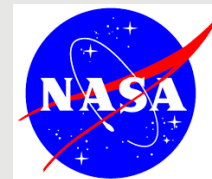


Delivering crop yield nowcasts and forecasts by integrating satellite data and crop modelling in Sub-Saharan Africa

John Wasige: Makerere University/ Langa Tembo : University of Zambia

- Africa nations share challenges in addressing current & future climate risks, have significant gaps in their ability to produce and deliver near real-time crop health information and mainstream these in national decision making.
- There is often a mismatch between timely crop health & weather information available and what is used to support on-the-farm decision-making process
- This project seek to develop a geosystem for farmers and agriculture business to have access to real-time crop health information using a user friendly WebGIS and mobile application



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Research Approach: *including the different kinds of data you are collecting as part of your research:*

Implemented in Uganda & Zambia

1. A baseline household survey to determine seasonal farmer Early Warning information requirements, Integrated Earth Observation data/crop data, complementary field work & free open source modeling tools to generate crop health nowcasts and weather forecasts data (crop health, weather forecast, daily soil moisture and drought indices, and cropping seasons),
2. Development of WebGIS and mobile application for dissemination of nowcasts and forecasts data,
3. Capacity building in crop/ land change monitoring and to delivery nowcasts and forecasts data and,
4. Policy advocacy to target delivery of nowcasts and forecasts data to land managers, decision makers, smallholder farmers in SSA.



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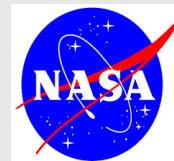
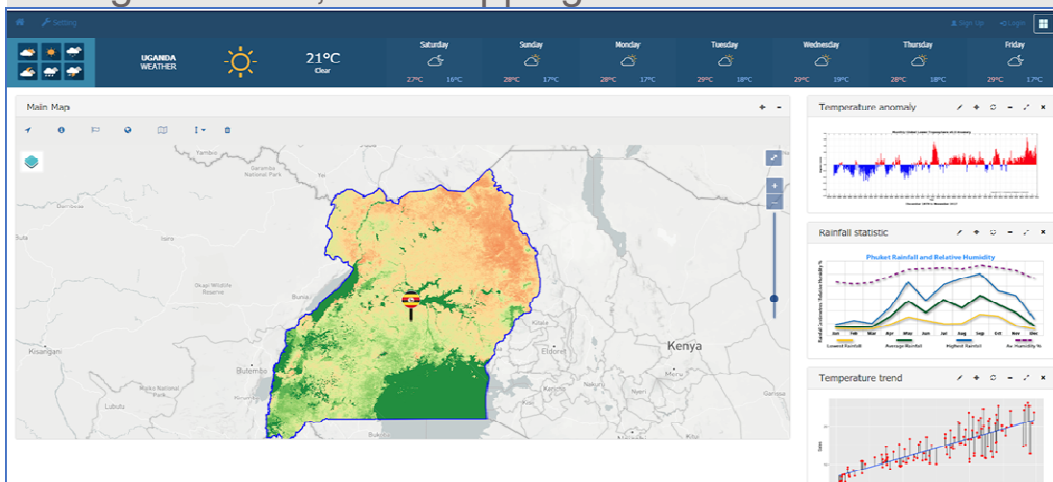
Key results of your research/project so far:

1. friendly WebGIS allows to **pull data** & process automatically for displaying Webmaps and graphics of; crop health, weather forecast, daily soil moisture and drought indices, and cropping seasons.

3. Capacity building has been achieved by on-going training graduate students of 2 MSc student, 1 PhD, 1 BSc & 4 community workshops

4. Reviewed policy and barriers to Early Warning information to assess gaps and strength of Early Warning System to Manage Disasters in Uganda and Zambia. About 70 stakeholders have been interviewed in Uganda and Zambia, data analysis is ongoing

2. A baseline household survey outputs: Farmer seasonal Early Warning Data Needs: Fertilizer application date, Crop health/ phenology, Pest/disease prevalence, Weather forecast, Market prices
Manuscripts available & 2 Draft Manuscripts on-going



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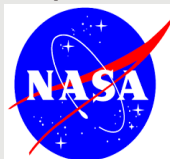
Top next steps for your project:

1. Training & Dissemination of online WebGIS Based Near Real-Time crop health/ drought monitoring tool and smartphoneApp to end users through national & Field work/ workshops for Farmer Field Schools (FFS) learning groups. We intended to reach directly 100 extension workers and policy makers and 600 farmers, and indirectly reach 2 million farmers.
2. Promotion of policy dialogue and advocacy at different levels and develop policy recommendations for increased supply, prioritization and adoption of relevant near real-time agricultural and drought monitoring information for planning.

Project will impact stakeholder decisions and the development problem:

1. Provide appropriate crop health & weather nowcasts and forecasts data for drought and famine preparedness in farm agricultural production planning: changing their crop production methods
2. Enhance technical and human capacity to generate crop health nowcasts and forecasts data
3. Public officials can adjust policies to reflect the data collected, better anticipate and coordinate relief efforts in the wake of a natural catastrophe, regional marketing, processing & trade, and target social programs or promote sustainable agricultural intensification technologies and diversification

Challenges you have faced in collecting meaningful data: poor internet connectivity



ACKNOWLEDGEMENT

Thanks for your attention

*The National
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DEVELOPMENT, SECURITY, AND COOPERATION

Policy and Global Affairs

