COMBO Project Launch and Biodiversity Offsets Roadmap
Launch in Mozambique

Mitigation Hierarchy and Biodiversity Offsets Training

Data Gap Analysis Expert Screening

24-26 October 2016

Activity Report

Project funders:

AFD  
MAVA  

Project partners:

WCS  
FOREST TRENDS  
biotope

Institutional support:

biofund  

Event sponsors:

WORLD BANK GROUP  
PROFOR
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1 Introduction

Mozambique is a developing country that, over the last years, has received numerous initiatives and projects related to the mining, oil & gas, energy, forestry, agriculture, industry and infrastructure sectors. Its natural vegetation occupies 70% of the territory, including 40.6 million hectares of forests, 2,800 km of coastline and 25 rivers. Additionally, the country currently has about 23% of the territory classified as Protected Areas. Biodiversity and services provided by the Mozambican Ecosystems contribute greatly to poverty reduction and to economic development in general. This is recognized by the Government, which has defined as "one of the five priorities of governance, the ‘Ensuring the Sustainable and Transparent Management of Natural Resources and the Environment’. To this end, it has worked in several areas to review and improve the legal framework on the environment, forests, biodiversity and conservation.

The COMBO Project thus emerges at a moment especially relevant to Mozambique in terms of conservation of its natural resources, at a stage where the hierarchy of mitigation and biodiversity offsets have been clearly included in the Environmental Impact Assessment legislation. The COMBO Project will contribute in the following areas:

1. **C1 Giving support to policies**: assisting the government in the identification, analysis and introduction of appropriate policy to encourage investment in development projects that result in no net loss or a net gain of biodiversity.

2. **C2 Planning tools and metrics**: creating the enabling conditions for development projects to achieve no net loss of biodiversity by: i) supporting national planning processes; ii) identifying relevant biodiversity metrics; and iii) developing and implementing baseline and monitoring survey methodology.

3. **C3 Assisting implementation mechanisms**: developing institutional, legal and financial mechanisms for offset implementation, particularly those linked with conservation trust funds to secure the permanence of conservation outcomes.

4. **C4 Interaction with the private sector**: supporting the uptake of best practice in the public and private sectors, monitoring these initiatives and developing lessons learnt.

5. **C5 Training, capacity building information sharing**: building national and regional capacity by sharing lessons learnt drawn from African and global experiences of no net loss activities with a wide range of involved stakeholders.

Over the next four years, the COMBO Project will work with the Government of Mozambique, developers, industry, academia, NGOs, international bilateral and multi-lateral institutions and communities, providing technical assistance, developing tools and producing information on the hierarchy of mitigation and biodiversity offsets adjusted to the reality of the country.
The project will follow the no net loss principles and guidance of the Business and Biodiversity Offsets Program (BBOP) Standard, the International Finance Corporation Performance Standard 6, Equator Principles, IPIECA, ICMM and other best practice policy and methodologies. As these principles and standards have received widespread review by a range of stakeholders, this approach will facilitate the improved application of the mitigation hierarchy globally.

In this context, one of the first activities was the official project launch (Component 6), as well as a first training session mainly aimed at the Government of Mozambique staff (Component 5). Specifically, it was also defined as an objective for this training to bring one representative of each Provincial Directorate of Land, Environment and Rural Development (DPTADER), in addition to the technicians that are based in Maputo. Finally, under Component 2, it was also considered appropriate to take this opportunity to bring together specialists based in Maputo who are known to have a good knowledge on biodiversity data to hold a data gap analysis expert screening.

2 Objectives

The objectives of the COMBO launch event were to:

- Disclose information on the COMBO project to relevant country stakeholders
- Learn more about the activities that are being undertaken by MITADER institutions and their partners, which are relevant for COMBO
- Present and officially launch the Biodiversity Offset Roadmap for Mozambique (supported by Biofund and the World Bank)

The objectives of the training were to:

- Raise awareness amongst trainees of the concepts of mitigation hierarchy and biodiversity offsets
- Improve understanding of how the EIA law should be applied and when the mitigation hierarchy and offsets are necessary
- Improve understanding of how the mitigation hierarchy should be applied
- Raise awareness of the basic requirements for designing and implementing an offset

The objectives of the data gap analysis expert screening were to:

- Explain briefly the approach of the COMBO Project and its data requirements and to have an initial focused discussion with a number of known biodiversity and data experts on:
Which datasets needed for a No Net Loss system already exist in Mozambique, what do we know about their quality & reliability, who are data holders and how accessible are the data likely to be?

Which potential demonstration landscapes have the best data and/or might be most suitable?

Feasibility of identifying any major data gaps?

Who could do a data gap analysis to complement the current workshop findings? What are key next steps?

3 Implementation

The COMBO partners had been discussing launch dates for the second half of 2016. As the World Bank (WB) finished the Biodiversity Offsets Roadmap for Mozambique in mid-2016, both institutions thought it would be useful to combine the COMBO launch with the presentation of the Roadmap. Therefore, the World Bank decided to sponsor the event and co-fund the initial training with 18,000.00 USD.

The launch event was scheduled for the 24 October 2016 at the University Eduardo Mondlane (UEM) and planned for 100 participants.

