

#### Sponsors



MILLENNIUM  
CHALLENGE CORPORATION  
UNITED STATES OF AMERICA

#### Partners



SBC4D

IntraHealth



# The dLab/GODAN Roundtable in Agriculture, Nutrition and Economic Growth

10<sup>th</sup> August 2016

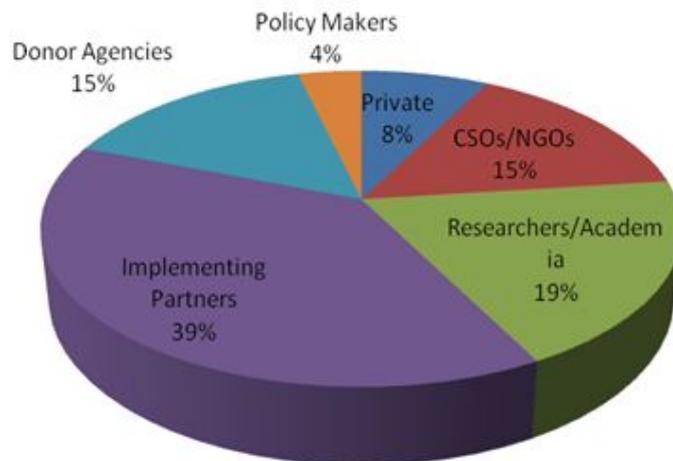
University of Dar es Salaam, CoICT, Kijitonyama Campus

## PUBLIC REPORT

On 10<sup>th</sup> August, 2016 the dLab in collaboration with the Global Open Data for Agriculture and Nutrition (GODAN) conducted a roundtable focusing on identifying the data gaps and data use and reuse challenges in the sectors of Agriculture, Nutrition and Economic growth. This unique event of its own took place at the University of Dar es salaam, College of Information and Communication Technologies, drawing more than 20 participants from different institutions for an open discussion on this important theme. This was the second roundtable of a series of roundtables convened by the dLab. The main objective of the event was to bring together stakeholders from agriculture, nutrition and economic growth sectors to brainstorm on the data availability, data sharing and data use and reuse to support the sectors growth in Tanzania. The roundtable platform also provided an opportunity for the dLab to identify data and actionable information needs from stakeholders to inform the dLab action plan for supporting the data revolution roadmap on priority sectors.

An important aspect of this roundtable was to encourage stakeholders to align the data needs with the national plan and the global SDGs data on these sectors. Participants had an opportunity to explore these thematic areas a priori through round table materials that were distributed ahead of the round table event. The participants represented different institutions including public, private, donor and CSOs. It is worth noting that the Ministry of Agriculture, Livestock and Fisheries which plays a critical role in the formulation and foreseeing of the implementation of the national policies and plans governing the sector's growth was represented. Specifically, the participant's representation by category included 4% from policy makers, 8% from private enterprises, 15% from CSOs, 15% from donor agencies, 19% from research institutions and 39% from the implementing partners as depicted by Figure 1.

## Participants Organization by Category



**Figure 1: Participant proportion representation by category**

The roundtable session was opened up by with a series of enlightening talks to set a stage for discussions. Dr. Justo, who also assumed the role of a lead facilitator, opened up the session by a welcome note followed by a highlight on the roundtable overview and an introduction to Open Data. Dr Juma Lungo who is the dLab project manager gave an enlightening presentation on the dLab project and its overall mission in supporting the data revolution in Tanzania. Figure 2 depicts an enlightening moment by Dr. Juma Lungo.



**Figure 2: An enlightening talk about the dLab lead by Dr. Juma Lungo**

Another important key aspect of the roundtable was for participants to have an opportunity to talk about their organization experience in data use and reuse through a perpetuated *ignite talk style* (<http://www.ignitetalks.io>). Participants used the ignite talk session to introduce what work their organization are doing, the problem they are trying to solve, the data being collected or used to solve the problem and any information/tools needed to solve the problem

(e.g., a satellite map, to adapt an app, etc.). Critical issues that emerged out of the ignite talks are summarised as follows:

