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REPUBLIC OF MOZAMBIQUE
MINISTERY OF LAND ENVIRONMENT AND RURAL DEVELOMPMENT
NATIONAL SUSTAINABLE DEVELOPMENT FUND

Mozambique Conservation Areas for Biodiversity and Development- Phase 2

Environmental and Social Management Framework (ESMF)

June 2018

List of Abbreviations

AASE	*Avaliação Ambiental e Social Estratégica*
AC	Conservation Area / *Área de Conservação*
ACTF	Transfrontier Conservation Area / *Área de Conservação Transfronteiriça*
ANAC	National Conservation Areas Administration / *Administração Nacional das Áreas de Conservação*
ARA-Z	Zambeze Region Water Resources Administration / *Administração Regional de Água de Zambeze*
BIOFUND	Foundation for Biodiversity Conservation
BM	*Banco Mundial*
BOMP	Biodiversity Off-set Management Plan
CA	Conservation Area
CBNRM	Community Based Natural Resources Management
CL	Chimanimani Landscape
CNR	Chimanmani National Reserve
CONDES	National Council for Sustainable Development / *Conselho Nacional de Desenvolvimento Sustentável*
DA	District Administrator
DINAB	National Directorate for the Environment / *Direcção Nacional de Ambiente*
DNDR	National Directorate of Rural Development / *Direcção Nacional de Desenvolvimento Rural*
DPTADER	Provincial Directorate of Land, Environment and Rural Development / *Direcção Provincial de Terra, Ambiente e Desenvolvimento Rural*
E&S	Environmental and Social
EA	Environmental Assessment
EAS	Simplified Environmental and Social Impact Assessment Study / *Estudo Ambiental Simplificado*
ECL	Elephants Coast Landscape
EIA	Environmental Impact Assessment
EIAR	Environmental Impact Assessment Regulation
EMP	Environmental Management Plan
EPDA	*Pre-feasibility and Scoping Report / Estudo de Pré-viabilidade Ambiental e Definição do Âmbito*
ESHS	Environmental, Social, Health and Safety
ESIA	Simplified Environmental and Social Impact Assessment
ESMF	Environmental and Social Management Framework
ESMGPG	Environmental and Social Management Good Practice Guide
ESMP	Environmental and Social Management Plan
FNDS	National Sustainable Development Fund / *Fundo Nacional de Desenvolvimento Sustentável*
GD	District Government / *Governo do Distrito*
GoM	Government of Mozambique
GoM	Government of Mozambique
HWC	Human-wildlife conflict
IDA	International Development Association
ILM	Integrated Landscape Management

INGC	National Institute for Disaster Management / *Instituto Nacional para a Gestão de Calamidades*
M&E	Monitoring and Evaluation
MGS	Matching Grant Scheme
MICAIA	Environmental NGO
MITADER	Ministry of Land, Environment and Rural Development / *Ministério da Terra, Ambiente e Desenvolvimento Rural*
MozBio 1	Mozambique Conservation Areas for Biodiversity and Development - Phase 1
MozBio 2	Mozambique Conservation Areas for Biodiversity and Development - Phase 2
MozBio2U	MozBio2 Unit
MSLF	Multi-Stakeholder Landscape Forum
NGO	Non-governmental organisation
NR	National Reserve
ONG	*Organização não governamental*
OP	Operational Policy (of the World Bank)
OP/BP	Operational Policy / Bank Policy (of the World Bank)
PCR	Public Consultation Report
PDO	Project Development Objective
PDUT	District Land Use Plan / *Plano Distrital de Uso de Terra*
PEOT	Strategic Spatial Plan / *Plano Estratégico de Ordenamento Territorial*
PF	Process Framework
PGP	*Plano de Gestão de Pragas*
PIM	Project Implementation Manual
PMP	Pest Management Plan
PO/PB	Política Operacional / *Política do Banco (Mundial)*
PPF	Peace Parks Foundation
PPP	Public Participation Process / *Processo de Participação Pública*
PUT	Land use plan / *Plano de Uso da Terra*
QGAS	*Quadro de Gestão Ambiental e Social*
QP	*Quadro de Processo*
RAP	Resettlement Action Plan
REM	Maputo Special Reserve / *Reserva Especial de Maputo*
RMPPO	*Reserva Marinha Parcial da Ponta do Ouro* / Ponta do Ouro Marine Partial Reserve
RNC	Chimanimani National Reserve / *Reserva Nacional de Chimanimani*
ROAM	Restoration Opportunities Assessment Methodology
RP	Resettlement Plan
RPF	Resettlement Policy Framework
RPSED	Report on the Physical & Socio-economic Diagnosis
SDAE	District Service for Economic Activities / *Serviço Distrital de Actividades Económicas*
SDPI	District Service for Planning and Infrastructure / *Serviço Distrital de Planeamento e Infraestruturas*
SDSMAS	District Service for Health, Women and Social Action / *Serviço Distrital deSaúde, Mulher e Acção Social*
SDSMAS	District Service of Women, Health and Social Action / *Serviço Distrital de Saúde, Mulher e Acção Social*
SESA	Strategic Environmental and Social Assessment
SESS	Social and Environmental Safeguards Specialists
SSA	Social Safeguards Assistant

TFCA	Transfrontier Conservation Area
TOR	Terms of Reference
TPZ	Total Protection Zone
TTL	Task Team Leader (World Bank)
UGFI	Unidade de Gestão de Fundos Internacionais / International Fund Management Unit
UGP	Landscape Management Unit / *Unidade de Gestão de Paisagem*
UIP	Project Implementation Unit / *Unidade de Implementação do Projecto*
UN	United Nations
WWF	Worldwide Fund for Nature
ZPT	*Zona de Protecção Total*

PROJECTO MOZBIO-2
MOÇAMBIQUE
Quadro de Gestão Ambiental e Social

Sumário Executivo

Introdução

O Governo de Moçambique, através do Ministério da Terra, Ambiente e Desenvolvimento Rural (MITADER) tem vindo, desde 2014, a implementar o Programa Áreas de Conservação de Moçambique para a Biodiversidade e Desenvolvimento Sustentável (MozBio). O Programa MozBio tem como objetivo geral melhorar a gestão das Áreas de Conservação (AC) e desenvolver a contribuição destas áreas para a diversificação de oportunidades económicas e melhoria das condições de vida nas áreas de conservação em e ao seu redor.

O Programa MozBio foi desenvolvido por um período de 10 anos para ser implementado em duas fases. A primeira fase - MozBio (de 2014 a 2019) incluiu subprojectos de infraestrutura e desenvolvimento comunitário, que accionaram seis das dez políticas de salvaguardas do Banco Mundial. O Programa foi classificado pelo Banco Mundial como um projecto da Categoria B sob a PO 4.01 e foi requerida a preparação de um Quadro de Gestão Ambiental e Social (QGAS).

O presente documento constitui uma actualização do QGAS para a segunda fase do MozBio (MozBio 2), que tem por base as lições aprendidas durante a sua implementação na primeira fase.

O QGAS visa assegurar o cumprimento dos requisitos ambientais e sociais nacionais, bem como o cumprimento das salvaguardas sociais e ambientais do Banco Mundial e as suas Directrizes Gerais e Específicas para o Ambiente, Saúde e Segurança. Inclui uma identificação preliminar de possíveis impactos ambientais e sociais, define procedimentos para avaliação ambiental e social e gestão de impactos potenciais, definindo arranjos institucionais necessários, capacitação e orçamento para implementação.

O QGAS é um instrumento dinâmico que deve ser revisto periodicamente para ser actualizado e incluir lições aprendidas. O QGAS para o MozBio 2 será consultado e divulgado publicamente em Moçambique e no InfoShop do Banco Mundial antes da avaliação do projecto. Será então parte integrante do Manual de Implementação do Projecto e aplicável a todos os investimentos sob o MozBio 2.

Descrição do Projecto

O Projecto MozBio 2 constitui um seguimento de uma série de projectos de investimento de apoio a áreas de conservação, implementados em Moçambique nas últimas duas décadas. O projecto pretende aproveitar os resultados da primeira fase do MozBio, integrando as lições aprendidas neste e de outros projectos implementados no país, nomeadamente aqueles que utilizam a abordagem de Gestão Integrada Da Paisagem. As lições aprendidas no MozBio 1 indicam que haverá vantagens na adopção da abordagem de Gestão Integrada da Paisagem, adoptada pelo MITADER em outros projectos. Esta abordagem combina operações de desenvolvimento rural em apoio à agricultura, silvicultura, transportes e outros sectores dentro das fronteiras administrativas de uma província, adaptadas no MozBio 2 aos limites de paisagem das ACs alvo, incluindo suas zonas tampão e áreas circundantes. Esta abordagem é relevante para as áreas de conservação (ACs), uma vez que a maioria das ameaças vêm de fora das suas fronteiras, incluindo a pressão populacional. Além disso,

constatou-se que seria mais eficiente concentrar esforços em menos ACs, num sistema de co-gestão com outros parceiros já estabelecidos, a fim de alcançar um processo de transformação.

O MozBio 2, a ser implementado entre 2018 e 2023, tem como Objetivo de Desenvolvimento do Projecto (PDO) *melhorar a gestão das paisagens das áreas de conservação alvo e melhorar as condições de vida das comunidades em dentro e torno dessas áreas de conservação*.

