

Building International Research Networks

Experiences of the
Globelics and AfricaLics networks and energy research gaps and priorities

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Building Bi-regional Partnerships for Global Challenges



CAAST-Net Plus is funded by the European Union's Seventh Framework Programme for Research and Technological Development (FP7/2007-2013) under grant agreement n° 311806. This document reflects only the author's views and the European Union cannot be held liable for any use that may be made of the information contained herein.

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What is Globelics? (www.globelics.org)

- Globelics stands for **G**lobal network on **E**conomics of **L**earning, **I**nnovation and **C**ompetence-building **S**ystems
- Initiated in 2000 at Aalborg by scholars from Innovation Studies and (gradually) Development Studies.
 - Network includes scholars from Europe, USA and BRICS countries and gradually also including more scholars from less developed countries
- Regional LICs: AsiaLics, Lalics, AfricaLics and EuroLics
- The Globelics Secretariat is located at the department of Business and Management, Aalborg University. Will move to Rio in 2017.

The goal of Globelics

- To contribute to **scientific capacity building in the field of innovation and development** through networking
- To contribute to the **knowledge base for strategies and policies linking innovation to economic development**
- To establish a **platform for North-South/South-North and for South-South research collaboration**
- To **help Ph.D.-students** – especially from least developed countries - to pursue high quality research in the field innovation and development.

Globelics activities

- Annual research conference on STI and development issues
 - 14th conference will take place in Bandung in October 2016 with app. 160 papers being presented
- Annual Academy with research training (30 student for 2 weeks)
 - 11th Globelics Academy took place in Pretoria, South Africa in June 2016
- Hosting major projects, including projects on catching-up, BRICS, innovating out of poverty and NIS/GVC
- Coordinating capacity development in Africa through the AfricaLics project funded by Sida

The AfricaLics network

- established in 2011 in connection with the All Africa Seminar held in Dar es Salaam
- AfricaLics Scientific Board meets regularly to make key decisions
 - Chair: Bitrina Diyamett (STIPRO, Tanzania)
 - Secretary General: Anna Kingiri (ACTS, Kenya)
- Its vision is to **build research capacity in Africa in the field of innovation and development** with strong links to users – including policy makers, the private sector and increasingly also to civil society.

AfricaLics activities

- Holding biannual international conference in Africa
 - Recent AfricaLics Conference took place from 17-19th November 2015 in Rwanda
- Holding PhD Academies
 - Kenya (2012 and 2015); Algeria (2014) and Tunisia (2015)
 - about 120 PhD students from Africa (and other continents) have been trained
- New training programs/modules on innovation and development being developed at MSc and PhD level
 - MSc module is available at www.africalics.org – open access
 - Curriculum for Master in Innovation and Development developed at Aalborg University (MIKE-D)
- AfricaLics Ph.D visiting fellowship programme
 - established in collaboration with Aalborg University (pilot model)
 - more at: <http://www.ike.aau.dk/Ph.D+Activities/africalics-visting-scholarships/>
- Research incubation activities/seed money for thematic research
- Webinars/seminars, knowledge bank and more info at www.africalics.org

AfricaLics Research Incubation activities

- a **research agenda was developed** at All African Seminar in Dar es Salaam in 2012.
- the agenda included the following topics:
 - The role of gender in Africa's innovation systems.
 - The role of the state in promoting innovation and development
 - Work organization and innovation in formal and informal sector.
 - Overcoming natural resource curse through expanding manufacturing and service activities.
 - National strategies to stimulate spill overs from BRIC-presence in Africa.
 - Engineering and design capacity building and economic development in Africa.
 - Building Low-carbon Innovation Systems.
 - Agroindustrial innovation systems and food security.
 - The role of financial institutions in relation to innovation
- AfricaLics grant for research incubation supported by Sida initiated in 2014

- Grants for a standard amount of support were arranged (about 35,000 USD) . To be used for:
 - Realising a book project or journal special issue based on existing or almost finalised research.
 - Developing a project proposal (where the outcome is a proposal to be submitted to an external funding body within 18 months of initiation).
- Requirements to project proposals
 - A minimum of two African countries should be represented in the research team.
 - There should be one assigned project leader employed by an organization (normally a university in Africa) that can serve as host for the administration of the grant.
 - Project leader should apply for the funds and will be fully responsible for the realization of the project.
- Total of 18 proposals received, 6 proposals were granted funding and have been completed.

