



# Gap Analysis on Policy, Laws, Capacity and Experience, to deliver No Net Loss (or Net Gain) (NNL/NG) of Biodiversity in Mozambique

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## 1 INTRODUCTION

The Wildlife Conservation Society (WCS), Forest Tends and Biotope have commenced a four-year project (2016-2019) which aims to reconcile economic development in Africa with conservation of biodiversity and ecosystem services. This project is funded by the Agence Française de Développement (AFD), the Fonds Français pour l'Environnement Mondial (FFEM) and the Mava Foundation. It will build capacity to reduce the impacts of development projects on biodiversity.

The COMBO partners will support the initiative through several actions, namely:

- ✓ Assisting governments 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.
- ✓ Creating the enabling conditions for development projects to achieve No Net Loss of Biodiversity by: supporting national planning processes; identifying relevant biodiversity metrics; and developing and implementing baseline and monitoring survey methodology.
- ✓ Developing institutional, legal and financial mechanisms for offset implementation, particularly those linked with conservation trust funds to secure the permanence of conservation outcomes.
- ✓ Supporting the uptake of best practice in the public and private sectors, monitoring these initiatives and developing lessons learnt.
- ✓ 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.

The project is working with governments, developers and industry to expand and improve the application of the Mitigation Hierarchy in four African nations: Guinea, Madagascar, Mozambique and Uganda, through out the implementation of a policy of No Net Loss of Biodiversity.

The concept of No Net Loss (NNL) or Net Gain (NG) of Biodiversity is increasingly being adopted by the governments, sectors of activity, multi-lateral institutions and funders. One of the tools required to achieve NNL / NG is the Mitigation Hierarchy. Through this approach, project developers are asked to take rigorous measures to avoid and minimize biodiversity impacts and, then restore / rehabilitate biodiversity in affected areas of the project. As a last resource, they should compensate for or offset the residual impacts on biodiversity, in order to achieve NNL / NG.

Although the specific concept of NNL / NG is relatively recent, in many countries the policies and legal framework already exist to achieve this goal. A first step is thus to analyse existing relevant policy at the national and provincial levels (e.g. EIA, conservation law including protected area legislation, planning regulations, sectoral policies, fiscal policies, liability regimes, land tenure, indigenous peoples' rights, strategic environmental assessments, land-use plans, and the range of economic incentives – for instance in agriculture, fisheries, energy, construction) to explore the extent to which these serve to require, facilitate or even present a barrier to measures for NNL/NG.

The Component 1 of COMBO project aims to support government in the identification, analysis and introduction of appropriate policies to encourage investment in development projects that result in No Net Loss or Net Gain of Biodiversity.

## 2 OBJECTIVE AND ORGANIZATION OF THE DOCUMENT

This study aims to undertake a gap analysis on Policy, Laws, Capacity and Experience, to achieve No Net Loss (or Net Gain) (NNL/NG) of Biodiversity in Mozambique.

To achieve that the work was divided in 4 main activities, which are presented in the current document in three Parts:

- An analysis of policies, laws, regulations, programs and strategies (Part I)
- An analysis of the capacity and experience of key stakeholders (Part I)
- An analysis of capacity and experience of the governmental institutions (Part II), and
- A workshop to analyze and validate the results obtained in the previous parts and collect inputs from the participants to improve the gap analysis done so far (Part III).

The gap analysis on policies, law, capacity and experience of key stakeholders to achieve NNL / NG of Biodiversity, was developed by IMPACTO, Lda, a consulting firm hired by COMBO project. It focused on a set of stakeholders (private sector, academic institutions, civil society organizations, financial institutions, etc.), to analyze their capacity and experience, as well as the role on the implementation of a policy of NNL / NG of Biodiversity, based on the adequate application of the Mitigation Hierarchy and Biodiversity Offsets, whenever necessary.

The gap analysis on capacity and experience of the governmental institutions to achieve NNL / NG of Biodiversity, was developed by the Mozambican team of the COMBO Project. It focused on identifying the capacity and experience of a set of institutions of the Government on the above mentioned issue and presentation of potential recommendations.

### **3 METHODOLOGY**

#### **3.1 Part I: Gap Analysis on Policy, Laws, Capacity and Experience of Key Stakeholders**

As explained before, this Part of the gap analysis was divided in two sub-activities. The first one was a review and analysis on policies, laws, regulations, programs and strategies, which aimed to:

- Identify provisions in policies and / or laws, by area of activity, susceptible to implicate the revision, amendment or introduction of elements in the next 3 years;
- Present a global summary of gaps by area of activity related to NNL / NG and requirements to implement the Mitigation Hierarchy;
- Present a summary of the existing provisions by area of activity that best fit to require or support investors' plans to achieve NNL / NG.
- Present a summary of legal provisions by area of activity contrary to the introduction of NNL / NG and which should be considered as priorities for amendment / revocation.

The legal analysis equally aimed to clarify a number of issues that were considered essential for the creation of a system to achieve NNL and manage Biodiversity Offsets. A brief discussion about these issues, always in the perspective of NNL and offsets, is presented in the "Results" sections.

For this review and analysis, twelve (12) areas of activity were selected, namely: i) environment; ii) mines; iii) forestry and wildlife; iv) conservation and biodiversity; v) hydrocarbons; vi) land and spatial planning; vii) tourism; viii) agriculture; ix) energy; x) water; xi) marine environment and fisheries; xii) economic incentives.

The selection of the areas of activity under review and analysis took into account those whose development activities have the greatest potential to cause impacts on biodiversity. The regulations selected for analysis were the ones considered key in each of the areas of activity.

The number of sectors and legislation reviewed also took into account the time available for carrying out work previously defined under the ToR.

The list of policies, laws, regulations, programs and strategies consulted can be found in the list of references included in Appendix 1.

A second stage of this section consisted on the analysis of the capacity and experience of key stakeholders to achieve NNL / NG of Biodiversity. This was done through interviews, which were conducted with the objective of evaluating the following key issues:

- Existence of sufficient technical capacity and staff in consulting firms, academic Institutions, Non-Governmental Organizations, developers, cooperation agencies, civil society, financial institutions and international conservation organizations to administrate, monitor and to apply the mitigation requirements (avoid, minimize, restore, compensate) and Biodiversity Offsets to achieve NNL / NG.
- Steps to be taken to build capacity to regulate, administrate, monitor and apply the requirements of mitigation, Biodiversity Offsets and achieve NNL / NG.
- Capacity and required representation of local communities in Mozambique (and their leaders and representatives) to present their opinions on impact assessments, mitigation and offsets during public consultations on specific development projects (eg. new road or a mine).
- Experience of companies or projects in the implementation of the Mitigation Hierarchy including Biodiversity Offsets and / or that have planned their projects for NNL / NG of Biodiversity.
- Identification of companies that asked the government for any recommendations (or to COMBO team) in terms of requirements of national policy, guidelines or support that the government could provide to the companies for NNL / NG planning.

Thirty-two interviews were conducted with nine (9) stakeholder groups. The interviews were conducted using a questionnaire adapted to each stakeholder group and conducted personally. For two (2) of the Groups (Local Communities and proponents in the Tourism area) the interviews were conducted by telephone, as the representatives are based outside of Maputo city.

The selection of groups was made taking into account the key issues described above that should be answered. It should be noted that the groups of consulting firms, developers and academic institutions have a greater number of interviewees, since there was a tentative to interview several representatives by type of activity (hydrocarbons, forestry, agriculture, ports and railways, tourism, electricity, infrastructures and mines) given that these are key in the implementation of a NNL / NG system and Biodiversity Offsets.

Concerning the duration of the interviews, the time ranged between 45 to 60 minutes. The mean interviews time was 50 minutes. The available time allocated for the work was also considered as a criterion for limiting the number of interviewees.

The stakeholders groups, institutions and the respective number of interviews are identified in Table 1 below.

**Table 1. Stakeholder group, institution and number of interviewees.**

Stakeholder group	Institution interviewed	Number of representatives	Total number of Interviewees
Local communities	Communities of Nhantemule (Mocimboa da Praia)	1	2
	Community of Inhassoro-Sede	1	
Consulting firms	Consultec	1	4
	Sal & Caldeira	1	
	IMPACTO	1	
	Austral Cowi	1	
Proponents (of Projects of Development in areas such hydrocarbone, forestry, agriculture electricity, ports and railways, infrastructures, tourism and mines, respectively)	Anadarko, Eni, SASOL	3	15
	Portucel, Green Resources	2	
	Tongaat Hullet	1	
	HCB, EDM	2	
	CFM, PCD	2	
	ENH Logística, ENH Bonnati	2	
	Complexo Turístico Seta, Palma Residence	2	
	Rio Tinto	1	
Academic Institutions	Faculty of Agronomy and Forest Engineering (UEM)	1	3
	Department of Biological Sciences (UEM)	1	
	Project SECOSUD II – Conservation and Equitative Use of Biological Diversity in SADC Based on Department of Biological Sciences.	1	
Non-Governmental Organizations (NGO's)	Centro Terra Viva – CTV, Livangingo	2	2
Cooperation Agencies	Embassy of the Kingdom of the Netherlands	1	1
Financial Insitutions	World Bank	1	1
Internacional Conservation Organizations	IUCN, WWF	2	2
Civil Society	Sekelekani, MASC	2	2
<b>TOTAL</b>			<b>32</b>

### 3.2 Part II: Gap analysis on the capacity and experience of Mozambican governmental institutions

The gap analysis on the capacity and experience of Mozambican governmental institutions to implement a policy of No Net Loss of Biodiversity was carried out by the COMBO Mozambican team through a structured interview consisting in a set of 37 open and closed questions (Appendix 2), in a

face-to-face mode. Twenty governmental institutions belonging to 9 ministries, which deal directly or closely with Environmental Impact Assessment, biodiversity or environment in general, were interviewed, namely:

- **Ministry of Land, Environment and Rural Development (MITADER):** i) National Directorate of Environment (DINAB), including the Department of Environmental Licensing, Department of Environmental Management and Section of Marine and Coastal Environmental Management; ii) National Directorate of Resettlement and Territorial Planning (DINOTER); iii) National Agency of Environmental Quality Control (AQUA); iv) National Administration of Conservation Areas (ANAC); v) National Directorate of Forestry (DINAF); and vi) National Directorate of Land (DINAT).
- **Ministry of Mineral Resources and Energy (MIREME):** i) National Institute of Oil (INP); ii) National Directorate of Geology and Mines (DNGM); and iii) National Institute of Mines (INAMI);
- **Ministry of Culture and Tourism (MICULTUR):** National Directorate of Tourism (DINATUR);
- **Ministry of Agriculture and Food Safety (MASA):** National Directorate of Agriculture and Forestry (DINAS);
- **Ministry of Economy and Finance (MEF):** National Directorate of Planning and Budgeting (DNPO);
- **Ministry of Public Constructions, Housing and Water Resources (MOPHRH):** National Directorate of Water Resources Management (DNGRH);
- **Ministry of Sea, Inland Waters and Fisheries (MIMAIP):** i) National Directorate of Operations (DNO); ii) National Directorate of Maritime and Fisheries Policies (DIPOL); iii) Fisheries Research Institute (IIP);
- **Ministry of Transport and Communications (MTC):** National Directorate of Studies and Projects (DNEP);
- **Attorney General of Republic (PGR):** Environmental Office.

The interviewees were the Directors / Chiefs of Department / Chiefs of Division and/or technicians connected with the environmental sector / environmental impact assessment procedure. The number of interviewees in each institution varied between 1 and 4, with a mean of 2 interviewees. Regarding the interview duration, the minimum time was 34 minutes and the maximum was 2 hours and 23 minutes; the interview mean time was 1 hour and 14 minutes.

The study carried out is technical and not scientific. Through a sample, it intended to determine which major gaps exist in the Government institutions that deal the most with the environmental impact assessment procedure and biodiversity, regarding the policies, laws, capacity and experience of Mozambique to implement a policy of No Loss Net of Biodiversity. The study did not focus on the individual analysis of the capacity and experience of each institution, but on a global assessment, based on the analysis of the standard questionnaire performed to a small number of individuals within each institution.

### 3.3 Part III: Workshop to analyse and validate the obtained results and improve the gap analysis

A Workshop entitled "Gap Analysis of Policies, Laws, Capacity and Experience to Achieve No Net Loss of Biodiversity" was held in Maputo on 7 November, 2017 at Hotel Montebelo Indy.

A total of 60 participants from 45 institutions attended the event, representing academy / research institutions, governmental institutions, private sector (consultants and developers), NGOs, specific projects and bilateral institutions (Table 6). This workshop also intended to be the first meeting of

the Technical Advisory Board of the COMBO project, which is to be comprised of these institutions and a few other which were not able to attend. Two draft versions of the Gap Analysis were presented referring to:

- Gap Analysis on Policy, Laws, Capacity and Experience of Key Stakeholders, to deliver No Net Loss (or Net Gain) (NNL/NG) of Biodiversity in Mozambique, and
- Gap Analysis on Capacity and Experience of Mozambican Governmental Institutions to Deliver No Net Loss (or Net Gain) of Biodiversity.

These documents were previously sent to the participants so that these could familiarize with the content and prepare the respective comments to be presented at the workshop.

## **4 RESULTS**

### **4.1 Part I: Gap Analysis on Policy, Laws, Capacity and Experience of Key Stakeholders**

#### **4.1.1 Review and Analysis on Policies, Laws, Regulations, Programs and Strategies**

##### **4.1.1.1 Legal Framework and existing provisions for NNL, Mitigation Hierarchy and Biodiversity Offsets**

In general, the legal framework in Mozambique does not contain specific provisions requiring NNL / NG and compliance with the Mitigation Hierarchy. The exceptions are the Regulation on the Environmental Impact Assessment (EIA) procedure, Decree 54 / 2015 of 31 December and Law 16 / 2014 of 16 June, related on the Protection, Conservation and Sustainable Use of Biological Diversity, as amended by Law 5/2017 of 11 May. Decree 54/2015 demands for the adequate application of the Mitigation Hierarchy, introducing in the legal framework the Biodiversity Offsets to compensate for residual impacts. Law 16 / 2014 amended by Law 5/2017 requires for No Net Loss of biodiversity inside Conservation Areas and its buffer zones.

The International Conventions ratified by Mozambique, do not explicitly require the scope of NNL, respect for the Mitigation Hierarchy or Biodiversity Offsets. However, the Convention on Biological Diversity (CBD) in its Article 14, on the topic "Environmental Impact Assessment and Minimization of Adverse Impacts", establishes that each Party should establish appropriate procedures for the environmental impact assessment of submitted projects that may have significant adverse effects on biological diversity with a view to avoiding or minimizing such effects. A basis is thus created in CBD to adhere to the "avoidance" principle in the Mitigation Hierarchy. This Convention creates a solid basis for promoting the conservation and sustainable use of biodiversity.

The Ramsar Convention on Wetlands of International Importance, especially those that serve as aquatic birds habitat, is not specific on the NNL and the need to respect the Mitigation Hierarchy, however, is relevant in promoting the introduction of Offsets, since in its Article 4, point 2, requires that if each Party, by reasons of national interest, removes from the list or reduce the limits of the wetland (s), as far as possible, should compensate for the loss of the area's resources and create additional natural reserves for aquatic birds and for the protection of an adequate portion of the original habitat, whether in the same region or in any part of the country.

Also the Resolution Nº 9/2008 of 19 September regarding the Convention on Migratory Species ratified by Mozambique determine in article 3, point 4.b) that any activities or obstacles that

seriously impede or prevent the migration of the species should be avoided, removed, minimise or compensated for, as appropriate.

On its turn, the Government of Mozambique (GoM) recognizes biodiversity conservation as a priority. This recognition was materialized through the "National Biodiversity Strategy and Action Plan" (NBSAP). The Strategy provides an overview of the importance of biodiversity not only to the national economy, but also provides information on the state of biodiversity conservation in Mozambique, trends, threats and their impacts on community life, challenges and perspectives for 20 years (2015-2035). The strategy and action plan were designed to "ensure the conservation of biodiversity through integration, training, financing and strengthening of strong partnerships between different sectors". The Strategy defines biodiversity compensation as an action to reduce the loss of biodiversity (Strategic Objective A and respective actions).

In addition, the GoM in its Quinquennial Program 2015-2019, establishes as one of the priorities (Priority V) to "Ensure the Sustainable and Transparent Management of Natural Resources and Environment". One of the Strategic Objectives under Priority V is to "Strengthen the capacity for environmental quality assessment and monitoring, especially in the areas of implementation of development projects". It is in this context that the Program recommends improving the management and execution of the EIA and environmental licensing. As previously mentioned, the requirement to carry out EIA (under the specifications of the Decree 54/2015 on the EIA Process) immediately creates a space for the requirement to comply with the Mitigation Hierarchy, the scope of NNL and Biodiversity Offsets.

In 2016, the World Bank produced the document "A National Biodiversity Offset System: A Roadmap for Mozambique", whose aim is to define a route for achieving No Net Loss in Mozambique, through the adequate application of the Mitigation Hierarchy, including the creation of an aggregate system of Biodiversity Offsets. The approach aims to encourage the minimization of environmental impacts resulting from the implementation of economic development activities. The document analyzes the role of development finance organizations, such as the IFC, as catalysts for initiating this process for projects benefiting from their financing in Mozambique. IFC has a number of Performance Standards (particularly PS6) that require the implementation of the Mitigation Hierarchy, including the identification of residual impacts and the implementation of Biodiversity Offsets when residual impacts occur.

It also analyzes the national framework that would facilitate the introduction of the offsets system in Mozambique, namely the existence of the Environmental Law and the legislation on EIA that already requires the Mitigation Hierarchy to be respected and that the residual impacts need to be offset. The existence of key government institutions, of a network of biodiversity conservation areas in Mozambique, and a Conservation Trust Fund (BIOFUND) are also considered as facilitators of the introduction of the offsets system in Mozambique.

A roadmap to achieve No Net Loss (NNL) in Mozambique is proposed in this document, which mainly recommends (1) the inclusion of the NNL requirement in national legal instruments, (2) the creation of specific legal instruments for NNL, (3) use of the current network of conservation areas, taking into account the multiple advantages that it would represent, such as the reduction of transaction costs, synergies of aggregation, permanence, advantages for the government, among others, (4) development of implementation mechanisms through pilot projects, (5) adaptation and improvement, and (6) learning and training.

This roadmap is an important corner stone for a system for NNL in Mozambique and proposes as next steps: i) to improve the current legal framework, which already includes the need to apply the Mitigation Hierarchy; ii) guarantee the high level Government commitment, which is already



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sensitized to this issue; iii) identification of avoidance areas, which are not possible to offset (includes defining methods for determining benchmarks and measuring loss and gain of biodiversity); iv) definition of mechanisms to mapping and gazettement offset areas; v) establishment of a trust fund which is capable to manage offset finance; vi) development of the management and coordination structures, and; establish the first pilot projects, promoting the adequate training.

In international guidelines, BBOP or IFC PS 6 and 7 there is a theoretical orientation on how to implement the Mitigation Hierarchy, but the practical implementation is still considered quite complex. It should be noted that MITADER is presently creating legal instruments in order to draw a framework for NNL / NG and Biodiversity Offsets. Currently, there is the intention of developing a regulation for the implementation of Biodiversity Offsets in Mozambique. Additionally, the regulation of Conservation Law was recently approved and, the aims, among other things, are to clarify the mechanism for the compensation of biodiversity use within the Conservation Areas.

Table 2 below, summarizes the results of the “Gap analysis on Policies, Laws, Regulations, Programs and Strategies by Area of Activity” in relation to NNL / NG, Mitigation Hierarchy and Biodiversity Offsets.