O MozBio 2 irá incidir sobre três ACs alvo e a sua paisagem circundante: (1) Paisagem da Costa do Elefante (incluindo as ACs da Reserva Especial de Maputo e Reserva Parcial Marinha da Ponta do Ouro), (2) Paisagem de Chimanimani (incluindo a Reserva Nacional de Chimanimani) e (3) Paisagem do Complexo Marromeu (incluindo a Reserva Nacional Marromeu).

Figura 1 – Localização das paisagens alvo do MOZBIO-2

O MozBio 2 irá conter os seguintes componentes:

Componente 1: **Fortalecimento da Capacidade das Instituições Nacionais de Conservação e Sustentabilidade Financeira do Sistema das Áreas de Conservação.** Esta componente irá melhorar a capacidade das três principais instituições nacionais de conservação (ANAC, BIOFUND e FNDS), criará um grupo de profissionais da área de

conservação e fomentará o turismo baseado na natureza a nível nacional, a fim de fortalecer a capacidade técnica e institucional a nível nacional para conservar a biodiversidade e aumentar a sustentabilidade financeira do sistema das AC. Estas actividades contribuem para dois pilares do Programa MozBio: (i) assegurar uma política favorável e um ambiente institucional (governação), e (ii) assegurar a sustentabilidade financeira para o sistema das AC. Os resultados esperados incluem: fortalecimento da capacidade institucional da ANAC, BIOFUND e FNDS; maior disponibilidade de fundos para conservação, inclusive através do Turismo Baseado na Natureza; e um grupo de profissionais de conservação treinados e disponíveis para trabalhar nas instituições do sistema das AC.

Componente 2: **Melhoramento da Gestão das Áreas de Conservação em paisagens alvo.** Esta componente irá melhorar a gestão da conservação da biodiversidade das AC alvo, particularmente a governação das áreas de conservação (incluindo a coordenação de múltiplas partes interessadas), gestão de recursos humanos, estabelecimento e manutenção de infraestrutura, pesquisa, controle de recursos e fiscalização, promovendo a conscientização ambiental e fortalecendo as associações comunitárias-de-base (OCBs) entre a população local. As actividades a serem financiadas estarão alinhadas com o Plano de Maneio da AC. A gestão da conservação da biodiversidade é um pilar fundamental do Programa MozBio, na qual esta componente contribui directamente. Os resultados esperados incluem um aumento na eficiência das AC alvo (um aumento médio de 20% de acordo com a Ferramenta de Acompanhamento da Eficiência de Gestão) e assegurar que seja mantido ou aumentado o número das populações das espécies chaves, entre outros.

Componente 3: **Promover o desenvolvimento rural compatível com a conservação e o maneio integrado da paisagem nas paisagens alvo** (US$ 13 mi IDA)**.** Esta componente promoverá o desenvolvimento rural compatível com a conservação em paisagens alvo através da prestação de apoio a cadeias de valor sustentáveis e promoverá o maneio integrado da paisagem, financiando o planeamento do uso da terra, estabelecimento das Unidades de Gestão das Paisagens, e fortalecimento da capacidade dos distritos alvo como forma de reduzir a pressão sobre ACs. A restauração de habitats degradados será promovida uma vez estejam disponíveis os fundos do GEF 7. Estas actividades contribuem para um dos pilares do Programa MozBio e requerem que se aborde vários constrangimentos, incluindo acesso limitado ao crédito, assistência técnica e insumos, acesso insuficiente ao mercado e oportunidades de emprego. Isto só pode ser alcançado por meio de um conjunto integrado de intervenções em toda a paisagem (gestão integrada da paisagem), incluindo o planeamento terretorial e a restauração de habitats degradados (terra, florestas, mangais, etc.). O desenvolvimento rural compatível com a conservação visa melhorar os meios de subsistência das comunidades que habitam nestas paisagens, ao mesmo tempo que reduz a pressão sobre as AC por parte das comunidades vizinhas e restaura habitats degradados. Os resultados esperados incluem um aumento no número de famílias rurais e comunidades locais ligadas a cadeias de valor sustentáveis, e restauração de habitats degradados. Este componente baseia-se nas ferramentas de implementação do programa Sustenta, financiado pelo Banco. Os resultados esperados incluem: aumento do número de famílias incluídas em cadeias de valor sustentáveis, particularmente famílias chefiadas por mulheres, alfabetização financeira da população rural aumentada, planos locais de uso da terra concluídos e área de habitats degradados restaurados.

Tal como na primeira fase do MozBio, no MozBio 2, o Fundo Nacional de Desenvolvimento Sustentável (FNDS) será responsável pela orientação estratégica global e coordenará a implementação do Projecto, coordenando a interacção com todas as partes interessadas. Assim com em outros Projectos do BM implementados pelo FNDS, ao nível da paisagem da CA, as actividades do projecto serão coordenadas por Unidades de Gestão da Paisagem (UGPs) a serem estabelecidas.

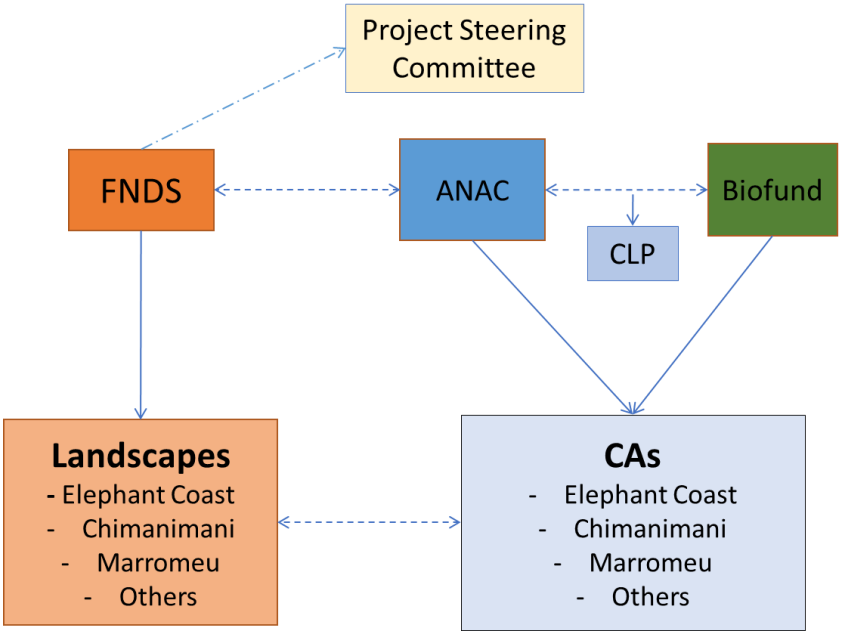

Figura 2 – Arranjo institucional do MozBio 2

Quadro legal e institucional de Moçambique em aspectos sociais e ambientais

Em Moçambique a Lei do Ambiente define as bases legais para o uso e gestão do ambiente como meio de garantir o desenvolvimento sustentável do País. De acordo com esta lei, a Avaliação do Impacto Ambiental é um instrumento que apoia a tomada de decisão sobre a atribuição da licença ambiental. O licenciamento ambiental deve preceder qualquer outra licença legalmente exigida em todas as actividades públicas e privadas que podem ser directa ou indiretamente afetadas pelo ambiente. O processo de Avaliação de Impacto Ambiental é regulamentado pelo Decreto n° 54/2015, enquanto auditoria ambiental e inspeção ambiental são reguladas, respectivamente, pelos Decretos nº. 32/2003 e 11/2006.

O Regulamento do Processo de AIA define todas as fases do processo de AIA – triagem (*screening)*, definição do âmbito, conteúdo dos estudos, processo de participação pública, revisão e aprovação pela autoridade ambiental. A primeira fase do processo de avaliação ambiental e social é a triagem, que define o tipo e nível de detalhe do estudo de avaliação ambiental e social. Assim como a Política Operacional do Banco Mundial, o Regulamento Moçambicano de AIA considera três categorias a fim de identificar o nível adequado de avaliação de impacto ambiental: Categoria A+ (requer um Estudo de Impacto Ambiental completo – o EIA, com Plano de Gestão Ambiental (PGA) específico, revisor independente e processo ampliado de consulta pública), Categoria A (é necessário um EIA com PGA específico), Categoria B (é necessário um Estudo Ambiental Simplificado – EAS, com PGA específico) e Categoria C (isenta de um EIA ou EAS, requerendo um guião de Boas Práticas de Gestão Ambiental).

Outros diplomas relevantes abrangem a gestão de resíduos sólidos, padrões de emissão atmosférica, qualidade do ar e ruído, recursos de água, qualidade da água, pesticidas, gestão costeira, propriedade da terra, ordenamento do território, património cultural, áreas protegidas e de conservação e reassentamento involuntário.

O quadro institucional para a implementação do QGAS será focado no Ministério da Terra, Ambiente e Desenvolvimento Rural (MITADER), que tem uma intervenção múltipla e transversal na Terra, Ambiente e Desenvolvimento Rural. Portanto, o MITADER é responsável por várias áreas directamente relacionadas com o Projecto MozBio 2, tais como

conservação, uso da terra e desenvolvimento rural. A nível provincial, o MITADER é representado pela Direcção Provincial da Terra, Ambiente e Desenvolvimento Rural (DPTADER). A DPTADER é responsável pela triagem ambiental e social e pela subsequente categorização do subprojecto, sendo responsável pela condução dos projectos de licenciamento ambiental das actividades classificadas como sendo de categoria B ou C.

