DRAFT REPORT

The SADC-JICA Project for Forest Conservation and Sustainable Management of Forest Resources in Southern Africa

7th – 8th November, 2016

Johannesburg, South Africa

Report on

1st Expert Working Group

for Forest Information System

(EWG-FIS) Meeting

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Report on the 1ˢᵗ Expert Working Group for Forest Information System (EWG - FIS) Meeting

Introduction

The Southern African Development Community (SADC) consisting of 15 Member States, is a framework of multilateral agreement with emphasis on economics. SADC is implementing a regional Project for Forest Conservation and Sustainable Management of Forest Resources in Southern Africa, which commenced in June 2015. The objective of the project is to develop the capacity of the SADC region in conservation and sustainable management of forest resources particularly in the areas of Forest Information System (FIS); Integrated Forest Fire Management (IFFM); and Participatory Forest Management (PFM). The Project is supported by the Government of Japan through the Japan International Cooperation Agency (JICA).

In order to achieve the objective of the project, the First (1ˢᵗ) Expert Working Group for Forest Information System (EWG-FIS) Meeting of the SADC/JICA Project on Forest Conservation and sustainable Management of Forest Resources in southern Africa was held from 7th – 8th November, 2016, Johannesburg, South Africa. The Meeting was jointly held with Expert Working Group for Forest Fire Management (EWG-FFM).

The objective of the meeting was to develop the training programme for the Expert Working Group regarding Forest Information System (EWG-FIS) and the annual work plan for 2017-2018. The meeting was attended by all 15 SADC Member States. The report outlines the proceedings of the EWG-FIS and the recommendations made.

Objectives of the EWG-FIS component

The objectives of the Expert Working Group for Forest Information System (EWG-FIS) of the project are to:

i.   Harmonize National Forest Information Systems (NFIS) of the Member States;
ii. Develop and/or modify the SADC Regional Forest Information System (SADC-RFIS);
iii. Publicize the SADC Regional Forest Information; and
iv. Enhance capabilities for the Forest Information Management.

Opening Remarks

The Chief Director for Forestry Development and Regeneration, who was standing in for Deputy Director-General of Forestry and Natural Resources Management welcomed all the participants to the meeting and thanked JICA for choosing South Africa as the Host country for the First Joint EWG-FIS and EWG-FFM. She mentioned that:

-   **Southern** Africa is a hot spot of fire due to the climatically diverse nature of the region (wet/dry)
-   **In addition** – inadequate policy and institution framework, the fire protection approach is different in individual Member States
-   **She indicated that MSs** such as South Africa are mandated to report every three (3) years on the trends, forestry facts and findings to parliament.

- **Information** – is therefore key to formulation of policies and strategies that are sound for building the nation
- **Current** National Forest Information Systems (NFIS) are a source of information to support decision
- **Spatial data** is fundamental – needs to be of High Accuracy and error should be sufficiently small for Monitoring, Management and effective use
- **Satellites** can provide the rate, drivers and how to monitor forest change
- **New technology** needs to be applied, however accuracy is a challenge in southern Africa
- **Key issues**
    i. **Remapping of** provinces at sub national level
    ii. **Support information** exchange
    iii. **Infrastructure for** data storage and archival
    iv. **Capacity building on the processing, analysing and delivering of forest information**

She emphasized that Forest information and fire management should be integrated and called for the active and constructive participation of the members for effective implementation of the project.

Remarks by SADC Secretariat

Ms Pandaleni Elago –

- **Review the annual** work plans
- **Criteria** for selecting the pilot area
- **Agreements at the EWG meetings** will be shared at the Next JCC
- **Called upon** the delegates to provide expertise and input to the meeting.
- **The role of SADC secretariat is to coordinate and facilitate**
- **Need to take MSs'** ownership of the project and ensure sustainability
- **JCC** is the highest decision making body. **She explained that** Technical staff and forestry experts should analyse the present status, make proposal and report their finding before JCC for adoption.

Workshop Activities

Day 1: 07th November 2016

Selection of chairperson

The delegate from Swaziland (Mr N. Jele) volunteered to take the role of being chair after being nominated by Lesotho delegate (Mr T. Motsoane) and manages to lead the afternoon session with co-chair Mr Kurashina.