**Table 2. Summary of the Results on the Analysis of Laws, Policies, Regulations, Programs and Strategies by Area of Activity.**

Area of activity	Provisions susceptible to revision/amendment or introduction in the next 3 years	Global summary of gaps related to achieve NNL / NG and requirements to implement the Mitigation Hierarchy	Summary of provisions that are adequate to require or support investors' plans to achieve NNL / NG	Summary of provisions contrary to the introduction of NNL/NG and which should be considered as priorities for amendment/revocation.
Environment	<p>With the exception of Decree 54/2015 on the Environmental Impact Assessment Process, provisions in environmental legislation are not explicit and precise in terms of achieving NNL / NG of Biodiversity and implementation of the Mitigation Hierarchy. Decree 54/2015 is the only one that clearly addresses the need to respect the Mitigation Hierarchy (Article 9, Point 2) and Article 12 (h). This legislation, however, is specific to the need to prepare Biodiversity Offsets Management Plans for the cases referred to as necessary (Article 11, point o) and Article 22, Point 7.).</p> <p>The procedures and criteria for Offsets are not yet evident in this legislation, however Article 8, Point 4 specifies that "The terms and conditions for the assessment and identification of the offsets needs of the affected biodiversity shall be governed by specific regulations."</p>	<p>As for the achievement of NNL / NG, the legal framework has no explicit provisions. Regarding the implementation of the Mitigation Hierarchy, the legal framework is explicit, as mentioned in the next column.</p> <p>It should be noted that MITADER is currently preparing a specific regulation on Biodiversity Offsets in order to draw up a framework for offsets / NNL. Therefore, it is expected in the short term that provisions for NNL / NG and Biodiversity Offsets are regulated.</p>	<p>The provisions set forth in environmental regulations are not explicit regarding NNL / NG. Therefore, there is no requirement that investors should plan for NNL. In order to be considered a NNL for biodiversity, in the context of the implementation of development projects, it would be necessary for the regulation to have provisions that would induce the quantification of environmental impacts (including residual impacts) and, on the other hand, implementation of a system of offsets that would ensure NNL / NG.</p> <p>It should be noted that the best provisions have been identified in Decree 54/2015, Article 11, paragraph (o), which clearly requires that a Biodiversity Offsets Management Plan should be prepared (when necessary) and Annex V on Fatal Flaws, which imposes that the ones listed in it should always be assessed during the EIA. The basis of this Annex is PS6. It further determines which areas of activity potentially causing significant impacts will not be authorized. Included here are ecologically sensitive areas that contain critically endangered and / or endangered species, endemic species, migratory species and key areas for provision of key ecosystem services.</p> <p>The requirement to maintain ecosystem services is also a provision that can anchor the NNL requirement. Regulation 54/2015 clearly states that qualitative assessment of ecosystem services must be carried out (Articles 9, 10, 11, 12).</p>	<p>In general, no provisions have been identified that are contrary to NNL / NG, although it is recognized that it is necessary to introduce procedures that lead to the implementation of the Mitigation Hierarchy and the quantification of impacts.</p>

Area of activity	Provisions susceptible to revision/amendment or introduction in the next 3 years	Global summary of gaps related to achieve NNL / NG and requirements to implement the Mitigation Hierarchy	Summary of provisions that are adequate to require or support investors' plans to achieve NNL / NG	Summary of provisions contrary to the introduction of NNL/NG and which should be considered as priorities for amendment/revocation.
			<p>In the National Biodiversity Strategy and Action Plan, Chapter V, Point 5.4, Justification of Strategic Objective C, "the need for the conservation and sustainable use of biodiversity and natural resources as a way of maintaining ecosystem services" is also addressed.</p>	
Forestry and Wildlife	<p>In general, legislation omit the issues of Mitigation Hierarchy, NNL / NG or Biodiversity Offsets, so more than revising / amending it is necessary to introduce new provisions that contribute to introduce the principle of following the Mitigation Hierarchy and achievement of NNL as a result of the implementation of development projects. It is also important to introduce provisions that create the mechanisms and procedures for the implementation of a system of Biodiversity Offsets.</p> <p>It should be noted that a new Forest Law is being drafted. With the publication of the new forest law, the forestry and wildlife law will cease to exist as it will be covered by the new forest law and conservation law.</p>	<p>The provisions of Laws and Policies in the area of Forestry and Wildlife are generally favorable to the biodiversity conservation. However, these are not explicit as to the need to follow the Mitigation Hierarchy or to achieve NNL.</p> <p>It is in Decree 12/2002, Article 81 states that there is an explicit reference on the need to carry out environmental impact assessments for plantations for industrial, commercial and energy purposes. Thus, with the current Decree 54/2015 this means that an approach is possible regarding the compliance of the Mitigation Hierarchy and Biodiversity Offsets. On the other hand, in the Forestry and Wildlife Law there is also an explicit reference to the need to restore or compensate for damages caused to forest ecosystems. These are the express and favorable provisions for the implementation of Biodiversity Offsets. The need to implement the Mitigation Hierarchy is not explicit and mechanisms have not been identified to allow the regulator to assess whether the Mitigation Hierarchy has been implemented, particularly as regards efforts to avoid impacts.</p>	<p>In general, there are no clear and guiding references regarding the Mitigation Hierarchy, NNL / NG and Biodiversity Offsets, however, there are already some provisions that contribute to the implementation of the Mitigation Hierarchy, through the requirements for the elaboration of EIA.</p> <p>In Law 10/99, Article 3, the principle of strict liability is clearly established, in which those who degrade must restore or compensate for the loss of biodiversity.</p>	<p>In general, regulations in forestry and wildlife area do not contain provisions contrary to NNL / NG, however it is necessary that it should be specific, for example, as to the provisions to apply the Mitigation Hierarchy, achieve NNL, including Biodiversity Offsets.</p>
Conservation and Biodiversity	<p>The legislation creates a clear foundation for the need to biodiversity conservation, for compliance with the Mitigation Hierarchy, and for NNL as a result of the implementation of development projects. It is also explicit as to the need for compensation in case of damage to biodiversity and natural resources. Specific reference is made to Law 16/2014, as amended by Law</p>	<p>Regarding the gaps, consult the previous column. Globally, the legislation is favorable to the implementation of the Mitigation Hierarchy and NNL (Article 4 and Article 11, Point 2).</p>	<p>Law 16/2014, as amended by Law 5/2017, establishes the Principle of Environmental Responsibility where "The Preservation, protection and management of the environment should prioritize the establishment of systems to prevent acts harmful to the environment. It is the duty</p>	<p>In general, provisions in legislation create a space for the introduction of NNL and respect for the Mitigation Hierarchy. No provisions have been identified that are explicitly contrary to NNL.</p>

Area of activity	Provisions susceptible to revision/amendment or introduction in the next 3 years	Global summary of gaps related to achieve NNL / NG and requirements to implement the Mitigation Hierarchy	Summary of provisions that are adequate to require or support investors' plans to achieve NNL / NG	Summary of provisions contrary to the introduction of NNL/NG and which should be considered as priorities for amendment/revocation.
	<p>5/2017, Article 4 (e), on social responsibility, in which the duty of those damaging natural resources, of restoring and / or paying the costs for elimination and compensation for damage caused by it in such a way as to ensure that there is No Net Loss of Biodiversity.</p> <p>Article 11 (2) is also explicit on the need to ensure that there is No Net Loss of Biodiversity.</p> <p>However, the methodologies, mechanisms and procedures through which these premises must be operationalized must still be debated and duly introduced into the legal framework, in the most effective way.</p>		<p>of those who damage natural resources, to replenish them and / or pay the costs for the elimination and compensation of damages caused by them in order to ensure that there is No Net Loss of Biodiversity or natural resources. "</p>	
Mines	<p>In the mines areas, law and policy provisions are, in general, favorable to the conservation and sustainable management of natural resources and biodiversity, however they are not explicit and precise regarding the Mitigation Hierarchy issue, to achieve NNL / NG and Biodiversity Offsets. It is important that the provisions in the mining legislation are in line with the Environmental Framework Law and follow the evolution of the new regulation 54/2015 and Law 16/2014, as amended by Law 5/2017.</p>	<p>The legislation does not contain provisions to require NNL / NG. Concerning the Mitigation Hierarchy, the legal framework it is not explicit regarding the need to implement it. It is also not clearly required on this legislation that NNL of biodiversity must be achieved by the projects.</p> <p>It should be noted that, according to DNGM, the new environmental regulation of mines law will be prepared soon. A number of guidance instruments are also being developed within the mine sector, such as the "Small Scale Mining Strategy", "Environmental Guidelines for Mining and Petroleum Operations". These instruments will certainly cover some of the gaps identified during the process of assessing and revising the legal framework, such as "The issue of how to better address challenges related to the assessment and / or establishment of methodologies for Biodiversity Offsets".</p>	<p>The provisions set forth in Decree 26/2004, Law 20/2014 and Resolution 2/2014 directly contribute to demand compliance with the Mitigation Hierarchy, achieve NNL or support investors' offset plans. The legislation does not explicitly provide for the compensation of biodiversity, however, mention is made for some tools that could be used to compete for NNL objectives and, where necessary, biodiversity compensation in the implementation of projects that, by their nature, location or size, are likely to cause damage to biodiversity and result in net loss, such as the Environmental Impact Study, the need for biodiversity conservation, etc. (Law 20/2014, Article 36 (j) and (k), Article 44 (l) and Article 47 (h)); Decree 26/2004, Chapters III and IV on Environmental Management and Environmental Conservation, respectively.</p>	<p>In general, no provisions that are contrary to achieve NNL / NG were identified, although it is recognized that it is necessary to introduce mechanisms properly tested that allow the initiation of a system of implementation of the Mitigation Hierarchy, including the offsets management.</p> <p>It is urgent and important to update and harmonize the mining environmental legislation according to the NNL provisions, Mitigation Hierarchy and Biodiversity Offsets created under the Decree 54 / 2015 and the law 16 / 2004, amended by the law 5 / 2017.</p>
Hydrocarbons	<p>In general, the legislation contributes to the implementation of provisions related to the protection and conservation of the environment and biodiversity in</p>	<p>The legislation does not clearly refers to the need to observe the Mitigation Hierarchy, or to achieve NNL, but in general it contains provisions to encourage</p>	<p>In general, the legislation does not contain explicit provisions to require or support the investors plans for NNL / NG, however</p>	<p>In general, regulation in the petroleum area does not present contrary provisions to the</p>

Area of activity	Provisions susceptible to revision/amendment or introduction in the next 3 years	Global summary of gaps related to achieve NNL / NG and requirements to implement the Mitigation Hierarchy	Summary of provisions that are adequate to require or support investors' plans to achieve NNL / NG	Summary of provisions contrary to the introduction of NNL/NG and which should be considered as priorities for amendment/revocation.
	<p>particular. Specific reference is made in order to avoid the degradation of the environment (for example Article 66, Law 21 / 2014 and Article 90, Decree 24 / 2004).</p> <p>Regarding the need to implement the Mitigation Hierarchy, including the Offsets, in order to achieve NNL, the legislation is not specific, however it has several provisions that contribute to these requirements being introduced (Decree 56 / 2010, Articles 2, 3 and 16). It should be noted that it is necessary to consider the revision of the legislation in the petroleum area so that it follows the progress already verified in Decree 54 / 2015 concerning the Mitigation Hierarchy, including the offsets. Consideration should also be given to establishing legal provisions for obtaining NNL of biodiversity.</p> <p>Specific technical guidelines should be developed and disseminated to ensure the success of these measures. No other issues have been identified that need to be amended or revised.</p>	<p>compliance with the Mitigation Hierarchy, since it always establishes as a principle that damage to the environment must be avoided, that the impacts must be identified, the mitigation measures should be identified, the environment should be restored and / or compensated by the damage caused to the environment (see for example Decree 21 / 2014, Article 66, on Environmental Protection and Safety, in which it is required that the proponents of the activities must carry out the operations in accordance with the environmental legislation; Decree 34/2015, Article 89, on Environmental Protection, in which the operator is obliged to comply with environmental legislation and to take all measures of environmental protection, to avoid damages to the environment and to repair losses if they occur during the conduct of petroleum operations ; Decree 56/2010, Article 13 (m)), under which it is clearly stated that the EIA must present the planned measures to prevent, control, mitigate, rehabilitate and compensate for any negative effects on the environment. No provisions have been identified that could support the scope of NNL.</p> <p>It should be noted that to ensure compliance with the Mitigation Hierarchy, including offsets and NNL, it is important that existing legislation contains explicit provisions in this regard.</p> <p>There is a need for coordination between the environmental regulation of oil operations and the EIA regulation in order to standardize procedures and requirements, in particular for the achievement of NNL and the implementation of Biodiversity Offsets where necessary to achieve them.</p>	<p>there are provisions that might be a starting point to produce guidelines and specific procedures to guide the investors (See for example Decree 21 / 2014, Article 66; Decree 34 / 2015, Article 89; Decree 56/ 2010, Article 13. See general information on the contents of these articles in the next column).</p>	<p>Mitigation Hierarchy or the NNL, but it is necessary that it is more specific, for example, as to the provisions to apply the Mitigation Hierarchy, as to the need to achieve NNL, as to the need for impacts quantification to support the residual impacts quantification and the decision on the need for offsets.</p>
Lands and Spatial Planning	<p>Provisions in legislation are generally favorable to the principles of precaution, accountability, conservation and safeguard of environmental values (see for example Decree 31/2012, Article 4, which establishes the principle of environmental accountability, according to</p>	<p>In general, the legislation does not contain provisions to encourage the compliance with the Mitigation Hierarchy, NNL and Biodiversity Offsets.</p>	<p>The legislation establishes, in general, important principles and objectives of precaution, accountability, conservation and safeguard of the environmental values that are important for the promotion of</p>	<p>Provisions in legislation are not contrary to NNL, however we recognize the need to adequate the legislation to achieve NNL / NG as a consequence of the</p>

Area of activity	Provisions susceptible to revision/amendment or introduction in the next 3 years	Global summary of gaps related to achieve NNL / NG and requirements to implement the Mitigation Hierarchy	Summary of provisions that are adequate to require or support investors' plans to achieve NNL / NG	Summary of provisions contrary to the introduction of NNL/NG and which should be considered as priorities for amendment/revocation.
	<p>which those who pollute or degrade must repair or compensate for any damage; Decree 23/2008, Article 58, which establishes as one of the final objectives of environmental, social and economic inventories the understanding of the dynamics of environmental, social and economic phenomena in order to support the elaboration of development strategies that take into account the preservation and sustainability of natural resources; Decree 18/2007, Point 2 (b) and (i) on the Principles of Precaution and Principle of Accountability, respectively; Decree 18/2007, point 3.3 (a), which establishes as a specific objective of the Ordinance Policy for the rural area "Preserve ecological balance and heritage and ensure the sustainable use of natural resources; Law 19/2007, Article 4 (d), which establishes the Precautionary Principle (already defined above), Article 5 (1) and (2) (d) and (g), where it is clearly stated that one of the objectives of spatial planning is the protection and conservation of the environment).</p> <p>It is desirable to create a link between the various legal instruments or to have specific reference in legal instruments such that the need to compliance with the Mitigation Hierarchy and to achieve NNL, are clearly addressed.</p> <p>It should be noted that MITADER is analyzing the potential creation of SEA legislation. The process for the elaboration of the National Territory Development Plan is also underway.</p>		<p>sustainable development, as mentioned in previous columns, however it is not explicit about the need to comply with the Mitigation Hierarchy and achieve NNL.</p> <p>Resolution 18/2007, Point 2 (b) establishes the Principles of Precaution, according to which spatial planning instruments should prioritize the establishment of systems to prevent acts harmful to the environment, in order to avoid the occurrence of significant negative environmental impacts or irreversible, irrespective of the existence of scientific certainty on the occurrence of such impacts. This provision may contribute to the introduction of the NNL requirement in territorial planning instruments.</p> <p>Provisions have been identified that contribute to Biodiversity Offsets. Decree31 / 2012, Article 4 (g) and Decree 18/2007, Point 2 (i) establish the Principle of Environmental Accountability, according to which anyone who pollutes or degrades the environment has the obligation to repair or compensate for the damages there under resulting.</p>	<p>implementation of development projects.</p>
Tourism	<p>The legislation creates a notable baseline for the need for conservation and sustainable use of biodiversity (Law 4/2004, Articles 3, 9 and 16, Resolution 14/2003, Points 6, 7 and 9), however there is no specific reference to achieve NNL, and to adhere to the mitigation hierarchy.</p> <p>The regulation is explicit in requiring EIA to tourism development projects, including those located within conservation areas (Resolution 14/2003, Point 9.11)</p>	<p>In general, legislation is not explicit on achieving NNL and the implementation of Mitigation Hierarchy.</p> <p>As mentioned in the previous column, the regulation is explicit when subjecting EIA to the tourism development projects, including those located within conservation areas (Resolution 4/2003, Point 9.11; Strategic Development Plan for Tourism, Chapter 4, Point 4.8).</p>	<p>In general, legislation is favorable for the requirement of Mitigation Hierarchy, since it refers the need of compliance the environmental legislation and, this legislation is explicit that the Mitigation Hierarchy must be observed. In addition, specifically the Law 10/99, Article 3 (d) explicitly requires to restore and compensate for damages caused. This</p>	<p>No provisions have been identified that are contrary to the introduction of NNL / NG.</p>

Area of activity	Provisions susceptible to revision/amendment or introduction in the next 3 years	Global summary of gaps related to achieve NNL / NG and requirements to implement the Mitigation Hierarchy	Summary of provisions that are adequate to require or support investors' plans to achieve NNL / NG	Summary of provisions contrary to the introduction of NNL/NG and which should be considered as priorities for amendment/revocation.
	<p>The Strategic Development Plan for Tourism establishes as one of the strategic recommendations for intervention, promoting tourism development environmentally and socially sustainable through the application of national environmental legislation as well as internationally accepted sustainability practices and guidelines, including the Convention on Biological Diversity.</p> <p>Explicit reference is made to the need for tourism companies to obtain the Environmental Licenses under the legislation on Environmental Impact Assessment (Chapter 4, Point 4.8). This requirement opens space to demand the adherence to the Mitigation Hierarchy and the Biodiversity Offsets. There is no clear requirement that projects must achieve NNL.</p>	<p>At present, it is through this mechanism that the windows are opened to the requirement of compliance with the Mitigation Hierarchy and Biodiversity Offsets. Achievement of NNL is not required.</p>	<p>means that there are already legal provisions where to anchor the question of mitigation hierarchy and Biodiversity Offsets.</p>	
Agriculture	<p>The legislation consulted in the area of agriculture generally has provisions that contribute to the protection and conservation of the environment and natural resources (Decree 11/2013, Articles 2 which stipulates that the quality of fertilizers circulating in the country must comply with the principles of protection of public health, animal health and the environment; Article 6 which assigns to the fertilizer logger the responsibility for ensuring that the management of fertilizers is in accordance with applicable national and international standards Article 21, Point 2, which stipulates that the application for authorization for the industrial production of fertilizers must be accompanied by the Environmental License).</p> <p>Decree no. 6/2009 (Articles 2 and 21) requires that activities related to the production of pesticides, repackaging of pesticides for commercial purposes, commercialization and storage of agricultural pesticides and those used in public health as well as the elimination of pesticides and their packaging is subject to EIA under Decree 54/2015.</p>	<p>In general, legislation consulted in agriculture area does not contain provisions that contribute to NNL or the compliance of the Mitigation Hierarchy.</p> <p>The references that are connected to the preservation and protection of the environment and natural resources are made through the environmental license. It is possible to ask for those requirements through the environmental licensing procedure.</p> <p>The regulations lack specific provisions for compliance with the Mitigation Hierarchy and to achieve NNL.</p> <p>As mentioned in the previous column the legislation in the area of agriculture refers the environmental decision to regulation 54/2015. It is through this Decree that the principles of Mitigation Hierarchy and NNL can be fulfilled. It is, however, important to establish the technical procedures that should guide the achievement of NNL.</p> <p>The only references to environmental legislation are to the former environmental impact assessment regulation, Decree 45/2004, already revoked.</p>	<p>According to the analysis in the previous column, a requirement of compliance with environmental legislation that is patent in the area of agriculture is an important step and contributes to a requirement to achieve NNL.</p>	<p>In general, regulations in the area of agriculture and food security do not contain provisions contrary to the implementation of the Mitigation Hierarchy or the NNL, however, it needs to be revised to include environmental provisions that contribute to NNL and to comply with the evolution of environmental and conservation legislation in force.</p>

Area of activity	Provisions susceptible to revision/amendment or introduction in the next 3 years	Global summary of gaps related to achieve NNL / NG and requirements to implement the Mitigation Hierarchy	Summary of provisions that are adequate to require or support investors' plans to achieve NNL / NG	Summary of provisions contrary to the introduction of NNL/NG and which should be considered as priorities for amendment/revocation.
	In general, regulations need to be revised in order to include environmental provisions necessary for their harmonization with the framework of environmental legislation, and particularly regarding the achieve of NNL / NG, Mitigation Hierarchy, including Biodiversity Offsets.	Therefore, it is recommended that the legislation should be updated.		
Energy	<p>In general, the legislation creates a remarkable baseline for the need to conserve biodiversity (Law 21/97, Articles 5 and 31, according to which the development of energy capacity must ensure ecological balance, conservation and preservation of the environment) and compliance with relevant legislation in the environmental area (Article 16 (h)), where it is established that the concession holder must comply with relevant legislation on environmental issues). There is no explicit reference to the need for observance of the Mitigation Hierarchy and the achievement of NNL.</p> <p>Since Law 21/97 recognizes that the implementation of electricity generation, transmission, distribution and commercialization projects must comply with all environmental legislation, this creates a corner-stone for requiring such projects to comply with the Mitigation Hierarchy and Offsets. However, achievement of NNL is not required.</p>	<p>The mechanisms and procedures on energy activities which compliance with the Mitigation Hierarchy, NNL and Biodiversity Offsets should be operationalized, must be discussed and duly introduced into the legal framework.</p> <p>No specific requirements have been identified leading to the implementation of the Mitigation Hierarchy and the achievement of NNL. However, it is possible to require that the principles of Mitigation Hierarchy, NNL and Biodiversity Offsets be respected through the implementation of Decree 54/2015, since the Law 21/97 requires that environmental regulation be respected.</p>	<p>In general, the legislation is favorable to the requirement to comply with the Mitigation Hierarchy, NNL and offsets through the use of the EIA regulation (Law 21/97, Article 16, points g) and h).</p> <p>The requirement to respect the Mitigation Hierarchy and Biodiversity Offsets can be made, for example, through the regulation of environmental impact assessment (Decree 54/2015) that on the one hand already contains specific provisions and on the other links all development projects to environmental licensing (with the exception of mines and hydrocarbons that have dedicated environmental regulations).</p>	<p>In general, provisions in legislation create a space for the introduction of requirements for compliance with the Mitigation Hierarchy, NNL and Biodiversity Offsets.</p> <p>No provisions have been identified that are explicitly contrary to NNL / NG.</p>
Water	Legislation presents in general, the basis to promote protection and conservation of the environment and natural resources (Law 16/91, Article 7), which mentions that "the hydraulic works cannot be approved without being analyzed on their social, economic and environment impacts"; Article 13, referring to the general scheme for the use of water resources, states that this Scheme aims at protecting the environment by ensuring that water use takes place without damaging the minimum flow and the ecological flow. Article 30 establishes as an obligation of holders of right of use and use of water resources, the duty to guarantee the	No specific requirements have been identified leading to the implementation of the mitigation hierarchy or the NNL. However, the existing provisions in the Law concerning the protection, conservation and prevention of environmental damage, associated with the requirement to carry out EIA (for example, Law 16/91, Articles 7, 13 and 30, Resolution 46/2007, Point 4, Water and Environment (details already mentioned in the previous column)), opens space to introduce / demand provisions to comply with the mitigation hierarchy and the NNL of Biodiversity.	In general, the legislation is favorable to the requirement of NNL / NG by carrying out the EIA conducted by the regulations in force on this matter. Law 16/91, Article 7 states that "hydraulic works cannot be approved without analysis of social, economic and environmental impacts".	In general, provisions in legislation create a space for the introduction of NNL / NG, since compliance with the EIA regulations is required (Law 16/91, Articles 7, 13 and 30; Resolution 46/2007, Point 4). No provisions have been identified that are explicitly contrary to NNL / NG.