Políticas de Salvaguarda do Banco Mundial

Há dez Políticas de Salvaguarda do Banco Mundial, criadas para apoiar o processo de tomada de decisão, assegurando que os projectos financiados pelo Banco são ambientalmente e socialmente sustentáveis. Estas Políticas Operacionais (PO) incluem: Avaliação Ambiental (PO 4,01), Habitats Naturais (PO 4.04), Floresta (OP 4.36), Gestão Integrada de Pragas (PO 4.09), Património Cultural (PO 4.11), Povos Indígenas (PO 4.10), Reassentamento Involuntário (PO 4.12), Segurança de Barragens (PO 4.37), Projectos em Águas Internacionais (PO 7.50) e Projectos em Áreas Controversas (PO 7.60).

O Projecto MozBio 2 despoleta seis destas Políticas de Salvaguarda, nomeadamente PO 4.01 Avaliação Ambiental; PO 4.04 Habitats Naturais; PO 4.36 Floresta, PO 4.09 Gestão de Pragas, PO 4.11 Património Cultural; PO 4.12 Reassentamento Involuntário.

A PO 4.01 - Avaliação Ambiental categoriza os projectos em Categorias A, B, ou C dependendo da importância do seu potencial impacto ambiental e/ou social adverso. De acordo com esta política o Projecto MozBio é categorizado como B. Uma vez que os investimentos dos subprojectos e os seus potenciais impactos negativos localizados não serão definidos antes da avaliação do projecto pelo BM, o documento de salvaguarda apropriado da PO 4.01 é um Quadro de Gestão Ambiental e Social (QGAS). Complementarmente é elaborado um Quadro da Política de Reassentamento e um Quadro do Processo, conforme requerido pela PO 4.12 – Reassentamento Involuntário, assim como um Plano de Gestão de Pragas para obedecer à PO 4.09 – Gestão de Pragas.

As políticas de salvaguardas do Banco Mundial e o quadro legal moçambicano de Avaliação Ambiental e Social estão geralmente alinhados em princípio e objectivo. As principais discrepâncias referem-se à inexistência na legislação nacional de alguns dos instrumentos considerados na PO 4.01, como a Avaliação Ambiental e Social Estratégica (AASE) e o QGAS; e na PO 4.12 o Quadro do Processo (QP). A legislação de Reassentamento Involuntário não inclui o princípio de evitar o reassentamento, ao contrário do contido na PO 4.12. O tamanho das parcelas para residências e os requisitos com equipamentos adicionais de infraestrutura e serviços sociais são muito restritivos e independentes do número de pessoas afetadas. Não há regulamentação específica sobre gestão integrada de pragas ou produção agrícola orgânica e, portanto, nenhum mecanismo nacional para aprová-lo.

Lições aprendidas na implementação do QGAS no MozBio 1

Os desafios enfrentados durante a implementação do QGAS do MozBio foram progressivamente reconhecidos e abordados. O atraso inicial no desembolso dos fundos da MozBio resultou numa pressão para desenvolver subprojectos em prazos curtos, numa fase em que o Especialista em Salvaguardas ainda não tinha desenvolvido conhecimento e familiaridade adequados com os procedimentos do QGAS. A falta de conscientização dos requisitos do QGAS pela equipa de aquisições (*procurement)*, bem como pelas equipas de infraestrutura e desenvolvimento da comunidade, apresentou outra restrição, resultando na emissão de documentos de concurso sem cláusulas ambientais e sociais, limitando a implementação do QGAS durante as obras.

A integração do Especialista em Salvaguardas da MozBio dentro da Equipa de Salvaguardas da FNDS permitiu a troca de experiências e melhoria na aplicação de procedimentos. Actualmente, a Equipa de Salvaguardas do FNDS é composta por quatro especialistas em

salvaguardas, sendo cada um responsável pelo tipo específico de projectos (infraestrutura, terra e floresta, desenvolvimento da comunidade e cadeia de valor). Esse arranjo parece ser mais eficaz, permitindo uma estreita colaboração dentro da equipa.

Com apoio da equipa de Salvaguardas do BM, a equipa de salvaguardas da FNDS, procurou melhorar os procedimentos do QGAS desenvolvendo novos modelos (como a ficha de rastreio e guião de boas práticas de gestão ambiental e social). No entanto, verifica-se que ainda não há harmonização entre a equipe da FNDS e a equipe do BM sobre o conteúdo e nível de detalhamento considerado nos instrumentos de salvaguardas.

Com base nos desafios enfrentados e lições aprendidas, as seguintes ações são recomendadas:

- Desenvolver intervenções de capacitação mais práticas sobre o uso e a aplicação dos procedimentos do QGAS;
- Iniciar a preparação da fase de triagem em um estágio anterior (antes da elaboração do projecto), a fim de integrar os aspectos ambientais e sociais nesse estágio inicial, ao mesmo tempo em que antecipa a categorização do subprojecto;
- Desenvolver formulários ambientais e de rastreio mais descritivos, permitindo a sua devida verificação pelas equipas de salvaguardas e do BM;
- Desenvolver modelos práticos para o Plano de Gestão Ambiental e Social (PGAS) e as Diretrizes de Gestão Social e Ambiental; e
- Melhorar a conscientização do QGAS para todos os membros da equipa do MozBio.

O presente QGAS foi desenvolvido com base nessas lições e reflete as melhorias destinadas a ajudar as equipes a promover a conformidade com os princípios e processos contidos no QGAS.

Condições Ambientais e Sociais das Paisagens Alvo

A *Paisagem da Costa dos Elefantes* está integrada no Centro de Endemismo Maputaland e faz parte da Área de Conservação Transfronteiriça de Lubombo. Inclui a Reserva Especial de Maputo (REM), a Reserva Marinha Parcial da Ponta do Ouro (RMPPO) e a Reserva Florestal Licuáti. É dominada por uma planície costeira, atravessada longitudinalmente pelos rios Maputo e Futi, com importantes habitats associados a terras húmidas, para além do habitat marinho e costeiro. Os habitats marinhos e costeiros compreendem praias e litoral rochoso, recifes de maré baixa, florestas de mangais e zonas intermarés, leitos de ervas marinhas e estuários. A REM possui uma população reprodutora de elefantes (a última grande população de elefantes na Província de Maputo). As espécies mais abundantes na REM são hipopótamo, elefante, cabrito cinza, cabrito vermelho, gnu azul e zebra, com a população de girafas aumentando de forma constante. A zona de Maputaland também é abençoada com uma grande diversidade de espécies marinhas, algumas endêmicas e raras, mas algumas dessas espécies estão sendo exploradas em excesso e, como resultado, tornam-se ameaçadas de extinção. Os meios de subsistência das comunidades baseiam-se em recursos naturais (agricultura de subsistência, pesca e caça). A agricultura de pequena escala e a pesca são também fontes de rendimento, bem como atividades de turismo. A paisagem tem um elevado potencial turístico (natureza, vida selvagem, praia e actividades recreativas associadas), que é fomentado pelo acesso à cidade de Maputo, África do Sul e eSwatini, impulsionado pela nova estrada que deverá estar concluída no final de 2018. A estrada irá tambem resultar em novas pressões sobre a CA. Instrumentos de planeamento agrário estão sendo preparados para contribuir para a gestao dessas novas pressões.

Incidentes de conflitos homem-animal ocorrem dentro da CA, bem como em suas áreas adjacentes, embora diminuindo na última devido à vedação instalada ao longo do Corredor Futi. Eventos fatais ocorreram no ano passado dentro da AC, o que levou algumas famílias a pedirem assistência para o reassentamento voluntário, o que foi discutido a nível de gestão da AC e do governo distrital.

A *Paisagem de Chimanimani* é parte do Centro de Endemismo Chimanimani-Nyanga e é caracterizada pela presença da cordilheira Chimanimani, que representa uma paisagem e um ambiente únicos. Sua riqueza em biodiversidade provem da floresta perene e da pastagem afromontana, habitat de várias espécies, incluindo espécies endêmicas de flora e fauna, bem como grandes mamíferos (como sable, *eland* e elefantes). As montanhas foram habitadas por séculos, contendo importantes locais históricos, como pinturas rupestres da Idade da Pedra e ruínas que datam da época do Grande Zimbábue, nos séculos XIV e XV. A paisagem está integrada na Área de Conservação Transfronteiriça Chimanimani. Em Moçambique, inclui a Reserva Nacional de Chimanimani (RNC) e as reservas florestais de Moribane, Mpunga e Maronga.

Em 2010, foi elaborado o Plano de Gestão da RNC, que identificou oportunidades e ameaças e uma estratégia de gestão. Seguindo este plano, os limites do RNC foram revistos em 2013. Existem incertezas quanto ao número de habitantes que vivem dentro do Zona de Protecção Total (ZPT). O recente censo populacional indica a presença de aproximadamente 500 famílias, o que está a ser investigado pela RNC, por ser superior ao esperado. A principal ameaça à ZPT tem sido a atividade de garimpeiros ilegais, embora a maior parte da mineração tenha sido abandonada dentro da ZPT, ainda são relatados alguns casos. A recente (2014) reabilitação da estrada Chimoio-Sussundenga para uma estrada alcatroada impulsionou fortemente o desenvolvimento económico do distrito de Sussudenga, o que resultou no estabelecimento de novas grandes áreas agrícolas (principalmente árvores frutíferas) e pecuárias, incluindo na zona tampão da RNC, o que poderá resultar em um aumento de pressão na RNC. Apesar do alto potencial turístico, a nova estrada não induziu ainda um desenvolvimento do turismo. O turismo foi afetado pela instabilidade política e de segurança (de 2012 a 2017) e é limitado pela falta de instalações turísticas. A RNC tem sido apoiada há muitos anos por agências internacionais (como o BM) e ONGs (como a MICAIA).