The initial training on the Mitigation Hierarchy and Biodiversity Offsets, to be given to the Government of Mozambique staff and project partners (Biofund) was scheduled for the day after (the 25th October 2016). It was planned for a maximum of 40 people and to be held at a training room of the UEM. It was decided to bring one representative of each Province (DPTADER) for the training (total of 10).

Finally, for the Data Gap Analysis Expert Screening, a technical Round Table between the COMBO project team and a focus group of local Biodiversity specialists was planned to assess which of the priority spatial data for mitigation hierarchy and biodiversity offsets are available for Mozambique. This was scheduled for the 26 October 2016 to be held at WCS Mozambique local office meeting room.

The planning, logistics and administration of the events were conducted by the local COMBO team in coordination with the project’s international team. The WB did the procurement and several administrative procedures for the Launch and Training events and selected the service providers in coordination with the local COMBO team (more details on this can be found in Appendix I).
4 Results

Project launch and Biodiversity Offsets Roadmap for Mozambique

As planned, the event was held on the 24th October 2016 at the University Eduardo Mondlane in Maputo.

A total of 101 people from 61 different institutions attended the COMBO and Offsets Roadmap Launch: Academia, Developers, Environmental consultancy companies, Government of Mozambique Institutions and Public companies, Multilateral cooperation, NGOs/OCBs and the organization partners.

Table 1 shows the complete list of institutions from the different sectors that were present at the event and Figure 1 shows the proportion of institutions and participants by sector.

<table>
<thead>
<tr>
<th>Table 1 - List of institutions and number of participants from the different sectors that were present at the launch event</th>
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</thead>
<tbody>
<tr>
<td><strong>List of institutions</strong></td>
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<tr>
<td>UEM</td>
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<td>UEM-FC</td>
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<td>UEM-PAEF</td>
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<td>UEM-FLCS</td>
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<td>UEM-FCS</td>
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<tr>
<td>Universidade de S. Tomás</td>
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<tr>
<td>Universidade Politécnica</td>
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<tr>
<td>Number of institutions</td>
</tr>
<tr>
<td>Number of participants from each institution</td>
</tr>
</tbody>
</table>
Figure 1 - Proportion of institutions (top) and participants (bottom) by sector present at the launch

The launch event agenda can be found in Appendix II. The speakers did they presentations by the planned order with two coffee breaks and one lunch during the event. All the presentations are available at the COMBO project webpage at http://combo-africa.org/mocambique.

The attendees were participative and several discussions were held during the event, especially during the debate, which was opened to the attendees (Figure 2 and Figure 3).
Besides the opening speeches from WCS’s country director and AfD, World Bank and Biofund representatives, it should be highlighted the National Director for Environment’s (MITADER) opening speech. She focused on the opportunities and challenges that Mozambique and its biodiversity and ecosystems are currently facing and the importance that COMBO may have in supporting a sustainable development for the country.

ANAC’s Director presentation was also clarifying in relation to what are the conservation priorities for the country. Many points raised by the audience were related to wildlife poaching, which is currently a major problem in Mozambique.

COMBO team’s presentations, the one of the World Bank explaining what is the Biodiversity Offsets Roadmap for Mozambique and the one from Biofund and its relation to Biodiversity Offsets raised several questions from the attendees, who wanted to know more about these projects.
World Bank presentation was also very well received by the attendees who became aware of the Bank’s portfolio on Biodiversity and Forestry in Mozambique. MITADER/FNDS that is being funded by the World Bank explained what were the Environmental and Social Safeguards of REDD+ and its relation with the Mitigation Hierarchy.

The private sector was also represented by the international firm “The Biodiversity Consultancy” whose representative gave some insights on the SADC regional guidance for government and business, namely for mainstreaming biodiversity and ecosystem services in extractive industry.

Finally, the round table generated significant discussion related to the changing roles of key-stakeholders under legal no net loss obligations. The private sector (environmental consultancy companies), NGO’s and academia had the opportunity to give their points of view about biodiversity offsets and their implementation in Mozambique.
Training Session on the Mitigation Hierarchy and Biodiversity Offsets

The second day of the event was held on the 25 October at the UEM facilities (training room CPII-105). The training session was specifically addressed to government institutions and Biofund.

As explained before the objectives of the training session were to make the trainees:

- Aware of the concepts of mitigation hierarchy and biodiversity offsets
- Understand how the EIA law should be applied and how the mitigation hierarchy and offsets can be required
- Understand how the mitigation hierarchy should be applied
- Aware of the basic requirements for designing and implementing an offset

The training session agenda is presented in Appendix III and the content is available at the COMBO project webpage at http://combo-africa.org/mocambique.

A total of 36 trainees attended the event, representing 24 institutions, as presented in Table 1 and Figure 4. As it can be seen most of the participants were affiliated to institutions from the Government of Mozambique, Biofund and Academia.