Area of activity	Provisions susceptible to revision/amendment or introduction in the next 3 years	Global summary of gaps related to achieve NNL / NG and requirements to implement the Mitigation Hierarchy	Summary of provisions that are adequate to require or support investors' plans to achieve NNL / NG	Summary of provisions contrary to the introduction of NNL/NG and which should be considered as priorities for amendment/revocation.
	<p>minimum environmental impact.</p> <p>The National Water Policy (Resolution 46/2007) generally includes provisions that support the vision of the need for water availability for environmental sustainability (see Part 1, 2 and 3 of the Resolution). The Policy also states that "in order to protect water resources while promoting socio-economic development, environmental management tools will be used in accordance with Mozambican EIA legislation and environmental quality standards" (Point 4, Water and Environment).</p> <p>This opens a window for the consideration of the Mitigation Hierarchy, NNL and Biodiversity Offsets. The requirement to fulfill these provisions explicitly can be made through the legislation on environmental impact assessment.</p>			
Marine Environment and Fisheries	<p>Especially with the approval of Decree 21/2017, legislation in the marine area creates a remarkable baseline to the need to conserve aquatic biological resources, biodiversity, maintenance of ecosystem services and the need for compensation in case of damage to biodiversity and aquatic biological resources.</p> <p>Specific reference is made to Decree 21/2017. This Decree is very innovative regarding provisions for the preservation and sustainable use of the environment, biodiversity and ecosystem services. See Article 11, which establishes that the Situation Plan should include, among others, the identification of areas and / or volumes relevant to nature conservation, under the terms of the Conservation Law. The Situation Plan is subject to EIA and SEA (Articles 12, 13, 14, 23). The application of the legal provisions referred to in Articles 12, 13, 14, 23 should be discussed in order to reach a technical consensus on the application of the legal requirements. Note that according to these regulations,</p>	Regarding the gaps, see previous column. The binding between Decree 21/2017 and the Conservation Law and EIA create space to the implementation of Mitigation Hierarchy and to achieve NNL. Decree 21/2017, Article 11 (d); Articles 12 and 23.	In general, the legislation is in favor of enforcing the compliance of Mitigation Hierarchy and to achieve NNL / NG through the alliance established with the Conservation Law and the EIA regulation.	In general, provisions in legislation create a space for respect for the Mitigation Hierarchy, the achievement of NNL / NG, and Biodiversity Offsets. No provisions have been identified that are explicitly contrary to NNL / NG.

Area of activity	Provisions susceptible to revision/amendment or introduction in the next 3 years	Global summary of gaps related to achieve NNL / NG and requirements to implement the Mitigation Hierarchy	Summary of provisions that are adequate to require or support investors' plans to achieve NNL / NG	Summary of provisions contrary to the introduction of NNL/NG and which should be considered as priorities for amendment/revocation.
	<p>Maritime Spatial Planning Instruments are subject to two separate environmental assessment instruments, namely EIA and SEA.</p> <p>Law 22/2013 also provides various provisions for the protection and conservation of aquatic resources and biodiversity (see Articles 12, 16, 17, 18, 51). Aquaculture activities are subject to EIA because of their potential negative impacts on the environment (Article 64).</p> <p>Through the obligation to link the provisions contained in Decree 21/2017 to the EIA (see Article 12, Point 3, letter b), which states that the Situation Plan must be accompanied by an Environmental Report and Declaration; Article 13, paragraph 2, point e), which states that the Situation Plan is subject to SEA; Article 14 which subjects the Situation Plan to SEA; Article 23 which requires an EIA. In this way, respect for the Mitigation Hierarchy is safe guarded, however there is no obligation to achieve NNL. The new Decree 21/2017 is not explicit on offsets, but creates space for the introduction of this requirement through EIA (Articles 12 and 23). A technical discussion on how to operationalize the simultaneous requirement of EIA and SEA for Maritime Spatial Planning is recommended.</p>			
Economic Incentives	<p>There are some economic instruments and mechanisms although not specified in almost any legislation consulted. For example, in the area of tourism, Law 4/2004, Article 14, states that "investments, new developments as well as improvements may, due to their socio-economic interest in the development of the sector, benefit from special incentives to be defined by the council of ministers. The same approach was found in the following legislation: Forests, Law 10/99 (Article 35), Regulation 12/02 (Article 79 and 101), Resolution 8/97 (Point 3.v, Point 4 (55) and point 5.5), Fisheries, Law 22/2013 (Article 6 (5) and Article 1,2,3 and Article 53 (3)), Decree 45/2006 (Article 10 (c) Law 4/2004 (point</p>			



Gap Analysis on Policy, Laws, Capacity and Experience, to deliver No Net Loss (or Net Gain) (NNL/NG) of Biodiversity in Mozambique

Area of activity	Provisions susceptible to revision/amendment or introduction in the next 3 years	Global summary of gaps related to achieve NNL / NG and requirements to implement the Mitigation Hierarchy	Summary of provisions that are adequate to require or support investors' plans to achieve NNL / NG	Summary of provisions contrary to the introduction of NNL/NG and which should be considered as priorities for amendment/revocation.
	2 of article 7 and article 14).			



#### 4.1.1.2 Statutory processes in the law and management practices under the topics “Land Tenure; Protected Areas and Wildlife; Rights of Local Communities; Economic Incentives and Liability regimes and trust funds”.

- Land Tenure

Land Tenure is a key aspect on the implementation of Biodiversity Offset plans, considering that it may be necessary to acquire land parcels with similar habitats to those lost through the implementation of development projects to compensate for residual impacts.

There is a policy of land tenure, but in the land registration it is difficult to know who has the right to a particular piece of land, because land management includes several processes due to human activities and requires regular updates, which do not occur (according to information registered by COMBO).

The creation of Biodiversity Offset areas may require legal land tenure for a long time – the DUAT. In the case of closure of a project or transfer of rights to implement a project, the obligation to manage the offset area should also be transmitted. However, no legal provisions were identified regarding the transfer of obligations related to biodiversity conservation in the processes of sale or transfer of land to third parties (consultation was made to the legislation of Conservation - Law 16/2017, amended by Law 5/2017 - of Land - 19/97 and Decree 66/98 - and Land Planning - Law 19/2007 and Decree 23/2008).

It should be noted that, based on the 32 interviews conducted to assess the capacity and experience of various stakeholder groups directly or indirectly involved in the implementation of development projects (one of the objectives of this work on legislation review), it was suggested that a survey / update of areas with high/critical biodiversity value should be done and these should be gazetted as conservation areas under government management. Private / public entities that have the obligation to create offset areas should channel resources to support the management of these areas. It should be noted that the risk of having each investor identifying an area for offset is to have many conservation areas outside the national network of conservation areas when these resources could be used and concentrated in the current conservation areas, which currently lack resources for their protection and management.

- Protected Areas and Wildlife

The conservation areas are classified and regulated under Law 16/2014, as amended by Law 5/2017. The regulations on protected areas are consistent, but it is necessary to listen to conservation managers to record the challenges they have faced during the implementation of the Law.

Within the conservation areas there are specific activities that are allowed, for example, tourism, beekeeping, hunting, among others. It should be noted that within the Total Protected Areas the extraction of resources is prohibited. There can only be the indirect use of natural resources, with the exceptions provided in Law 16/2014, as amended by Law 5/2017, and in the Management Plan of the respective conservation area or any specific legislation, according to Article 27, Law 16/2014.

No legal obstacle has been identified to establish Biodiversity Offsets within existing protected areas. However, according to the international good practices, the criteria and procedures for establishing Biodiversity Offsets requires articulation between those interested in establishing the offsets and the conservation area management team. This is yet to be regulated.

According to Law 16/2014, revised by Law 5/2017, the proposed creation of conservation areas can be done by government agencies, academic institutions, the private sector, non-governmental

organizations or local communities or according to a set of categories (Article 38). Conservation areas are set up to meet a number of conservation objectives, including "to contribute to the maintenance of biological diversity and genetic resources within Mozambican national waters and jurisdictional waters" and "to protect endangered, rare and endemic species at the provincial, district and municipal levels" (Article 12 of Law 16/2014). Thus, it is clear that if the goal is conservation, then it is legally possible that offsets areas are established as conservation areas.

- Rights of Local Communities

The legal provisions that obligate to "free and prior consent" are shaped on various legal instruments, as for example on Decree 12/2002 (Article 6 that indicates that "The Management Plan in protected areas should be done with participation of local communities", which allow the communities to participate on decision-making on biodiversity and natural resources management; Article 36 on "Auscultation Meeting", that obligates the consultation to local communities during the process of Forestry Concessions); Decree 54/2015 (Article 15 on "Public Participation Process", Point 1, where provision is made for information and consultation to stakeholders concerned and directly or indirectly affected by an activity); Ministerial Decree 130/2006 that defines the rules for public participation in the decision-making process on development projects; Ministerial Decree 55/2013 Article 3 which requires the consultation of local communities during forest licensing.

It is therefore specified in the legislation that development projects are only implemented with the consent of local communities, stakeholders and other affected parties. While it is clearly reflected in the legislation that local communities should be consulted, not always the rights and procedures of access to information, complaint, vote, inclusion of community ideas in the context of the consultations provided to interested and affected parties (including affected communities) is adequately regulated.

If a given community proposes to include a given mitigation measure or proposes measures to avoid a certain impact on the services of a given ecosystem, and this measure is not complied with by the developer, it is not explicit on how the community can move forward their complaint and raise their concern, if appropriate.

- Economic Incentives

It has been found that there are some economic instruments and mechanisms, although not specified in almost any legislation consulted. For example, in the area of tourism, Law 4/2004 (Article 14) states that "investments, new developments as well as improvements, for their socio-economic interest in the development of the sector, may benefit from special incentives to be defined by the Council of Ministers". A similar approach was found in the legislation on Forests, Law 10/99 (Article 35), Regulation 12/02 (Articles 79 and 101), Resolution 8/97 (Point 3.v, point 55 of Point 4 and Point 5.5), Fisheries Law 22/2013 (Article 6 (5) and Article 53 (1), (2) and (3)), Decree 45/2006, Article 10 ( c ), and Tourism Law 4/2004 (Article 7 (2) and Article 14).

- Liability regimes and trust funds

As regards the liability regime, most of the legislation consulted and listed in the reference list provides for the obligation of basic care through mandatory / principles of prevention of damages, principle of liability and use of good environmental practice.

The "Principle of Environmental Liability" is established, for example, in Law 20/97, Law 16/2014, amended by Law 5/2017, Decree 31 / 2012. However, the type of compensation that is to be made by those that harm the environment is not specified.

No explicit provisions establishing obligations or other prior investment measures to mitigate impacts on biodiversity have been identified in the legislation consulted (see list of references). However, it should be noted that the obligation to comply with environmental standards previously established by law may require prior technological investment.

Regarding responsibility for resettlement, this is duly detailed and the economic, physical and social compensation of those affected is mandatory (Decree 31/2012, Article 4, 10).

A conservation trust funds already exists in Mozambique: Foundation for biodiversity conservation (BIOFUND). This foundation that aims to support the conservation of terrestrial and marine biodiversity and the sustainable use of natural resources, including the consolidation of Mozambique's protected areas system. It has 3 strategic objectives:

- BIOFUND is an effective and efficient institution in the financing of conservation
- The national parks and reserves are funded adequately
- Increase awareness of the importance of conservation biodiversity

BIOFUND manages multiple sources of financing, including an endowment fund established to ensure long-term financing for biodiversity conservation. The market value of the endowment capital of BIOFUND in December 2016 was USD 21 247 518 as a result of donations received from KfW, World Bank / GEF and Conservation International / GCF.

Under its Pilot and current phase, BIOFUND has started the disbursement of funds for the Conservation Areas through Project "Abelha" (Bee). The objective is to cover up to 80% of the CA current operating budgets; BIOFUND expects its funding to be additional to what Government is contributing and will not normally cover salary costs of existing conservation area of staff. Government is expected to cover those costs. Salaries for additional staff required to carry out the management plans would be considered eligible. BIOFUND began the disbursements in 2016, with the funding of a single conservation area, and is planning to support five in 2017; it is expected that in 2018 BIOFUND would be funding eight conservation areas from project Abelha funds.

One of BIOFUND's strategic actions is to "explore innovative forms of fundraising, like Biodiversity Offsets and carbon credits and others". The current main focus of the institution is on Biodiversity Offsets working with government and industries to define appropriate mechanisms according to the Biodiversity Offsets Roadmap for Mozambique. Currently (2017), BIOFUND is reviewing its the Strategic Plan (this review is funded by the KfW) and has decided to continue considering Biodiversity Offsets as an additional source of funding to donor contributions to its endowment.

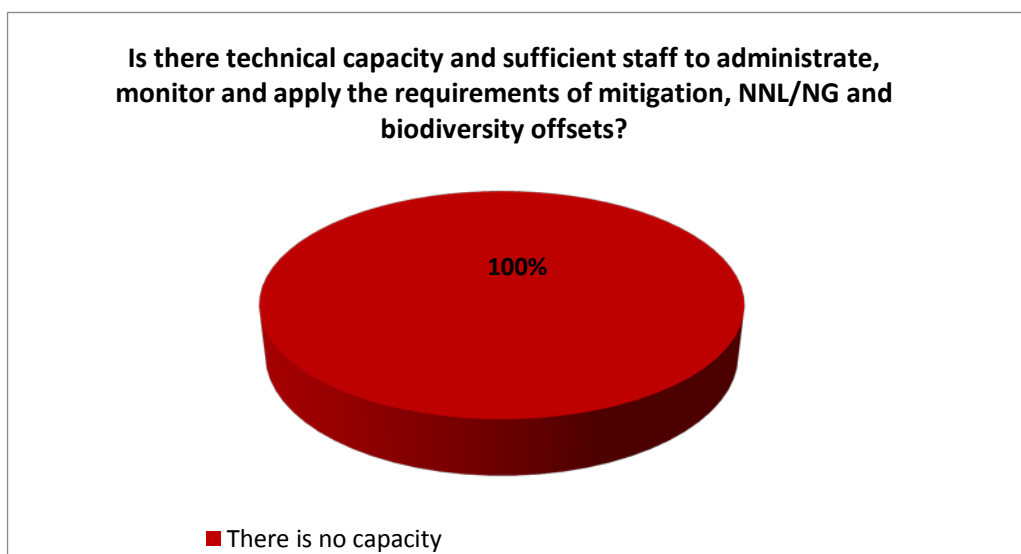
Although comprehensive, BIOFUND's current documentation and procedures barely mention Biodiversity Offsets as a potential financing source and do not seem to be sufficient to include the management of performance-based offsets (rather than simpler financial "compensation" by industry) as part of BIOFUND's portfolio. The documents and procedures can be however upgraded to integrate what is needed to achieve this.

As part of the ToR, specific questions about Law Enforcement Processes and Management Practices in the areas of "Land Tenure, Protected Areas and Wildlife, Rights of Local Communities, Economic Incentives and Liability Regimes and Trust Funds" were assessed. The answers to these questions are in Appendix 3.

## 4.1.2 Analysis of Capacity and Experience

### 4.1.2.1 Existence of sufficient technical capacity and staff of stakeholders to administrate, monitor and apply the mitigation requirements (avoid, minimize, restore, offset) and achieve NNL / NG

From the analysis carried out, there is no capacity to manage, monitor and apply mitigation requirements (avoid, minimize, restore, compensate), Biodiversity Offsets and achieve NNL / NG by the stakeholders, such as: consulting firms, academic institutions, Non-Governmental Organizations, developers, cooperation agencies, civil society and international conservation organizations (Figure 1).



**Figure 1. Existence of technical capacity and sufficient staff by the stakeholders to administer, monitor and apply mitigation requirements (avoid, minimize, restore, compensate), NNL / NG and Biodiversity Offsets.**

Each stakeholder group interviewed provided specific comments on the capacity issue. The comments are presented below.

- Consulting firms (CF)

The four companies interviewed (100%) were unanimous in stating that there is no technical capacity within companies and their consultants to manage, monitor and apply the Mitigation Hierarchy, including Offsets, in order to achieve NNL / NG of Biodiversity.

Interviewees recognize that offsets and NNL / NG of biodiversity are a recent and complex matter, and there are still many knowledge gaps to calculate biodiversity losses and to design a Biodiversity Offset plan.

Only two of the consulting firms interviewed were trained in Mitigation Hierarchy and Biodiversity Offsets:

- 1 with WCS and Forest Trends in Madagascar, in 2012 (only 1 consultant in the company)
- 1 company promoted online courses to raise the awareness of calculations and the perception of the Biodiversity Offsets. Three consultants from the company participated in these courses.

Companies have the technical capacity to assess environmental impacts and define mitigation measures, but it has been clear that impacts are rarely quantified, which does not allow assessing what should be offset. The four companies have not yet tried a NNL approach.

- Academics institutions (AI)

The three interviewees (100%) reported that there is no capacity (particularly for quantification of impacts and implementation of a NNL system) at the institutions level. One interviewee believes that there is good technical-scientific capacity to support the development of strategies, but the appointed people in the institution would need to undergo training in offsets and NNL.

The three interviewees participated in the training workshop led by COMBO in 2016, in Maputo, where the concepts of Mitigation Hierarchy, Offsets and NNL of Biodiversity were addressed. In addition, two of the interviewees also participated in other workshops that addressed the same concepts. One of the respondents participated in an European Union program that involved approaching the concept of offsets and NNL.

It should be noted that while there is currently no capacity to develop methodologies and data required for NNL, academic institutions have the capacity to implement environmental impact assessment requirements and are available to participate in NNL training so that they can support companies and institutions that would need it.

- Non-Governmental Organizations (NGO's)

Regarding the technical capacity of NGOs to apply the mitigation requirements, Biodiversity Offsets, and achieve NNL / NG, the two interviewees (100%) were unanimous in saying that there is no technical capacity.

Only one of the two interviewed organizations was invited and participated in a workshop conducted by COMBO, but it was an introduction to the concepts of Biodiversity Offsets.

- Developers (Dp)

From fifteen developers interviewed, all (100%) stated that there is no capacity in their institutions to apply the mitigation requirements and Biodiversity Offsets to achieve NNL / NG.

Seven of the fifteen developers interviewed stated that they had already dealt with the new concepts of MH, Biodiversity Offsets and NNL, and eight said they did not know the concepts.

From the seven developers who had already dealt with the concepts, two were recommended to develop and include a Biodiversity Offsets management plan in EIAs, because critical habitats were identified within the project area.

However, the offset management plan was not yet developed because of the complexity of the criteria for preparing the plan. They mentioned that there is still no experience for calculating net losses and drawing up an Offset Plan.

- Cooperation agencies (CA)

The only agency interviewed has never dealt with the concepts of MH, Biodiversity Offsets and NNL. The agency mentioned that there is no capacity in its institution to apply the mitigation requirements, Biodiversity Offsets and achieve NNL / NG.

The agency mentioned that the focus of the organization is to finance projects, not their implementation. On the other hand, the agency has not been making the requirement to comply with the MH, including offsets and achieve NNL, since it is a complex matter and the country is not

yet prepared, as it lacks clear procedures to guide investors on how to implement NNL and Biodiversity Offsets.

It was noted that there is competence to technically understand the concepts and implement them, however it was mentioned that the institutions lack the capacity to implement a NNL system and Biodiversity Offsets. It is also necessary to work hard to disseminate and popularize the concepts.

- Civil society (CS)

The two interviewees (100%) said that their organizations do not have technical capacity. One interviewee said he would need training in this area.

The two interviewees were not aware of the concepts of MH, Biodiversity Offsets and NNL / NG.

- Financing institutions (FI)

The only institution interviewed mentioned that there is capacity in its organization, but emphasized that it is not a clear process and, that the institutions are not yet technically prepared to implement a NNL system and Biodiversity Offsets.

The institution interviewed also commented that it is necessary to make a technical analysis of the necessary requirements, legalize and expand the techniques for NNL and offsets. He also said that it should be ensured that key players understand the concept to ensure its implementation.

The interviewee worked on several projects that dealt with the issue of Biodiversity Offsets in several countries. His experience in Mozambique was not long. He participated in the elaboration of the study entitled "National Biodiversity Offset System: A Roadmap for Mozambique".

- International conservation organizations (ICO)

For the two interviewees (100%), there is no capacity within their organizations. However, in their international network, there are specialists dealing with NNL systems and Biodiversity Offsets.

One of the interviewees stated that they had a representative in a training outside of the country (in Brazil) in matters related to NNL and Biodiversity Offsets.

