Miombo Network Meeting
27th-29th July 2016

Restoring the socio-ecological and socio-economic relationships in the Miombo woodlands

Venue: Pedagogic Complex, Eduardo Mondlane University, Maputo, Mozambique

Background Of the Miombo Network

Land Cover mapping and monitoring is one of the two primary themes of Global Observation of Forest and Land Cover Dynamics (GOFC-GOLD), a coordinated international effort working to provide ongoing space-based and in-situ observations of forests and other vegetation cover, for the sustainable management of terrestrial resources and to obtain an accurate, reliable, quantitative understanding of the terrestrial carbon budget. The GOFC-GOLD Land Cover theme is aimed at refining and articulating the international requirements for land cover related observations and making the best possible use of global land cover products from the existing and future satellite observing systems, for forests management, policy decision-making and global change research.

To execute and design projects, develop consensus algorithms and methodologies for product generation and validation, the GOFC-GOLD Land Cover Implementation Team works with GOFC-GOLD Regional Networks in Eurasia, Asia, Africa, South and Latin America to bring together land cover data providers, users and researchers operating in a common geographic area, and represent a link between national agencies, user groups and the global user/producer.

GOFC Regional Networks – Miombo Network

The Miombo Network is the oldest regional network in southern Africa that fosters collaborative efforts in land cover monitoring and management in southern Africa. Miombo network's goal is to support the development of sustainable miombo woodlands management policies and practices in southern Africa through information derived from remote sensing and other geospatial information technology. Miombo Network's purpose is to enhance the use of information from field observations and remote sensing of miombo cover for management in

southern Africa. The Miombo Network has collected extensive background information on the ecology, functions and dynamics of miombo systems including land cover and biomass/carbon changes.

In 2013, the Miombo Network was re-launched in a meeting held in Maputo, after almost ten years of inactivity. The main outcome of this meeting was the network's science plan, which is a document that provides key orientation for research activities in the miombo woodlands. The research areas identified in the plan are: patterns and rates of land cover change, processes and drivers of land use change, carbon and biomass in the miombo woodlands, ecology of the miombo woodlands, miombo management and climate change adaptation, and human dimension of the miombo woodlands. There was also a strong commitment that scientific results produced by the network members should support decision making at national and regional levels.

Three years since the last meeting have passed therefore, it is important to discuss and share updated information about the woodlands as well as discuss the network's governance and institutionalization. Additionally, the current situation faced by the miombo countries in which socio-economic development imposes major land cover changes, reveals that is essential to discuss topics such as landscape restoration, payment for ecosystem services and REDD+, sustainable forest management among others. These will provide a platform to update the science plan for the network, which in turn, will leverage the network capacity to influence decision-making.

Objectives of the Miombo meeting

The Miombo woodlands are the most extensive warm dry forest type in southern Africa (Frost, 1996), covering ca. 2.7 million km^2 across seven countries in southern Africa. It is also one of the most important ecosystems in the world, playing an important role at the social, economic and environmental levels. Being an important centre of plant biodiversity Miombo is a key provider of goods and services, supporting the livelihoods of more than 65 million of people in the region. From the environmental point of view Miombo is determinant to energy, carbon and water balance. The ecological dynamics of Miombo is strongly influenced by their woody component, particularly by large trees, which play a key role in ecosystem function, primarily in nutrient cycling, accounting for a great deal of the carbon pool. This component is in turn influenced by a combination of climate, disturbances [e.g. drought, fire, grazing and herbivory primarily by elephants (*Loxodonta africana* Blumenbach)] and human activities. Accelerated human population growth coupled with global climate changes imposes further pressure over the woodlands, which in turn dictates additional challenges in managing and restoring miombo.

The objectives of the miombo network meeting 2016 are:

- Review the GOFC-GOLD Miombo Network activities in the last 3 years in terms of:
  - Forest governance in the miombo woodlands (include payment for ecosystem services, policies, decision-making),
  - Processes and drivers of land use change (natural and anthropogenic),
  - Restoration of the miombo woodlands,
  - Miombo management and climate change adaptation, and
  - Socio-ecological relationships in the miombo woodlands.

