



Report on Geodata for Agriculture and Water Workshop

**Held May 21st 2014,
Maputo-Mozambique**

Reporting by:

Marleen Schiereck, Agri Hub Mozambique

Hercio Chiziane, Agri Hub Mozambique

General information

On May 21st, 2014 the Geodata for Agriculture and Water workshop was held at the VIP Hotel in Maputo, Mozambique.

The aim of the event was to introduce the new Geodata for Agriculture and Water facility (G4AW). This is a new programme of the Dutch Ministry of Foreign Affairs carried out by the Netherlands Space Office (NSO). To prepare for the workshop a quick scan was drafted, for which Agri Hub Mozambique provided the part on the agricultural sector. Furthermore Agri Hub Mozambique organized the workshop. The G4AW programme in Mozambique is further supported by The Netherlands Embassy and the Netherlands Water Partnership (NWP). The workshop was attended by 41 participants coming from government institutions, NGOs, financial institutions, companies and donors (see Annex I).

Reporting on the programme

The workshop was held on May 21st in Maputo and lasted the whole day. Below in bold the part of the programme is highlighted and a description of the outcomes of the particular part, if applicable, is given as well.

9:00 – 9:30 Arrival and registration of participants.

9:30 – 9:45 Welcome and official opening of the workshop

Marleen Schiereck – Agri Hub Mozambique Ton

Negenman – The Netherlands Embassy

Participants were welcomed to the G4AW workshop and invited to introduce themselves and their companies or institutions. After this the representative of The Netherlands Embassy, Ton Negenman, officially opened the workshop. In addition, he spoke about the main activities of The Netherlands Embassy in Mozambique. He mentioned the programmes that the Embassy is involved in, for example the support to the Zambezi Valley Development Agency and SME's in seeds in Gurué. He also explained how these programmes relate to Geodata. Mr. Negenman then invited the participants to learn and contribute to the success of the workshop by sharing their knowledge and experiences.

9:45 – 10:30 Introduction to satellite information for

smallholders *Adri Bakker – Netherlands Space Office*

Presentation in Annex II

In the presentation it was explained that Mozambique is one of the fourteen African countries that were selected for the G4AW programme by the Ministry of Foreign Affairs in the Netherlands. After this Mr. Bakker showed the effects of climate

change on food and water security in the world and shortly described their effect on agriculture.

To introduce the satellite data Mr. Bakker showed various images obtained by satellites launched in Europe. The newest satellite, the Sentinel-I which was launched in 2014, is able to collect images through the clouds both during day and night. Furthermore he elaborated upon the information chain services, by explaining how the so called 'infogineering mode' is used in this process by giving an overview of the Energy and Water Balance Monitoring System.



Presentation by Mr. Bakker on satellite information

In addition, Mr. Bakker spoke about the possible services that can be provided by the use of satellite data. He gave examples on how the satellite data can be used in crop growth monitoring, giving irrigation advice, hazards and risk analysis and yield forecasting.

After the presentation Mr. Bakker elaborated on the availability of data to producers in relation to a question on this from the audience. He explained that the availability of raw data is free of cost. However, to make the data useful for the farmers there are costs involved. The G4AW programme supports projects that do make those data available. Projects can be of a value between 1 and 5 million euros. Of this amount 70% is granted and 30% has to be collected by the partnership.

10:30 – 11:00 Coffee Break

11:00 – 11:20 Geodata and Agricultural Sector in Mozambique

Marleen Schiereck – Agri Hub Mozambique

Presentation in Annex III

The Netherlands Space Office (NSO) requested Agri Hub Mozambique to draft a quick scan on the agricultural sector of Mozambique. The overview presented gave a clear baseline of the status, challenges and opportunities of the sector. A short summary is given below, for more information the presentation can be found in Annex III and the quick scan is available at the NSO/G4AWwebsite.

