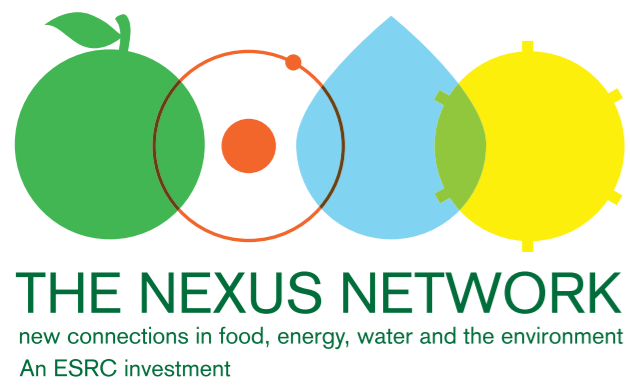


Unravelling Complexity

Understanding the land-water-food nexus in Elgeyo-Marakwet, north-west Kenya



Funded by the ESRC, the Nexus Network brings together researchers, policy makers, business leaders and civil society to develop collaborative projects and improve decision making on food, energy, water and the environment.

In July 2016, the Nexus Network announced five research partnership awards that will advance understanding of the food- energy- water- environment interactions and support actions to improve their sustainability. These partnerships will enable researchers to build interdisciplinary research collaboration in locations across both the UK and Africa.



Host institution

Institute for Global Prosperity, UCL
Prof Henrietta Moore
prosperity1@ucl.ac.uk
Dr Constance Smith
Dr Matthew Davies

Partners

Elgeyo-Marakwet County Council
Department of Natural Resources, Eldoret University
The Marakwet Research Station
British Institute in Eastern Africa
Botany Department at National Museums of Kenya
Royal Botanic Gardens at Kew

Background

This project addresses the changing land-water-food nexus in Elgeyo-Marakwet County, northwestern Kenya. Local communities reside across a diverse ecological landscape, from the temperate highlands of the Cherangany Hills to the arid Kerio Valley. Over several centuries of farming in the region, they have developed sophisticated techniques for managing a complex land-water-food nexus, in the face of multiple environmental challenges.

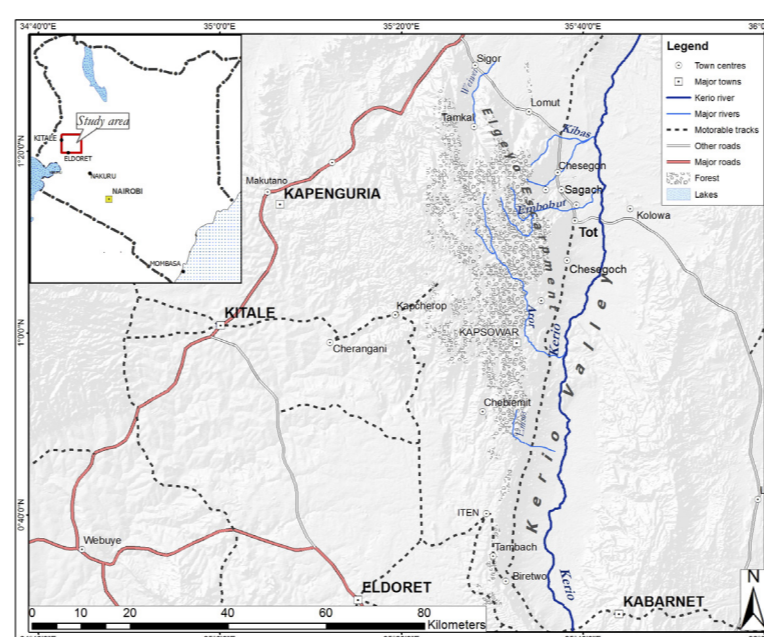
However, locally there is growing apprehension about new changes, including climate change, a shift towards water-intensive mono-cropping, and the installation of piped irrigation which has had the inadvertent effect of exacerbating unequal access to local water resources. Related to this are extensive deforestation and concerns about declining traditional methods of natural resource management, the loss of culturally valuable biodiversity, and the implications for food security.

This collaborative project seeks to unravel the complex land-water-food nexus in Elgeyo-Marakwet, understanding its transformation over time. By developing interdisciplinary academic expertise, the project seeks to aid policy makers and local community members to address and mitigate the challenges they face.

Project approach and early findings

Local communities and the Elgeyo-Marakwet County government are eager to understand the implications of new challenges and

develop practical solutions. The project focuses on working across disciplines and in collaboration with citizen scientists, local policy makers, practitioners to develop intensive academic expertise to guide this process. Using ethnography, interviews, botanic survey, aerial photography, GIS mapping, research has followed two research axes: Forest resources, history and management and Agricultural practice, history and management.



The first axis has focused on the Embobut Forest in the Cherangany highlands, one of the gazetted water towers of Kenya. We have mapped land cover changes and piloted ethnobotanical work with communities on the reduction of forest cover and biodiversity. The second axis has worked with a team of trained local citizen scientists, following cohorts of farmers and collecting their perceptions of crop yields and varieties, impact of monocropping, limited water access and related conflicts. Botanic collections have been made of key landraces and wild plant foods and their characteristics documented.

Our primary aim is to generate knowledge that creates direct social, economic and resource security benefits for the research area. We have been working closely with the County Government of Elgeyo-Marakwet, holding a very productive policy and practice workshop in February 2017. By working directly with the local community through our pioneering citizen science programme, we ensure that academic research remains pertinent and useful to the communities most affected.

“Across the 20th century multiple environmental planners and developers have failed to fully understand the complex interactions between land, water, food and biodiversity that are so well understood by local communities and which we aim to learn from. Consequently the history of external environmental management programs in the region is a long one.”

The Nexus Network
SPRU
University of Sussex
Jubilee Building
Brighton
BN1 9SL
UK

Email
info@thenexusnetwork.org

Tel
01273 873603

Web
www.thenexusnetwork.org