Table 2 – List of institutions and number of participants from the sectors that were present at the initial training session

<table>
<thead>
<tr>
<th>List of institutions</th>
<th>Academia</th>
<th>GoM - Institutions and Public companies</th>
<th>NGOs / CBOs</th>
<th>Organization</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Universidad Politécnica</td>
<td>DPTADER-Cabo Delgado</td>
<td>BIOFUND</td>
<td>WCS</td>
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<td></td>
<td>Universidade de S. Tomás</td>
<td>DPTADER-Gaza</td>
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<td>DPTADER-Inhambane</td>
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<td>DPTADER-Manica</td>
<td>FFI</td>
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<td>DPTADER-Macuto</td>
<td>Forest Trends</td>
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<td>DPTADER-Nampula</td>
<td>Tradição</td>
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<td>DPTADER-Niassa</td>
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<td>DPTADER-Sofala</td>
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<td>DPTADER-Tete</td>
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<td>DPTADER-Zambézia</td>
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<td>EDM</td>
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<td>MIREME-DNRM</td>
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<td>MIREME-INP</td>
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<td>MITADER</td>
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<td>MITADER-ANAC</td>
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<td>MITADER-DINAB</td>
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<td>MITADER-DAF</td>
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<td>MOPHH-DFR</td>
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<td></td>
<td>Procuradoria Geral da República</td>
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</tbody>
</table>

Number of institutions: 2
Number of participants from each institution: 32

A total of 36 trainees attended the event, representing 24 institutions, as presented in Table 1 and Figure 4. As it can be seen most of the participants were affiliated to institutions from the Government of Mozambique, Biofund and Academia.
A total of 6 trainers gave the course (Amrei von Hase, Sean Nazerali, Fabien Quétier, Bruno Nhancale, Hugo Rainey and Hugo Costa) with the support of one administrative and 2 translators (English to Portuguese and Vice-versa).

The training session focused essentially on key concepts such as:

- The mitigation hierarchy: Avoidance, Minimization, Restoration and Offsets
- Direct, indirect and cumulative impacts
- EIA and NNL; the current legal framework in Mozambique
- The BBOP Principles and international standards (BBOP, IFC PS6, ESF WB)
- Not net loss (NNL) & net gain (NG)
- Compensation and offsets around the world
- The importance of stakeholders
- Key biodiversity values (species and landscapes)
• Impacts which cannot be offset
• Metrics and exchange rules for biodiversity
• The principle of additionality and the importance of reference scenarios
• Implementation: issues to consider

Figure 5 – Initial training session (trainees and trainers)
Other relevant topics such as the ones below were also presented to the trainees:

- Role of government
- Roadmaps and lessons learnt and good practice globally
- Evolution of mitigation systems over time
- Biodiversity Offsets Roadmap for Mozambique
- The COMBO team and resources to go further

Several exercises were done during the training course so that the participants could capture the concepts more clearly.

At the end of the day the objectives were considered achieved. A form was fulfilled by all the attendees to evaluate the course organization and training contents.
Data Gap Analysis Expert Screening Meeting

The data gap analysis expert screening meeting was held at WCS in Maputo on 26 October.

A total of 13 people attended the meeting: 9 specialists plus 4 COMBO project staff. The specialists were:

- Marcos Pereira – MSc in Marine Biology, Centro Terra Viva (CTV), specialized in Marine Ecosystems and Turtles
- Alexandra Jorge – Biofund Program Director
- Sean Nazareli – Biofund consultant specialized in Biodiversity and member of AMAIA (Mozambican Association of Environmental Impact Assessment)
- Natasha Ribeiro – PhD, Professor of the Forestry Dpt. at University of Eduardo Mondlane, specialized in Miombo and natural habitats
- Valerio Macandza – PhD, Professor and terrestrial wildlife ecologist at Dpt. of Forestry at University of Eduardo Mondlane
- Madyo Couto – Mozambican Biodiversity specialist, consultant to World Bank in Mozambique
- Bruno Nhancale – PhD, Professor at Faculty of Sciences, University Eduardo Mondlane and FFI staff member in Mozambique, specialized in Biodiversity and spatial analysis
- Salomão Bandeira – PhD, Marine Biologist and specialist in vegetation, Professor at Faculty of Sciences, University Eduardo Mondlane
- Ivan Remane – Consultant to World Bank in Mozambique, specialized in spatial analysis

The COMBO team was represented by:

- Hugo Costa
- Hugo Rainey
- Amrei von Hase
- Fabien Quétier

The main focus of this meeting was not to be totally comprehensive but to speak to independent data experts first, as a springboard to orientate the data gap analysis (Appendix IV). Therefore, although representatives from Government of Mozambique institutions were not present, they will be involved in the development of activities related to this, now that we have a better understanding of what the situation is.
The discussion was long and all the experts noted that there were significant data limitations in Mozambique regarding biodiversity data, especially at the national scale. However, some recent initiatives have contributed new spatial data, and there are several useful developments at the regional / provincial scale in particular. These were identified and discussed during the morning.

Figure 7 - Data gap analysis expert screening meeting held at WCS office

At the end of the day relevant insights were gathered on the status of biodiversity data in Mozambique, including major achievements and contacts of other specialists who might also have relevant information. A meeting summary report was drafted with the main results and conclusions (Appendix V). The discussion group highlighted the importance of doing this gap analysis planned under COMBO’s Component 2 as well of working together with partners such as BIOFUND, the World Bank, Universities and other NGOs that are working in similar areas.