The agricultural sector in Mozambique consists for over 99% of smallholders. These smallholders make very little use of fertilizers, irrigation and other techniques. In addition producers face challenges to obtain access to credit, knowledge and land. For these and other reasons, the productivity is very low. It is claimed that there is a direct link between this low productivity and the lack of food security in the country. The government, and the Ministry of Agriculture in particular, are guiding the sector by several plans towards a more productive future. Several objectives in these plans are related to the use of Geodata, especially the objectives focused on the increase of production of both food and cash crops, reduction of vulnerability of farmers to climate (change) influences and the sustainable use of land.

11:20 – 11:40 Agro-Forestry Villages Project

Rosália Rodrigues – TechnoServe

Technoserve gave a presentation on the project they carried out in the past two years of which strategic planning by making use of spatial data was a part. The presentation focused on how these data can be useful by showing actual results that have been achieved through use of satellite data on land, land use and mapping. The Agro Forestry Village Project engaged different stakeholders and focused on four main objectives

- 1: Support the development of a competitive and sustainable plantation forestry industry
- 2: Transform farmers into commercially-oriented farmers utilizing intensive and sustainable farming systems
- 3: Promote investment in the grain processing and poultry industry – leveraging agricultural output
- 4: Improve local government capacity to promote private investment and economic development

The presentation focused on the fourth objective, since this one is mostly related to the topic of the workshop. The project provided the actors in both the public and private sector concerned with spatial planning with baseline maps and supporting information of existing socioeconomic and biophysical conditions, and a series of multi-sector, strategic plans recommending future land use distribution, including infrastructure to support broad-based economic growth in each district and province. The strategic plans have been made both at district level and provincial level. The project took place in 11 districts (Lichinga, Sanga, Muembe, Ribaue,

Mecuburi, Ile, Namarroi, Gorongosa, Muanza, Sussundenga, Manica) located in 5 provinces (Niassa, Nampula, Zambezia, Sofala and Manica).

The use of strategic maps can provide support to land management and strategic planning, monitoring and evaluation of programmes, agricultural sector by providing data (farmers, crops, yields, etc.), identification of suitable land for farming and other economic activities, optimization of donor dollar, risk mitigation of loans and insurances, elevation of the level of information by the communities, adjustment of land allocation based on quality information with direct impacts on yields and many other objectives.

After the presentation Mrs. Rodrigues answered questions from the audience. One question was related to that from the strategic plans it appeared that there were issues with the area of some forestry companies in Niassa and how the project reacted to that. Mrs. Rodrigues replied that all the forestry companies in Niassa were invited and they participated actively in the project during which they noticed that there was a need to let go of some areas. When they got to this conclusion they adjusted their investment projects within those areas. Some are in a process of changing the areas in which they have been working. Another question that was raised was if there was a link with the National Land Department, since they are doing a similar project. Mrs. Rodrigues said that all relevant government departments were invited.

11:40 – 12:30 Group sessions on the needs and challenges for Geodata

Participants were divided into four groups and invited to discuss the following questions:

1. Do you recognize the results of the quick scan and what are your comments?
2. Is there a base for using Geodata to improve the livelihood of smallholders?
3. Which information themes can be determined and do they effect each other?
4. What are the biggest challenges?

12:30 – 13:00 Presentation of the group sessions

The groups agreed on the presence of a basis for the use of Geodata to improve the livelihood of smallholders. They mentioned that some prerequisites are already present, like telecommunication infrastructure including the existence of services like M-kesh and MPesa, early warning systems and agro meteorology services.

In terms of needs for Geodata the following issues were mentioned, prediction of occurrence of rainfall, cyclones and droughts, specific agro-ecological zoning, information coordination of production, meteorological data including historic weather data, live crop data and demographic data. Additionally, some groups focussed on the benefit of mapping improving decisions and through this leading to cost reduction, investment planning and minimization of investment risk.