A *Paisagem do Complexo Marromeu* está localizada na região central de Moçambique, no Delta do Rio Zambeze, sendo classificada como um sítio RAMSAR. Compreende a maior parte da Zona Húmida de Importância Internacional nos termos da Convenção de Ramsar na margem sul do Delta do Zambeza, incluindo a Reserva Nacional de Marromeu (RNM), áreas de concessão de caça ao seu redor (Coutadas 10, 11 e 14) e as Reservas Florestais de Nhapacué e Inhamitanga, e as áreas adjacentes nos Distritos de Marromeu, Cheringomma e Muanza. Inclui uma variedade de habitats que vão desde savanas costeiras inundadasZambezianas, dunas costeiras, pastagens, pântanos de água doce, dambos associados à floresta de miombo, mangais e tapetes de ervas marinhas. Estes habitats são de grande importância para várias espécies de avifauna, mas também para populações de búfalos e antílopes, entre outros. Na década de 1960, a população de búfalos da região era considerada uma das maiores do mundo, embora, durante os anos 80, tenha diminuído drasticamente devido ao conflito armado e às campanhas de abate. As indicações são de que nos últimos anos a população de búfalos vem crescendo significativamente. As coutadas (principalmente a Coutada 11) estão activas há mais de 20 anos, estabelecendo uma área de proteção em torno da RNM. Durante esse período, os operadores notaram um aumento na população dentro das Coutadas, o que poderá resultar da assistência fornecida pelos operadores às comunidades locais (incluindo a distribuição da carne de troféu). Os meios de subsistência das comunidades são baseados na agricultura de subsistência, complementada pelo uso extensivo de recursos locais para suplementar dietas e renda e para atender às suas necessidades básicas. Ao longo da costa pratica-se pesca, tanto por

pescadores locais (essencialmente para subsistência) como por outros oriundos de outras províncias ou mesmo da Tanzânia. A Companhia do Sena é o principal empregador que atrai 3-4000 imigrantes nos períodos de pico do ano. Esta área é extremamente propensa a cheias, que já levaram à necessidade de reassentamento de populações pelo INGC.

Potenciais Impactos Ambientais e Sociais

O MozBio 2 foi classificado pelo BM como um projecto de Categoria B, uma vez que se prevê que os possíveis impactos adversos (ambientais e/ou sociais) associados aos subprojectos planeados serão de baixa magnitude, específicos ao local e facilmente geridos. Será efectuada uma triagem e pré-avaliação de cada subprojecto com base na natureza e escala das actividades propostas e nos potenciais impactos, bem como na sensibilidade do ambiente e da comunidade existentes na área de implantação.

Dentro das Áreas de Conservação alvo, os subprojectos potenciais da Componente 2 incluem a construção ou reabilitação de novos edifícios (como escritórios, centros de acomodação e treinamento), abertura de novos acessos, melhoramentos de acessos existentes, lançamento de um grande programa de desenvolvimento turístico, translocação de animais e estabelecimento de parcerias comunidade-privadas para turismo para a CNR.

Impactos ambientais adversos associados à construção de edifícios serão localizados e em geral com impactos limitados. Os impactos podem incluir desmatamento, erosão do solo, geração de poeiras e ruído e incómodo associado, bem como aspectos de saúde e segurança, tanto para trabalhadores com para a comunidade envolvente. No caso de projectos de abertura ou melhoria de acessos os impactos adversos ocorrerão ao longo de todo o corredor intervencionado, sujeito a impactos de maior magnitude e significância, incluindo no que se refere à perda de vegetação, fragmentação de habitats e riscos de segurança para as comunidades. Em qualquer dos casos as obras de construção civil constituem uma oportunidade de emprego para pessoas locais, o que constitui um impacto positivo.

A abertura, reabilitação ou melhoria de estradas, além de beneficiar a gestão da AC, pode também contribuir para o aumento do número de turistas, uma vez que as actuais más condições de transitabilidade constituem um factor limitante para o desenvolvimento turístico. O estabelecimento de um importante programa de desenvolvimento turístico na Paisagem da Costa dos Elefantes e turismo na RNC poderão também contribuir para o aumento da afluência de turistas nestas AC. Os potenciais impactos sociais nas comunidades locais, em resultado do aumento do número de turistas, devem ser cuidadosamente investigados - é provável que traga benefícios devido à criação de novas fontes de renda, mas também poderá ter implicações nas estruturas e dinâmicas sociais existentes - poderá também afectar o acesso das comunidades locais aos recursos naturais. Avaliações do impacto social sobre as comunidades em torno das ACs alvo serão conduzidas para avaliar os potenciais riscos sociais e informar a implementação do projeto, incluindo a implementação de medidas de mitigação. Não se prevê que haja necessidade de deslocação involuntária de populações, mas poderão ocorrer danos em propriedades ou bens, que irão requerer a devida compensação de acordo com o Quadro de Política de Reassentamento (QPR) do MozBio 2. Por outro lado, nomeadamente na sequência da introdução de fauna bravia, poderá haver algumas situações de aumento do risco homem-animal, que requeira a deslocação pontual (voluntária ou involuntária) de famílias para áreas de menor risco, que requererá igualmente a aplicação do QPR.
Fora das Áreas de Conservação, no âmbito da Componente 3 do MozBio 2, o projecto prevê o fortalecimento do zoneamento da paisagem, a promoção do acesso ao financiamento para o desenvolvimento de cadeias de valor compatíveis com a conservação, a construção de infraestruturas sociais fundamentais e a promoção da restauração da terra (agricultura de

conservação, reflorestamento e redução do desmatamento) nas paisagens alvo. As potenciais actividades de cadeias de valor, específicas para cada CA são mencionadas abaixo:

Paisagem da Costa dos Elefantes. As actividades de potenciais cadeias de valor podem incluir o apoio a a) associações pesqueiras na área da baía da reserva marinha, (b) joint ventures privadas ou comunitárias / privadas, (c) manejo sustentável da fauna e pecuária, (d) conservação esquemas pecuários compatíveis; (e) cultivo de caranguejo; (f) artesanato; g) apicultura.

Paisagem de Chimanimani. As actividades de potenciais de cadeias de valor podem incluir: (a) joint ventures privadas ou comunitárias / privadas, (b) vida selvagem e pecuária, (c) silvicultura, incluindo plantações de pequena escala; (d) agricultura compatível com a conservação - por exemplo, macadâmia, café, apicultura, soja, milho, gergelim, que também oferecem oportunidades para melhorar a capacidade de adaptação para gerir os riscos relacionados ao clima.

Paisagem do Complexo de Marromeu. As potenciais actividades da cadeia de valor podem incluir apoio a (a) pesca no estuário e área costeira, (b) joint ventures privadas ou comunitárias / privadas na caça esportiva, (c) produtos florestais não madeireiros, silvicultura ou agricultura compatível com a conservação - por exemplo, castanha de caju, cana-de-açúcar, apicultura, produtos para a vida selvagem; (d) criação de sapateira.

Os benefícios sociais resultantes da implementação destes subprojectos incluem a criação de oportunidades de trabalho (inclusive para mulheres), melhoria nas oportunidades de geração de renda através do estabelecimento de novas cadeias de valor e melhoria na organização da comunidade e desenvolvimento de habilidades, para além de contribuição para a preservação da biodiversidade e qualidade ambiental.

Os projectos agrícolas, pecuários e florestais podem ter impacto na ocupação da terra, causar a transformação e fragmentação de habitats, afectar a disponibilidade de água para os utilizadores a jusante e resultar na poluição do solo e da água como resultado do uso indevido de pesticidas, fertilizantes e antibióticos, dependente do tipo de actividade. Actividades que envolvam o processamento de produtos de cadeias de valor agrícola, florestal, pecuária ou de pesca podem adicionalmente vir a gerar efluentes, resíduos e odores que afectem a qualidade do ambiente e a saúde das populações requerendo a adopção de medidas especificas de gestão ambiental.

A preparação de planos de zoneamento previstos para a Paisagem da Costa dos Elefantes (PCE) e Paisagem de Chimanimani (PC) pode ter implicações ambientais e sociais associadas às limitações de acesso à terra e ao uso dos recursos naturais. Na PCE, o zoneamento será baseado no PEOT e sua Avaliação Ambiental e Social Estratégica (SESA) associada. Os novos planos de zoneamento também devem ter SESAs associados para garantir a integração adequada de questões ambientais e sociais.

Diretrizes para a implementação do QGAS

Este QGAS define arranjos institucionais e procedimentos a implementar, de forma a garantir que as preocupações ambientais e sociais sejam adequadamente consideradas ao longo do ciclo de cada subprojecto financiado pelo MozBio 2.

O FNDS, através da sua Equipe de Salvaguardas será responsável por garantir a adesão ao QGAS, QP, QPR e PGP em todos os subprojectos financiados pelo MozBio 2. Assim, a do FNDS será responsável pela implementação de todos os procedimentos contidos no presente QGAS, com o apoio dos Assistentes de Salvaguardas das Unidades de Gestão da paisagem (UGP) e das estruturas de cogestão das Áreas de Conservação.

A nível provincial, as DPTADER estarão envolvidas no processo de avaliação ambiental de cada subprojecto, de acordo com o Regulamento Nacional de EIA.

A nível distrital, o SDPI será envolvido na supervisão de obras civis, verificando também o cumprimento dos requisitos do PGA ou Guião de Boas Práticas, em especial nas questões laborais, de saúde e segurança. O SDAE será envolvido na preparação e implementação de subprojectos de desenvolvimento rural.