- Review and up-date the Miombo Network science plan:
  - Evaluation of the availability and suitability of remotely sensed data in support of the Miombo Network science plan
  - Update the 3 year Miombo Network plan of activities, and
  - Discuss a strategy to support decision-making in the region.

- Discuss the new edition of miombo woodland book of 1996 in terms of:
  - New topics to be included,
  - Define the outline of the book,
  - List of editors, authors and co-authors, and
  - Funding sources possibilities.

- Discussion of GOFC-GOLD network governance:
  - Elect the Miombo Network Executive Steering Committee, and
  - Define the action plan of the steering committee for the next three years.

Thematic areas

The workshop will cover several relevant themes, which will be addressed in parallel sessions during the second day of the event. Below is a general description of the sessions, but in general the participants are requested to present and discuss their findings and data collection (space and field observations) and analysis techniques. They are also requested to reflect about the existing and missing data and techniques and proposed a common action plan for the next three years, which will feed the discussion about the science plan.

Thematic area 1: Processes and drivers of land use change (natural and anthropogenic):

Miombo woodlands are submitted to different land-use practices, which support the livelihoods of rural poor but also are important to leverage socio-economic development of miombo countries. Various combinations of land-use practices and fire regimes seem to be capable to driving miombo ecosystems to a range of stable states. These land use practices are power agents of land-use change and land degradation, including charcoal production, mining, shifting and commercial agriculture, among others. Originally, the woodlands ecology is also determined by climatic and edaphic factors, which determined species compositions and dynamics. However, the current global climatic changes are imposing additional pressure on miombo such as erratic and scarce rainfall, elevated temperatures and strong winds. These, in combination with anthropogenic activities are important drivers of change in miombo woodlands. Topics in this session may include: timber and non-timber forest products exploitation, impacts of mining, commercial and non-commercial agriculture, climate change impacts, charcoal production, among others.

Thematic area 2: Restoration of the miombo woodlands

Human population growth and unsustainable land use practices impose a serious risk of degradation in the miombo woodlands and in fact, large miombo areas in the region are facing several levels of degradation. Miombo is known as a resilient ecosystem, which regrowth from stumps after for example several years of cultivation and logging. Seed regeneration is slow, but some species such as *Afzelia quanzensis* have the capacity to perform well. Despite the need to urgently engage in miombo restoration action, there is no sufficient evidence in the region to support decisions about it. In this thematic area, the participants will present experiences and models for the restoration of the miombo woodlands and topics that may be discussed are: landscape restoration approach, stump vs seed regrowth, among others.

Thematic area 3: Miombo management and climate change adaptation

Sustainable management of the miombo woodlands is a major challenge especially in the context of ever increasing human growth and the consequent need to satisfy people's livelihoods. Sustainable forest management is one of the best approaches to guarantee forest production that is compatible with biodiversity conservation objectives. Engaging local communities in sustainable forest management is highly relevant in the African context given their knowledge about species growth and regeneration. Thus it is important to discuss approaches for sustainable forest management of miombo woodlands, which should involve the different sectors of the society namely private, government, local communities and respective institutions, civil society and NGO's. The topics addressed in this theme may include: community

forest management, sustainable forest management, certification, indicators and criteria for biodiversity conservation, among others.

Thematic area 4: Socio-ecological relationships in the miombo woodlands

It is well known that rural and urban communities in southern Africa have a straight relationship with the forest resources as the woodlands provide important resources including: food, medicines, building materials, cultural and a series of environmental benefits not always perceived by the communities. In this context, it is important to recognize this relationship in managing and restoring the woodlands. This is important in terms of recognizing and validating the traditional knowledge of miombo ecology as well as the value they have in sustaining the woodlands. In this context, it is also important to recognize the rights (land ownership) and responsibilities of the communities, which must be respected and raised in any forest management initiative. The topics under this them may include: cultural and behavioural aspects, traditional knowledge and practices, local best practices.