5 Conclusions and next steps

The COMBO project launch event included 3 days of activities and the planned objectives were achieved. The participation was very good:

- 101 people from 61 institutions at the Project COMBO and Biodiversity Offset Roadmap for Mozambique launch
- 36 people from 24 institutions were trained at the course on the Mitigation Hierarchy and Biodiversity Offsets
- 9 specialists attended the data gap analysis expert screening meeting
It was clear from the 3-day event that although previous training was done in Mozambique on the mitigation hierarchy and biodiversity offsets, the subjects are still generally poorly known and are not yet well mainstreamed in the country’s Environmental Impact Procedure, either by the Government, private companies, NGOs, academia or CBOs.

All the stakeholders feel that the mitigation hierarchy and biodiversity offsets are important approaches for the country and that further capacity building is necessary to guarantee its effective implementation by all the stakeholders. The general feeling is that the different institutions are willing to learn more about the subjects and are willing to cooperate with the project to assist achieving COMBO objectives.

In addition to policy-making and production of technical documents such as guidelines adapted to Mozambique’s needs, training is urgently required, especially for Government institutions, including public companies. This is important at the central level (Maputo) and extremely important at the Provincial level where the majority of projects are being undertaken and many decisions are taken. Reaching the district level and local NGOs and CBOs is needed to mainstream these subjects across the country.

The data gap analysis expert screening meeting provided a good basis and excellent leads for further in depth, systematic investigation on biodiversity data. At a political level, ensuring a sound collaboration with the government (in particular MITADER) is crucial. Practically speaking, access to key spatial datasets and other information (e.g. SEA, EIAs) held by MITADER would facilitate work by COMBO.

A key conclusion from the three-day event is that COMBO is timely, and has generated interest from a broad range of stakeholders. The COMBO team looks forward to engaging and working with these stakeholders to make progress on considering biodiversity in Mozambique’s development.
6 Appendices

Appendix I – Details of the selected options for the COMBO launch events

- **Venue:**
  - After analysing the conditions and prices offered by the pre-selected vendors, it was decided that the launch should took place at one of the UEM’s conference rooms (Maputo) on the 24 October 2016. This was prepared for 150 people, which was above the total participants estimate.
  - For the training, a 80 people capacity training room was also selected at the UEM. The room had all the characteristics to guarantee a good training, including conditions for simultaneous translation.

- **Translation:**
  - Because international participants were expected for both days as speakers and participants, an accredited simultaneous translation company was contracted as a service provider.
  - This company also provided the sound for the conference and training, and did the translation from Portuguese to English and vice-versa.

- **Transportation:**
  - Participants and trainers coming from outside Maputo (and abroad) were transported by airplane.
  - In Maputo the participants coming from outside were transported by Taxi.
  - The remaining participants travelled using their own cars or local public transportation

- **Accommodation:**
  - A procurement was done to select the place for the accommodation of all people coming from outside Maputo. Hotel Cardoso was selected to accommodate all the participants.

- **Subsistence:**
  - The Hotel Cardoso provided all the meals to the participants accommodated there.
  - The lunch, coffee break and waters were provided by local catering providers, who also did the rooms decoration.

- **Printings, Stationary, and other materials:**
  - All the items were purchased in Maputo.

The events’ planning included the following tasks:
• Contacts with the World Bank to hold a joint event to launch the Biodiversity Offsets Roadmap in Mozambique and co-fund the event;

• Definition of the events needs and procurement of the suppliers (for days 1 and 2 this was done by the WB);

• Final selection of the suppliers;

• Preparation of a preliminary participants list (individuals or institutions) in coordination between the COMBO team and Biofund for each of the days of the event, with the respective contacts and positions;

• Elaboration and endorsement of 219 invitation letters (paper and digital format);

• Specifically, in the case of the DPTADER representatives it was necessary to arrange all the logistics, namely air travelling;

• Elaboration of the promotional material, namely a brochure and roll-ups for the COMBO project;

• Preparation of a press release;

• Registration and follow-up and of the participants for the three days of the event;

• Preparation of the final participants list;

• Preparation of individual identification cards (badges);

• Meeting with the different stakeholders involved in the event organization (different organizers and suppliers);

• Verification of the conditions and preparation of the auditorium, training room and spatial meeting room;

• Installation of sound and simultaneous translation system from English to Portuguese and vice versa at the conference and training rooms;

• Translation of presentations and other meeting document into Portuguese;

• Preparation of the participants’ reception for each of the three days.
## Appendix II – COMBO launch agenda