Todos os subprojectos do MozBio 2 terão de ser inicialmente submetidos a um processo de revisão e triagem para determinar o nível de avaliação ambiental e social necessária. Para garantir a implementação das medidas de mitigação ambiental e social identificadas, é crucial haver uma colaboração estreita entre a equipe de salvaguarda e as equipes de concepção do projecto, a nível nacional e da Paisagem (infraestrutura, cadeia de valor e desenvolvimento comunitário), bem como a equipe de aquisições (*procurement)* do MozBio. Essa integração deve começar durante a fase de planeamento dos subprojectos - durante a definição das cadeias de valor e a preparação dos planos de negócios associados - onde os especialistas de salvaguardas devem garantir que as preocupações ambientais e sociais sejam contabilizadas e, quando necessário, que diretrizes adicionais e mais detalhadas sejam listadas para complementar aqueles já incluídos no QGAS.

Para apoiar a triagem de subprojectos foi desenvolvida e está incluída neste QGAS, uma Lista de Verificação Ambiental e Social detalhada, destinada a identificar o tipo e a extensão da avaliação ambiental e social necessária.

A fase de triagem e categorização do projecto determina o tipo de instrumento de gestão ambiental e social a ser desenvolvido para cada subprojecto, ou seja, Avaliação de Impacto Ambiental Simplificada, Plano de Gestão Ambiental e Social, um Guia de Boas Práticas de Gestão Ambiental e Social, Plano Simplificado de Reassentamento, Plano de Compensações, Acordo com a Comunidade e/ ou Plano de Acção Participativo.

O QGAS define ainda diretrizes para fiscalização, monitoria e preparação periódica de relatórios, como forma de auxiliar no rastreamento da implementação do QGAS.

Os Instrumentos de Gestão Ambiental e Social descritos acima (como o ESIA Simplificado, ESMP e ESMGPG) fornecerão a base para a preparação dos Requisitos Ambientais, Sociais, de Saúde e Segurança (ESHS) a serem incluídos nos Documentos de Licitação de Obras e anexado aos Documentos de Licitação. Durante o processo de licitação, será solicitado ao Empreiteiro a preparação de um Plano de Implementação e Estratégias de Gestão de ESHS (MSIP) - para apoiar a implementação do ESMP ou o Guia de Boas Práticas de Gestao Ambiental e Social - e submeter um Código de Conduta ESHS, que por sua vez deve ser aprovado pelo FNDS e incluído no contrato. O Código de Conduta da ESHS do Empreiteiro deve ser aplicado a todos os trabalhadores de subcontratados e contratados.

Por fim, está prevista a adopção de um ciclo de auditoria independente para avaliar o desempenho do projecto MozBio 2 na implementação das directrizes do QGAS de forma a identificar áreas para melhoria.

Mecanismo de Diálogo e Reclamações

O MozBio 2 contará com o Mecanismo comum de Reclamações e Reparações que foi estabelecido para todos os projectos incluídos na Carteira Integrada de Gestão da Paisagem do Banco Mundial em Moçambique - denominado “Mecanismo de Diálogo e Reclamações (MDR)” (Figura 3). Um manual de procedimentos e uma estratégia de comunicação foram preparados, e uma plataforma informática foi projetada para registrar e monitorar os casos relatados. Este mecanismo foi discutido com as principais partes interessadas, incluindo as comunidades locais, e foi testado na Reserva Especial de Maputo para validar os seus

procedimentos. O MDR está em processo de implementação e será operacionalizado em todas as áreas do Projecto como parte do MozBio 1 ou no início do MozBio 2.

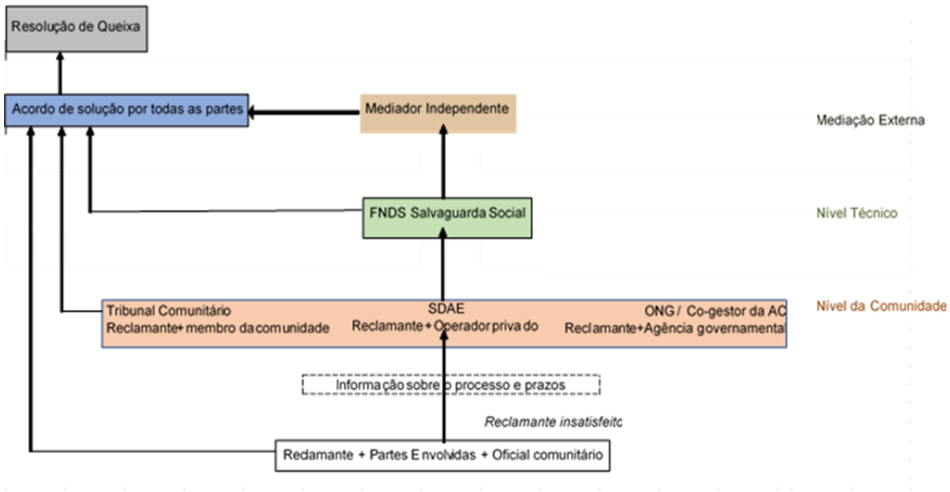

Figura 3 – Mecanismo de Diálogo e Reclamações

Capacitação

A implementação bem-sucedida do Projecto MozBio 2 dependerá, entre outros, da implementação efectiva das medidas de gestão ambiental e social delineadas no QGAS, QP, QPR e PGP. É recomendada a capacitação para as principais partes interessadas, a fim de garantir que tenham o conhecimento e as habilidades apropriadas para implementar os procedimentos e diretrizes do QGAS.

O QGAS do MozBio 2 inclui um processo prático de capacitação que inclui actividades de treinamento técnico, conscientização e sensibilização. Estas visam superar as dificuldades experimentadas durante a implementação do QGAS da MozBio 1, principalmente relacionadas com a falta de familiaridade com os procedimentos e orientações do QGAS e com a aplicação prática dos instrumentos de salvaguarda.

O BM tem apoiado o fortalecimento da capacidade da equipe de salvaguardas da FNDS, incluindo o especialista em salvaguardas do MozBio. As acções de treinamento têm envolvido também outras instituições como a DINAB, AQUA, DPTADERs e instituições locais para ajudar a melhorar tanto a conscientização das políticas de salvaguardas quanto a conscientização sobre outros assuntos transversais relacionados a género, a inclusão de grupos vulneráveis e a compreensão de como implementar a medidas de mitigação e de inclusão. Novas sessões de formação estão planeadas para o futuro próximo, além do uso de uma abordagem de *coaching* e treinamento *on-the-job* para tratar de questões e lacunas específicas.

O MozBio 2 deverá incluir um processo prático de capacitação que inclua formação técnica e actividades de sensibilização, a fim de superar as dificuldades que ocorreram na fase anterior. Considerando que o trabalho está planeado para ser realizado internamente, poderá ser contratado um consultor para auxiliar no desenvolvimento e implementação de medidas específicas de capacitação durante a vida do projeto.

Orçamento

O orçamento para a implementação do QGAS inclui os custos dos Serviços de Consultoria para preparar (i) Estudos Ambientais Simplificados para os subprojetos do Componente 2;

(ii) Avaliações Sociais para as três paisagens; (iii) Avaliações Ambientais Estratégicas dos planos de zoneamento do Complexo de Marromeu e Chimanimani; (iv) Auditoria externa da implementação do QGAS, (v) Formação e (vi) Monitoria. O orçamento global para a implementação do QGAS é estimado em US $ US$ 1,339,500.00. Os fundos para a implementação do QGAS serão disponibilizados pela Associação Internacional de Desenvolvimento (IDA).

MOZBIO PROJECT
MOZAMBIQUE
Environmental and Social Management Framework (ESMF)

Executive Summary

Introduction

Since 2014, the Government of Mozambique, through the Ministry of Land, Environment and Rural Development (MITADER) has been implementing the Mozambique Conservation Areas for Biodiversity and Sustainable Development (MozBio) Program. The MozBio Program aims to improve the management of the Conservation Areas (CAs) whilst enhancing the ability of these areas to contribute to the diversification of economic opportunities and the improvement of living conditions in and around conservation areas.

The MozBio Program was designed for a 10-years period to be implemented in two phases. The first phase – MozBio (from 2014 to 2019) included infrastructure and community development subprojects, that triggered six of the ten World Bank Safeguards Policy. The Program was classified by the World Bank as a Category B project under OP 4.01 and an Environmental and Social Management Framework (ESMF) was required.

The present document is the Draft of the ESMF update for the MozBio 2 Project, which builds on the lessons learned during its implementation in the first phase.

The ESMF seeks to ensure the compliance with national environmental and social requirements as well as compliance with the World Bank's Social and Environmental Safeguards and the General and Specific Environmental, Health, and Safety (EHS) guidelines. Includes a preliminary identification of potential environmental and social impacts, defines procedures for environmental and social assessment and management of potential impacts, defining required institutional arrangements, capacity building and budget for implementation.

The ESMF is a dynamic instrument that shall be reviewed periodically in order to be updated and include lessons learned. The ESMF for MozBio 2 will be publicly consulted and disclosed in Mozambique and at the World Bank's InfoShop prior to project appraisal. It will be then an integral part of the Project's Implementation Manual and applicable to all investments under MozBio 2.