One of the institutions interviewed was involved, since the beginning of the offsets process in Mozambique, as they collaborated to establish BIOFUND in Mozambique. They also worked in Madagascar under the offsets concept, before the COMBO project existed.

#### 4.1.3 Steps to be taken to build capacity to regulate, administrate, monitor and apply the requirements of Mitigation Hierarchy, Biodiversity Offsets and achieve NNL / NG

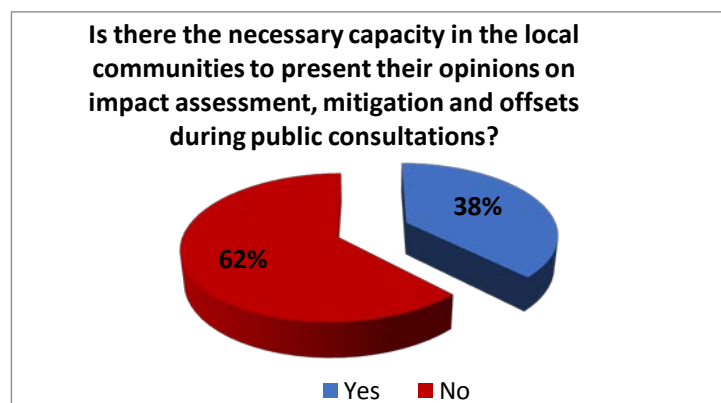
Eight interviewed groups (with the exception of the local communities, because these were not asked this question) point out that there needs to be a joint action that includes all stakeholders who are directly or indirectly involved in implementing a system to manage, monitor and apply the Mitigation Hierarchy requirements, Biodiversity Offsets and achieve NNL / NG. A number of proposals have been presented, and are summarized below:

- Hold discussions on NNL mechanisms, procedures and guidelines and Biodiversity Offsets so that all stakeholders are actively involved in building the system they are to implement in the future;
- Create clear and specific legislation / guidelines;
- Conduct a baseline study to identify areas of high biodiversity and adequate to conservation;

- Establish clear procedures for a possible NNL implementation system and Biodiversity Offsets (Note: as already mentioned in this document, all the groundwork and foundations that propose a roadmap for the creation of an offset system have already been presented in the document "National Biodiversity Offset System: A Roadmap for Mozambique." This document should be disseminated and studied by stakeholders through a Facilitation Mechanism to technically support them);
- Capacity building at government level and all sectors that should participate in the implementation of NNL system and Biodiversity Offsets;
- Incorporate the theme into academic training;
- Create a Facilitation Mechanism to technically support the implementation of this new NNL concept;
- Disseminate the concept and aware all stakeholders that will potentially be involved in the regulation, implementation and monitoring of NNL implementation and offsets;
- Implement a pilot project to test the techniques, mechanisms and procedures for the adequate introduction of a NNL system and Biodiversity Offsets.

#### 4.1.4 Capacity and required representation of local communities in Mozambique (and their leaders and representatives) to present their points of view on impact assessments, mitigation and offsets during public consultations of specific development projects

From 32 interviewees who comprised the nine stakeholder groups, 12 (38%) were of the opinion that local communities (LC) have the capacity to present their views on impact assessment and mitigation during public consultation meetings of development projects. The remaining 20 (62%) reported that communities do not have the necessary capacity (Figure 2).



**Figure 2: Existence of the necessary capacity in local communities to present their views on impact assessment and mitigation in public consultations of development projects.**

Although twelve individuals (38%) were of the opinion that the LC have the capacity to express their concerns and feelings towards the projects (Figure 2), they pointed out the following main difficulties of the communication process during the public consultation meetings:

- ✓ The contents are complex and presented in an unfamiliar format to the communities, which means that they can not present their contributions in a safe way. Communication in Portuguese is also a limitation during conversions, as several only speak local languages;

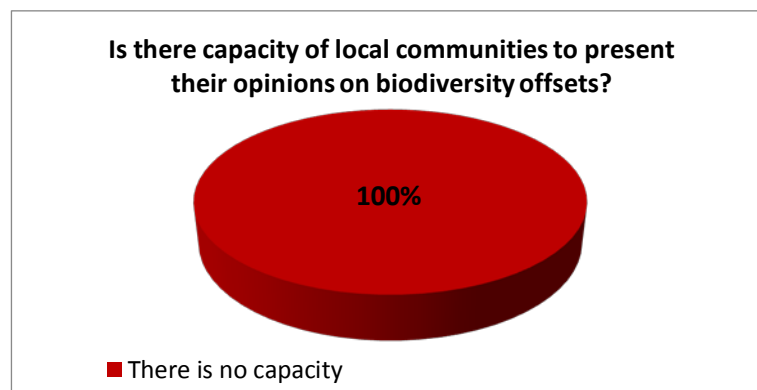
- ✓ Community representatives are afraid to suffer retaliations from other members and leaders of communities and their hierarchical superiors;
- ✓ Communities are convinced that they are not always heard by developers, especially as regards the form of compensation when there are projects that directly influence their livelihood activities and employment opportunities;
- ✓ Communities focus on their basic needs.

Twenty individuals (62%) who were of the opinion that LC do not have the capacity to express their concerns and feelings about projects (Figure 2), pointed out the main following limitations:

- ✓ Communities feel intimidated to react in meetings in the presence of their leaders, as they are associated with the political-party system, which they consider to be unresponsive to party diversity;
- ✓ Communities often hear for the first time a lot of information about the project during public consultations, so they have a hard time reacting;
- ✓ They do not know their rights;
- ✓ They have difficulty understanding how projects can influence their lives, so they hardly react.

It was also questioned whether LC have the capacity to present their views on Biodiversity Offsets. The 32 interviewees (100%) are of the opinion that LC do not have this capacity (Figure 3). However, they indicated that they can provide specific contributions on ecosystem services and alternative solutions in case of habitats loss from which communities withdraw resources.

They also mentioned that it is important that the messages sent to LC are prepared in a simple, focused and graphic mode, as well as transmitted in the local languages.



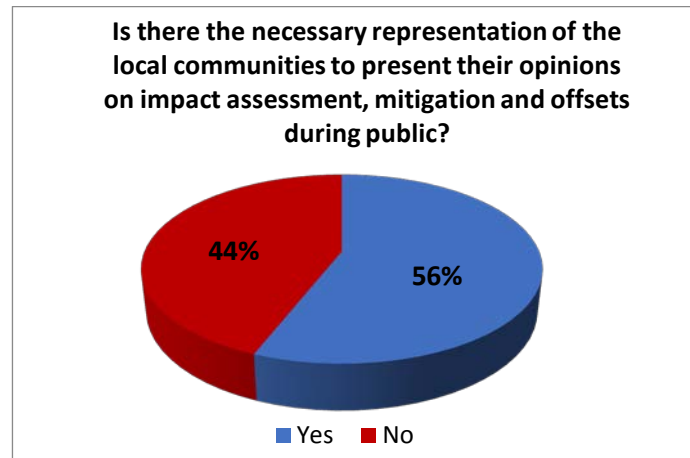
**Figure 3: Capacity of local communities to present their opinions on Biodiversity Offsets.**

Regarding the representativeness of LC, 18 individuals (56%) consider that it is good (Figure 4). Communities are usually represented by their leaders (part of the territory's administrative management), community leaders and influencers.

One of the interviewees of the LC group spoke of the existence of some NGOs that have worked with the communities. He also spoke of some influential and empowered members of communities who play the role of community representatives in meetings and other forums.

Fourteen individuals (44%) consider that LCs are not adequately represented in public consultations for development projects (Figure 4), mainly because the structures representing them, namely

community leaders, are an extension of government to local level and therefore are in the meetings to defend the interests of the Government.



**Figure 4. Existence of the necessary representation of the local communities to present their views on impact assessment and mitigation in public consultations on development projects.**

#### **4.1.5 Experience of companies or projects in the implementation of the Mitigation Hierarchy, including Biodiversity Offsets and / or that have planned their projects for achieving NNL / NG of Biodiversity**

From the eight groups interviewed (with the exception of LC, since this issue was not addressed) any of institutions have applied the Mitigation Hierarchy, including the use of Biodiversity Offsets. However three companies reported to understand how a system for NNL would technically work.

Three of the interviewed developers stated that they have already internally started an exercise to understand how they can carry out the necessary calculations within NNL / NG and implement an offsets system. They also mentioned that it is a challenge to be able to quantify the impacts, determine the net losses of biodiversity to know what to compensate for, but they continue to work to clarify what the procedures and techniques to be used should be.

Developers recognize that the implementation of an NNL system will contribute to the conservation of biodiversity. On the other hand, they also want to be in compliance with international requirements (IFC PS6 and PS7) and improve their image nationally and internationally.

The financial institution stated that it had financed the "National Biodiversity Offset System: A Roadmap for Mozambique", but never required development projects to address the issue of compliance with the Mitigation Hierarchy, Offsets and NNL, as this matter is still unclear.

Most interviewees recognize that the implementation of a NNL and offsets system will bring benefits in terms of image enhancement and enforcement (national and IFC).

#### 4.1.6 Identification of companies that asked the government for any recommendations (or to COMBO team) in terms of requirements of national policy, guidelines or support that the government could provide to the companies for NNL / NG planning

No company requested government support (or to the COMBO team) in terms of national policy requirements or planning guidelines for NNL / NG.

One international conservation organization said that it was involved in the process of discussions and training on offsets. It also mentioned that has always worked in coordination with MITADER, BIOFUND, ANAC and WCS.

## 4.2 Part II: Gap Analysis on Capacity and Experience of Mozambican Governmental institutions to Deliver No Net Loss (or Net Gain) of Biodiversity

### 4.2.1 Capacity of the Government institutions to regulate and administer the Environmental Impact Assessment (EIA) efficiently and effectively.

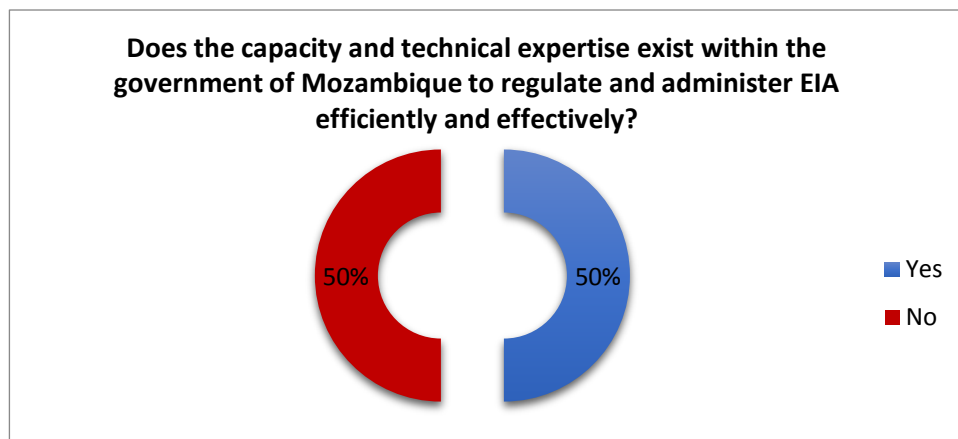
From the analysis of the interview results regarding the capacity of government institutions to regulate and administer the No Net Loss policy, it was verified that 10 of the interviewed institutions (50%) consider that, in general, the Mozambique government has the capacity and technical knowledge to regulate and administer environmental impact assessment efficiently and effectively (Figure 4), because the country has a procedure for EIA well defined, with over ten years of implementation and a recent review of the legal framework. The Ministry of Land, Environment and Rural Development (MITADER) has a Directorate (National Directorate for Environment – DINAB) with a department dedicated to EIA (Department of Environmental Licensing), with several technicians experienced in this area and other departments, such as the Department of Environmental Management, which also has experienced technicians in this field and that participates in the EIA process. However, it has been identified the need to improve the technical capacity and knowledge of the teams in general, as well as, in specific areas, such as the case of ecological impact assessment. It has also been identified the need of periodic training revisions due to the dynamics of the environmental topics and associated legislation.

On the other hand, 10 institutions (50%) answered negatively (Figure 5), citing as justification the existence of gaps in the quality and existing technical capacity, as well as shift of technical staff to other positions inside and outside the institutions, which causes the loss of knowledge. Based on this, there is need for regular training in EIA to several technicians belonging to the relevant institutions.

Analyzing in detail the content of the answers, in general, there is a good institutional awareness for the environmental issues, namely for Environmental Impact Assessment. The institutions know the legal and administrative procedures for the purpose, being internally organized to apply these. However, besides DINAB which deals with the environmental issues already for some time and has experienced technicians, there is clearly lack of knowledge on the matter, especially within the institutions for which environment is a fairly recent working subject. This can be seen, for example in the capacity to assess the studies correctly, once there is no technical knowledge of the specific impacts caused by the projects' activities of several economic sectors, especially when these are complex (*Oil & Gas*, mining, new industries for the country, etc.). It is inclusively assumed that of the 10 institutions that answered positively to this question (that there is capacity), potentially, 6 of

them do not have the necessary capacity to regulate and administer EIA efficiently and effectively. This assumption is based on the type of internal gaps identified, which are similar to those of the institutions which replied negatively to the question asked:

- Need of knowledge and technical capacity in the environmental area, as well as in biodiversity, because it is still a very recent area;
- Need to update and acquire more knowledge, regarding environmental impacts.
- Need of a guidance for technical evaluation of EIAs, as well as dedicated staff for the purpose.



**Figure 5. Existence of capacity and technical knowledge to regulate and manage environmental impact assessments efficiently and effectively, within the government of Mozambique.**

In the institution which is responsible for the EIA procedure (DINAB), there is a department which dedicates solely to the Environmental Licensing (with 15 technicians) and another department for Environmental Management (with 20 technicians), therefore having more technicians dedicated to this subject than any other institution. On the other hand, some of the other institutions indicated that they have a technician specifically designated as a focal point for environmental licensing, who interacts with DINAB (e.g. DINATUR, DINAF, DNGRH) and is usually part of the Technical Assessment Committee (CTA). Within its institution, whenever the focal point considers it necessary, it requests support from other team members. However, there are other institutions that did not mention having a similar internal organization.

According to the performed interviews (Table 3), it was also found that, considering the whole set of interviewed institutions, the number of technicians dedicated to the licensing and other environmental issues is considerable (n~145). This number varied between 1 and 36 per institution, excluding directorates/delegations/provincial departments, which were not covered by this study.

On the other hand, the number of EIA projects/year/institution varied between 3 and 110, which corresponded to a number of projects/technician/year that varied between 2 and 17. It is important to underline that except DINAB, the other institutions do not have any system for information registration/organization, that allows obtaining expeditiously the statistics of the number of statements given per year, so the numbers presented in Table 3 are just estimates.

**Table 3. Technical capacity of the government institutions toward the environmental licensing processes.**

Ministries	Institutions	N. of technicians	N. of annual processes	Average of the n. of processes / technician	Time for review (days)
MASA	DINAS	5	40 to 50	8 a 10	5
MEF	DNPO	8	**	****	**
MICULTUR	DINATUR	5	***	****	1 to 2
MIMAIP	DNO	**	**	****	**
MIMAIP	DIPOL	**	****	****	****
MIMAIP	IIP	6	60	***	7
MIREME	INP	4	24	6	> 30
MIREME	DNGM	12	36	3	15
MIREME	INAMI	3	50	17	3
MITADER	DINAB – Department of Environmental Licensing	15	100	7	> 50
MITADER	DINAB - Department of Environmental Management	20	50	3	6 a 10
MITADER	DINAB - Section of Marine and Coastal Environmental Management	7	42	6	8 a 10
MITADER	DINOTER	36	100	3	15 a 20
MITADER	ANAC	1	10	10	30
MITADER	AQUA	8	110	14	9
MITADER	DINAF	7	11 to 20	2 to 3	15
MITADER	DINAT	4	3	***	2 to 5
MOPHRH	DNGRH	2	30	15	15 a 30
MTC	DNEP	1	***	****	5
PGR	Department of Environment	1	*	****	*
<b>Total</b>		145			

\* No statements were requested yet  
 \*\* Does not deal directly with impact assessment  
 \*\*\* Information is not available  
 \*\*\*\* Not applicable

According to the obtained information, it can be seen that some institutions have a considerable number of technicians who deal with the environmental licensing process, such as the case of DINOTER (36) or the Department of Environmental Management of DINAB, that includes the Section of Marine and Coastal Environmental Management (20 technicians in total). On the other hand, institutions such as the Department of Environmental Licensing of DINAB is subject to a greater workload, but has a smaller number of technicians (15). Still within MITADER this is also the case of AQUA, that is an institution which is responsible for the environmental licensing enforcement and that only has 8 technicians at central level who deal with the EIA procedure's enforcement. In other ministries, DNGRH and INAMI are two evident cases where the proportion between the number of the technicians and the processes is very high (15 and 17 projects per technician/year, respectively), meaning that these technicians are subject to more work comparing to other institutions.

The timing for environmental processes' analysis by several institutions is very variable (from 1 to > 50 days). This is normal, because there are institutions that give comments on a very specific

component, but others have to analyze more transversal aspects, or even the whole project as it is the case of DINAB, which, as it was previously mentioned, is responsible for the EIA procedure.

In any way, in this case none of the interviewed institutions had a reliable registration of the time spent per process. Specifically, in the case of DINAB, according to the information obtained, each technician analyzes 6 to 7 projects per year, being spent more than 50 days with each one. The number of days does not necessarily have to be spent by just one technician, but by a team of technicians within each institution.

Although in some institutions the team associated to the environmental licensing may be undersized for the volume of work to which they are subject, as mentioned above, the main problem identified in the interviews consists in the gap of specific knowledge and technical capacity of these teams, especially to assess more complex and recent projects in Mozambique. In fact, analyzing Table 3 and the obtained information in other sections of the inquiry, it could be assumed that if a baseline assessment was done to coordinate the several institutions involved in the environmental licensing, its monitoring and enforcement, it would eventually be possible to optimize the available resources.

#### **4.2.2 Existence of sufficient organization within the institution and between institutions with whom they deal with, for the effective application of the regulatory and administrative component of EIA, MH / NNL of Biodiversity**

A total of 14 institutions (70%) stated that there is sufficient organization within their institution and between institutions with whom they deal with for the effective application of the regulatory and administrative component of EIA. On the other hand, 6 institutions responded that they are not sufficiently organized, due to a lack of coordination with other institutions, as well as insufficient technical capacity. Two cases that were considered relevant were:

- Although ANAC is naturally one of the institutions that has more technicians with training in biodiversity, in relation to the application of EIA regulation it is dependent on the MOZBIO project, which has allocated a specific technician in environmental safeguards for this component. Although the project will end soon, a focal point for the EIA process was not defined internally in ANAC, who could have been trained by the MOZBIO technician. If this situation persists, the MOZBIO project will cease without leaving any trained technician in ANAC to continue with this work.
- A potential limitation at MIREME was identified. There is still not a good articulation between INAMI and DNGM on environmental issues, due to a lack of clarity in the responsibilities and specific limits of the functions each one plays in the environmental licensing process, monitoring and enforcement. This is an important gap, as the mining projects are the most relevant in terms of environmental impacts and on biodiversity, with a considerable number of projects for Mozambique.

Regarding the application of the Mitigation Hierarchy, Biodiversity Offsets and No Net Loss, 19 institutions (95%) said that they are not organized to apply these concepts. This is due to insufficient knowledge and basic principles on these subjects and a lack of specific regulation about Biodiversity Offsets. Only one institution (5%) stated to be organized in a way which allows the effective application of the regulatory and administrative component of EIA (Figure 6).

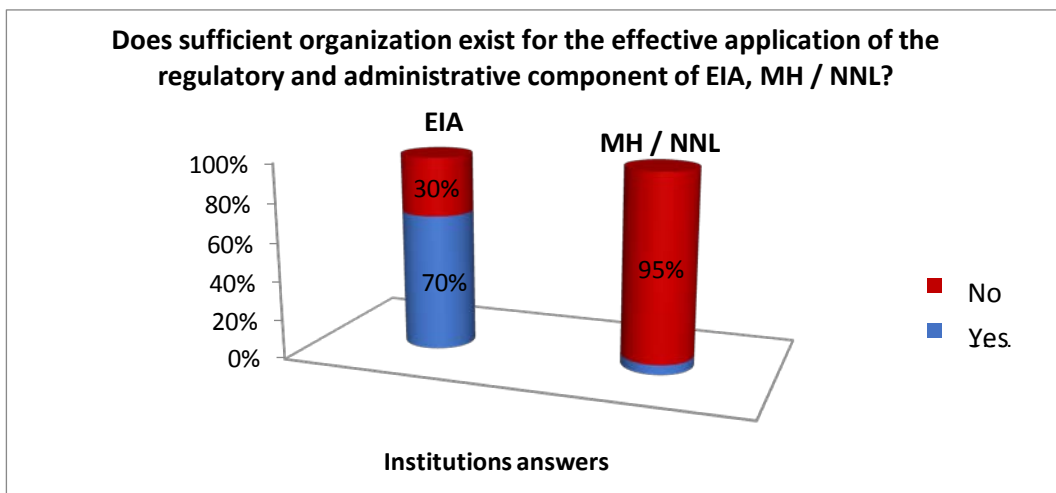


Figure 6. Existence of sufficient organization in the ministry and between ministries that makes possible the effective application of the regulatory and administrative component of the EIA, on the one hand, and the evaluation of the Mitigation Hierarchy and Biodiversity Offsets plans / No Net Loss of Biodiversity, on the other hand.