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Presenter/Institution</th>
</tr>
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<tbody>
<tr>
<td>07:15</td>
<td>Registration</td>
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<tr>
<td>08:00</td>
<td>Welcome speech</td>
<td>WCS Country Director</td>
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<td>08:15</td>
<td>Introductory speech</td>
<td>Agence Française de Développement</td>
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<tr>
<td>08:25</td>
<td>Opening ceremony</td>
<td>WORLD BANK</td>
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<tr>
<td>08:45</td>
<td></td>
<td>BIOFUND</td>
</tr>
<tr>
<td>09:00</td>
<td>ANAC’s vision and strategy for Conservation Areas in Mozambique (10 min of Q&amp;A incl.)</td>
<td>ANAC</td>
</tr>
<tr>
<td>09:15</td>
<td>COMBO Project presentation (10 min of Q&amp;A incl.)</td>
<td>COMBO Team</td>
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<tr>
<td>10:00</td>
<td>Biodiversity Offsets Roadmap for Mozambique presentation (10 min of Q&amp;A incl.)</td>
<td>WORLD BANK</td>
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<tr>
<td>10:45</td>
<td>Coffee break</td>
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<tr>
<td>11:15</td>
<td>Mitigation Hierarchy Activities around the World (10 min of Q&amp;A incl.)</td>
<td>COMBO Team</td>
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<tr>
<td>11:45</td>
<td>Environmental and Social Safeguards of REDD+ (10 min of Q&amp;A incl.)</td>
<td>Fundo Nacional para o Desenvolvimento Sustentável</td>
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<tr>
<td>12:15</td>
<td>The role of Biofund and the Biodiversity Offsets (10 min of Q&amp;A incl.)</td>
<td>BIOFUND</td>
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<tr>
<td>12:45</td>
<td>Lunch break</td>
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<tr>
<td>14:15</td>
<td>World Bank Biodiversity and Forestry Portfolio in Mozambique (10 min of Q&amp;A incl.)</td>
<td>WORLD BANK</td>
</tr>
<tr>
<td>14:45</td>
<td>Mainstreaming biodiversity and ecosystem services in extractive industry: SADC regional guidance for government and business (10 min of Q&amp;A incl.)</td>
<td>The Biodiversity Consultancy</td>
</tr>
<tr>
<td>15:15</td>
<td>Round table: The changing roles of key-stakeholders under legal no net loss obligations</td>
<td>Consultants, NGOs, Academia</td>
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<tr>
<td>16:00</td>
<td>Closing session and farewell cocktail</td>
<td>COMBO Team</td>
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</tbody>
</table>
### Appendix III – Training session agenda

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
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<tbody>
<tr>
<td>08:00</td>
<td>Registration</td>
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<tr>
<td>08:30</td>
<td>Day Opens: Introduction: training objectives</td>
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<tr>
<td></td>
<td>Focus on key concepts, including:</td>
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<td></td>
<td>Company team</td>
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<tr>
<td></td>
<td>• The mitigation hierarchy: Avoidance, Minimisation, Restoration and Offsets</td>
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<td></td>
<td>• Direct, indirect and cumulative impacts</td>
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<td></td>
<td>• EIA and NNL; the current legal framework in Mozambique</td>
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<td></td>
<td>• The BBOP Principles and international standards (BBOP, IFC PS6, ESF WB)</td>
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<td>• Not net loss (NNL) &amp; net gain (NG)</td>
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<td>• Compensation and offsets around the world</td>
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<td>• The importance of stakeholders</td>
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<tr>
<td>10:15</td>
<td>Coffee break</td>
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<td>10:45</td>
<td>Examples and case studies</td>
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<td>• Exercise on the mitigation hierarchy</td>
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<td>• Q&amp;A and discussion</td>
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<tr>
<td>12:00</td>
<td>Lunch</td>
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<tr>
<td>13:30</td>
<td>Focus on key concepts, particularly technical issues:</td>
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<td></td>
<td>Company team</td>
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<tr>
<td></td>
<td>• Key biodiversity values (species and landscapes)</td>
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<td>• Impacts which cannot be offset</td>
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<td>• Metrics and exchange rules for biodiversity</td>
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<td>• Introduction to the exercise “What counts as a gain?”</td>
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<td>• The principle of additionality and the importance of reference scenarios</td>
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<td>• Implementation: issues to consider</td>
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<td>Coffee break</td>
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<td>16:00</td>
<td>• Role of government</td>
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<td>• Roadmaps and lessons learnt and good practice globally</td>
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<td>• Evolution of mitigation systems over time</td>
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<td>• Biodiversity Offsets Roadmap for Mozambique</td>
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<td>• The COMBO team and resources to go further</td>
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Appendix IV – Data Gap Analysis Expert Screening Meeting agenda

DAY 3: DATA GAP ANALYSIS EXPERT SCREENING MEETING

7:30 – 10:30 am

INTRODUCTION (7:30-7:50): COMBO briefly outline the context for the meeting and the need for the data (i.e. specifically to inform planning for and decisions in a robust system for the applying the mitigation hierarchy, including offsets, and NNL/ NG). As part of this:

- Brief summary of the kinds of activities and decisions that require sound data, what kind of data are needed and most critical datasets that COMBO will need.
- Note we will work at two scales: national level and demonstration-landscape level (with implications for data)

FOCUS DISCUSSION ON DATA (8:00-10:30): All have a focused discussion around the following key topics:

- Which of the datasets required for NNL planning/ system already exist in Mozambique, what do we know about their quality & reliability, who are data holders and how accessible are the data likely to be? (NB: we can use the table in the briefing to discuss datasets) (8.00 – 9.30am)
- Which of the potential demonstration landscapes have the best available data for our purposes?
- Can we already identify any major data gaps and any ideas how to fill these?
- Who could undertake a data gap analysis to complement the current workshop findings? Whom do you recommend we speak to regarding data (i.e. who else has good knowledge of key datasets)?