Project Description

MozBio 2 is a follow-up to a series of investment projects in support of conservation areas implemented in Mozambique over the past two decades. The project intends to build on MozBio 1 results, integrate lessons learned from previous projects and other projects implemented in the country in relevant areas such as those using a landscape approach. Lessons learnt in MozBio 1 include the need for an Integrated Landscape Management (ILM) approach that has been adopted by MITADER in other projects. This approach combines rural development operations in support of agriculture, forestry, transport and other sectors within the administrative boundaries of a province, adapted to the relevant landscape

boundaries of target CAs, their buffers and influence areas. This approach is relevant to conservation areas (CAs), since most threats come from outside their borders, including population pressure. In addition, it was learnt that it would me more efficient to concentrate efforts in fewer conservation areas, in co-management arrangements with other partners already in place, in order to achieve a transformational process.

The MozBio 2, to be implemented from 2018 to 2023, has as Project Development Objective (PDO) *to improve management of target conservation area landscapes and to enhance the living conditions of communities in and around these conservation areas.*

The MozBio 2, will target three CAs and their surrounding landscapes: (1) Elephant Coast Landscape (including the CAs of Maputo Special Reserve, Ponta do Ouro Partial Marine Reserve), (2) Chimanimani Landscape (including Chimanimani National Reserve) and (3) Marromeu Complex Landscape (including Marromeu National Reserve).

Figure 1 – Location of MozBio 2 Landscapes

MozBio 2 will comprise the following components:

Component 1 – Strengthening Capacity of National Conservation Institutions and Financial Sustainability of the CA system (US$ 15 mi IDA). This component will improve the capacity of the three main national conservation institutions (ANAC, BIOFUND and FNDS), create a cohort of conservation professionals, and foster nature-based tourism at the national level. These activities will strengthen technical and institutional capacity at national level to conserve biodiversity and to increase the financial sustainability of the CA system. These activities contribute to two pillars of the MozBio Program: (i) ensuring an enabling policy and institutional environment (governance), and (ii) ensuring financial sustainability for the CA system. Expected results include: strengthened institutional capacity at ANAC, BIOFUND and FNDS; increased availability of funds for conservation, including through NBT; and a cohort of conservation professionals trained and available to work for institutions in the CA system.

Component 2 - Improving Conservation Areas Management in target landscapes (US$ 17 mi IDA). This component will improve biodiversity conservation management of target CAs, particularly the governance of CAs (including its relationship with surrounding stakeholders), human resources management, infrastructure establishment and maintenance, human-wildlife coexistence, research, resources control and patrolling, promoting environmental awareness and strengthening of community-based organizations (CBOs) among local communities. Activities to be financed will be in line with the CA management plan. Biodiversity conservation management is a pillar of the MozBio Program, to which this component contributes directly. Expected results include significantly improved management effectiveness of the targeted CAs (an average increase of 20 percent in the Management Effectiveness Tracking Tool score across the targeted CAs), ensuring that key species populations are maintained or increased, among others.

Component 3 – Promoting conservation-compatible rural development and integrated landscape management in target landscapes (US$ 13 mi IDA). This component will promote conservation-compatible rural development in target landscapes through support to sustainable value chains, and promote integrated landscape management, by financing land use planning, establishment of Landscape Management Units, and capacity strengthening of targeted districts to reduce pressure on CAs. Restoration of degraded habitats will be promoted once GEF 7 funds are available. These activities contribute to a pillar of the MozBio Program, and requires addressing several constraints, including limited access to credit, technical assistance and inputs, insufficient market access and employment opportunities. This can only be achieved through an integrated set of interventions across the landscape (integrated landscape management), including spatial planning, and restoration of degraded habitats (land, forests, mangroves, etc.). Conservation-compatible rural development aims to improve the livelihoods of communities living in these landscapes while also reducing pressure on CAs from surrounding communities and restoring degraded habitats. Expected results include an increase in the number of rural households and local communities connected to sustainable value chains, and restoration of degraded habitats. This component draws on the implementation tools of the ongoing Sustenta Program, financed by the Bank. Expected results include: increased number of households included in sustainable value chains, in particular of women-headed households, rural population's financial literacy increased, local land use plans completed, and area of degraded habitats restored.

As with the first phase of MozBio, MozBio 2, the National Sustainable Development Fund (Fundo Nacional de Desenvolvimento Sustentável – FNDS) will be responsible for overall strategic guidance and will coordinate Project implementation, coordinating interaction with all stakeholders. As in the implementation of others WB Projects by FNDS, at CA

landscape level the project activities will be coordinated by Landscape Management Units (LMUs) to be established.

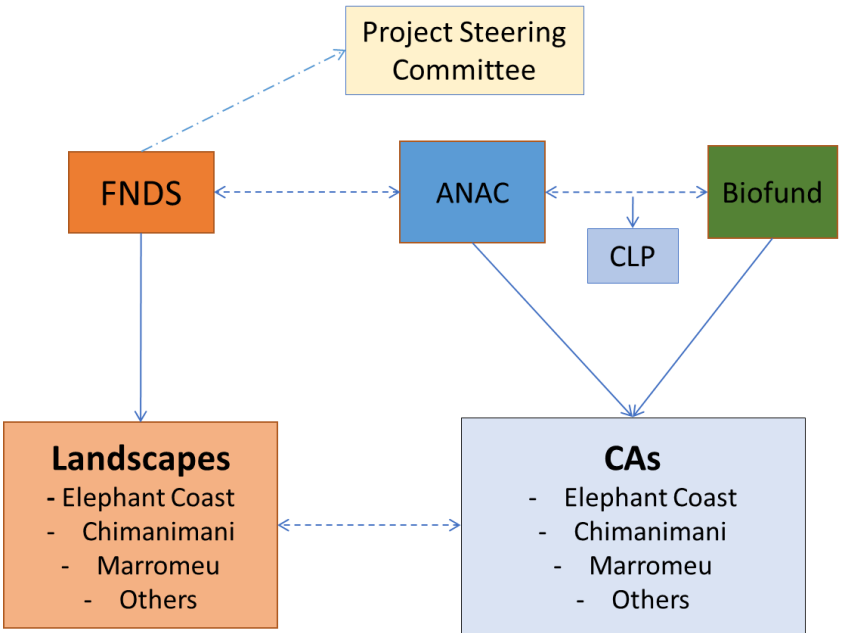

Figure 2 – MozBio 2's Institutional Arrangements

Mozambican Legal and Institutional Framework on Social and Environmental Aspects

In Mozambique the Environmental Law defines the legal basis for the use and management of the environment as a means of safeguarding the sustainable development of the country. According to this Law, Environmental Impact Assessment is an instrument that supports the decision-making on the allocation of environmental license. The environmental licensing should precede any other license legally required in all public and private activities that can be directly or indirectly affected by the environment. The Environmental Impact Assessment Process is regulated by Decree No. 54/2015 while Environmental Auditing and Environmental Inspection are regulated respectively by Decrees no. 32/2003 and 11/2006.

The EIA Regulation defines all the stages of the EIA Process – screening, scoping, content of the EA studies, public participation process, revision and approval by the environmental authority. The first stage of the environmental assessment process is screening, to define the extent and type of required environmental assessment. Similar to the WB's Operational Policy, the Mozambican Regulation on EIA considers four categories of project to identify the appropriate level of environmental assessment: Category A+ (full EIA required, with an EMP, independent review and extended consultation process), Category A (full EIA required with an EMP), Category B (Simplified Environmental Study – SES required with an EMP) and Category C (exempt from an EIA and SES, requiring an Environmental Management Good Practices guide).

Other relevant legal aspects comprise legislation on solid waste management, air emissions, air quality and noise, water resources, water quality, pesticides, coastal management, ownership of land, land use planning, cultural heritage, protected and conservation areas and involuntary resettlement.

The institutional framework for ESMF implementation will be focused in the Ministry of Land, Environment and Rural Development (MITADER) which has multiple and transversal interventions in matters relating to Land, Environment and Rural Development. Therefore, MITADER is responsible for several areas directly related with MozBio 2 projects, such as conservation, land use and rural development. At provincial level MITADER is represented by the Provincial Directorate of Land, Environment and Rural Development (DPTADER). DPTADER is responsible for the environmental and social screening and the subsequent subproject's categorization, being responsible to conduct the environmental licensing projects of activities classified under Category B or C.

World Bank's Safeguard Policies

There are ten safeguard policies in the World Bank, created to inform decision making, ensuring that projects financed by the Bank are environmentally and socially sustainable. These Operational Policies include: Environmental Assessment (OP 4.01), Natural Habitats (OP 4.04), Forestry (OP 4.36), Pest Management (OP 4.09), Physical Cultural Resources (OP 11.03), Indigenous People (OP 4.10), Involuntary Resettlement (OP 4.12), Safety of Dams (OP 4.37), Projects on International Waterways (OP 7.50) and Projects in Disputed areas (OP 7.60).

MozBio 2 triggers six of the World Bank's Safeguard Policies, namely OP 4.01 Environmental Assessment; OP 4.04 Natural Habitats; OP 4.36 Forestry, OP 4.09 Pest Management, OP 4.11 Cultural Heritage; OP 4.12 Involuntary Resettlement OP 4.01 Environmental Assessment categorizes the projects in Categories A, B, or C depending on the significance of its potential adverse environmental and social impacts. MozBio 2 is categorized as a Category B project. Since the sub-projects investments and their potential negative localized impacts will not be firmed up before appraisal, the appropriate safeguard document to comply with OP 4.01 at appraisal is an Environmental and Social Management Framework (ESMF). In addition, a Pest Management Plan is required to comply with, OP 4.09 - Pest Management as well as a Process Framework to comply with OP 4.12 - Involuntary Resettlement.

