to establish a governance mechanism and backend office for data quality control and management.



JAMES NAMALIMA
Government of Malawi



NEXT STEPS

SEforALL is committed to being a Centre of Excellence for energy planners working in or with energy-access-deficit countries. Our participation in the ICTP Summer School was an expansion of our efforts to provide training in managing and applying geospatial data for energy planning. We have made the materials from our two trainings publicly available online on [OpenLearn](#), and we will be looking to repeat our participation in the annual summer school in 2024.

Through active follow-up with the participants in the summer school, we have identified opportunities to continue to support their professional development in energy planning and collaborate with them on projects in their respective countries. This includes ensuring that the data management and governance plans drafted for Madagascar, Malawi, and Rwanda during the summer school will be further enhanced and aligned with current Integrated Energy Access Planning efforts.

Learn more about
[Integrated Energy Access Planning](#)





ABOUT SEFORALL

Sustainable Energy for All (SEforALL) is an independent international organization that works in partnership with the United Nations and leaders in government, the private sector, financial institutions, civil society and philanthropies to drive faster action on Sustainable Development Goal 7 (SDG7) – access to affordable, reliable, sustainable and modern energy for all by 2030 – in line with the Paris Agreement on climate change.

SEforALL works to ensure a clean energy transition that leaves no one behind and brings new opportunities for everyone to fulfil their potential. Learn more about our work at www.SEforALL.org.