Thematic area 5: Forest governance in the miombo woodlands

Miombo woodlands management and restoration are strongly dependent on good and transparent governance, which includes building strong institutions, improving forest patrolling, implementation of strong policies and redistributing the benefits equally among the different stakeholders. Forest governance includes also a strong political will and changing of attitudes and behaviour of the government institutions and individuals towards reducing corruption to reduce forest degradation and unequal sharing of benefits. Topics within this theme include: policy efficiency, forest management structures and hierarchies, land rights, among others.

Programme

The programme will be managed flexibly and adaptively to accommodate the interests of the group and to make maximum use of the time and energy of the participants. In case there are other priority areas coming up during the workshop, changes will be taken into consideration

Day 1: Tuesday, 27 July, 2016	
OPENING SESSION:	
08:00 - 08:30	Arrival and Registration at Eduardo Mondlane University
08:30 -10:00	Welcome remarks **National Directorate of Forests (DINAF)**

	Tomás Chiconela - Dean of the Faculty of Agronomy and Forestry (FAEF) **Orlando Quilambo** - Eduardo Mondlane University (UEM)
	Introduction of Participants, Objectives and Agenda of the Meeting **Natasha Ribeiro - UEM**
	GOFC-GOLD Background and Land Cover **GOFC –GOLD Land Cover Theme**
	The History of the Miombo network **Natasha Ribeiro - UEM**
	SADC REDD+ and Forest Program **SADC forest program representative**
	Opportunities for restoration of degraded areas in the Miombo woodlands **MITADER/WB/IUCBN**
10:00 - 10:30	**Tea/Coffee Break**

	SESSION 1: *MIOMBO WOODLANDS – COUNTRY STATUS* **Moderator: David Nangoma** **Rapporteur**

10:00 – 12:30 Including Q&A	Angola **Virginia Lacerda**
	Tanzania **Alfan Rija**
	Malawi **Tembo Chanyenga**
12:30 – 13:30	**Lunch**
13:30- 15:30	Zambia **Stephen Syampungani**
	Zimbabwe **Isla Grundy**
	Mozambique **Natasha Ribeiro**
15:30 – 16:00	**Tea/Coffee Break**
16:00 – 17:00	Plenary Discussion – Research and Management needs
	Reception Dinner

Day 2: 28 July, 2016					
SESSION 2: **PARALLEL SESSIONS (PS)**					
08:30 -13:00	**PS I:** Processes and drivers of land use change (natural and anthropogenic)	**PSII:** Restoration of the miombo woodlands	**PS III:** Miombo management and climate change adaptation	**PS IV:** Socio-ecological relationships in the miombo woodlands	**PS V:** Forest governance in the miombo woodlands
	Moderator: XX- institution **Rapporteur**	**Moderator: XX- institution** **Rapporteur**	**Moderator: XX- institution** **Rapporteur**	**Moderator: XX- institution** **Rapporteur**	**Moderator: XX- institution** **Rapporteur**
13:00-14:00	**Lunch Break**				
SESSION 3 **SCIENCE PLAN DISCUSSION** **Moderator: Regina Cruz** **Rapporteur**					
14:00 – 14:30	Presentation of the Science Plan **Natasha Ribeiro - UEM**				
14:30 – 16:00	Breakout Group Discussions about the Miombo SP – 5 groups				
16:00-17:00	Breakout groups and Report back to Plenary				

Day 3: 29, July 2016	
SESSION 4 **Miombo Book Project** **Moderator: Almeida Sitoe**	

	Rapporteur
8:30- 9:00	Miombo book project 1996 **Davison Gumbo -CIFOR**
9:00-10:00	Plenary discussion about the miombo book project
10:00 - 10:30	**Tea/Coffee Break**
	SESSION 5 *MIOMBO NETWORK GOVERNANCE*
10:30- 11:30	Network governance and election of steering committee **Natasha Ribeiro**
11:30 -12:00	Evaluation of the meeting **Closing** **TBN**
12:00 13:00	Miombo Network steering committee meeting
13:00 -14:00	**Lunch**