

Quick scan Uganda

Geodata for Agriculture and Water
(G4AW) Facility

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Background



- G4AW Facility aims increase food security in partner countries of which Uganda is inclusive
- The goal is to provide food producers with relevant information using satellite data in order to secure and/or increase their production.
- In preparation for the incoming call in June, this match making event is aimed at preparing applicants to submit good quality project proposals.
- ***Goal for this quickscan was to provide an overview of the information gaps and opportunities related to Agriculture and water.***

Uganda's Agriculture



- Lies in East Africa and is landlocked
- Total area 241,055km² (18% is open inland water and wetlands)
- Population estimated at 34.5 million people (UNFPA,2012)
- Annual population growth 3.2%- "population growth coupled with economic development activities are placing a heavy burden on the environment and natural resource base including water resources".
- Equatorial climate with distinct wet and dry season
- Dramatic climate changes (floods, landslides, prolonged droughts) have been experienced

Uganda's Agriculture



- Agriculture is the main economic activity (NAP, 2010)
 - 73% of total employment
 - 22.5% of total GDP
 - 46% total exports
- Country is facing severe environmental degradation
 - Loss of biodiversity
 - Deforestation
 - Pollution
 - Declining soil fertility
- UNEP estimated that the decline in biodiversity was estimated to cause a severe US\$10bn-\$50bn impact on business

Main Issue of attention on food and water



- Low agriculture productivity
 - Agriculture highly dependant on water
 - Seasonal variability of rainfall- hard to ensure consistency of supply of agricultural products
 - Only 3.6% of land is under irrigation
- Low value addition to agricultural produce
- Poor access to sustainable markets
- Food and nutrition of Uganda not satisfactory
- High population growth- food security
- Climate change
- Only 65% of rural population have access to water (protected water springs, piped water, shallow wells, boreholes and rain water)
- Availability of water for production is currently inadequate

- ICT sector is liberalised and many players are now active
 - Telecommunication, postal services, broadcasting infrastructure, information technology, library services and information services
- Meteorology
- meteorology services are important for planning and management of agricultural production, however, in Uganda
 - There are no reliable predictions and early warning systems on climate change
 - Short term accuracy is between 40% and 50%
 - Long term accuracy (70-80%)
 - Poor condition of meteorology instruments and not automated
 - Few meteorology stations available



- Mobile services
- Widely used; 1 in 4 people owns a mobile phone
- Use is subscription based which causes a challenge to farmers due to related costs

- Internet
- Still emerging sector and access is limited by high access costs
- Satellite capacity is reported as being relatively expensive limiting access by internet service providers

Main challenges in information supply encountered in Agricultural Activities



- Inadequate data and information; there general shortage of regular and reliable agricultural statistics and information (weather, prices, buyers, quality specifications and type of product.
- This is coupled with costly and infrequent data collection services and poor data analysis mechanisms
- Inadequate meteorology services: Inadequacy in providing early warning information related to changes in rainfall patterns to farmers
- High risks and high costs of investment; There is limited lending to the agricultural sector due to high administration and management costs involved and perceived difficulty in managing the risks