- An organization that works on business intelligence data collection uses a SMART tool for data collection from USAID, but needed a mobile app and drone technology (for fire-outbreak boundary probes) for complementary data. In addition for collection of marketing data needed a better tool for spatial data capture, satellite data and robust resources (server space to support big data capture)
- An organization that works in agricultural land planning highlighted challenges for free software for spatial data analysis being not robust enough (compared to available proprietary software). Also highlighted data gaps on soil information – existing maps being obsolete requiring urgent update, and the available free satellite imagery data had poor resolution.
- An organization working on projects that support smallholder farmers to improve productivity identified a tool gap for dissemination of agricultural extension actionable information to farmers, including agricultural inputs, etc.
- An organization working in forestry development highlighted challenges of low wood price to community forestry growers due to poor access to marketing information, poor linkage of producers with buyers, and lack of better land use planning. Also exist challenges of poor quality data from satellite/imagery and road network maps from open sources. They needed support in acquiring accurate data on road network around communities forestry farmland. They also need high resolution imagery data for mapping water bodies and streams, mapped data on settlement hierarchy and land planning for forestry farmland versus food crops.
- An organization working in nutrition data for early infancy (ages 0-5) sought improved accessibility and dissemination of the early infancy nutrition data to determine the prevalence of malnutrition for children less than five years of age.
- A researcher on GIS tools and data science articulated need for mainstreaming robust data analytics tool amongst stakeholders, specifically the R language tool. He asserted that exploiting technology to collect accurate data is vital and demonstrated how to use free software in developing tools which can be used to collect the data in agriculture and nutrition sectors. Further, he stressed the benefit of using free tools in processing and visualising statistics as a sustainable way for developing countries to empower the public with access to more presentable data, thus a deliberate integration of local knowledge and professional knowledge in agriculture sector could ensure the availability of the vital data including climate information.
- An organization purporting the vital sign system (WB tool) which is used to generate and integrate data for managers and farmers to enable better decision making, and actively collaborate with the NBS for household data surveys within the SAGCOT corridor identified the following gaps
  - How can farmers be educated for good farming practice / sustainable farming that value nature (ecosystem conservation)
  - How to mitigate the cost of data from other suppliers e.g. Tanzania meteorological Association (TMA) data which is available for sale, or where data cannot be provided easily e.g. Ministry of Agriculture, Livestock and Fisheries
  - How to improve the feedback loop – how data/actionable info can be provided to farmers
- A researcher working on national water point mapping project highlighted the challenge of data availability and quality to enhance accurate predictions.

Overall the ignite talks provided deep insights on issues surrounding data use and reuse amongst agricultural stakeholders and the need for integrated mechanism to address the identifiable data challenges to spur sector wise better decision making and sustainable development. Use of a combination of different technologies could be crucial in the agricultural sector for better results. Figure 3, features an ignite talk presentation from amongst participants.



**Figure 3: An ignite talker Ms Rose Funja - Managing Director of AGRINFO**

Subsequent from the ignite talks, was two enlightening presentations on the Tanzania national development plan in Agriculture 2015/2016-2020/2021 facilitated by Aman Grawel, the dLab managing director and on SDGs in Agriculture, Nutrition and Economic Growth facilitated by Lawrence Sperling from the United States Department of State. These two presentations opened up a stage for a breakout sessions, where the participants broke into two discussion groups that focused on detailed exploration of the following discussion points:

- Availability of Data
- Data Gaps
- Challenges faced in collecting data
- The legal and ethical means of accessing the data
- The quality of published data and the means of collecting accurate data.
- The quick wins

The feedback from breakout sessions re-asserted the key questions by reporting the variety and amount of data potentially available, key gaps thereof and what could be done in the near term. From both groups participants pointed out that the available data in different areas which includes satellite imagery, boundaries survey, village registers were largely in paper form, while the global climate models, water bodies, FAO statistics which include crop statistics, population statistics were largely coordinated by NBS. Further, the water quality data were coordinated by the ministry of water, the soil data were coordinated by Mlinganyo, while the urban data were coordinated by CNES (French data source for Urban) thereof creating silos of data.

Some data gaps were identified which can be broadly categorised into three aspects, namely, outdated data, unavailable data and non-standardised data format. Participants highlighted

lack of updated national soil map, information about fertilizers versus soil, better resolution satellite data, agricultural marketing information which includes data on various products, infrastructure information to different agricultural places, and usage data/ information (water usage assessment data). The later was articulated as important for easy plan of irrigation, domestic consumptions and resolving conflicts between farmers and pastoralists. Another key highlighted data gap was the inaccessibility of funding data/information with respect to the budget allocated to the agricultural sector by the government and development partners to the public.

