ICT4Agroecology with smallholder farmers in Tanzania

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Industrial agriculture: an unsustainable model

- Agricultural industrialization and productivity increase over the past century has come at a great cost to the environment and human health.

- "Business as usual is not an option any more." (IAASTD 2009)

- A consensus is emerging that transforming unsustainable industrial agricultural systems into sustainable ones is an imperative for global food security. (IAASTD 2009, UNCTAD 2013, IPES Food 2016)

- New narratives of agri-cultures have to grow bottom-up, be inclusive and culturally sensible, and include the voices of small-scale farmers.
The Agroecological alternative

- Agroecology is the study, design, management, and evaluation of agricultural systems that are productive but also respectful of the environment.

- Agroecology considers the interactions between biological, physical, technical, social, and economic factors that are relevant to farming systems.

- Agroecology has been described not only as a scientific discipline, but also as a social, cultural, and political movement.

(Altieri, 1989; Gliessman, 2000; Toledo, 2011)
ICT4Agriculture

- Since 2003, ICTs have been strongly promoted as key enabling technologies for the improvement of livelihoods and agricultural practices of smallholder farmers (WSIS, 2003).

- Mobile communication technologies have become the main tools of ICT4Agriculture initiatives.

- A case-based study in Tanzania argued that the key benefits that mobile phones can deliver to small-scale farmers include:
  - Accessing timely information
  - Making markets more efficient and transparent
  - Providing advance warning of weather and other risks
  - Accessing complementary services, such as mobile banking or insurances
    (Furuholt and Matotay 2011).
Potential risks of ICT4Agriculture

- De-skilling of small-scale farmers
- Eroding communal values and reciprocal practices in the name of competition
- Favoring a spiraling dependency on new monetized loops
Despite potential risks, we believe that the interactive and connective power of ICTs can effectively empower smallholder farmers, by embedding those technologies into the practices and methodologies of Agroecology.
Sauti ya wakulima (2011-ongoing): farmers in Bagamoyo, Tanzania, share smartphones to document the effects of climate change and their strategies for adaptation, and share them on the Internet.
Sauti ya wakulima: http://sautiyawakulima.net
Research for Development on Agroecology: our vision.

- Introduce and establish the field of ICT4Agroecology in Tanzania to:
  - research and validate the effectiveness of agroecological practices in different regions
  - build a live, open source, publicly accessible repository of evidence of successful/best agroecological practices
  - develop and validate a series of ICT platforms that will:
    - aid in the process of evaluating the effectiveness of selected agroecological treatments
    - enable and encourage farmer-led research on agroecology
Starting in 2016, Swissaid Tanzania built on the experience of Sauti ya wakulima to reach 5,000 farmers in the region of Masasi who are being trained on agroecology.
Agroecology research fields in Masasi and Morogoro
Thank you!