10:30 am Close
Appendix V – Data gap analysis expert screening meeting summary report

COMBO Mozambique – Data Gap Analysis – Expert Screening Meeting

26/10/2016: 7.30 am – 11am

1. Aims of meeting
An agenda and background briefing note were sent out ahead of the meeting (HC & AvH have this info).

In summary, the main aims of the meeting were for the COMBO team briefly to explain its approach and data requirements (as per the briefing doc) and to have an initial focused discussion with a number of known biodiversity and data experts on:

- Which datasets needed for a NNL system already exist in Mozambique, what do we know about their quality & reliability, who are data holders and how accessible are the data likely to be?
- Which potential demonstration landscapes have the best data/ might be most suitable?
- Can we identify any major data gaps?
- Who could do a data gap analysis to complement the current workshop findings? What are key next steps?

2. Participants and short introductions:

- Marcos Pereira – marcospereira@gmx.com - marine biologist, Centro Terra Viva (CTV), with some monitoring etc. but mainly focused on land rights and advocacy – Database of publications on marine & coastal biodiversity.
- Alexandra Jorge – ajorge@biofund.org.mz - Biofund – Making information more available including mapping of habitats + restricting website to host database, with some info on PAs. Investigating role as data hub. Discussions with partners.
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- Valerio Macandza - vmacandza2001@yahoo.com - terrestrial wildlife ecologist at Dpt of Forestry at university – contributed to first attempts of mapping of habitats (Modified, Critical, Natural), using secondary data. The map needs to be improved. Research on use of space by large herbivores in the country.

- Madyo Couto – madyo.couto@gmail.com - consultant to World Bank – multiple projects on forestry, land management etc. and “willingness” to create a shared database in the Ministry Mitader. The WB is also looking at compiling data on project implementation and outcomes. Focus on two landscapes: Zambezia (around Gilé) and Cabo Delgado (around Quirimbas).

- Bruno Nhancale - bruno.nhancale@fauna-flora.org – FFI has been working in Niassa reserve before WCS came in. They have past data, but WCS probably has it too. Also on Mount Mabu. This includes “ecological envelopes” for most species. They have some data from ENI that they can share, but not reports. This was done in relation with CORDIO. FFI has a GIS lab in Cambridge. He also works at University. This includes a project developed by dep. of biological science, funded by Italian cooperation agency. It’s SEPRUSUT: decision support tools for management in southern Africa: develop GIS data and create systems to help with management of forest fires… one component is a biodiversity database. They have done capacity building on creating database (which language?). The project covers the whole country.

- Sean Nazareli – sean.nazerali@gmail.com – Wearing various hats, including Biofund. Information squirrel… with a lot of buried studies and some spatial data saved on his computer.

- Prof. Salomao Bandeira - salomao.bandeira4@gmail.com - marine biologist “by imposition” as initially worked on terrestrial, but branched out into sea grass, macro-algae and mangroves. Centres of endemism. The UEM has a strong position with regards to biodiversity data, also with the herbarium. He has done a lot of work on Maputo bay (data, publications, etc.) - most of the work done in marine / coastal biology in Mozambique is from that area. He has upcoming publications on estuaries. Also regional sensibility, in relation to other countries. New document on wildfowl and trees of Mozambique. The issue of restoration also came up… where we need to learn techniques. Any research? Not much, but some experience on coastal systems in the lower Limpopo. Also on sand-dunes.

- Ivan Remane – consultant to WB, who manages biodiversity and other spatial data for WB projects.

- COMBO team: Hugo Costa, Hugo Rainey, Amrei von Hase, Fabien Quetier
NOTE: Several absences were noted, including of MITADER (which has most of the relevant data) and selected other organisations. A list of key contacts who would have to be contacted as part of the planned COMBO data gap analysis is provided at the end of this summary report. NB: The idea of the meeting was not to be totally comprehensive but to speak to independent data experts first, as a springboard for the data gap analysis.

3. Focus on data systems/hubs and conclusions
An important first discussion was around ‘data hubs’ or data repositories and platforms: in Mozambique, several initiatives have been established (or are positioning themselves) to act as ‘data hubs’: this is with the intention to collect, collate, prepare and possibly serve environmental/biodiversity and related data. These efforts are driven variously by government departments and externally (e.g. NGOs, universities, etc.).

While we didn’t record the full suite of relevant initiatives, the COMBO team emphasised that COMBO itself does not want to establish yet another data hub. Instead, the plan is to find alignment with the most appropriate databases and hub/s, which ideally would be established with a view to fulfilling that role over the long-term. COMBO intends collecting and collating (primarily secondary) and using spatial and non-spatial data primarily to inform its work on the major project components and undertake various analyses (e.g. to produce tools, templates and develop methods that can be used to support NNL/NG and mitigation design and implementation). Given the right permissions, the outputs and supporting datasets would be handed over to the appropriate platform.