The World Bank safeguards policies and Mozambican legal framework on Environmental and Social Assessment are generally aligned in principle and objective. The main discrepancies refer to the nonexistence in the national legislation of some of the instruments considered in OP 4.01, such as the Strategic Environmental and Social Study (SESA) and the ESMF; in OP 4.12 Process Framework (PF). The Involuntary Resettlement legislation does not include the avoidance principle, contrary to OP 4.12. The plots and housing requirements are very restrictive, with additional requirements for infrastructure and social services, independent of the number of affected persons.
There is no specific regulation on integrated pest management or organic agricultural production and therefore no national mechanism to approve it.

Lessons learned from the ESMF implementation, in MozBio 1

The challenges faced during the implementation of MozBio's ESMF were progressively recognized and addressed. The initial delay in the disbursement of MozBio funds resulted in pressure to develop subprojects over short timelines at a stage when the Safeguard Specialist had not yet developed adequate knowledge and familiarity with ESMF procedures. The lack of awareness of the ESMF requirements by procurement personnel, as well as by the infrastructure and community development teams, presented another constraint resulting in tender documents being issued without any environmental and social clauses, limiting the ESMF's implementation during construction works.

The integration of the MozBio Safeguard Specialist within the FNDS Safeguard Team allowed for the exchange of experiences and improvement in the application of procedures. Currently the FNDS Safeguard Team comprise four safeguard specialists, being each one responsible for specific type of projects (infrastructure, land and forest, community development and value chain). This arrangement seems to be more efficient, allowing closer collaboration within the team.

The FNDS's Safeguard team, with support from the WB Safeguard team (both through technical workshops and a coaching approach), has sought to improve the ESMF procedures by reorganizing the team (enhancing support between all the FNDS safeguard specialists) as well as by developing new templates. However, there is still no harmonization between the FNDS team and the BM team on the content and level of detail considered in the safeguards instruments.

Based on the faced challenges and lessons learnt, the following actions are recommended:

- Develop more practical capacity building interventions on the use and application of ESMF procedures;
- Start the preparation of the screening phase at an earlier stage (before project design) in order to integrate environmental and social aspects at this early stage whilst also anticipating the subproject's categorization;
- Develop more descriptive environmental and screening forms allowing their proper verification by the Safeguard and WB teams;
- Develop practical templates for the ESMP and Environmental & Social Management Guidelines;
- Improve ESMF awareness for all MozBio team members.

The present ESMF was developed whilst accounting for these lessons and reflects improvements aimed at assisting teams in promoting compliance with the principles and processes contained in the ESMF.

Environmental and Social Baseline

The *Elephant Coast Landscape* is integrated in the Maputaland Centre of Endemism and is part of the Lubombo Transfrontier Conservation Area. It includes the Maputo Special Reserve (REM)[1], the Partial Marine Reserve of Ponta do Ouro (RMPPO) and the Licuáti Forest Reserve. It is dominated by a coastal plain area, longitudinally crossed by the Maputo and Futi rivers with important habitats associated with wetlands, in addition to marine and coastal habitat. The marine and coastal habitats comprise beaches and rocky shoreline, sub-tidal reefs, mangrove forests and intertidal sand flats, sea grass beds and estuaries. REM is home to a breeding population of elephants (the last large population of elephants in Maputo Province and to the south). The most abundant species in the REM are hippo, reedbuck, elephant, grey duiker, red duiker, blue wildebeest and zebra, with the giraffe population increasing steadily. Maputaland is also blessed with a wide diversity of marine species, some endemic and rare, yet some of these species are being over-exploited, and have as a result become endangered. Communities' livelihoods are based on natural resources (subsistence agriculture, fishing and hunting). Small-scale agriculture and fisheries are also sources of income as well as tourism activities. The landscape has high tourism potential (nature, wildlife, beach and associated recreational activities), which is fostered by access to Maputo

[1] which integrates the Futi Corridor.

city, South Africa and eSwatini, boosted by the new road that is expected to be concluded by the end of 2018. This road will result in new pressures on the CA. Land planning instruments are being prepared to contribute towards the management of these new pressures. Human-wildlife conflict events occurs inside the CA, as well in its surrounding areas, although decreasing in the latter due to the fence installed along the Futi Corridor. Fatal events occurred last year inside the CA which led a few families to ask for assistance for voluntary resettlement, which has been discussed at CA management and district government levels.

The *Chimanimani Landscape* is part of the **Chimanimani–Nyanga Center of Endemism** and is shaped by the presence of the Chimanimani mountain range, which represents a unique landscape and environment. Its biodiversity richness comes from the perennial forest and the afromontane pastureland, habitat for various species, including endemic species of flora and fauna, as well as large mammals (such as sable, eland and elephants). The mountains have been inhabited for centuries, containing important historical sites such as Stone Age rock paintings and ruins dating back to the times of Great Zimbabwe in the fourteenth and fifteenth centuries. The landscape is integrated in the Chimanimani Transfrontier Conservation Area. In Mozambique it includes the National Reserve of Chimanimani and the forest reserves of Moribane, Mpunga and Maronga. In 2010 the CNR Management Plan was drawn up, which identified opportunities and threats and a management strategy. Following this plan, the CNR limits were revised in 2013. There are uncertainties on the number of inhabitants living inside the TPZ. The recent population census indicates the presence of approximately 500 households, which is being investigated by the CNR, as it is higher than expected. The main threat to TPZ has been the activity of illegal gold panners, although most of the mining has now been abandoned within the TPZ, although a few cases are still reported. The recent (2014) upgrade of the Chimoio-Sussundenga road to a tarmac road has strongly boosted the economic development of Sussudenga District, which resulted in the establishment of new large agriculture areas (mainly fruit trees) and livestock farming, including in the CNR buffer zone, which could result on an increase of pressure in the CNR. Despite the high tourist potential, the new road has not yet led to tourism development. Tourism was affected by the political and security instability (from 2012 - 2017) and is limited by the lack of tourism facilities. CNR has been supported for many years by international agencies (such as WB) and NGOs (such as MICAIA).

The Marromeu Complex Landscape is located in the central region of Mozambique, in the Zambezi River Delta. It comprises most of the Ramsar's Wetland of International Importance in the south bank of the Zambezi Delta, including the Marromeu National Reserve, Coutadas 10, 11, and 14, the Nhapacué and Inhamitanga Forest Reserves and adjacent land areas in Marromeu, Cheringoma, and Muanza Districts. The Landscape is part of the Zambezian Coastal Flooded Savanna ecoregion, a flat alluvial plain irrigated by the Zambezi River Delta. It includes a variety of habitats ranging from Zambezian coastal flooded savanna, coastal dunes, grassland, freshwater swamps, *dambos* associated with miombo forest, mangroves and seagrass beds. These habitats are of great importance for several avifauna species, but also for populations of buffalo and antelope amongst others. In the 1960's, the area's buffalo population was considered one of the largest in the world, although, during 1980's it sharply declined, due to the armed conflict and slaughtering campaigns. Indications are that in recent years the buffalo population has been growing significantly. Coutadas (mainly Coutada 11) have been active for more than 20 years, establishing a protection area around the MNR. During this time the operators have noticed an increase in the population inside the Coutadas, which could result from some assistance provided by the operators to local communities (including distribution of trophy's meat). Livelihoods are based on subsistence agriculture, complemented by extensive use of local resources to supplement diets and incomes and to fulfil basic needs. Along the coast, fishing is practiced both by local fishermen (mainly for

subsistence) and by others from other provinces or even Tanzania. The Sena Sugar Company is the main employer which draws in 3-4000 migrants at peak periods of the year. The area is prone to floods and INGC has had to resettle communities from the area.

Potential Environmental and Social Impacts

MozBio 2 has been classified as a Category B Project since the potential direct adverse environmental and social impacts associated with planned subprojects are expected to be minor, site specific and easily manageable. Each subproject will be screened and assessed based on the nature and scale of the proposed activities and impacts, as well as the sensitivity of the affected environment and community.

Within the target Conservation Areas, Component 2 potential subprojects include the construction or rehabilitation of new buildings such as headquarter offices, accommodation and training centres, the opening of new and improvement of existing accesses roads, the launch of a major tourism development program, the additional translocation of animals and the establishment of a community-private partnerships for tourism for the CNR.

Adverse environmental impacts associated with building construction will be localized and generally with limited impacts. Impacts can include deforestation, soil erosion, dust and noise generation and associated nuisance, as well as health and safety aspects, both for workers as well as the surrounding community. In the case of projects to open or improve access, adverse impacts will occur throughout the corridor, subject to impacts of greater magnitude and significance, including loss of vegetation, habitat fragmentation and communities. In any case, construction works constitute an employment opportunity for local people, which is a positive impact.

The opening, rehabilitation or improvement of roads, besides benefiting the management of the CA, can also contribute to an increase in the number of tourists, since the current poor road conditions are a limiting factor for tourism development. The establishment of an important program of tourism development in the Elephant Coast Landscape and tourism in the CNR can also contribute to an increase in the influx of tourists in these CAs. Potential social impacts on local communities as a result of increased tourist numbers should be carefully investigated - it is likely to bring benefits by giving rise to new sources of income but may also have implications for existing social structures and dynamics - it may also affect the access of local communities to natural resources. Social assessments of the communities around the targeted CAs will be conducted to evaluate the potential social risks and inform project implementation, including mitigation. It is not expected that there will be a need for involuntary displacement of populations, but damage to assets or property may occur and will require adequate compensation in accordance with the MozBio 2 Resettlement Policy Framework (RPF). On the other hand, and in particular as a result of the introduction of wildlife, there may be some situations of increased human-animal conflict, requiring one-off displacement (voluntary or involuntary) of families to areas of lower risk, which will also require the application of RPF.

