

Geospatial expertise of UTU in research, teaching and development collaboration in Tanzania

University of Turku has been working in Tanzania since 2003 with Tanzanian and international partners. Our collaborative research topics are broadly related to the analysis of human-nature dynamics with landscape and geospatial approaches.

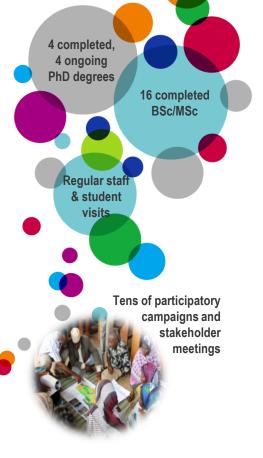
UTU has research, education and development activities in:

- Landscape, land cover and forest change mapping and geospatial analyses
- · Participatory landscape service mapping and land use planning
- Livelihood strategies, agroforestry and food security
- · Knowledge creation processes, globalization and development
- Environmental and climate change
- Geospatial business and entrepreneurship
- Geospatial competence development and higher education geospatial skills training



We link our research efforts with education in Geography and Landscape Science, Geographical Information Systems (GIS), Remote Sensing, Participatory GIS and Landscape Management. We collaborate with our partners in developing better spatial tools, methods and practices of sustainable landscape management and use and preservation of natural resources. Our main academic partners in Tanzania are University of Dar es Salaam, University of Ardhi, State University of Zanzibar and Sokoine University of Agriculture.





Recent publications and project references:

Käyhkö, N, Fagerholm, N, Khamis, M, Hamdan, SI & Muhammad JM (2018). Collaborative, Participatory Process of Landscape Character Mapping for Land and Forest Planning in Zanzibar, Tanzania. In Fairclough, G, Sarlov Herlin, I & Swanwick, C (Eds.) Routledge Handbook of Landscape Character Assessment: Current Approaches to Characterisation and Assessment. 118–127.

Kukkonen MO, Muhammad, J, Käyhkö N & Luoto M (2018). **Urban expansion in Zanzibar City, Tanzania: Analyzing quantity, spatial patterns and effects of alternative planning approaches**. Land Use Policy 71, 554-565.

Khamis Z, Kalliola R. & Käyhkö N (2017). **Geographical characterization of the Zanzibar Coastal Zone and its management perspectives**. Ocean and Coastal Management 149, 116-134.

Holvitie J, Vasankari T, Järvi A, Eilola S, Hyrynsalmi S, Käyhkö N & Makandi H (2017). **Platform-Driven Ecosystem Prefacing for Emerging Markets in Developing Countries**. Proceedings of the 9th International Workshop on Software Ecosystems. CEUR-WS.org 2053, 74-87.

Hooli L. J. (2017). From warrior to beach-boy: Resilience of Maasai in Tanzanian tourism industry. In Cheer, J. & Lew, A. A (eds.) Tourism, Resilience and Sustainability: Adapting to Social, Political and Economic Change, Routledge, 103-115.

















- Geospatial and ICT capacities in Tanzanian Higher Education Institutions (Geo-ICT) (Ministry for Foreign Affairs of Finland / HEI-ICI, 2017-2020, with UDSM, Ardhi, SUZA and SUA, leaders Niina Käyhkö and Ville Leppänen)
- Geospatial Business Ecosystem in Tanzania (GESEC) (Tekes/BEAM preparatory funding 2016, leader Niina Käyhkö)
- National spatial data infrastructure for integrated coastal and marine spatial planning in Zanzibar (ZAN-SDI)
 (MFA/ICI project between Commission for Lands, Government of Zanzibar (COLA) and Finnish Environment Institute
 (SYKE) 2016-18. UTU subcontracted for geospatial training, leader Niina Käyhkö)
- Forest plantation mapping in the Southern Highlands of Tanzania (Food and Agricultural Organization (FAO) 2016, leader Niina Käyhkö).
- Sustainability, scale relations and structure-function-benefit chains in the landscape systems of the Tanzanian Southern Highlands (SUSLAND) (SA/Academy of Finland, Development Research 2014-2018, leader Niina Käyhkö)
- HEI-GIS capacities in Geography education at the University of Dar es Salaam (HEI-ICI/Ministry for Foreign Affairs
 of Finland, 2013-2015, leaders Niina Käyhkö and Phillip Mwanukuzi)
- Knowledge Creation Processes (KREPRO) (SA/Academy of Finland, 2012-2016, leader Jussi Jauhiainen)
- North-South (NSS) networks 2008-2010; 2011-2013 and 2013-15 on Sustainable development and human rights with UDSM and Zanzibar University.
- Rural Settlement Development, Land Ownership and Food Security since Ujamaa era in eastern Tanzania (SA/Academy of Finland, Development Research 2008-2010, leader Taimi Sitari)
- Changing land use and forest management practices and multidimensional adaptation strategies in Zanzibar, Tanzania (SA/Academy of Finland, Development Research 2010-2013, leader Niina Käyhkö)
- Practical measures needed to tackle climate change (Ministry for Foreign Affairs of Finland, 2008, leader Taimi Sitari)
- Sustainable landscapes in Zanzibar (MOSSE/Ministry for Foreign Affairs of Finland, 2005-2007, leader Niina Käyhkö)
- Interaction between community, forest plantation and biodiversity (MOSSE/Ministry for Foreign Affairs of Finland, 2003-05, leader Taimi Sitari)