As part of the data gap analysis, a note on the various data initiatives and hubs will be prepared. Over the course of the project, COMBO will work with key stakeholders to identify the most suitable long-term platforms/systems.

4. Focus on datasets, demonstration landscapes and conclusions
All the experts noted that there were significant data limitations in Mozambique regarding biodiversity data, especially at the national scale. However, some recent initiatives have contributed new spatial data, and there are several useful developments at the regional/provincial scale in particular.

Nationally:

- A good, relatively fine-scale map and classification of the country’s ecosystem types (e.g. vegetation types) does not appear to be available. Most people refer to WWF’s very broad-scale global ecoregions, and the Flora zambesiaca for habitats is widely used, but it is regarded as outdated (Wild & Barbosa, 1967). (Hugo C has it georeferenced.)

- An initial mapping of modified, natural and critical habitat (based on IFC criteria) has been done for Mozambique and involved many of the meeting participants. (Available at the Biofund website http://www.biofund.org.mz/en/habitats/). It was a challenging exercise that highlighted data limitations at the national level. An important component of the work
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was relying on expert information (e.g. on criteria such as threatened species (EN/CR) and migratory species, centres of endemism, etc.) to produce many of the input spatial layers.

- With respect to landcover and use information, there are several recent developments. Most notably, an interpretation of Sentinel 2 satellite imagery has been undertaken at the national level. This has also allowed analysis of past deforestation and degradation trends and resulting CO2 emissions. Based on this information, a WB funded initiative is developing scenarios of land use change, using current and past degradation data. A workshop on this was to be held in first week of November. (Ivan Remane is up to date on this and should be further consulted, not least to get a good overview of available spatial data!).

- There is a National Forestry inventory from 2007 and another one is currently taking place. Data is not available to the public yet.

- An important resource to consult on available data and information systems is the 2016 review released by FAO, which summarises data and information at MITADER (‘Policy note on Forest, Environment and Land Information Management Systems in Mozambique’).

- Other databases that were mentioned are Geocats and the Southern African Bird Atlas.

More and finer-scale data are available regionally and at provincial level (which has implications for suitable demonstration landscapes, which will likely be at the provincial or sub-provincial level):

Marine:

- A coastal SEA was conducted a few years ago, and environmental profiles were produced as part of this. Many underlying data layers were produced, including of the distribution of seagrasses (by Prof Bandeira), coral reefs and mangroves. Impacto led the SEA and would have the GIS layers (contact John Hatton). There are clearly caveats to the data, e.g. there still is a lot of discussion on the area of mangrove in Mozambique.

- WWF (global) also led a substantial exercise to prioritize areas according to globally and regionally important regions, including a focus on the whole eco-region along the Moz coast (and reaching beyond). (East African marine ecoregion programme).

- The Transmap project (involving UEM) played an important role in the designation of the Palma NR.

- At the provincial level, the best marine data are available for the Maputo area. Most of the other provinces lack good marine data. However, the O&G projects in Cabo Delgado are busy with extensive ESIAAs (ENI, Anadarko), but it’s important to recognise that the data for these are a) still being collected and b) are not necessarily easily accessible.

- Marcos Pereira (CTV) has amassed a large database of marine literature and studies.

Terrestrial:
• Conservation planning was done for Maputaland as part of CEPF profile. This covered mostly area in South Africa but also reached into parts of S Mozambique. Bruno N was involved in this. As was noted for the marine environment, some of the best biodiversity data for terrestrial enviros exist for the Maputo area. Advantage of this region, relative to other provinces, would be that data already exist, while they are still being collected and collated for other provinces (e.g. Cabo Delgado, Zambezia, ...). In terms of potential project development, there is the deepwater harbour (just right at the South limit of Reserva Especial de Maputo), a project that has been on and off the cards for a long time.

• CTV is starting to collect data on community-managed / delimited areas, focused on Inhambane in particular. The idea is to extend this and contribute to a global database for WRI on community / indigenous lands.

• In addition, CTV is doing a focus on “hot spots” of where large projects could impact rural communities (> 200 ha, approved projects in the O&G, mining sector etc. (information not necessarily official)

• A ‘threat and opportunity analysis’ was undertaken by ETOA (USA). (? Not sure at what scale/ level)

• Much work is concentrated on two provinces – Zambezia and Cabo Delgado – which may therefore lend themselves very well as possible COMBO demonstration landscapes:
  o JICA is funding work (remote sensing, land cover-related, namely to the National Forest Inventory) in Cabo Delgado and Gaza (or eventually Nampula).
  o The World Bank through the GEF is funding a number of projects in Cabo Delgado and Zambézia, all of which also involve significant efforts to generate, collect and collate spatially explicit data (e.g. for the purposes of REDD+ MRV systems and with a focus on sustainable forest management). For example:
    ▪ Forest inventories are being conducted to collect a range of different data. Different teams are collecting the data: ITC, Aga Khan Foundation, ORAM, IIED, Portucel, Terra Firma, Biodinâmica, etc.
    ▪ Information on communities, different activities in the landscape, agricultural extension etc. are being added.
    ▪ A study of forest fire risk analysis will take place shortly in Zambézia.
    ▪ Data on mining (exploration and exploitation licenses) already exists and is available. There are efforts underway to expand this to the forestry (plantation) sector.
    ▪ A map of remaining coastal forests has been produced for N Mozambique (hence including CD). This layer was used in the Mod/Nat/Crit habitat mapping and is available from Kew.
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- A vegetation types layer is also available for CD: produced as part of the SEA/Oil&Gas EIA (?). Not sure who would hold this information, but it is referenced in some of the large-scale EIAs (e.g. by Anadarko) for CD.