Due to the identification of knowledge and experience gaps in No Net Loss of Biodiversity and Biodiversity Offsets, as well as some particular needs of each of the institutions, a simple enquiry was made to assess the number of potential trainees and the scope of training per institution, as shown in Table 4.

Table 4. Capacity building needs in the government institutions, related to biodiversity and other environmental subjects.

Institution	N. technicians	Scope of training
ANAC	4	- No Net Loss, Mitigation Hierarchy and Biodiversity Offsets.
AQUA	16 rangers (3 environmental, 5 auditors, 3 for land issues, 1 for land use/planning and 4 for forestry); 8 technicians.	- Law enforcement, assessment of the Mitigation Hierarchy and Biodiversity Offsets; - Training in the English language, interpretation of legal documents.
DINAB – Dep. of Environmental Management	20	- Biodiversity, No Net Loss, Mitigation Hierarchy and Biodiversity Offsets.
DINAB – Section of Marine and Coastal Management	> 6	- Biodiversity, No Net Loss, Mitigation Hierarchy and Biodiversity Offsets. - Environmental impacts on the marine and coastal environments which are subject to the mining and oil & gas activities, etc.; - Legal analysis to identify policy and legal gaps and how legal recommendations can be done to improve the dugong conservation and seagrass habitats.
DINAB – Dep. of Environmental	15	- Environmental Impact Assessment. - Impacts of the diferente types of projects on biodiversity. - No Net Loss, Mitigation Hierarchy and Biodiversity Offsets.

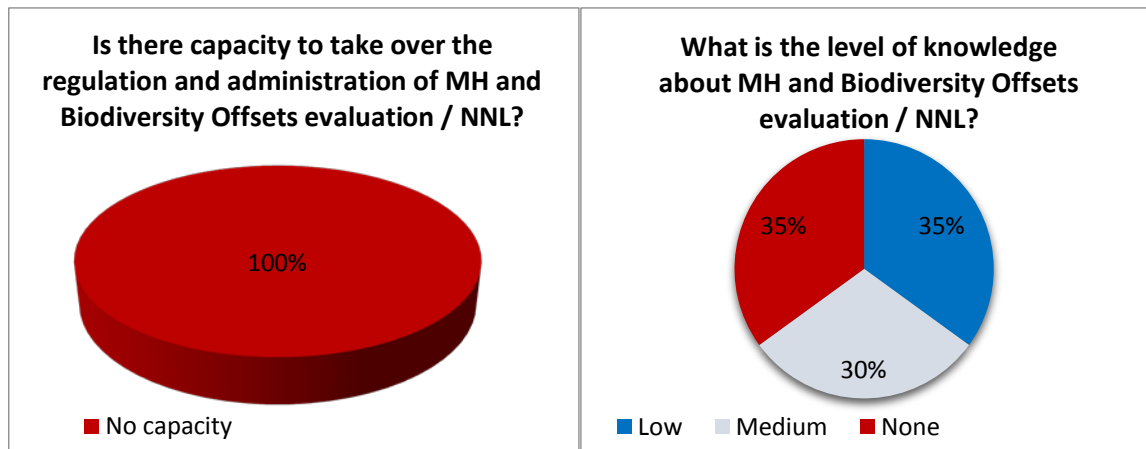
Institution	N. technicians	Scope of training
<b>Licensing</b>		
<b>DINAF</b>	10	- No Net Loss, Mitigation Hierarchy and Biodiversity Offsets.
<b>DINAS</b>	-	- Biodiversity, No Net Loss, Mitigation Hierarchy and Biodiversity Offsets.
<b>DINATUR</b>	3	- Training on Environmental Impact Assessment to the technicians who are involved in the Environmental Licensing.
<b>DINOTER</b>	-	- Environmental contents.
<b>DNEP</b>	4	- Environmental subjects.
<b>DNGM</b>	-	- Biodiversity, No Net Loss, Mitigation Hierarchy and Biodiversity Offsets.
<b>DNGRH</b>	-	- Biodiversity, No Net Loss, Mitigation Hierarchy and Biodiversity Offsets.
<b>DNO</b>	20 a 30	- Identification of species, especially the threatened ones and included in CITES.
<b>DNPO</b>	7 - 12	- Biodiversity, No Net Loss, Mitigation Hierarchy and Biodiversity Offsets.
<b>INAMI</b>	7	- Mitigation Hierarchy, No Net Loss of Biodiversity and Biodiversity Offsets directed to the mining sector.
<b>INP</b>	> 4	- Biodiversity, No Net Loss, Mitigation Hierarchy and Biodiversity Offsets.
<b>PGR</b>	29	- Biodiversity; - Seminars on Environmental issues throughout the country, especially in the Provinces and Districts more problematic.
<b>IIP</b>	5-20	- Biodiversity, No Net Loss, Mitigation Hierarchy and Biodiversity Offsets.
<b>DINAT</b>	-	- Biodiversity, No Net Loss, Mitigation Hierarchy and Biodiversity Offsets.

Being the institution which main focus are environmental issues, DINAB explained the necessity of the government to create a specific regulation on Biodiversity Offsets, since there is a lack of clarity on how these will be implemented. This regulation will allow DINAB and other institutions which deal with environmental issues to obtain the necessary basis for the proper application of this approach to development projects that might affect the environment and biodiversity.

#### 4.2.3 Internal knowledge to assume the regulation and administration of MH and offsets evaluation / NNL of biodiversity.

As illustrated in Figure 7, all institutions (100%) stated that their team which currently works in EIA does not currently have technical capacity to apply the regulations and to administer efficiently and effectively the application of the Mitigation Hierarchy and the Biodiversity Offsets and, consequently, to achieve NNL / NG. This is due to the fact that these subjects are new, and that the technical knowledge is still not sufficient.

These institutions therefore consider that more training in these subjects for their technical staff is necessary, since their level of knowledge regarding the Mitigation Hierarchy, Biodiversity Offsets and NNL / NG is considered low in 7 institutions (35%), medium in other 6 (30%) and inexistent in 7 (35%). Some institutions also identified that they do not have enough people with training in these subjects, or at least in sufficient numbers considering what would be desirable.



**Figure 7. Internal technical capacity and level of knowledge of the current team working in the EIA to take over the regulation and administration of the Mitigation Hierarchy and evaluation of Biodiversity Offsets / No Net Loss of Biodiversity.**

Still about this subject, the following aspects were verified:

- Apart from a small number of institutions, which have a good technical knowledge of environmental impact assessment, the others have considerable base gaps, and there is a need to train institutions with basic knowledge on environmental impact assessment and strategic environmental assessment in activities that are connected to several development sectors.
- There are very few institutions that have regular training activities in environment and biodiversity; this is restricted to those with dedicated technical assistance from foreign institutions (e.g. INP and DNGRH); several of the institutions interviewed only heard about the concept of No Net Loss of Biodiversity through the training provided by COMBO project during its kick-off event.
- Several institutions stated that they need training properly framed and adjusted to their activity areas. For example:
  - INAM identified their need for training on Mitigation Hierarchy, Biodiversity Offsets management plan and No Net Loss directed to the mining sector;
  - The Section of Marine and Coastal Environmental Management from the Environmental Management Department of DINAB needs training on environmental impacts in the marine and coastal areas affected by Oil & Gas, mining, and other activities.
  - DINATUR needs the technical capacity to validate the quality of the projects in relation to their integration into the ecosystem.
- There are also institutions that consider that the fact of having little knowledge in these areas is not determinative, because in the EIA process they are just responsible for analyzing the specific sector for which they are responsible, and other government institutions have responsibility for biodiversity issues.

#### 4.2.4 Technical and scientific capacity of the institutions to support the government on the implementation of a policy on No Net Loss of Biodiversity.

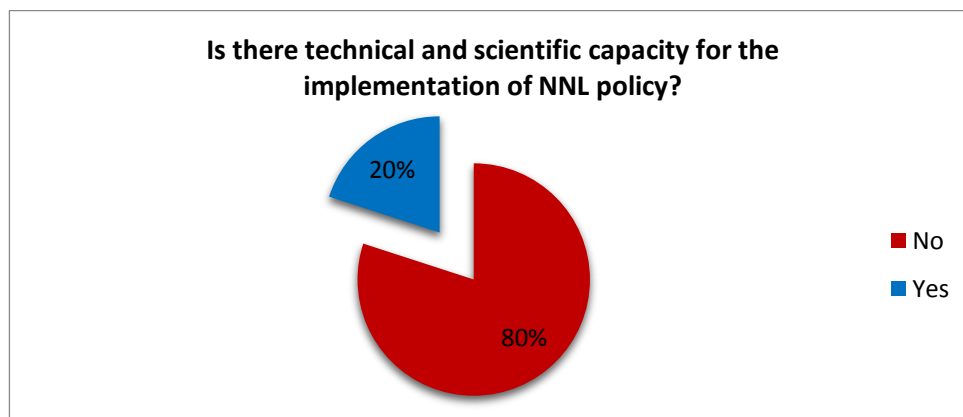
One of the main aspects to support the implementation of a policy on NNL by the Government, is the technical and scientific capacity of the institutions to carry out validations on the field, know how to use geographic information systems, mapping, modelling and developing metrics and exchange rules. The results of the interviews are summarized on Table 5.

**Table 5. Existence of technical capacity (number of technicians) in the institutions to carry out verifications on the field, geographic information systems, mapping, modelling, developing metrics and exchange rules, and the enforcement of environmental impact assessment.**

Institution	Verification on the field	GIS	Mapping	Modelling	Metrics	Enforcement
DINAB - Dep. of Environmental Licensing	8	0	0	0	0	8
DINAB – Department of Environmental Management	11	11	19	0	0	4
DINAB – Section of Marine and Coastal Management	7	7	7	0	0	**
DINOTER	22	7	7	0	0	22
ANAC	1	0	0	2	0	1
AQUA	16	0	0	0	0	150 to 200
DINAF	5	11	0	0	0	15
DINAT	***	10	10	0	0	***
INP	2	0	0	0	0	4
DNGM	*	5	*	0	0	12
INAMI	7	6	6	1	0	7
Department of Environment in PGR	***	***	***	***	***	***
DINATUR	1	0	0	0	0	1
DNGRH	3	3	3	2	0	4
DINAS	30	4	4	2	0	4
DNPO	***	***	***	***	0	***
DNO	**	**	**	**	0	**
DIPOL	***	***	***	***	***	***
IIP	15 to 20	4	4	4	0	***
DNEP	8	3	3	0	0	***
<b>Total</b>	<b>136 to 141</b>	<b>71</b>	<b>63</b>	<b>11</b>	<b>0</b>	<b>232 to 282</b>

\* Annual selection  
\*\* Did not mention  
\*\*\* Not applied

From all the institutions interviewed, 16 (80%) considered that they do not have the necessary technical and scientific capacity to support the implementation of a NNL policy, due to gaps in the number of human resources and their knowledge, as well as the lack of financial resources (Figure 8). For example, regarding the technical and scientific capacity to develop and implement metrics and exchange rules, most institutions stated that they do not have capacity to do it, because even with some basic theoretical knowledge, they do not have practical experience.



**Figure 8. Technical and scientific capacity needed to support the implementation of No Net Loss of Biodiversity policy, in the institutions.**

Only 4 institutions (20%) stated that overall, they have adequate technical and scientific capacity (Figure 8), of which only half have the capacity to carry out validations on the field, with the support of partners to fill in other areas.

The insufficient specific knowledge is the main limiting factor for the institutions, as well as the lack of means to proceed with law enforcement. Some examples are giving bellow:

- ANAC has technicians with basic training in biodiversity, but these are not properly trained on No Net Loss of Biodiversity.
- Although the Department of Environment in PGR has a great interest in supporting the environmental issues, there are some obstacles that prevent it. Internally, for example, there is a need for training and awareness among a large number of prosecutors, mainly at provincial and district level, as environmental issues are a new subject for them.
- As an institution dealing with land use planning, it was identified that DINOTER has a lack of means and internal conditions to carry out its activities, being dependent on the partners or institutions' financial and technical support.
- AQUA is an institution whose role is to carry out the law enforcement and undertake environmental quality control. However, the institution is new and does not have the necessary capabilities and means to develop its activities. Being an institution with this type of responsibilities, it needs to be equipped with means, equipment, technical and scientific capacity in terms of quality and quantity, as well as other operational conditions to carry out its role.
- DNPO from MEF is responsible to allocate the necessary budget to the programs and subprograms associated with the Government five-year plan. For example, although biodiversity could be considered a sub-program in the government's annual budget, it still is not, being considered only as a line. In order for the budget plan to include biodiversity as a

sub-program, DNPO would need to receive more training in this area so that it could gain the necessary knowledge to include biodiversity in the annual budgets.

#### 4.2.5 Development of partnerships with other entities

To fill in the gaps regarding the technical and scientific capacity of its ministries, 19 institutions (95%) have developed partnerships with research institutes, NGOs, consulting firms, specialists and/or others, for technical and financial support (Figure 9). Only one institution (5%) indicated that it did not have partnerships established. This aspect seems to be related with its internal strategy associated to the environmental issues.

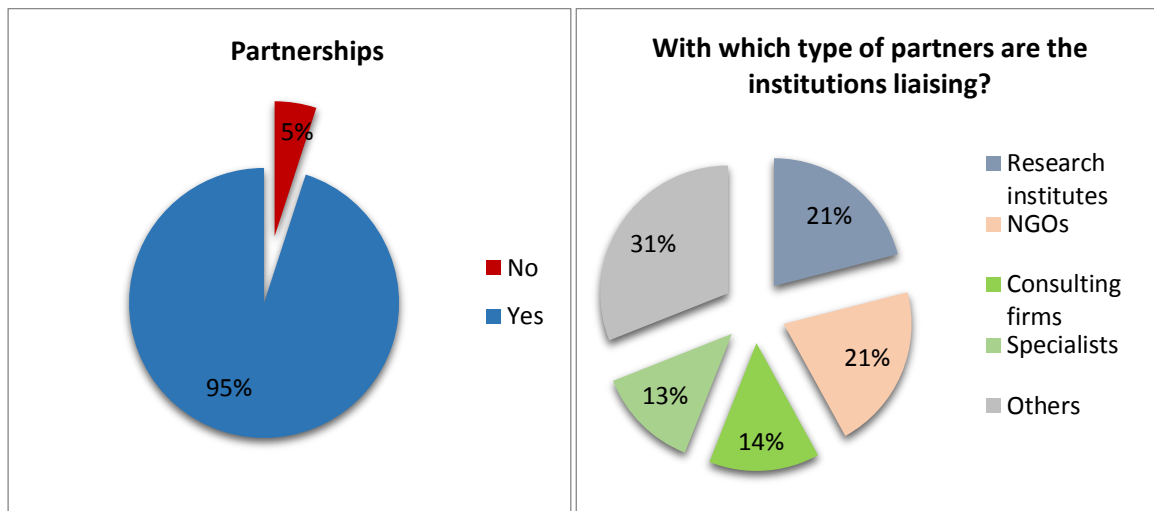


Figure 9. Involvement of partners to support institutions.

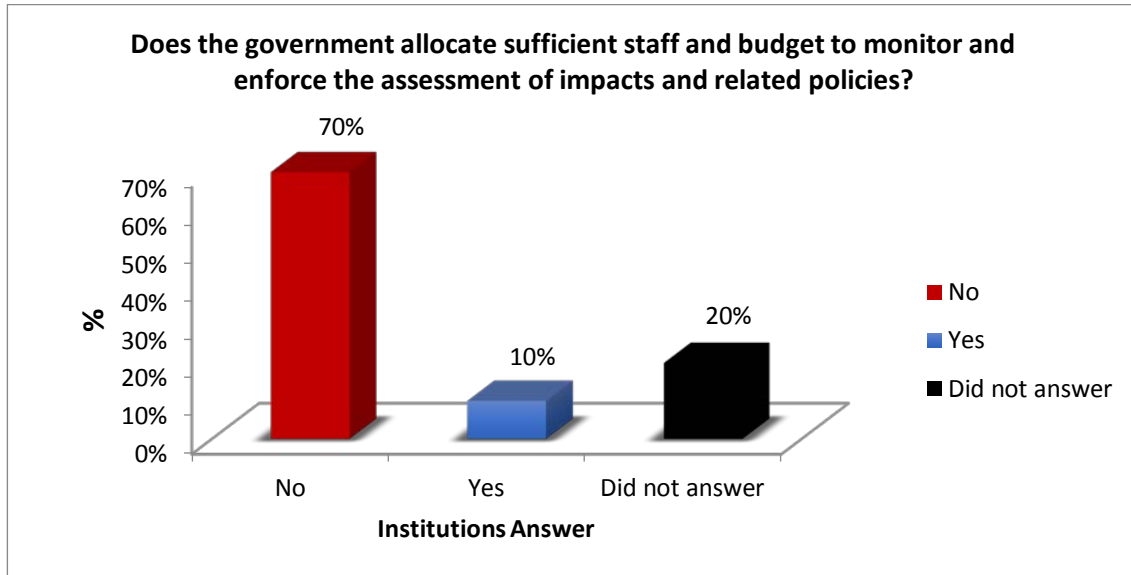
From the institutions that develop partnerships, most of them, 16 (42%) do it with research institutes and NGOs and 18 (31%) with multi and bilateral institutions (e.g. World Bank) or specific projects. On the other hand, 9 institutions (27%) have partnerships with consulting firms and specialists. The small number of institutions with this type of partnership is due to the fact that the majority has shortage of funds to pay for possible services provided (Figure 9); in some cases, this support is given in a *pro bono* basis.

There are institutions that favor the establishment of partnerships for technical and financial support, which, due to their quantity and potential quality, could have already translated into more favorable results within the Government institutions; at least regarding the increase of their capacity in the application of the Mitigation Hierarchy and No Net Loss of Biodiversity. Some of the institutions with the most active established partnerships are DINAS, ANAC, DINAB, DINOTER, DNPO, INP, and IIP.

#### 4.2.6 Allocation of sufficient budget and team by the government to monitoring and strengthen the enforcement of environmental impact assessment and related policies.

In total, 14 (70%) of the institutions for which the question was applicable responded negatively, stating the insufficiency of both human resources and budget to strengthen the enforcement of environmental impact assessment and related policies (Figure 10). Only two of the institutions (10%)

answered positively, but one argued that there is still a shortage of human resources and the other states that the budget is limited (Figure 10).



**Figure 10. Institutions answer to the issue whether the government adequately allocates sufficient budget and team to monitor and strengthen the monitoring of impact assessment and related policies.**

Some of the justifications that have been mentioned most often or that are considered most relevant are:

- There is still a lack of sensitivity to the environmental issues, and it is necessary to increase and improve the training and awareness among government and leaders;
- There does not appear to be a defined strategy and plan among the several institutions and activity sectors to address in an integrated way the monitoring and enforcement, including Environmental Management Plans (EMPs), to optimize the available means and human resources;
- There are communication and coordination gaps between the institutions, and the teams and operations are not optimized, which could maximize the limited financial resources available;
- Monitoring and enforcement are weak, and besides that the national law is still very soft. The punishments are not much severe, making offenders not intimidated;
- Negligence in the follow-up of the measures recommended in the Environmental Management Plans by the proponents, due to the weak monitoring and control operations. Is it necessary to identify the reasons for the deficiency of these operations (lack of financial means, poor coordination, lack of commitment, etc.);
- There are human resources that are not trained or do not have the necessary physical capabilities for the performance of enforcement;
- Lack of equipment and/or the required budget to move the technicians to the site and keep them there during the monitoring mission period;
- There is not enough technical capacity and even more serious, is the deficiency of commitment on this aspect in different government institutions due to high dependence of external consultants.
- There are cases of lack of articulation between the prosecutors at national, provincial and district levels; one of the main reasons is the lack of resources;

- The bureaucracy of the procurement process is not adapted to the law enforcement activities, whose effectiveness depends on the surprise effect and dynamics of the teams, adapting to the circumstances found in each mission.
- There is a lack of awareness of the rangers' role value, and there are many opportunities for dishonesty;
- There is a trend to null the ranger's activities by the hierarchy, who are very vulnerable to intimidation. Hierarchical supremacy should not have the authority to null the fine, and such a function should belong only to the courts. The solution would be to guarantee the exercise of the function and validity of the decision, as it happens in the sentences;
- The statute of the environmental ranger is still to be published; this is an essential tool to help solve some of the problems mentioned above.

#### 4.2.7 Results of the coordination analysis

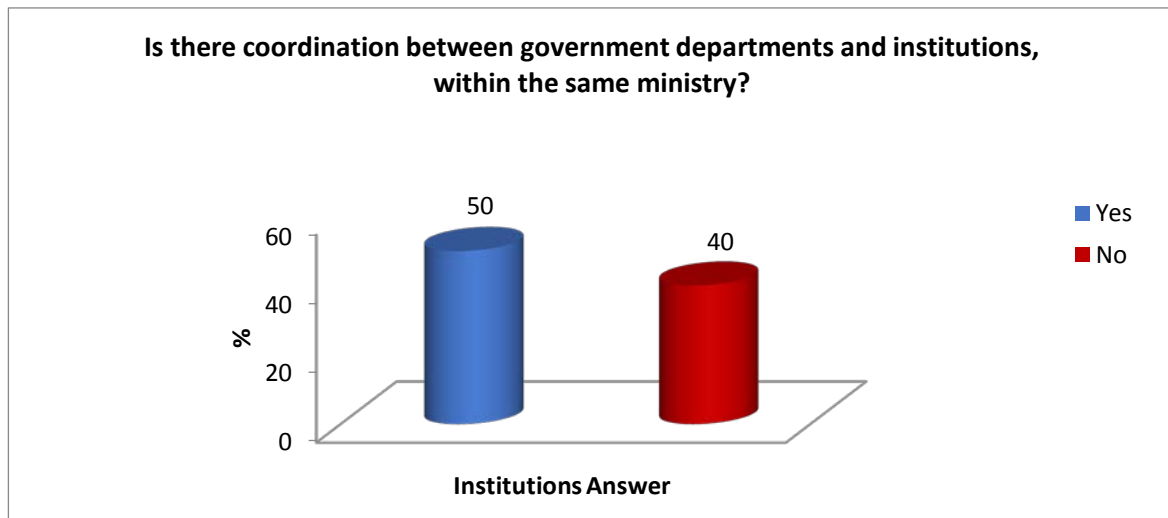
To determine if the government institutions and their respective departments which deal with EIA, Mitigation Hierarchy and NNL / NG of biodiversity are properly coordinated to allow the procedures to be clear, consistent and simplified for the project proponents, the issue was addressed in two ways. First, at the level of coordination between each institution and its homologues at the provincial and district levels. Secondly, between the institutions of different ministries. The summary of the information obtained for each of these analyses and the consolidated results are presented below.