Participants further highlighted the challenges of data/information collection which included inadequate resources to enable seamless collection, processing and dissemination of data/information; partly because the data/information needed is scattered all over the country and the budget and funding are limited, but also limited knowledge on the available data, and the limitation on technology. In particular, the general public have limited access to requisite technology for information dissemination including smart phones, internet access, electricity and computers. Figure 4 depicts a section of group discussions.



**Figure 4: A section of group discussants lead by Mr. Ismail Moses (standing)**

Another key highlighted data challenge is the availability of accurate information, largely attributed to poor quality data. In order to get accurate and quality data a few suggestions were put forward by participants which included:

- Improving the mechanism of collecting and processing data through investment in ICT tools to boost the quality of data being obtained and processed.
- Mainstreaming data collection methodology and publishing frameworks such that the source which is collecting or publishing data should be legally identified, for example, academic institutions, research institutions and legally known organisations. Also the sample space used in getting the data should be considered carefully.

To identify areas of quick wins, participants were given an opportunity to identify potential use cases within their organizations that are likely to be realized in the short term basis by collaboration with dLab. Some important quick wins that were highlighted included:

- Deployment of the Mobile Application Scene Tenure Software (MAST) from Agrinfo which is resource intensive data collection tool

- Capacity building and improving accessibility of soil information/data
- Dissemination of agricultural extension information/data to farmers
- Publishing data from different sources to provide a well known source of data, where to get information, platforms for harmonization of information using technology, and web based information service.
- Raise awareness amongst communities and stakeholders on how to get accurate data
- Facilitate wide dissemination of market information to farmers – provide a specific way in which a farmer can know about his/her market.
- Collaboration on how to collect accurate information (through better data collection tools), share knowledge on how to interpret the available data, such as data analytics on marketing information, and develop simple tools to collect data which can be used/reused by organizations which need to collect data and provide some room to entrepreneurs (empowering entrepreneurs) to use the data.

The roundtable was followed by a feedback survey from participating stakeholders to help strengthen and improve roundtable discussions and outcomes in upcoming events. Overall participants had shown positive feedbacks. Two key issues that needed improvement included a better management of time during ignite talks and making the about dLab enlightening talk a prelude, focused and comprehensive to broaden participants understanding of the dLab and bring the dLab mission and objectives at the forefront.

The dLab plans to scale up the number of organizations and sectors reached out by conducting more Roundtables in the near future that target priority sectors, including health & HIV/AIDS, gender, economic growth, amongst others, in line with the engagement indicator commitments. There is a follow-up strategy in place in which the Roundtable events are being backed up by other additional dLab outreach events to sustain continued collaborations. Numerous other dLab specialized events are on the pipeline, including hackathons, competitions and training in data wrangling, analytics, visualization and data/innovation workshops. Ultimately, the dLab has the prospect of greatly contributing on the aspects of improving data use, reuse and innovation for better decisions making and investment in Tanzania and support the national roadmap for the SDGs.

**Annex I: dLab/GODAN Roundtable in Agriculture, Nutrition and Economic Growth  
Participant Organizations - UDSM/COICT Kijitonyama Campus, 10 August  
2016**

S/N	Participant Organization	Job-Title
1	PEPFAR/MCC - DCLI	Open Data Engagement Advisor
2	dLab/COICT	M&E Lead
3	dLab/UCC	Training Lead
4	TGFA	Program Coordinator
5	Vitasigns/TFCG	Team Leader
6	SUA	Academic/Researcher
7	AGRINFO	MD - Agrinfo
8	USAID	Project MGT - Policy
9	dLab/UCC	Comm. Officer
10	ARU	Lecturer
11	Foundation Help	ICT

12	dLab/UCC	M&E Officer
13	dLab/COICT	Engagement Officer
14	UDSM/CoICT	Ass.Lecturer
15	AMREF	M&E Manager
16	Bagamoyo University	S. Lecturer
17	dLab/COICT	Ass. Director - dLab
18	Univ Twente The Netherland	Professor
19	Ministry of Agriculture	CSA/ICT
20	dLab/COICT	Engagement Lead
21	MCC/PEPFAR	MCC/PEPFAR - DCLI Management
22	SBC4D	dLab E.D
23	UCC	Accountant
24	Forestry Development Trust Iringa	GIS Technician
25	dLab/CoICT	dLab Manager
26	US Department of State	Senior Advisor – Data Revolution for Sustainable Development Team

## Sponsors



MILLENNIUM  
CHALLENGE CORPORATION  
UNITED STATES OF AMERICA

## Partners



SBC4D

IntraHealth  
INTERNATIONAL  
Because Health Workers Save Lives.