Report of Member States survey (Mr **Kurashina**)

> ➢ Where some Member States (MSs) have completed their Forestry inventory.
>
> ➢ Poor data collection
>
> ➢ Some MSs don't even have NFIS

Q. Questions and comments were raised based on the Survey done and what was the criteria that was used.

Q. Period of data validation

Q. Training of the experts.

A. Questions and comments will be answered on day 2 of our presentations.

Final Goal of NFIS/RFIS (Mr **Nanaumi**)

- He made a presentation with proposal for the activity to reach the goal of the project.

- He introduced an idea on how to develop open NFIS software in order to raise technical level of the NFISs especially for the MSs without NFIS.

- He emphasized the importance of sustainable monitoring of the activity data.

- He introduced an idea on how to develop SADC-RFIS based on his experience quoted NFRDB (National Forest Resource Database) system developed for Forestry Agency in Japan.

- Harmonization of the NFISs from 15 Member states is necessary for the SADC-RFIS development.

A. Each member state has been requested to submit their NFIS data so that it is harmonized to SADC-RFIS.

Q. Slide 4, further information how we go about it?

A. The detail information will be presented in another session tomorrow.

- Good practice of Botswana (**Mr Sekgopo**)

- The delegate from Botswana, Mr Sekgopo made a presentation on the on-going project with JICA on the National Forest Monitoring System. He covers from the formulation stage through the activities to the present and shared their good practice

as well as challenges they have faced as a lesson to other MSs. He showed expectation to the SADC-JICA project especially for the methodology on updating activity data as well.

A. Request to share the information on soft copy.

Introduction to AIMS (Ms. Panduleni)

- Data base from SADC region, which integrate different units that include Forestry.
- Objective to integrate and rationalize various information systems from Agricultural and natural sector.

A. Request to share the information on soft copy.

<u>Wrap up by the chairman</u>

- Open Global data will be updated yearly.
- The system design for the SADC-RFIS considering sustainable operation Needs for raising technical level of the NFISs in majority of the MSs
- Poor data collection
- Harmonization of the NFIS data from 15 MSs is important for the SADC-RFIS
- MSs are kindly requested to provide NFI information, Forest Definition, Forest Type Category information
- To have all Presentations in soft copies.
- Emails of participants in order to share information within member states.

Day 2: 08th November, 2016

Raising Technical Level

Takashi Nanaumi – JICA Consultant, presented a Review on how to raise technical level of the NFIS in each Member State (MS). He stated that the idea of raising technical level especially for MSs without NFIS is to support for the setting up of Basic Environment for monitoring Forest Resources in each MS and conduct training. He said there is need to distribute data and software as a package. This can be done by providing time series Open Global Data from JAXA, showing forests and non-forests and the extraction of change in forest cover. Mr. Nanaumi explained that the NFIS can be developed using Open Source Software such as QGIS. He however, noted that one year was not enough to extract data on forest cover. He mentioned that for forest to forest time difference the period should be five (5) years in order to see change. He further stated that to produce base maps and to maintain certain level of accuracy (e.g. 80%), ground surveys are necessary thus the process of producing Base Maps was very expensive. He said monitoring of forest resources was key and the JAXA dataset with the overall accuracy of 80-85% for tropical forests is useful although the accuracy is lower for dry/savannah forests. Therefore MSs need to provide National Forest Inventory (FIS) data to JAXA for calibration to Regional Forest Information System (RFIS). He lamented that even MSs with advanced information system also have a challenge updating base maps after 5 - 10years and that the method outline can be applied.

Outline of Training Schedule

The task of the 1st EWG – FIS was to review the methodology on how to update or monitor basic information using Open source data and software. Mr. Nanaumi explained that Basic Training will be conducted twice in the following year. The first training will take place in June, 2017 while the second will be in October the same year. He stated that 15 MSs will attend the training with one delegate from each MS in both training. He said it was difficult to define what basic information is but stressed the need to focus on crucial items such as Activity data and Regional Forest inventory in order to raise technical level for sustainable monitoring. Mr. Nanaumi informed the delegates that the last JCC meeting made a request for conducting training twice so as to involve 2 people per MSs. Therefore. Two (2) *Basic* trainings will be conducted and same for *Advanced* training to be conducted in 2018. He said the final goal is to integrate and consolidate into SADC-RFIS but the budget is limited and it is better to have this kind of meeting and opportunity to discuss and share ideas on Database guidelines as well.