One of the participants presents the findings of the group

At the same time the groups also identified challenges, like access to mobile telecommunication, literacy of the producers, need for raw data to be analysed and packed for local use, cost of the services, state of infrastructures, sustainability of the project, training of the producers to work with the data, lack of meteorological centres and resources for practical application of the information were highlighted. In addition, the business model for the distribution of these kind of data was considered a challenge in Mozambique.

Furthermore, some groups stated that the means of delivery of the data could be through either government, NGO's, extension offices or private companies.

13:00 – 14:00 Lunch

14:00 – 14:15 MOVERCADO – Building an ecosystem

Marco Gerritsen – The Netherlands Embassy

Movie shown to be found at: <http://enter.movercado.org>

Mr. Gerritsen is working as the primary secretary on the health sector at The Netherlands Embassy. Though at first there seems to be no direct link with Geodata for the agricultural sector, he explained 'an ecosystem' called Movercado used in the health sector for the distribution of for example condoms. This 'ecosystem' could be a possible model for the business case of Geodata in Mozambique. For an explanation of Movercado it is best to watch the short film via the link above.

14:15 – 14:45 Partnership and tendering

Adri Bakker – Netherlands Space Office

Presentation in Annex IV

Mr. Bakker's presentation consisted of key point of the Geodata project, like the impact and expected results, and clarified the requirements and obligations for applicants. The objective of the G4AW facility is to increase the output of the agricultural sector by providing producers with relevant information by offering advices or (financial) products through operational information chains using satellite data.

He further described the expected impact, namely to improved food security and income. In addition he discussed the expected results, for example improved sustainable food production, more effective use of inputs, economic development, stimulation of private investments and financially sustainable services after three years. Furthermore, Mr. Bakker spoke about the duration of the project, target countries, the total grant and the requirements for applicants.

14:45 – 16:00 Group sessions on opportunities for Geodata

In the afternoon participants were again divided into groups and invited to discuss the opportunities for Geodata in Mozambique by focussing on the following questions:

1. What are the opportunities in Mozambique to operationalize a proposal for G4AW?
2. Which partnerships are feasible with the information you got?
3. What is needed to support the opportunities and bring it to a proposition/proposal for G4AW?

16:00 – 16:30 Presentation of the group sessions

The groups identified several opportunities for Geodata in Mozambique, for example to start with planning of local production or to improve that planning and the reduction of production costs. Furthermore, the existence of producers with a market orientation, mostly in cotton, sugar cane and cashew nuts, were mentioned. Also the benefit of the Geodata for business and the presence of NGOs assisting producer organizations were seen as an opportunity.

Several options for partnerships were mentioned for the operationalization of a proposal, like a consortium of several private companies and public organizations such as promotion agencies. Also partnerships through the national corridors (Nacala, Beira, South, Zambezi Valley) were indicated. Or via big projects like ProSavana or already existing private company and NGO partnerships. In addition, partnerships based on out grower schemes in the sugar, beer, cotton and tobacco sector were highlighted. Furthermore, partnerships with the water sector were named. Other possible partners named were input companies, telecommunication companies, insurance companies, producers, retailers and actors in the banking

sector.

In terms of need for support the following issues were put forward by the groups, facilitation systems for the distribution of the Geodata, setting up liaisons with companies able to analyse the data, more funding (remark related to the project presented by TechnoServe, in comparison with this project the grant available is relatively small), market analysis, training of producers, feasibility studies and coordination with other programmes.

16:30 – 16:45 Way forward and link to Dutch partners

Adri Bakker – Netherlands Space Office

Presentation in Annex V

In his last presentation Mr. Bakker provided information on possible Dutch partners for the G4AW project. He described the activities in which these potential partners are involved, the organizations they are already linked to and in which countries they have applied for partnerships. The partners included companies working on data for weather and agricultural production, regional crop monitoring and forecasting, continental to regional scale soil moisture mapping, water planning and other related activities.

16:45 Closing ceremony