Challenges continued



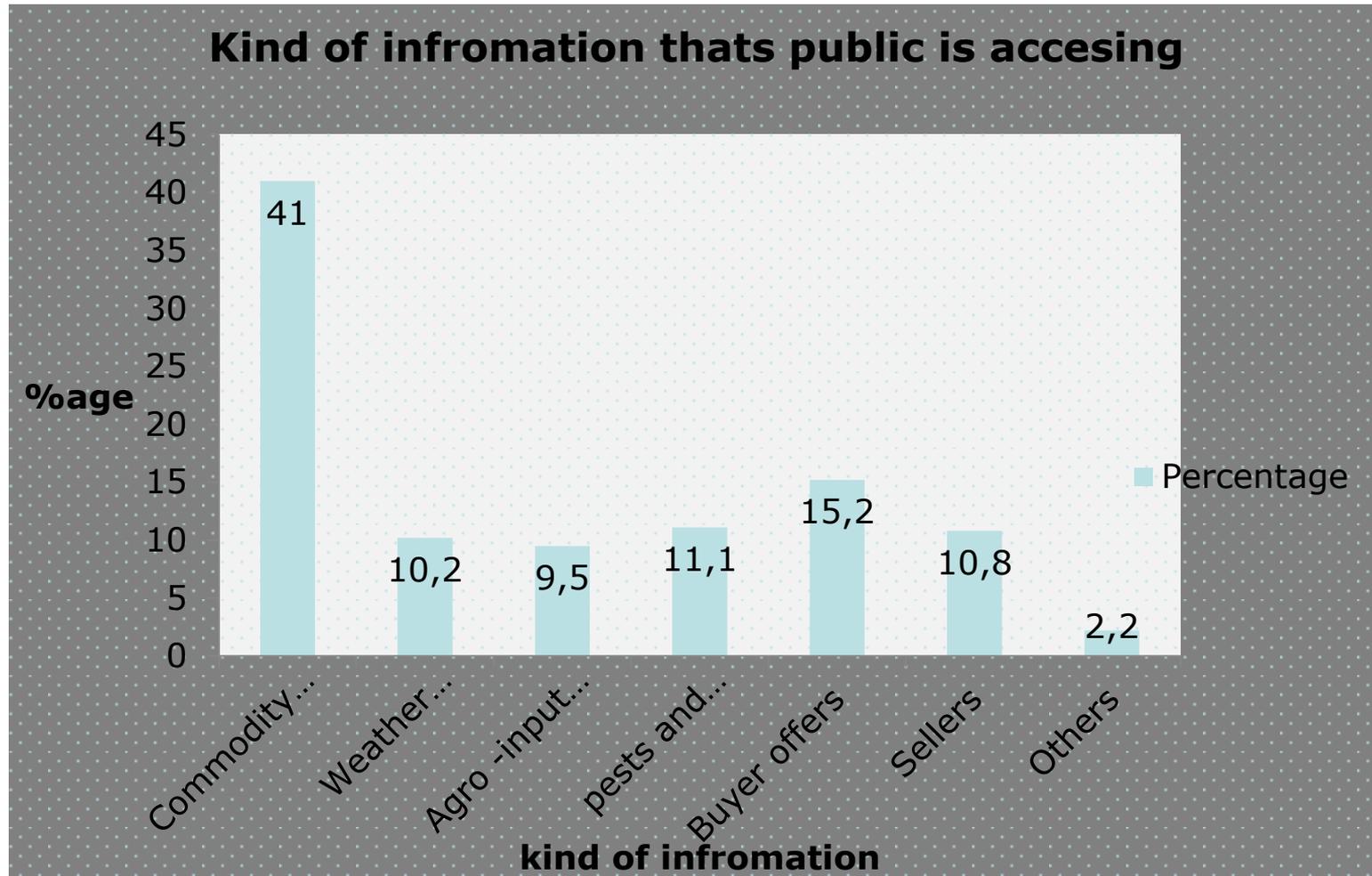
- Poor electricity connectivity and consumption; Uganda has one of the lowest electricity consumption per capita in the World and was estimated at 69.5kWh per capita in 2009. Poor electricity connectivity makes use of ICT technologies related to Agriculture even more difficult.
- Limited extension support services to farmers related to improving agricultural productivity
- Inadequate physical infrastructures such as transport (roads and railway), energy, water, and storage facilities

Agri-sector information supply



- Market information is the most common form of information collected and disseminated in Uganda
- This information is largely collected by private NGOs.
- Involves regular of commodity prices, verification, analysis and dissemination.
- Dissemination done through radios, newspapers, internet, mobile phone voice and text, notice boards, traders, farmer meetings and extension services.
- Major suppliers include; FIT Uganda Ltd, AgriNet, Grameen Foundation, Ric-Net and KRC.

Kind of information received in Agriculture



Source FIT Uganda, 2013

Stakeholders



Government

Min. of Agric. water, lands, ICT, lands & housing,

- Regulatory and enabling environment
- Implementers/ dissemination

Communication

(telecommunication, Market information, ICT, meteorology, topography)

- Providers of information
- dissemination
- Developers of technology

Farming organisations

(seed Cos. Coops, input suppliers, aggregators)

- Users of information

NGOs

- Dissemination
- Users
- Providers or facilitators

Research Institutes

- Providers of information
- Technology developers

Banks & Insurance Companies

- Use of information
- Providers of agricultural products

Needs and opportunities –use of spatially based information services



Constraint	Potential user	Needs/opportunity
Lack of regular and reliable agricultural data and information	<ul style="list-style-type: none"> •Farmers •Buyers 	<ul style="list-style-type: none"> •Provision of reliable and timely information •Weather predictions •Location of farms and farmers & product quantities • reliable data on product specifications
Inadequate meteorology services	<ul style="list-style-type: none"> •Farmers •Agri-firms •Insurance companies & banks 	<ul style="list-style-type: none"> •Reliable instruments for weather predictions •Increasing number of meteorology stations •Use of data to provide finance products and manage risk
Limited lending to agriculture (high risks and costs)	<ul style="list-style-type: none"> •Finance institutes •Insurance firms •Farmers 	<ul style="list-style-type: none"> •Services to predict weather patterns to determine level of risk •Create agricultural finance products
Inadequate physical infrastructure (transport, energy, water, and storage facilities) Limited extension services to farmers	Farmers	<ul style="list-style-type: none"> •Infrastructure especially irrigation technologies •Use of spatially based information for precision agriculture = efficient use of resources

Thank you!

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our website:

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