Basic Training Content

The Basic training will be conducted in Gaborone, Botswana for a period of one (1) week and will involve GIS basic training and utilization of WAMIS data. Each participant from MSs will be provided with JAXA Global Open Data were a subset area of interest (AOI) for each country would be extracted. Normally Remote Sensing software like Erdas Imagine, ENVI and ArcGIS could be used but for this purpose, QGIS will be used to clip the country and perform some data manipulation such as *intersect, union* and *overlays* to Extract Forest Change Area. We need to make a report and learn how to manage the data for sustainable use. Mr. Nanaumi stated that the proposal was to invite technical person to the first training while the EWG-FIS member should be invited to attend second training. The content for the *Advanced* training should be discussed. The idea is to make some groups based on the needs of the MSs. Some MSs do not have NFIS data and for such group follow-up training is recommended rather than advanced one but content to be discussed in next EWG meeting.

Mr. Nanaumi emphasized the need to harmonize the different levels of NFISs. In order to make Regional Forest Data, we need to support those countries without NFISs and ensure sustainability of combining the data. He pointed out that MSs need to feed information of the NFISs to the SADC-RFIS. As a result, the idea of using the Bottom-up approach is recommended to consolidate activity data. The approach involves using basic time series Global Open Data from JAXA showing forest/non-forest to extract activity data for all MSs more like a pizza dough. MSs with Activity Data can overlay it on the JAXA Global Open Data and interpolate various data on the basic data. For those with National level Activity data just need to replace the activity data from basic data and develop a NFIS for MSs which will be consolidated into SADC-RFIS.

The delegates were then given a questionnaire on information collection to indicate whether the MSs had National level activity data and what year was it.

Annual Work Plan 2017

The work plan for EWG-FIS for 2016 – 2020 was approved by the JCC. During the meeting the EWG-FIS delegates reviewed the annual work activities in the fiscal year 2017. The main activity is the preparation for the Basic Training of Forest Information System for 15 MSs and the actual training to take place in June, 2017. Wrap up contents to be prepared by

April next year 2017 and the training will be technical with basic ICT background as requirements for each participant.

Members of the EWG – Forest Fire Management are also expected to the second EWG – FIS training to be held in October, 2017. All trainings will be hosted in Gaborone, Botswana. Laptop PC will be prepared including training materials and self-training manuals and content, which will be used at their respective organizations.

Preparations need to be under away for advanced training. Outputs are in line with SADC's strategy. Activities such as Establishment of EWG are complete, collection of forest information from MS, others to follow soon. Seychelles queried whether advanced training can take place in Tokyo, due to the availability of facilities? Swaziland queried whether the first group will get laptops as well? PMU is going to keep the laptops after 1st training. After the 4 training are complete then they will be given to participants. Seychelles queried whether programs are backed up on severs? Training materials including data will be on hard disks. Seychelles prefers desktop to laptops due to security issues. Local consultants will be used to prepare training materials. Other groups not going to Indonesia, main purpose is to raise technical levels than exposure to advanced systems in Tokyo. There is a very big gap between advanced member states to others.

CONCLUSION

The 1st EWG meeting for FIS was very successful and constructive. The annual work plan was successfully reviewed.

RECOMMENDATION

- The MSs to provide National Forest Inventory (FIS) data to JAXA for calibration to Regional Forest Information System (RFIS) for consolidation of activity data to the regional level

- Harmonization of the NFIS data from 15 MSs

- Renaming of Basic and Advance training to Training 1 and Training 2 respectively

- EWG FIS must attend both trainings, while the alternate member should have basic technical knowledge for continuation

- Integrate with other data agency for additional/supplementary data for countries such as Mauritius /Seychelles where JAXA resolution (25m) cannot adequately sufficient level of details needed

- Training materials, manuals to be provided before the actual training dates (excluding huge image data)