AfricaLics supported research projects

Research topic	Countries involved
Natural Resource Endowment and Innovation Behaviour of Firms	Ethiopia (Abdi) and Burkina Faso
Engineering Design Capacity Building and Economic Development in Africa	South Africa (Mammo); Tanzania, France
Building low carbon innovation energy systems in Africa	Nigeria, South Africa (Mapungubwe), Kenya, Tanzania, Sweden, DK,
The Role of Women in Science and Technology Innovation in Grassroots Agriculture in Africa	South Africa (Nwagwu), Kenya, Uganda
Work organization, competence building and innovation in formal and informal microenterprises in Africa	South Africa (Erika), Uganda, Tanzania, Nigeria, France
The Southern African regional value chain for mining inputs: An opportunity to build regional technological capabilities in the mineral and non-mineral sectors?	South Africa (Simon Roberts), Zimbabwe

Questions for Low Carbon Project supported by AfricaLics

- What are the key **models of sustainable energy innovation in Africa**? Do they differ in nature and degree when it comes to interactive learning?
- How **do these various models compare in terms of achieving multidimensional sustainability** outcomes? Why – if at all – are some of these models better at achieving multidimensional sustainability outcomes?
- What **type of innovation system best promotes interactive learning**? Sectoral/regional/local/national?

Outputs from the seed-funding project on Low Carbon development

Paper	Author
Mapping Dynamics of Low-Carbon Energy Innovation for Small Hydropower Technology in Nigeria	Maruf Sanni
Partnerships spreading solar energy in the rural areas of Uganda	Anamaj Mathiesen
The Socio-Economic and Environmental Drivers of Renewable Energy Resources, a case study of Wind Power in Kenya	Victor Ongoma, Haishan Chen
Building Low Carbon Innovation Energy Systems in Africa: The Case of Biomass Power Production by the Tanganyika Planting Company Limited (TPC)	Heric Thomas
Analysing the diffusion and adoption of renewable energy technologies in developing countries: the functions of innovation systems perspective	Aschalew Tigabu

The IREK Project – off-spring from Globelics/AfricaLics collaboration

- Innovation and Renewable Electrification in Kenya (IREK)
- Project seeking to examine **how international and national cooperation on low carbon technologies can be shaped to support electrification efforts in Kenya** in a way that meets broader development goals
- Participating institutions
 - Aalborg University (Department of Business and Management)
 - Moi University (Department of Business and Department of Engineering)
 - African Centre for Technology Studies (ACTS)
- Total of 10 researchers, including 3 PhDs + 1 additional PhD funded by Sino-Danish Centre (funding secured in 2015)

Energy research gaps and priorities

- Both Globelics and AfricaLics promote the Learning, Innovation and Competence-Building Systems (LICS) framework to analyse innovation and diffusion of low-carbon technologies
 - LICS perspective adapts **the systems of innovation notion to a development perspective**. In developed economies the low-carbon challenge means re-orientation of the management of innovation systems towards low-carbon development.
 - In less developed economies, the attention shifts from **system management toward system building and strengthening** and – most often also from the development of new technology to competence and absorption of technologies developed abroad.
 - Low-Carbon Innovation and Development
http://vbn.aau.dk/files/196143452/Low_Carbon_Innovation_and_Development.pdf

- **Below are some selected gaps and research priorities in the energy sector of developing countries from LICS perspective**
 - empirical examination of **the role and influence of LICS on the diffusion, adoption and development of RETs** in developing countries
 - A better understanding of the role of **local innovation in developing countries for achieving and sustaining low-carbon development** is urgently needed
 - **political economy of low carbon innovation and development** in developing countries
 - a need to understand the influence of interest groups on the direction of low carbon innovation in developing countries
 - **alternative pathways to energy security**, including low carbon development pathways specific to developing countries context
 - effective **mechanisms for the generation of technological capabilities for renewable energy** technologies in developing countries

- Sources of technologies and their role on diffusion and adoption of energy technologies
 - E.g. **Are Chinese and Indian technologies more relevant to African countries than technologies from Western countries?** And Why?
- **Mechanisms of effectively channelling ODA to build LICs** for low carbon energy technologies in developing countries
- Socio-political investigation of power dynamics of actors within energy innovation systems in developing countries
 - Limited research that asks how politics, power and interests influence technology and innovation policy and practice in Africa
- Mechanisms of strengthening LICs of energy technologies to ensure widespread diffusion and adoption of energy technologies
- Development of context relevant analytical frameworks and indicators for renewable energy innovation systems

Ways of collaboration for CAAST-Net-PLUS and AfricaLics

- Participating in the upcoming Globelics/AfricaLics events. E.g. conferences (and for PhD students also in PhD academies)
- Linking up with researchers from the Globelics/AfricaLics network who work on energy issues, incl. e.g. in grant proposal development
- Utilising low-carbon development research outputs from Globelics
 - Globelics Thematic Review <http://www.globelics.org/globelics-thematic-review/>
 - Working Paper Series Archives <http://www.globelics.org/globelics-working-paper-series-archives/>
 - Special Issues <http://www.globelics.org/special-issues/>

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