- Important contacts for the provincial-level data is the REDD+ MRV team at MITADER (Julian, Eric, etc.), who hold most of the data on the landscapes of Zambezia and Cabo Delgado.

- Notably, Ivan Remane is also setting up a data platform, which would be made public soon.

- Other relevant analyses have been done, e.g. a study of deforestation drivers by ETCterra (French NGO) for the WB-financed MozBio. A contact for this work is Corentin Mercier <c.mercier@etcterra.org>.

- WWF with the University of Stanford conducted a Natural Capital study on the coast of Zambezia/Nampula.

  - There are many players involved in these provinces, as noted above (USAID, Danish Aid, etc are also involved). In both provinces fora have been established to facilitate coordination and to collect information on who is doing what. In CD this is the ‘Technical group on Conservation’; in Zambezia the forum was created by UT REDD which is now merged with FNDS. Note: BioFund also produced a donor mapping matrix.

5. Other relevant initiatives working on data issues

- WCMC “Connect Project” offers opportunities for collaboration: this has just started, is focused on three countries, including Mozambique and Uganda. (Contacts: John Tayleur and Nadine Bowles-Newark, WCMC.)

- ……..

6. Conclusions and some of the next steps for COMBO

- The summary above is a snapshot of data and initiatives that were mentioned in the very short but useful discussions. Details on the individual datasets could not be captured. The process however provides a good basis and excellent leads for further in depth, systematic investigation. This should follow as part of a data gap analysis. ToR for the gap analysis have been drafted. The expert group did not identify others (beyond those present) who could undertake such a gap analysis.

- On a political level, ensuring a sound collaboration with the government (in particular MITADER) is crucial. Practically speaking, one step to take would be to negotiate access to key spatial datasets and other information (e.g. SEA, EIAs) as part of the MoU between MITADER and WCS, so as to facilitate the process for COMBO.
• Another aspect of this would be to choose, together with the government, which demonstration landscapes to focus on – or said another way, to get buy-in for the landscapes COMBO sees as being most suitable. In this regard, aligning with the WB initiatives could be very beneficial and efficient for COMBO.

• A consultant should undertake a data gap analysis using this report as a starting point and following the ToR. Key first steps would be to:
  o Talk to the COMBO team who were at the expert meeting.
  o Check out the FAO report on who has what information at MITADER and on the various GIS data platforms planned. The report also highlights the principal data-related challenges, which will be relevant for COMBO.
  o Speak to Ivan Remane regarding national level data and regional/provincial-level spatial data and plans in the focus provinces of CD and Zambezia, where the WB-funded projects are situated.
  o Review other key reports and literature (e.g. also the one or other recent, extensive and decent quality EIA, as these tend to summarise available information and sources quite well).
  o Speak to other experts, including those already consulted and new contacts listed below.
  o Review available national level data, but then focus in on specific provinces that could be demonstration landscapes: likely, CD, Zambezia, area around Maputo.

7. Additional contacts suggested by the experts:
Peace Parks Foundation – Ponta do Ouro
  Country head - Antony Alexander <antonyalexander01@gmail.com>, 843011730
  GIS guru - Craig Beech <cbee@ppf.org.za>
  Marcos has given: Gap Analysis para Ponta do Ouro

WWF – Denise Nicolau, Sean Nazerali

IIAM - Teresa Alves, Camila de Souza
  Teresa Alves <tealves@gmail.com>,
  Camila Sousa <sousa.camila9@gmail.com>

FNDS/UGFI (MRV Team) – Julia and Castilho
  Julian Gonzalo <jgonzalo.jg@gmail.com>,
  Enrique Del Castillo <enriquemdelcas@gmail.com>

Almeida Sitoe – UEM
  Almeida Sitoe <almeidasito@gmail.com>,

Paula Santana Afonso – IIP
  Paula Santana Afonso <psafonso@hotmail.com>
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FAO – Carla Cuambe
"Cuambe, Carla (FAOMZ)" <Carla.Cuambe@fao.org> 827340380

Zambezia: MozBio – Gile (EGF, ETCterra); Corentin Mercier
Corentin Mercier <c.mercier@etcterra.org>

Impacto
John Hatton <jh@impacto.co.mz>

ERM
Paula Gonzalez <paula.gonzalez@erm.com>

Environmental Threats and Opportunities Assessment (ETOA) – USAID: given by Valerio Macandza

Biodinamica/CTV: Mozambique Ecosystems Marine Review

Cornelio Ntumi – CBD Report

MTC – Interagency GIS

MPD

Project Transmap (UEM and FCN – University of Lisbon, Portugal)

American consultant with lots of spatial data Mr Dublin (Madyo Couto has contact details)