

REPORT ON ESIPPS INTERNATIONAL'S PARTICIPATION IN RECENT GEO FOR AFRICA SUMMIT 2017 KAMPALA

Geo4Africa summit 2017 brought together different practitioners in the field of Geo Information Systems (GIS) to explore and showcase the relevance of geo tools. The Geo4Africa Summit 2017 also brought together organisations, Individuals across Africa Region and globally. It was held in Kampala at hotel Africana from 11th to 14th July, this year's theme was "Geo Tools Innovating Knowledge Databases"

ESIPPS international participated in the conference and presented the setting up unmanned aerial system (UAS) services for agriculture in Uganda. This is a demand-driven, multi-donor-funded project aimed at strengthening ICTs, data management and finance capacities of agribusiness like NUCAFE and IGTF and their farmer members. It's supported by the Technical Centre for Agricultural & Rural Co-operation ACP-EU (CTA) and CTA's local implementing partner, ESIPPS.

There was a presentation by the director of ESIPPS Jane Bemigisha (PhD) and Kennedy Ajiku the drone pilot and an exhibition by Ingrid Martha Kintu.

The objective of this programme is to enable agribusinesses and their members to access and manage spatially-defined farm data for improving enterprise management & profitability and possibly access to credit. Expected outcomes of this programme include;

- ❖ Mapping and surveying (e.g. farm boundary delineations, crop area calculations)
- ❖ Crop inventory (e.g. count of individual coffee plants, crop yield estimations)
- ❖ Crop scouting (e.g. identification of location-specific crop stress, biomass development, etc.)
- ❖ Crop damage assessment (e.g. for insurance purposes)
- ❖ Crop advisory (e.g. nitrogen application – on selected crops where solutions are available)
- ❖ Infrastructure inspection (e.g. irrigation systems, farm to market or processing point roads, etc.)
- ❖ Generation and provision of individual farms' profiles to increase farmers' credit-worthiness
- ❖ UAS capacity building (e.g. training parties interested to adopt UAV technology)
- ❖ Spatial data sets (600 farms) concerning individual farms are available and used by selected farmers, and NUCAFE management.
- ❖ Educated youth access knowledge intensive, ICT-based, agro-related employment opportunities

Under this programme there are activities for Capacity building & technical support to ESIPPS that include;

- ❖ Participation of an ESIPPS associate in the Africa Agribusiness Incubators Network (AAIN) Conference and Expo in Ghana (October 2016) - done
- ❖ Attendance of ESIPPS staff in a 5-day tailored hands-on and theoretical training at Airinov, Paris, France (March 2017) - done
- ❖ Provision of UAS technical back-stopping services by Airinov France (March 2017-18) - ongoing
- ❖ Participation in the forthcoming Geo4Africa Summit in Kampala (July 2017) - forthcoming
- ❖ Use of social media for marketing UAS services - ongoing
- ❖ Partnerships with national and regional farmers' organisations and successful farmer-led businesses CTA has been collaborating with in Uganda – ongoing

There are also activities for Capacity building to NUCAFE and IGTF as follows;

Training of enumerators in how to present project activities to the farmers, Use and maintenance of portable devices (tablets), Administer questionnaires using tablet devices, determine farm location using tablet in-built GPS, Handle, store and share data, training of selected office staff in how to download, install, update and use QGIS, a versatile open source Geographic information System, Import, manage, analyse and export data using QGIS, Produce maps in printed and electronic formats

CTA has supported the acquisition of technology by ESIPPS like the Multi-rotor 3DR Solo drone & multiSPEC 4C sensor, High capacity fixed wing drone with multispectral and RGB sensors, Analytical software and data storage devices, Mobile devices for enumerators

Expected outputs of pilot phase (600 farms) include Farmers' profiles (data sets to be determined, ready for import into NUCAFE and IGTF MIS, Farm profiles (spatial data sets, farm maps and coffee plants' inventories) Additional high resolution data sets will be available for eventual further elaboration, e.g. elevation data at 5 cm resolution), Trained enumerators and trained QGIS operators

The programme also features a number of upscaling opportunities like Expanding data generation to 20K NUCAFE and 10K IGTF members (Project phase 2), Documenting and publish experiences and case studies including cost and benefit analysis, offering training on UAV applications to users and future providers (e.g. Bishop Stuart University), Establishing a UAV4Ag community in Uganda (c/o 2017 Geo4Africa Summit, July 2017)

Benefits of UAS in agriculture;

To farmers include Information on acreage that can be easily updated; crop inventories; crop monitoring for improved crop husbandry; increased credit-worthiness; ease in claiming damages when insured

To enterprises: Monitoring actual use of inputs provided to farmers in advance; estimating crop yield; planning crop collection based on expected dates of harvest, traceability

To Govt: support research, explaining manifestations, disease surveillance e.g., Army worm impacts; production/yield estimation; national statistics and planning

NB: Interfacing a GIS enables dynamic analysis

The EU delegation may participate by Supporting to farmers through Spatial databases to enterprises engaged in crops that are earmarked in the NDP II - Crop monitoring for improved husbandry, yield estimation, to facilitate credit and traceability

Supporting government research –explaining manifestations, disease surveillance e.g., Army worm impacts; production/yield estimation; national statistics and planning; Awareness and training for agencies in management, research& policy.

Also concerted Government and Private enterprise mapping project is possible with UCDA to map coffee farms that are under registration, target of about 1.7m farmers (by 2013 record)

EXHIBITION

Environmental Surveys Information Planning and Policy Systems (ESIPPS) international Ltd had an exhibition at the Geo4Africa summit which happened at hotel Africana from the 11th to 14th July. A booth was secured just outside Katanga conference room. Pull ups and posters showing the ESIPPS company profile and the projects the organisation has worked on over the years but putting more emphasis on Geo-mapping for Hay making in Climate Stressed Rangelands (Geo4HCR) and the Uganda Component of Spurring a Transformation for Agriculture through Remote Sensing (STARS)

project which performed a trial of using a sensefly eBee drone (UAV) in Karamoja district, among others. Flyers about the organisation were also handed out to everyone who attended the summit. There were a number of professionals who visited the booth like the manager geofomation services UBOS (Uganda Bureau of Statistics), the director general for Bluebell, the managing director GeoSymp, managing director Davacc Tech among others. Overall, the exhibition was a success!