##### 4.2.7.1 Coordination between departments and institutions at central, provincial and district levels within the same ministry, in the environmental area.

With regard to the EIA policies, procedures and other related environmental issues, coordination among the various departments and institutions at the central, provincial and district levels within the ministry is a key procedure.

According to the interviews, 12 institutions (60%) answered that they were coordinated with each other. However, it has been mostly stated that coordination is still not completely adequate and effective. The coordination system needs to be strengthened as there are cases where processes take place at the provincial and district levels without the knowledge of the central level. It was also pointed out the lack of conditions namely, means, equipment and training of the leaders and rangers so that coordination is adequate.

On the other hand, 8 institutions (40%) considered that there is in fact no coordination between departments and institutions at central, provincial and district levels within their ministry (Figure 11).



**Figure 11. Coordination between the departments and institutions of the same ministry at different levels (National, Provincial and District) on procedures related to environmental issues.**

The most relevant aspects raised by the institutions that did not consider that coordination existed were:

- There are situations where the categorization of projects subject to EIA at the provincial level is not carried out exactly according to the regulation 54/2015 due to the lack of effective communication between the DPTADERS and DINAB's environmental licensing department;
- AQUA is already the institution responsible for environmental impacts' enforcement, but at the provincial level this function is still undertaken by other institutions due to the lack of resources of AQUA;
- Within MITADER there is still little articulation between AQUA and other institutions;
- The articulation between INAMI and DNGM (MIREME) is fragile, due to the lack of clarity about the roles that each one play at the environmental level.
- In the case of the MIMAIP, being a new Ministry, the structures are still being created so that an effective coordination among its institutions at the national, provincial and district levels is achieved.

Analyzing the answers in detail, it is assumed that from the institutions that answered positively to the previous question, at least some of them will not actually be coordinated effectively. For example:

- At the PGR level, the Department of Environment has a national staff mainly focused on biodiversity issues, and a group of 29 "conservationist" prosecutors, allocated to districts of the country where there are conservation areas with high intensity of wildlife crime. However, at the provincial level there are still no trained prosecutors on biodiversity issues. Because they do not have the same level of knowledge and sensitivity to issues associated with the environment and biodiversity, there is a gap between the Department of the Environment and the provincial prosecutors, and another gap between them and the district prosecutors. The training of prosecutors at the provincial level is thus a priority in order to solve this issue;
- It has also been identified that in the case of projects associated to water resources, there are processes that happen at the provincial and district levels that are not known by DNGRH at the central level, which can result in gaps regarding environmental issues;

- As regards MIMAIP, which is a recent Ministry, a structure has already been defined in terms of organization, but there is not yet adequate coordination due to lack of conditions, for example: i) some of the provincial and district structures are not yet created; ii) regarding law enforcement, there are not yet any means, equipment and guidelines for identifying species so that enforcement activities can be carried out in a coordinated manner; iii) the enforcement activity is decentralized in the districts, and in legal terms, for now, it is the SDAE that has the fisheries rangers. There is a lack of sensitivity of these rangers to biodiversity issues, since in addition to the lack of means, they do not have adequate capacity to carry out their roles, being essentially aware of agriculture and not fisheries.

As a way of improving coordination and avoiding the referred problems, these institutions have appointed solutions, such as:

- Impose, through the leaders, a link between internal and external institutions, namely between the various institutions of each ministry and between the different ministries;
  - Implement a clear procedure which makes mandatory the prior communication of DPTADERS to DINAB, on the decision to categorize a particular project, in order to avoid its wrong categorization;
  - Provide the necessary conditions for AQUA to work adequately;
  - Clarify the procedures and regulate the coordination between AQUA and the other institutions regarding the monitoring and enforcement components;
  - Clarify the roles and responsibilities of DNGM and INAMI on the environmental issues associated to the mining sector, determining the responsibilities that each one has on the environmental issues, avoiding overlap and duplication of roles.
  - Establish provincial and district structures within the MIMAIP, as well as the Research Centres and Research Stations of the IIP, and give adequate capacity to the rangers by receiving training from other institutions and partners and increase coordination with the other institutions involved in environmental enforcement.
- Coordination of national plans with those at local level

Regarding the coordination between national plans and local land use planning, Figure 12 shows that 4 institutions (20%) answered that the coordination does not exist. For example, AQUA has argued that it does not yet have the necessary capacities to carry out its role and the PGR due to the widespread lack of sensitivity and knowledge regarding environmental issues by lawmakers, including prosecutors and judges. On the other hand, 16 institutions (80%) stated that there is such coordination, but not in a comprehensive way because there are several weaknesses. Some examples are:

- Sometimes the inertia of the technicians can lead to delays in the issuing of comments and sharing of information;
- The new ministries and institutions are still in the process of establishing structures at the provincial and district levels;
- There have been challenges to publish the land use plans and Strategic Environmental Assessments (SEAs), such as the Zambezi Valley Spatial Plan (PEOT) and the Coastal SEA, as a tool to support decision making.

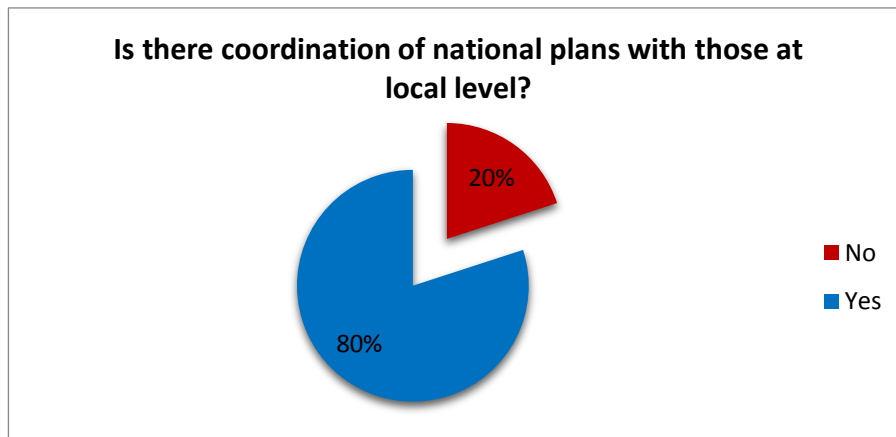


Figure 12. Coordination between national land use plans and local land use planning.

#### 4.2.7.2 Coordination between departments and institutions of different ministries, in the environmental area

The other approach was to assess the coordination of the departments and government institutions of different ministries, which are relevant to the environmental licensing and planning. A total of 15 institutions (75%) stated that there is coordination (Figure 13), however, several technical weaknesses were identified, such as:

- The delay to provide comments;
- The lack of technical knowledge of the elements that comprise the Technical Assessment Committees (CTA) of the EIA<sup>1</sup> with the exception of DINAB, which has the necessary technical capacity to deal with the environmental issues;
- The lack of commitment and inappropriate allocation of human resources within the different ministries and their respective institutions;
- The lack of capacity building and knowledge of leaders regarding issues related to the environment;
- The lack of digital platforms to share information;
- There have been ministries that have been recently created and have new responsibilities with regard to environmental issues, such as the MIMAIP, so formal coordination mechanisms are not yet established;
- The lack of structured and reasoned awareness of MITADER regarding environmental issues to other institutions.

A positive aspect mentioned by several institutions is the current existence of inter-ministerial teams, which are set up to discuss several issues in order to decide on the approval of the documents in a harmonized way, in particular the CTA in the case of the EIA process. It was also pointed out that inter-ministerial coordination has been improving over the last few years, particularly regarding megaprojects. The role of the National Council for Sustainable Development (CONDES) in the past has also been highlighted, as it is made up of several institutions from different ministries, allowing the sharing of information and coordination on the most relevant environmental issues. It was recommended that this should continue in the future, although CONDES is now partly inactive.

<sup>1</sup> The Technical Assessment Committees for Environmental Impact Assessment are comprised of technicians from any institutions considered relevant by DINAB to the environmental assessment of a specific project.

On the other hand, four institutions (20%) answered that there is no coordination between institutions of different ministries (Figure 13). The main causes are:

- The existence of too much bureaucracy;
- The lack of properly trained financial and human resources;
- The need to clarify the roles of each institution in relation to environmental issues;
- The need to strengthen oversight to ensure the implementation of laws;
- The lack of willingness or interest in collaboration;
- Fear of exposure (institutional or personal) and of positions that may be considered unconstitutional, in this specific case regarding the lack of coordination with the Attorney General's Office.
- The process of information and data sharing, despite its existence, is bureaucratic and time-consuming among governmental institutions, and is still weak with the department of environment of the Attorney General's Office;
- The procedures relating to the interaction between the EIA regulation and the environmental regulation of mining operations have some gaps, causing problems with both in the start phase of the process and in the monitoring and enforcement phase;
- The coordination between DINAB and INP at the level of the EIA procedure has some points that are not yet adequately consensual;
- Coordination gaps between the Investment Promotion Center (CPI, currently APIEX) and DINAB, regarding clear information on the need for environmental licensing of some projects that enter DINAB via APIEX;
- Lack of coordination between the Single Service Counters (BAU) and DINAB / DPTADER regarding information to users about the need for environmental licensing for projects / activities;
- There is still little articulation, in some cases inexistent, between the institutions interviewed and AQUA for the monitoring and enforcement component, lacking clarity of procedures and how institutions should collaborate in this component.

In the specific case of the project monitoring and enforcement process, 15 of the institutions interviewed (88%) identified participating in the process, and 8 (53%) considered that they are either not coordinated with the AQUA or that the coordination is still weak. Of these 8 institutions, half belong to MITADER and the other half belong to other ministries. Only one institution (5%) did not respond to the question, since it does not deal with the EIA processes (Figure 13).

As a way of improving coordination and avoiding the problems above-mentioned, the institutions have indicated solutions, such as:

- Development of platforms to share information and data efficiently and effectively at government level;
- Alignment of the EIA decree and the environmental regulation of oil operations so that the first is applied transversally for all projects;
- Interaction between the APIEX and DINAB to clarify the needed procedures for the approval of development projects and agree among themselves on the procedure that project the proponents subject to EIA need to follow, clarifying them on the subject and informing them that independently on the previous approval given by APIEX, the final project approval is dependent on obtaining an environmental license in the cases where the law considers it mandatory;
- Clarify the procedures regarding the link between AQUA and the other institutions.

Also regarding the inter-institutional coordination, the environmental department of the Attorney General's Office (PGR) pointed out the advantage of its involvement in the environmental licensing

process, stating that it is available to be consulted by MITADER, in order to pronounce itself on the licensing phase of activities. The justification pointed out is that sometimes there are projects that are more legally demanding, given their complexity, so in these cases the PGR can work as a legal advisor to the Mozambican government, giving its comments at a previous stage, thus avoiding potential conflicts in the future. For example, if a project is "inadequately" licensed, this can lead to the opening of a case against the State, compromising the image of the country. It was pointed out that, sometimes, civil society rightly claims that there were oversights in the environmental licensing phase, essentially because of the lack of analysis of the legality of the decision. The involvement of the PGR could be eventually useful in the processes of category A+ and A because these comprise the mega projects with specificities and with impacts which occur at a national scale. It will be necessary to analyze how the PGR can intervene in environmental issues, and identify the gaps regarding the prosecutors capacity.

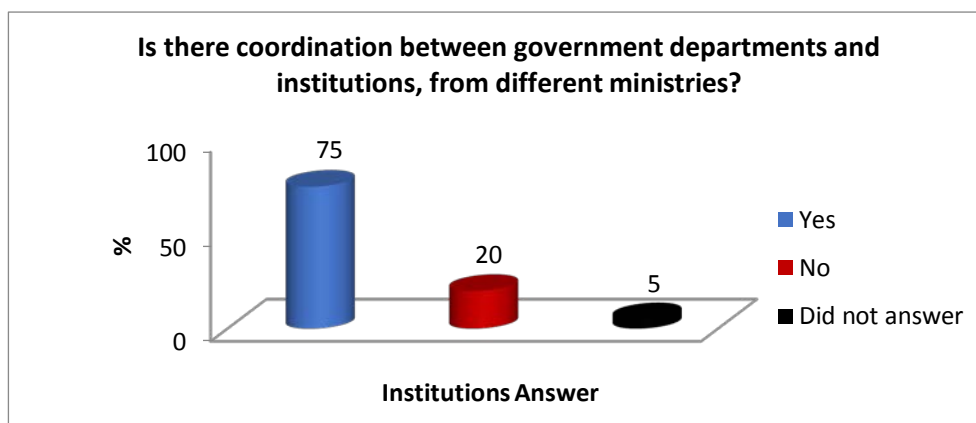


Figure 13. Existence of coordination between the departments and institutions of different ministries.

- Information and data exchange between different ministries.

Regarding the information and data exchange between the different ministries, 18 institutions (90%) stated that it exists (Figure 14). However, some institutions have mentioned several constraints, namely:

- Occurrence of delays to provide information;
- Sometimes the data is not made available in the form and content required;
- The information exchange is easier through informal means, because following the formal route the process is bureaucratic;
- There is a need to create a database system to facilitate access to information.

On the other hand, two institutions (10%) stated that there is no effective information and data exchange between ministries (Figure 14). One of the reasons pointed out is that the information and data exchange occurs essentially when there is a legal obligation to have an ongoing process rather than being proactively carried out. Another reason is the fact that some institutions are recent, and the necessary and agreed structures and procedures for the exchange of information do not yet exist.

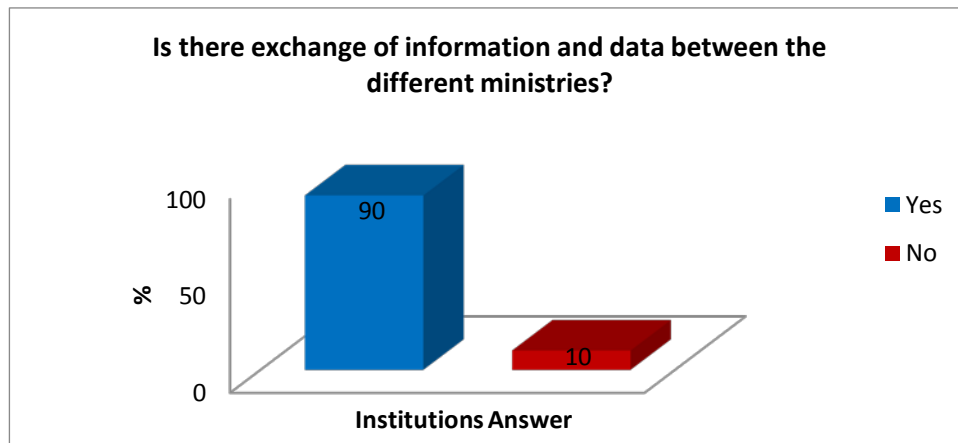


Figure 14. The institutions answer to the exchange of information and data between the different ministries.

- Agreed procedures for reviewing permit applications under several regulations or policies

Concerning the procedures agreed to review license applications subject to several regulations or policies, 16 institutions (80%) answered positively (Figure 15), indicating that, in general, existing procedures allow coordination between different institutions for the application of the regulations. Some of these have given specific examples of this coordination:

- The extension of deadlines for delivery of the requirements so that the processes are completed with all the required information;
- The obligation of the environmental license as a requirement for the authorization of the activity of the projects;
- The existence of institutional and inter-ministerial groups, which means that the institutions coordinate themselves in order to contribute to the harmonization of their relations.

However, several shortcomings were identified, namely:

- In the case of coordination between INAMI and DINAB, the procedures are not sufficiently clear and harmonized between the regulations; there is the need to distinguish the necessary documents for obtaining the mining title and the environmental license (in this case the EMP): any entity that wishes to obtain a mining title must submit to INAMI a mining plan which, in turn, includes an Environmental Management Plan. After obtaining the mining concession, it is necessary to obtain the environmental license, which is awarded by DINAB through the development of an EIA that includes a specific EMP, properly adjusted to the reality of the impacts identified and the necessary mitigation measures. It was argued that after the approval and attribution of the environmental license by DINAB, this institution only sends to INAMI the environmental license, but without the associated documents, namely the final EIA and the respective EMP, which is fundamental to the monitoring and enforcement activities carried out by INAMI. Often INAMI is guided by the EMP that was initially delivered by the proponent when obtaining the mining title, that is, carried out before the EIA was prepared;
- Coordination gaps between APIEX and MITADER for the approval of environmental licenses to the development projects approved by APIEX. The developers of investment projects receive a pre-approval by APIEX, and this makes them think that they are exempt of requiring and environmental license or that the pre-approval gives them a guarantee of obtaining that license;
- Lack of coordination between DINAB / DPTADER and BAU: BAU is one of the mechanisms created by the government to make the licensing process simpler and less bureaucratic.

Although BAU has delegations throughout the country, these are not properly coordinated with the environmental sector, so there have been cases of activities licensed by BAU without compliance with all environmental requirements. The suggestion is to create a "focal point" in each BAU delegation for environmental issues that is properly coordinated with MITADER in order to avoid such problems.

A total of 4 institutions (20%) answered negatively to the previous question (Figure 15), considering that there are no agreed procedures to review licensing applications under various regulations or policies, claiming the need to simplify processes. It was also pointed out that sometimes the issue is not the regulations, but rather the role of leaders, which should create the procedures and conditions for the correct application of the regulations.



Figure 15. Existence of agreed procedures to review permit applications under various regulations or policies.

#### 4.2.7.3 Coordination between different government departments and institutions so that developers and others potentially affected by the EIA and/or related policies have access to clear and consistent procedures such there is no conflict regarding land titles and resources

A total of 15 institutions (75%) stated that there is coordination between different government departments and institutions so that developers and other potential affected by the EIA and related policies have access to clear, consistent and simplified procedures without conflicts with land titles and resources (Figure 16). However, it has been identified by several of these institutions that although the procedures are clear, there are problems such as:

- The lack of alignment of the EIA regulation and the environmental regulation of *Oil & Gas* operations, which has led to procedural and administrative problems;
- There is a need to revise the environmental regulation of the mining sector (2004), as it is old and there is a large time gap in relation to the new mining law (2015), which is detrimental both to the proponents and to the technicians involved in the process;
- The land is owned by the State and only Land Use Rights (DUAT) are granted, so there may be proponents who complain that the processes are time consuming, since they do not know the regulation of the land law;
- The need to review procedures to make land law and its regulations simpler;
- Lack of outreach of procedures to developers, as well as the time necessary to carry out the several stages of the process. Although there are agreed procedures for the licensing of projects and plans, some developers may find them bureaucratic and fragmented.

On the other hand, four institutions (20%) stated that there is no coordination, and it was pointed out that the licensing in general is very controversial and that the procedures are not clear either for those who intend to license a project / activity or for who need to do law enforcement (Figure 16). For example, the case of environmental management, forest management and land management plans which are considered to be very complicated, requiring almost a guide to their interpretation. The need to improve coordination among MITADER's institutions was identified as a means to harmonize these plans. Only one institution (5%) did not respond to this question because it does not deal with the EIA processes (Figure 16).

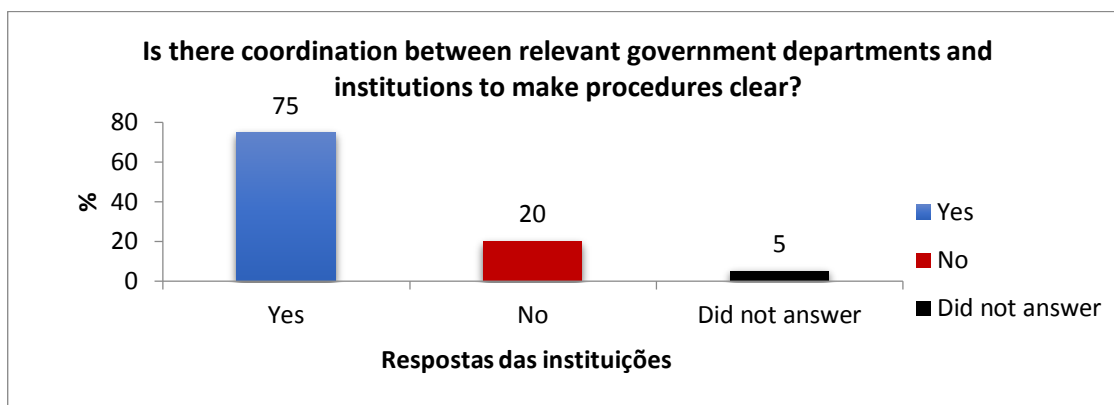


Figure 16. Coordination between relevant government departments and institutions to make procedures clear, consistent and streamlined, with no potential to create conflicts over resources and land titles.

### 4.3 Part III. Workshop to analyse and validate the obtained results and improve the gap analysis

#### 4.3.1 Workshop participants

Table 6 show the sectors in the event, the number and name of institutions by sector, as well as the number of participants.

Table 6. List of institutions and number of participants of the sectors present in the workshop and TAB meeting.

Sector	No. of institutions	Name of Institutions	No. of participants
Academy / Research	4	IIAM	1
		UEM - DCB	1
		UEM – FAEF	1
		UP	1
Specialist	1	Consultant	1
Government	21	ANE	1
		APIEX	2
		ENH	1
		MASA – DINAS	1
		MICULTUR	1

Sector	No. of institutions	Name of Institutions	No. of participants		
		MIMAIP - DIPOL	1		
		MIMAIP – IIP	1		
		MIREME – DNGM	1		
		MIREME – INAMI	1		
		MIREME – INP	1		
		MITADER – ANAC	1		
		MITADER – AQUA	2		
		MITADER – DINAB	5		
		MITADER – DINAF	2		
		MITADER – DINAT	1		
		MITADER – DINOTER	1		
				MITADER – DPC	1
				MITADER – FNDS	1
MOPHRH - DNGRH	1				
MTC – DNEP	1				
PGR	1				
Bilateral Institution	3	Cooperação Italiana	1		
		PROSPEX/EU	1		
		USAID	1		
NGO	4	BIOFUND	4		
		CTV	1		
		WCS	1		
		WWF	2		
Projects	5	CONNECT – DINAB	1		
		SECOSUD II/BIONOMO	1		
		SPEED+	1		
		UNEP –WCMC	3		
		WCS – COMBO	2		
Private sector	7	CTA – Terra e Ambiente	1		
		ENI East Africa	1		
		ERM	1		
		Green Resources	1		
		IMPACTO	2		
		PORTUCEL	1		
		SHELL	1		
<b>Total</b>	<b>45</b>		<b>60</b>		

Figure 17 shows the percentage of institutions and participants by sector. It was verified that, of a total of 45 institutions, the largest representativeness was affiliated to the government, represented by 21 institutions (47%). The private sector was represented by 7 institutions (15%).

Regarding the number of participants per sector, the government presented a larger number: 22 (41%).

As for the number of participants per institution, the National Directorate for Environment (DINAB) of the Ministry of Land, Environment and Rural Development was represented by the largest number of participants (5).

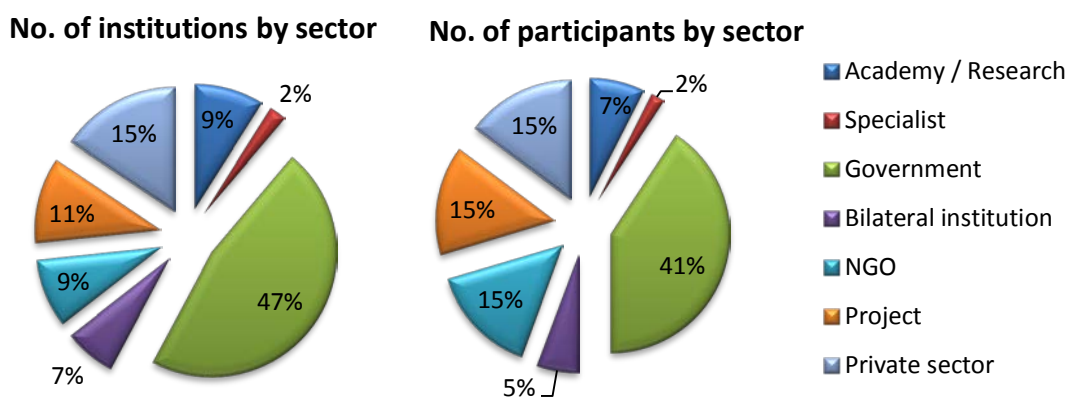


Figure 17. Number of institutions and participants by sectors that were present at the event.

#### 4.3.2 Workshop inputs

As shown in Figure 18, Naseeba Sidat from COMBO project presented the Gap Analysis regarding the capacity and experience of government institutions which deals to environmental issues. Representing the company IMPACTO, the institution author of the study in coordination with COMBO project, Dr. Hugo Costa, presented the gap analysis on the revision of policy and laws as well as other stakeholders, to achieve No Net Loss (or Net Gain) of Biodiversity in Mozambique.



Figure 18. Presentations of the Gap Analysis on Policy, Laws, Capacity and Experience, to deliver No Net Loss (or Net Gain) (NNL/NG) of Biodiversity in Mozambique.

After the presentations, some participants have presented their contributions. Afterwards, they were organized by working groups (Figure 19) to answer two questions regarding both gap analysis:

- Question 1. – Did they agree with the identified gaps? Justify.

- **Question 2 – Which other gaps and/or recommendations are considered important to be registered?**



**Figure 19. One participant presenting his contribution (left) and working groups to discuss the questions after the presentations of the gap analysis (right).**

All groups were unanimous in agreeing on the identified gaps. Some additional gaps that were not identified during the revisions were pointed out, such as:

- Necessity to update legislation, to keep up with development;
- Lack of ecosystem services analysis;
- It is necessary to develop a study about the impacts on the Exclusive Economic Zone;
- Assessment on the effectiveness of the Protected Areas' Management Plans and their harmonization with other environmental aspects, to ensure inclusion of specific issues on the projects' requirements for environmental impact assessment in conservation areas and their buffer zones, in order to improve biodiversity conservation.

## 5 Conclusions

### 5.1 Legal framework on No Net Loss or Net Gain and Biodiversity Offsets

- Decree 54/2015 Regulation on the Environmental Impact Assessment procedure creates the first legal basis for the adequate application of the Mitigation Hierarchy and introduces the concept of Biodiversity Offsets in the environmental licensing of development activities.
- Provisions that demand for NNL/NG inside Conservation Areas are included in the Law 16/2014 on the Protection, Conservation and Sustainable Use of Biological Diversity, as amended by Law 5/2017.
- The remaining legal framework in Mozambique does not contain specific provisions requiring NNL/NG, compliance with the Mitigation Hierarchy and Biodiversity Offsets.
- Environmental legislation, specifically the Environmental Law, Law 20/97 and the EIA Decree 54/2015 are binding to all development activities. The Conservation Law, Law 16/2014, amended

by Law 5/2017, is also binding to all development activities, with emphasis on Conservation Areas and its buffer zones.

- Sectorial legislation already requires developers to comply with environmental legislation. The linkage of the decrees mentioned above (as well as the other decrees) to the need to comply with environmental and conservation legislation, opens space for the fulfilment of the Mitigation Hierarchy, Biodiversity Offsets and achieving NNL/NG.

## 5.2 Environmental licensing

- Problems of coordination between the national, provincial and district levels were detected for environmental licensing, with emphasis on the first two.
- There is no simple, efficient and effective platform for sharing information and data. The process of exchanging information and data seems to be bureaucratic and time-consuming at the central and provincial levels within several MITADER institutions.
- Given the creation of new Ministries with new responsibilities for environmental issues, such as MIMAIP, formal coordination mechanisms are not yet in place.
- The importance of the environmental department of the Attorneys General Office in the process of EIA was identified. However there is a need to identify how this can intervene in environmental licensing and related issues.
- An effective coordination between APIEX and MITADER on the approval of projects is needed, so that the required procedure by the regulations to obtain the environmental license is fully complied with.
- BAU is an important platform, since it is a one stop shop where citizens can find all the information they need to create a business. However, there seems to have been no effective coordination between this institution, DINAB and DPTADER
- There appears to be a lack of strategy / planning and capacity for the adequate monitoring and enforcement of the licensed activities, including the EMPs.
- There is some turnover of technicians inside and between institutions, which often means that the acquired knowledge is lost in the institutions from which the technicians leave.
- Although there are agreed procedures for the licensing of projects and plans, some developers may find them bureaucratic and fragmented. There seems to be some lack of clarity about some procedures and time frame required for the environmental licensing steps.

## 5.3 Sectoral regulations

- A lack of alignment between the EIA regulation and the environmental regulation of Oil & Gas operations has been identified, leading to situations of disagreement between INP and DINAB and project developers, which cause delays in the processes.
- The procedures between INAMI and DINAB are not sufficiently clear in relation to the Environmental Management Plan. There is the need to distinguish the EMP that is necessary to obtain the mining title between the one needed to obtain the environmental license.
- The institutions recommended that the conditions for the effective implementation of sectorial regulations are established, for example: (i) the creation of mechanisms of coordination; (ii) supply of equipment; (iii) improvement of training of technicians and increase its number; (iv) resolution of the problem of transfer of technicians inside and between institutions, which

should be duly anticipated, promoting the training of several technicians within the same institution on environmental and biodiversity issues.

- Some institutions whose main focus is not the environment, feel the need to have a specific department for environmental issues, in order to improve their capacity in this area.

## 5.4 Monitoring and enforcement

In the monitoring and enforcement component, two main situations were verified, each with some peculiarities:

i. The first is the lack of means, which are usually financial:

- Sometimes the number of staff is enough within the institutions, the problem is the available budget;
- Budgetary gaps in enforcement issues, in particular at the level of financial compensation to rangers, contribute to the occurrence of corruption.
- There is also a trend for the rangers to see their decisions annulled by the hierarchy, since they are not given guarantees of the exercise of the role and validity of their decisions. For example, hierarchical supremacy can annul a decision, without recourse to the courts.
- There are other cases in which there are not enough technicians in the institutions considering the type of monitoring and enforcement that have to be carried out.
- In any case, there are major gaps in training and awareness of the rangers, and there is often no awareness of the value of their role. The current absence of the rangers' statute seems to contribute to this.
- There are institutions that consider that it is not their responsibility to comment on biodiversity issues, being restricted to matters directly related to their activity, even if this depends on the good status of biodiversity.

ii. The second is the lack of clarification of roles and coordination:

- On the one hand, there still seems to be a lack of a clear and coordinated strategy between Ministries for monitoring and enforcement of environmental licenses, as well as the respective action plans;
- A government agency (AQUA), responsible for the law enforcement of the environmental licenses, is now in place, and there is not yet a complete clarification of the division/coordination of roles between this institution and the other sectorial institutions;
- On the other hand, there is a lack of coordination between the several institutions and AQUA. While some of them claim to be part of joint enforcement teams, being called by AQUA to join them, others have never been so.
- There are also some cases of lack of clarity between the roles of institutions within the same ministry or of different ministries, but with similar attributions.

## 5.5 Spatial and Land use Planning

- It was stated that, regularly, the information and data do not exist in the format that it is intended for the land use planning, something which negatively affects the work of DINOTER.

- There are challenges in disseminating land use plans and strategic environmental assessments between government officials and technicians as a tool to support decision-making (two examples are the PEOT for the Zambezi Valley and the SEA for the coastline).

## 5.6 Coordination

In addition to some of the aspects covered by the previous topics that also relate to coordination, the following were identified:

- The general observation is that the institutions interviewed that deal directly with the EIA and biodiversity procedures, such as DINAB, AQUA and ANAC, or that have a lot of interaction with these processes, such as institutions in the extractive sector, consider that there are in fact several coordination gaps. Institutions that are not so dependent on this relationship eventually find coordination adequate.
- Even those institutions which consider that there is coordination, identified several technical and procedural weaknesses, which need to be improved.
- Something that seems clear is the existence of a general problem at the organizational level and that concerns the recent changes that have occurred in the Ministries.
- It is expected that MITADER should play an active role in the monitoring and awareness of environmental issues, since some of the Ministries' institutions linked to economic activities are not aware of relevant aspects.
- Something that also seems to happen is the lack of coordination between MITADER and other ministries with the Attorney General's Office.

## 6 Recommendations

During the first two stages (Parts) of this study as well as in the workshop, some useful recommendations were gathered as inputs to improve this study. These are presented below.

### *Legal mechanisms*

- Need to reinforce legal mechanisms such as the penal code and liabilities regarding environmental issues;
- Develop the mechanism for implementing Biodiversity Offsets in Mozambique by actively involving all the stakeholders in building the system; create a regulation with clear procedures, which should both be aligned with the existing roadmap;
- Create the new environmental regulations for the Oil & Gas operations and mining operations aligned with the EIA regulation (Decree 54/2015 of 31 December) and international best practice for achieving NNL of biodiversity according to the adequate application of the Mitigation Hierarchy, including Biodiversity Offsets;
- Mainstream the application of the EIA regulation (Decree 54/2015) to all sectors and according to the categories A+; A, B and C criteria, which implies producing specific guidance;

### *Institutional development*

- Regarding the Technical Assessment Committee (TAC), each member should have the domain of the issues discussed, independent of its background, so it is important to invest in their training on environment;

- To guarantee that the TAC are technically capable and comprised of members with knowledge and experience, each institution involved in the EIA licensing should define focal points and create redundancy within its team to avoid losing fundamental capacity when there is staff turnover;
- Provide AQUA with the means, equipment, technical and scientific capacity both in quality and quantity to undertake its role, including at the provincial level; promote better coordination with the institutions that are responsible for regulating each sector and law enforcement;
- Application of incentives to increase the motivation of technicians;
- Promote partnerships between the government, NGO's and academia; the same for the private sector;
- MITADER to raise awareness about biodiversity and conservation among other Ministries, including on the need to implement the Mitigation Hierarchy since the planning phase to achieve NNL of Biodiversity;
- Raise specific awareness on biodiversity and ecosystem services to the National Directorate for Planning and Budgeting (within the Ministry of Finance), in order to gather more political and financial support to this subject;

#### *Coordination*

- Promote better coordination, clear definition of roles and optimization of resources between the institutions involved in the environmental licensing, monitoring and law enforcement;
- Develop platforms to share information and data efficiently and effectively between the government institutions;
- Create strategic planning between institutions and activity sectors to address law enforcement integratedly, including Environmental Management Plans (EMPs) monitoring, optimizing the available means and human resources to overcome financial constraints; this could be led by AQUA;
- Clarify the role of AQUA among the different institutions involved in environmental licensing and follow-up and the coordination mechanisms between these for monitoring and law enforcement;
- Promote better coordination between the National, Provincial and District levels within MITADER, MIREME, MIMAIP and MOPHRH;
- Define communication procedures between DINAB and DPTADER regarding project categorization to avoid errors; the same between DNGM and the provincial directorates, and DNGRH and its provincial structures;
- Define clear roles and coordination between DNGM and INAMI regarding the environmental licensing, EMP oversight and monitoring;
- Promote coordination between DINAB, INAMI and AQUA to guarantee that these institutions share all the documents associated to the environmental licensing and are working according to the same EMP, therefore using the same baseline to interact with the developers;
- Promote communication between APIEX and DINAB to avoid misinformation on environmental licensing regarding projects that are submitted by the developers to APIEX;

- Promote coordination between the Single Service Counters (BAU) and DINAB/DPTADERS, by creating environmental focal points in the former to inform the public accurately regarding the environmental licensing of projects/activities;

#### *Structural review*

- Reduce the government institutions dependence regarding external consultants;
- Reduce bureaucracy in the handling of procedures, providing DINAB's technicians with specific knowledge to reduce fully dependence on the specific sectors;
- Use the environmental licensing fees to invest in creating technical capacity within DINAB and the TACs through training;
- Promote the participation of the environmental department of the General Attorneys Office on the environmental licensing, potentially as an advisor of MITADER/DINAB for verifying the legality of the decisions related to more complex projects;

#### *Technical support*

- Need for long-term training of technicians involved in environmental licensing (government, private sector, academia and civil society) in adequate planning and environmental impact assessment, and also invest in the awareness of the institutions and departments' leaders;
- Increase the technical capacity and knowledge of institutions on the concepts of No Net Loss of Biodiversity, Mitigation Hierarchy and Biodiversity Offsets;
- Create a facilitation mechanism to support the technical implementation of the NNL concept;
- Identify the areas in the country that should be considered avoidance areas;
- Undertake studies to define baselines, benchmarks and the metrics to quantify residual impacts and determine offsets, and also to generate measures to achieve No Net Loss of Biodiversity;
- Implement pilot projects to test the techniques, mechanisms and procedures for the adequate introduction of a NNL system and Biodiversity Offsets;
- The impact of implementing an NNL system and Biodiversity Offsets on the cost and schedule of the the project's implementation should be assessed;
- Create technical guidance to the implementation of the Mitigation Hierarchy, including Biodiversity Offsets, to achieve NNL or NG of Biodiversity;

#### *Sectoral capacity-building*

- Need to develop guidance for technical evaluation of EIAs;
- Need to reinforce technical capacity of all sectors included in the Technical Assessment Committee, with the aim to improve the analysis and discussions of the most relevant aspects in the EIAs: increasing and improving the technical capacity could avoid wrong interpretation of projects, bad decisions, bureaucracy in processes' evaluation and could improve the awareness of the decision-makers to environmental issues;
- Create consistency in the training of technicians and participation in events: sometimes different technicians are sent for related events, breaking the flow of knowledge, as the technician who participates in the first session does not participate in the following sessions; besides that, there is no follow-up and passing of the acquired knowledge for the rest of the institution, after the events;

- Training of government and stakeholders on NNL, Mitigation Hierarchy and Biodiversity Offsets, increasing the focus on planning and avoidance measures, which are the first steps of the Mitigation Hierarchy in order to avoid environmental impacts;
- Specific training and environmental awareness among judges and prosecutors, mainly at provincial and district levels;
- Training on biodiversity planning to DINOTER, so that NNL is incorporated in the planning exercises;
- Create capacity within ANAC to contribute to the EIA procedure of projects within Conservation Areas and its buffer zones, with emphasis on the adequate implementation of the Mitigation Hierarchy to achieve NNL of Biodiversity;
- Take the No Net Loss and Biodiversity Offsets concepts to decision makers;

#### *Stakeholder capacity-building*

- Training and capacity building of local communities on the subjects of No Net Loss, Net Gain, Mitigation Hierarchy, environmental impacts, Biodiversity Offsets, etc., in order to increase and improve their intervention capacity on subjects linked to environmental issues;
- Include the district level in capacity training, since it is at this level that projects' implementation and development occurs;
- Incorporate the NNL, Mitigation Hierarchy and Biodiversity Offsets in the academic curriculae;

#### *Transparency and consultation*

- Need of transparency in public consultation processes: improve the inclusion of the comments coming from this process;
- Establish a clear procedure for the participation of the public in legislation development: not all legislation is taken to public consultation, and this act denies the existence of transparency in the legislative procedures;
- Need to develop more awareness and environmental education measures at all levels;
- Include other sectors in future gap analysis such as health, education, energy, science and technology, industry and trading, etc.

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- Principles and Guidelines for Biodiversity Conservation Offsets. March, 2006.
- World Bank (2016). Um Sistema Agregado de Contrabalancos de Biodiversidade: Um Roteiro para Moçambique.

## 8 Appendix

### 8.1 Appendix 1. Legislation consulted

#### ENVIRONMENT

- Environment Law N° 20/97 of 1 October.
- Decree N° 54/2015 of 31 December. Regulation on Environmental Impact Assessment Process.
- Decree N° 198/2005 of 28 September. Ensures Sector Coordination in Effective Implementation of the Regulation on the Environmental Impact Assessment Process.
- Decree N° 94/2014 of 31 December of 2014. Regulation on the Management of Urban Solid Waste.
- Decree N° 83/2014 of 31 December. Regulation on the Management of Danger Waste.
- Decree N° 25/2008 of 1 July. Regulation for the Control of Exotic Invasive Species.
- Regulation N° 16/2015. Regulation on the Management and Control of the Plastic Bag.
- Resolution N° 5/1995 of 3 August. National Environment Policy.
- Resolution N° 45/2003 of 5 November. Accession of the Republic of Mozambique to the Convention on Wetlands of International Importance, Especially those that Serve as Aquatic Birds Habitats
- Ministerial Decree N° 129/2006 of 19 July. General Directive for Environmental Impact Studies.
- Ministerial Decree N° 130/2006 of 19 July. General Directive for Public Participation Process in the Environmental Impact Assessment Process.
- MICOA, 2007. Environmental Strategy for Sustainable Development.
- Resolution N° 2/94 of 24 August. United Nations Convention on Biological Diversity.
- Resolution N° 1/94 of 24 August. United Nations Convention on Climate Change.
- Resolution N° 20/81 of 30 December. Convention on International Trade in Endangered Species of Wild Fauna and Flora.
- Resolution N° 12/2015 of 14 April. Approves the Five-Year Government Program for 2015-2019.
- Resolution N° 9/2008 of 19 de September. Convention on the Conservation of Migratory Species of Wild Animals

#### MINES

- Mines Law N° 20/2014 of 18 August.
- Decree N° 26/2004 of 20 August. Environmental Regulation for Mining Activity.
- Decree N° 31/2015 of 31 December. Regulation of the Mining Law.
- Resolução N° 21/2014 of 16 May. Resolution of the Corporate Social Responsibility Policy for the Extractive Industry of Mineral Resources.

#### FORESTRY AND WILDLIFE

- Law N° 10/99 of 7 July. Establishes the Basic Principles and Norms on the Protection, Conservation and Sustainable Use of Forest and Wildlife Resources.
- Decree N° 12/2002 of 6 June. Approves the Regulation of Law N° 10/99 of 7 July. Forestry and Wildlife Law.
- Ministerial Decree N° 8/2007 of 24 January. Determines the Removal of the Species *Combretum imberbe* (Monzo), *Swartzia madagascariensis* (iron timber).

- Ministerial Decree Nº 55/2003 of 28 May. Licensing of Forest and Wildlife Activity.
- Resolution Nº 8/97 of 1 April. Policy and Strategic Development of Forests and Wildlife.
- Ministerial Decree Nº 16/2017 of 6 February. Update and Adequacy of Models for Forest Licensing.

## HYDROCARBONS

- Oil Law Nº 21/2014 of 18 August.
- Decree Nº 34/2015 of 31 December. Regulation of Petroleum Operations.
- Decree Nº 45/2012 of 28 December. It defines the regime to which the activities of Production, Import, Reception, Storage, Handling, Distribution, Commercialization, Transportation, Exploitation and Re-export of Petroleum Products are Subject.
- Decree Nº 56/2010 of 22 November. Environmental Regulation for Petroleum Operations.
- Decree Nº 56/2003 of 24 December. Regulation on Fuel Rate.
- Ministerial Decree Nº 272/2009 of 30 December. Licensing Regulations for the Installation and Petroleum Activities.
- Resolution Nº 27/2009 of 8 June. Strategy for the Concessions for the Concession of Areas for Petroleum Operations.

## LAND & SPATIAL PLANNING

- Land Law Nº 19/1997 of 1 October.
- Spatial Planning Law Nº 19/2007 of 18 July.
- Decree Nº 66/1998 of 8 December. Regulation on Land Law (Revoke the Decree 16.1987 of 15 July).
- Decree Nº 23/2008 of 1 July. Regulation on Spatial Planning Law.
- Ministerial Decree Nº 29-A-2000 of 17 March. Technical Appendix on the Regulation of Land Law.
- Resolution Nº 10/95 of 17 October. Approves the National Land Policy and the Implementation Strategy.
- Decree Nº 31/2012 of 8 August. Regulation on the Process of Resettlement Resulting from Economic Activities.
- Resolution Nº 18/2007 of 30 May. Spatial Planning Policy.
- Ministerial Decree Nº 181/2010, of 3 November. Directive on the Process of Expropriation for Land Use Effects.
- Ministerial Decree Nº 156/2014, of 19 September. Technical Directive of the Process for the Preparation and Implementation of Resettlement Plans.

## TOURISM

- Tourism Law Nº 4/2004, of 17 June.
- Resolution Nº 14/2003 of 4 April. Tourism Policy and Implementation Strategy.

## AGRICULTURE

- Decree Nº 11/2013 of 10 April. Regulation on Fertilizer Management.
- Decree Nº 6/2009 of 31 March. Regulation on the Management of Pesticides.
- Decree Nº 26/2009 of 17 August. Regulation on Animal Health.
- Decree Nº 12/2013 of 10 April. Regulation on Seeds.
- Decree Nº 26/2014. Regulation on the Protection of New Varieties of Plants.
- Decree Nº 5/2009. Regulation on the Phytosanitary Inspection and Plant Quarantine.

## CONSERVATION & BIODIVERSITY

- Law N° 16/2014, of 20 June. Law of Protection, Conservation and Sustainable Use of Biological Diversity.
- Decree N° 35/2008. International Trade in Endangered Species of Wild Fauna and Flora.
- Resolution N° 63/2009. Conservation Policy and Strategy.

## ENERGY

- Law N° 21/97 of 1 October. Regulates the activity of production, transportation, distribution and sale of electric energy.

## WATER

- Sea Law N° 4/1996 of 4 January.
- Fisheries Law N° 22/2013 of 1 November.
- Decree N° 45/2006 of 30 November. Regulation for Prevention of Pollution and Protection of the Marine and Coastal Environment.
- Decree N° 21/2017 Establishes the Legal Regime for the Use of the National Maritime Space.

## 8.2 Appendix 2. Questionnaire regarding analysis of policy, law, capacity and experience gaps of government institutions to achieve No Net Loss of Biodiversity

### Capacity

1. How many technicians deal with EIA process?

No one \_\_\_ / 1-5 \_\_\_ / 6-10 \_\_\_ / 11-20 \_\_\_ / 21-50 \_\_\_ / + than 50 \_\_\_

2. In average, how much time is spent for each EIA review?

1-5days \_\_\_ / 6-10 days \_\_\_ / 11-20 days \_\_\_ / 21-30 days \_\_\_ / 31-50 days \_\_\_ / +than 50 days \_\_\_

3. How many EIA processes are reviewed by technician / year?

No one \_\_\_ / 1-5 \_\_\_ / 6-10 \_\_\_ / 11-20 \_\_\_ / 21-50 \_\_\_ / 51-100 \_\_\_ / + than 100 \_\_\_

4. What is the opinion on your institution, regarding the capacity and technical knowledge to regulate and administer the environmental impact assessment in efficient and effective way?  
Yes \_\_\_ / No \_\_\_ Justify.

5. Your current team which works on EIA has technical capacity to apply the regulatory and administrative component of processes that include the evaluation of Mitigation Hierarchy and Biodiversity / No Net Loss? Yes \_\_\_ / No \_\_\_ Justify.

6. What is the level of knowledge of the technicians who work in EIA on Mitigation Hierarchy and Offsets / No Net Loss?

Don't know \_\_\_ / No knowledge \_\_\_ / low \_\_\_ / Medium \_\_\_ / High \_\_\_

7. How many technicians have participated in trainings on Mitigation Hierarchy and Offsets / No Net Loss?

0 \_\_\_ / 1-5 \_\_\_ / 6-10 \_\_\_ / 11-20 \_\_\_ / 21-50 \_\_\_ / + than 50 \_\_\_

8. Is there sufficient organization in the institute and between institutions that makes possible the effective implementation of EIA regulatory and administrative component? Yes\_\_\_ / No\_\_\_ Justify.
- 8.1. And for Mitigation Hierarchy evaluation and offset plans? Yes\_\_\_ / No \_\_\_ Justify.
9. On your institution, are there technicians with capacity to do verifications in the field? Yes\_\_\_ / No\_\_\_ How many technicians\_\_\_?
- 9.1. Capacity for geographic information systems? Yes\_\_\_/No\_\_\_ How many technicians?
- 9.2. Capacity for mapping? Yes\_\_\_ / No\_\_\_ How many technicians?
- 9.3. Capacity for modelling? Yes\_\_\_ / No\_\_\_ How many technicians?
- 9.4. Capacity for develop metrics and exchange rules? Yes\_\_\_ / No\_\_\_ How many technicians?
- 9.5. Do you think that in your institution, there is technical and scientific capacity needed to support the implementation of a policy of NNL? Yes\_\_\_ / No\_\_\_ Justify.
10. Your insitution has any partnership ou collaboration? Yes \_\_\_ / No\_\_\_
- 10.1. Research institutes? Yes\_\_\_ / No\_\_\_; How many?\_\_\_; Which one?  
How their contributions are used?
- 10.2. NGO's? Yes \_\_\_ / No\_\_\_; How many?\_\_\_; Which one? How their contributions are used?
- 10.3. Consulting companies? Yes \_\_\_ / No\_\_\_; How many?\_\_\_; Which one? How their contributions are used?
- 10.4. Specialists? Yes \_\_\_ / No\_\_\_; How many?\_\_\_; Which one? How their contributions are used?
- 10.5. Others? Yes \_\_\_ / No\_\_\_; How many?\_\_\_; Which one? How their contributions are used?
- 10.6. If there is not, do you know about any research institution that could support the implementation of a policy of NNL? Yes\_\_\_ / No\_\_\_; How many?\_\_\_; Which one? How?
11. Is there sufficient budget and human resources to ensure enforcement on impacts evaluation and related politics in properly way, at your institution?  
Yes\_\_\_ / No\_\_\_ Justify.
12. How many technicians are deployed to ensure enforcement on impacts evaluation and related politics in properly way, at your institution?  
No one\_\_\_ / 1-5\_\_\_ / 6-10\_\_\_ / 11-20\_\_\_ / 21-50 \_\_\_ / + than 50\_\_\_
13. In general, the Government allocates sufficient budget and team to monitoring and strengthen the enforcement of environmental impact assessment and related policies? Yes\_\_\_ / No\_\_\_ Justify.

## Coordination

1. Do relevant government departments in Mozambique at the national, state and local levels coordinate policy and procedure on EIA, NNL etc.? Yes\_\_\_ / No\_\_\_ Justify.
- 1.1. What are the departments at each level?

National, Provincial and, Local

- 1.2. Do national government and local authorities are well coordinate? (For instance, if large infrastructure projects are authorized by national government, but planning permission is needed from local authorities, is this coordinated?) Yes \_\_\_ / No \_\_\_ Justify
2. Is there coordination between land use national plans at local level? Yes \_\_\_/No \_\_\_ Justify
- 2.1. Do they coordination is good? Yes \_\_\_ / No \_\_\_ Justify
- 2.2. Do they share data and information? Yes \_\_\_ / No \_\_\_ How?
3. In Mozambique, there is coordination between the various government institutions (different ministries) that coordinate EIA, NNL policies and procedures, etc? Yes \_\_\_ / No \_\_\_ Justify
- 3.1. What are these institutions?
- 3.2. Is there any share of data and information between them? Yes \_\_\_ / No \_\_\_ How?
4. Do you think there are agreed procedures for reviewing license applications subject to various regulations or policies? Yes \_\_\_ / No \_\_\_ Justify
- 4.1. What are these procedures?
5. Given what have been discussed, do you think that the relevant government departments and institutions are well coordinated so that proponents and others affected by the EIA and possible NNL / NG policies are informed through clear, consistent and simplified procedures, with no potential to create conflicts over resources and land titles? Yes \_\_\_ / No \_\_\_ Justify

### 8.3 Appendix 3. Statutory Processes and Management Practices in the Areas of "Land Tenure; Protected Areas and Wildlife; Rights of Local Communities, Economic Incentives and Liability Regimes

Question	Answer
<b>Land Tenure</b>	
Is there a clear land tenure policy and an explicit land registry that allows to know who has the right to a particular piece of land? (in the context of the Mitigation Hierarchy, including Biodiversity Offsets. We need to establish how land parcels allocated for development and allocated to Biodiversity Offsets can be clearly identified, recorded and implemented)?	No, because land management goes through multiple processes due to human development and requires regular adaptations.
What are the mechanisms to ensure long-term legal commitment to land tenure, how does it work, and what are the mechanisms most used?	<p>The mechanisms to ensure the long-term legal commitment to land tenure are DUAT (obtained by request of occupation), Custom Norms or by Occupation of Good Faith (which does not need official registration; this Law does not apply in cases in which that occupation is done in areas in legally way.</p> <p>As national citizens, the law grants 5 years to prove their ability to operate or carry out the proposed investment or plan, whether individual or collective. The approval plan has a schedule that must be observed according to the 5 years granted. After this time, if the tenderer has not complied with the proposed, he can justify. Otherwise the DUAT is taken. However, it may also require the extension of 5 years, which is not provided for by law, but is carried out on a provisional basis until proven.</p>



## Gap Analysis on Policy, Laws, Capacity and Experience, to deliver No Net Loss (or Net Gain) (NNL/NG) of Biodiversity in Mozambique

Question	Answer
	<p>For foreigners, the law grants 2 years.</p> <p>After final approval, DUAT is subject to a maximum period of 50 years and can be renewed for an equal period. The DUAT is transmitted to the descendants in case of death.</p>
<p>Is there a system of agreements / leases / easements that allows conservation obligations to remain valid even when the landowner sells the land to a third party? If so, are there legal provisions that require / obligate disclosure (of conservation obligations) to successors?</p>	<p>In the consultation of Conservation legislation (Law 16/2017, amended by Law 5/2017), land legislation (Law 19/97 and Decree 66/98) and Spatial Planning (Law 19/2007 and Decree 23/2008) no provisions have been identified relating to the transfer of conservation obligations in land sale processes to third parties.</p> <p>The DUAT granted for conservation purposes is called wilderness or ecotourism farms. The applications are approved by the favorable opinion granted by ANAC. There are no obligations / agreements that ensure that conservation obligations remain valid even when the owner sells DUAT. The purchasing entity may request the change of the DUAT business plan. However, it may or may not be authorized from the point of view of the improvements that this new activity will bring, in relation to previous activities.</p>
<p>Could ownership, lease or other land tenure be better suited to long-term offsets arrangements (whether for "private" or "public" land) ?</p>	<p>Based on the 32 interviews conducted, a survey / update of areas with high biodiversity and / or critical value should be carried out and constituted as conservation areas under government management. Private / public entities that had the obligation to constitute offsets areas should channel resources to support the management of these areas. It should be noted that the risk of having each investor identify an area for offsets is to have many "conservation" areas outside government control when these resources could be used and concentrated in the already predefined areas, which currently lack resources for their protection and management.</p>
<h3>Protected Areas and Wildlife</h3>	
<p>What are the different Categories of protected areas existing in Mozambique? Is the legislation well-defined and regulated? Are there areas of community protection (as well as areas belonging to government) and are these legally regulated?</p>	<p>The conservation areas are classified in areas of Total Conservation and Sustainable Use Conservation Area. The Total Conservation Area is divided into Integral Natural Reserve, Natural Park and Natural Cultural Monument. Areas of Conservation of Sustainable Use include Special Reserve Areas, Environmental Protection Area, Hunting Area, Community Conservation Area, Sanctuary, Game Farm, Municipal Ecological Park. Law 10/99 on Forests and Wildlife has a different classification from that previously mentioned (see Article 10). Legal instruments need to be updated to be merged with the Conservation Act. The areas of Community protection are provided for under Law 16/2014, as amended by Law 5/2017 on Conservation and is duly regulated. It is important to listen to Stakeholders to evaluate the effectiveness of the provisions provided by the Law. The regulations on conservation areas are consistent, however, it is necessary to listen to the beneficiaries and managers of conservation areas to record the challenges they have faced.</p>
<p>Are there rules prohibiting development within the various categories of conservation areas or within some of the categories? And what are these rules?</p>	<p>According to Law 16/2004, Article 26, there are specific activities that are permitted within conservation areas, such as tourism, beekeeping, hunting, among others. It should be noted that within the Total Protection area the extraction of resources is prohibited, with only the indirect use of natural resources, with the exceptions provided for in Law 16/2014, in the Management Plan of the respective conservation area and in the specific legislation (Article 27, Law 16/2004).</p>
<p>Is there any barrier to establishing offsets areas within existing protected areas? How can Mozambique demonstrate that the "additionality" principle has been met with a justification for offsets activities in protected areas (for example protected areas that exist or are programmed)?</p>	<p>No impediment has been identified in the Conservation legislation to establish areas for offsets within existing protected areas, however, it is recalled that the criteria and procedures for setting up an area for offsets are not yet defined in legal terms. In this case, what articulation would exist between those interested in establishing the area for offset and the management of the conservation area. In order to be sure that the principle of Additionality in existing conservation areas has been complied with, it is recommended that a Pilot project be implemented through which additional measures will be introduced in addition to those already in place to improve conservation results already verified in a given conservation area. From the results of the Pilot project, the necessary procedures and requirements should be created to operationalize the</p>



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	option of using the existing conservation areas to comply with the Additionality principle. It should be noted that from the 32 interviews, 3 are available to conduct a Pilot project to test requirements related to NNL and Biodiversity Offsets.
Do areas established as areas for mitigation, including offset, have the status of protected areas? Does the designation of protected areas in Mozambique vary according to the type of protected area in question? If so, how does it vary?	<p>According to Law 16/2014, as amended by Law 5/2017, the proposed creation of conservation areas can be done by government agencies, academic institutions, the private sector, non-governmental organizations, local communities or by citizens, depending on the categories concerned (Article 38). Conservation areas are set up to meet a range of conservation objectives, including "to contribute to the maintenance of biological diversity and genetic resources within national territory and in Mozambican jurisdictional waters" and "to protect endangered, endemic and rare species at provincial, district and local levels "(Article 12 of Law 16/2014). Thus, it is clear that if the goal is conservation, then it is legally possible that offsets areas are established as conservation areas. On the other hand, it is recommended that the areas established for offsets have protected status, otherwise it would not be possible to compensate for lost biodiversity due to the risk of uncontrolled use of resources in these areas by other stakeholders.</p> <p>The designation of the protection zones varies according to the purpose for which they are intended. Total conservation areas are those in the public domain, intended for the preservation of ecosystems and species without resource extraction interventions, only indirect use of natural resources with the exceptions provided for in the Law. There is a second type of protected area that is called a conservation area of sustainable use, which is the area of public domain and private domain, destined for conservation, subject to an integrated management with permission of levels of extraction of resources, respecting sustainable limits in accordance with the management plans (Law 16/2014, Article 13).</p>
There is a liste of habitats or species (other than protected areas) on which development impacts are regulated? How is it regulated?	In the scope of Law 16/2004, Articles 46 and 47, the management of threatened species is regulated. The Council of Ministers approves by decree the list of protected species and those whose use, including hunting, is permitted.
There are legal provisions that require "free and prior consent" to local communities and indigenous populations for projects that occur or impact on their lands or where they obtain the means of subsistence such as edible plants, medicinal plants, places of worship, etc.?	The legal provisions that require "free and prior consent" are shaped in various legal instruments, such as Decree 12/2002; Decree 54/2015; DM 130/2006, Law 21/2014, among others, but not always the rights and procedures of access to information, reclamation, inclusion of the ideas of the communities, in the framework of the consultations provided to the interested parties, are duly regulated. If a given community proposes the inclusion of a given mitigation measure or proposes measures to avoid a certain impact on the services of a given ecosystem and this measure is not complied with by the proposer, it is not explicit in what way the community can claim this concern. No clear procedure has been identified for situations of this nature.
<b>Liability Regimes</b>	
Are there schemes that establish obligations or other prior investment measures to mitigate impacts on biodiversity?	Yes, there is an obligation to comply with the environmental quality standards established by law.
Are there regimes that establish obligations, compensation, restoration or other remedy measure for any environmental damage (for example oil spill, pollution, or illegal deforestation)?	Yes, there is the "Principle of environmental accountability", for example in Law 20/97, Law 16/2014, Decree 31/2012, however the type of compensation that is to be done is not specified.
There have been examples of mechanisms employed in the country to secure land for conservation through easements or other similar forms for the purpose of land management?	<p>In the legislation consulted, it was not identified.</p> <p>If any entity for the purpose of developing a conservation area should submit its proposal to ANAC. If the proposal is approved, the DUAT will be granted by DINAT.</p>
Duty of basic care: The law already stipulates a minimum duty of care for the management of natural assets (for example in land for agriculture / plantations and forests)?	Most of the legislation consulted and included in the reference list provides for the obligation of basic care through mandatory / harm prevention principles; principle of accountability; good practice. Details can be found in the analysis of legislation.
Does Mozambique use a principled approach (establishing	A number of consultation legislation uses a guiding approach to the



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principles and associated standards to be respected) in other areas of environmental policy?	protection, conservation and sustainable use of natural resources and biodiversity. Reference is made, for example to Law 16/2014, on Conservation; Decree 56/2010 approving the Environmental Regulation for oil operations; Law 19/2007 on Spatial Planning; Resolution 18/2007 on Spatial Planning Policy".
Are there laws and policies in Mozambique on other environmental compensation (for example carbon, water, social issues) and payments for ecosystem services?	The Mozambican legal framework provides for other compensation, for example, in the context of the resettlement of communities affected by a given development project, the economic, physical and social compensation of those affected is mandatory (Decree 31/2012, Article 4, 10). No payment cases have been identified for ecosystem services, but one of the compensatory measures is to create conditions for those affected to have access to an ecosystem that can provide the same services.
Monitoring and implementation: What is the record in Mozambique of monitoring and enforcement of law and policy, including those mentioned above? What are the limitations, for example, in terms of capacity? Is there any evidence?	In general, monitoring the implementation of laws and policies needs improvement. Evidence is daily given with the results of interventions such as "Timber operation" which revealed a high rate of violation of laws. One can also refer to the recent work done by Swedish Geological in collaboration with DNV-GL and IMPACTO, 2017, "Preparation of Environmental Guidelines for the Mining Activities and Mining Operations (Onshore and Offshore) and Technical Capacity Building In Mozambique-Regulatory Review and Consultative Framework "in which it is stated that the monitoring component needs to be improved. Improving technical, financial and working capacity is key to meeting this challenge.
Is there a requirement for the monitoring and evaluation of the implementation of mitigation and offsets measures by specialists?	Yes, the Environmental Management Plans that are an integral part of the Report on Environmental Impact Study (REIS) and determine, for example, the periodicity for the monitoring of the various environmental impacts as well as the periodicity for reporting to the Environmental Authority. With regard to compensation measures, the legislation is still incomplete. It is not explicit about the procedures and criteria for measuring what should be compensated and how to monitor the results in the areas of offsets, such as reporting to the Environmental Authority.
Is there a requirement for a quantified assessment of the effectiveness of the implementation of mitigation and offsets?	At national level it is not common to quantify the effectiveness of the measures. Note that environmental impacts are commonly qualified. As for offsets, at the national level there are still no records of implementation of measures of Biodiversity Offsets. Concerning international guidelines, it is necessary to investigate the proposed methodologies and test them. Several research institutions, consulting firms and proponents are of the opinion that this matter is still complex.
What are the mechanisms to ensure the transparency of evaluation and monitoring methodologies and their results and the reporting to the management entities (the project proponent) and regulatory institutions?	The improvement of the technical, human and material resources of the regulatory entity to analyze the information received and to monitor the implementation of mitigation and offsets measures will force the improvement of the quality of information produced and submitted to both the project proponent and the regulatory entity.