Outside the Conservation Areas, under Component 3 of MozBio 2, the project foresees the strengthening of landscape zoning, the promotion of access to finance for the development of value chains compatible with conservation, the construction of basic social infrastructures and promotion of land restoration (conservation compatible agriculture, reforestation and reduction of deforestation) in the target landscape. The potential activities of value chains, specific to each CA are highlighted below:

Elephant Coast Landscape. Potential value-chain activities may include support for (a) fisheries associations in the bay area of the marine reserve, (b) NBT private or community/private joint ventures, (c) sustainable wildlife management and cattle farming, (d) conservation-compatible livestock schemes; (e) crab farming; (f) handcrafting; (g) beekeeping.

Chimanimani Landscape. Potential value-chain to be promoted include (a) NBT private or community/private joint ventures, (b) wildlife and cattle farming, (c) forestry, including small-scale plantation; (d) conservation-compatible agriculture—e.g. macadamia, coffee, beekeeping, soy, maize, sesame, which also provide opportunities for improved adaptive capacity to manage climate related risks.

Marromeu Complex Landscape. Potential value-chain activities include (a) fisheries in the estuary and coastal area, (b) private or community/private joint ventures in sports hunting, (c) non-timber forest products, forestry or conservation-compatible agriculture—e.g. cashew nuts, sugar cane, beekeeping, wildlife products; (d) crab farming.

The social benefits resulting from the implementation of these subprojects include the creation of job opportunities (including for women), improvement of income generation opportunities through the establishment of new value chains and improvement in community organization and skills development, in addition to contribution to the preservation of biodiversity and environmental quality.

Agricultural, livestock and forestry projects can have an impact on land occupation, cause habitat transformation and fragmentation, affect the availability of water for downstream users, and result in soil and water pollution as a result of pesticide, fertilizers and antibiotic misuse, depending on the type of activity. Activities that involve the processing of agricultural, forestry, livestock or fishing value chain products may in addition generate effluents, residues and odors that affect the quality of the environment and the health of populations requiring the adoption of specific environmental management measures.

The preparation of zoning plans for the Elephant Coast Landscape (ECL) and Chimanimani Landscape (CL) may have environmental and social implications associated with limitations of access to land and the use of natural resources. In the ECL, the zoning will be based on the PEOT and its associated Strategic Environmental and Social Assessment (SESA). The new zoning plans should also have associated SESAs to ensure the proper integration of environmental and social issues.

Guidelines for ESMF Implementation

All MozBio 2 subprojects shall be subjected to a review and screening process to determine the level of required environmental and social assessment. To this end, this ESMF describes processes for ensuring that environmental and social concerns are adequately addressed through institutional arrangements and procedures during the subproject cycle.

The FNDS shall ensure adherence to the ESMF, PF, RPF and PMP in all subprojects funded under MozBio 2. Specifically, the FNDS's Safeguard Team shall be responsible for the implementation of all the procedures contained in the present ESMF, with support from the Safeguard Assistants of the LMUs and the CA' Co-Management structures.

At Provincial level, the Provincial Directorates for Land, Environmental and Rural Development (DPTADER) will be involved in environmental assessment process of each subproject as per the national EIA Regulations.

At District level, the SDPI will be involved in the supervision of civil works, verifying compliance with labour and health and safety contract requirements. The SDAE will be involved in the preparation and implementation of rural development subprojects.

All MozBio 2 subprojects will have to undergo a review and screening process to determine the level of environmental and social assessment required.

To ensure the implementation of the identified environmental and social mitigation measures, close collaboration between the safeguard team and the project conception teams, at national and landscape level (infrastructure, value chain and community development), as well as the MozBio procurement team, is crucial. This integration shall begin during the planning phase of subprojects - during the definition of value chains and the preparation of associated business plans - where safeguard specialists shall ensure that environmental and social concerns are accounted for and where required, that additional and more detailed guidelines are listed to complement those already included in the ESMF.

To support the screening of subprojects, a detailed Environmental and Social Screening Checklist, aimed at identifying the type and extent of the required environmental and social assessment, has been developed and is included in this ESMF.

The screening and project categorization phase determines the necessary type of environmental and social management instrument to be developed for each subproject, namely whether a Simplified Environmental Impact Assessment (ESIA), an Environmental and Social Management Plan (ESMP) or an Environmental and Social Management Good Practices Guide (ESMGPG), is required.

Guidelines for supervision, monitoring and regular reporting are also defined to assist in tracking implementation of the ESMF.

The Environmental and Social Management Instruments described above (such as the Simplified ESIA, ESMP and the ESMGPG) will provide the basis for the preparation of the Environmental, Social, Health and Safety (ESHS) Requirements to be included in Bidding Documents for Works and will be attached to the Bidding Documents. A Contractor's ESHS Code of Conduct shall be applied to all contractors and subcontractors' workers. During the bidding process, the bidder will be requested to prepare an ESHS Management Strategies and Implementation Plan (MSIP) – to support the implementation of the ESMP or the ESM Good Practice Guide - and to submit the ESHS Code of Conduct, which in turn must be approved by the FNDS and included in the contract.

An independent audit cycle shall be adopted to assess MozBio 2 project's performance against stated objectives and targets and to identify areas for improvement.

Grievance Mechanism

MozBio 2 will rely on the common Grievance and Redress Mechanism that has been established for all projects included in the World Bank's Integrated Landscape Management Portfolio in Mozambique – called the "Dialogue and Grievance Mechanism (MDR)" (Figure 3). A manual of procedures and a communication strategy were prepared, and an IT platform

was designed to register and monitor the reported cases. This mechanism has been discussed with key stakeholders, including local communities, and has been tested in the Maputo Special Reserve to validate its procedures. The MDR is in the process of being implemented and will be operationalized in all Project areas either as part of MozBio 1 or at the inception of MozBio 2.

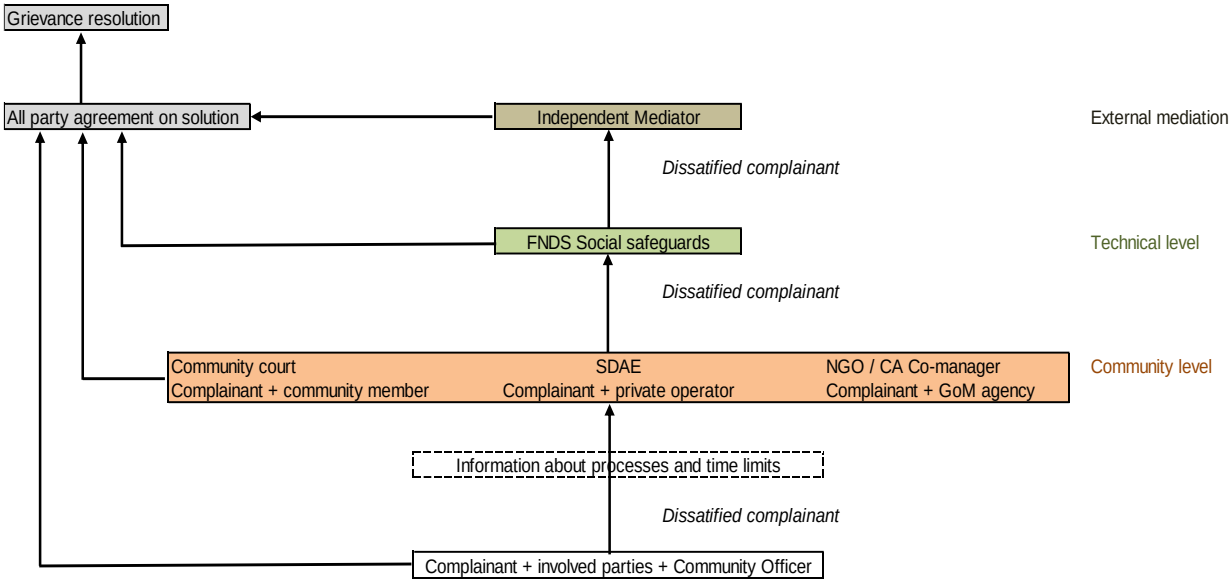

Figure 3 - Grievance resolution process outline according to the MDR

Capacity Building

Successful implementation of the MozBio 2 Project will depend, amongst others, on the effective implementation of the environmental and social management measures outlined in the ESMP, PF, RP and PMP. Capacity building is recommended for key stakeholders to ensure that they have the appropriate knowledge and skills to implement the ESMF's procedures and guidelines.

The MozBio 2's ESMF includes a practical capacity building process comprising technical training, awareness-raising and sensitization activities. These aim to overcome difficulties experienced during the implementation of MozBio 1's ESMF primarily related to the lack of familiarity with the ESMF's procedures and guidelines and on the practical application of safeguard instruments.

The WB has been supporting the strengthening of capacity of the FNDS safeguards team including the MozBio safeguards specialist. Training has also been provided to DINAB, AQUA, DPTADERs and local institutions to help improve both the awareness of safeguards policies, as well as awareness of other crosscutting issues related to gender, the inclusion of vulnerable groups, and the understanding of how to implement mitigation and inclusion measures. New training workshops are planned for the near future, in addition to using a coaching approach and on-the-job training to address specific issues and gaps.

MozBio 2 shall include a practical capacity building process comprising technical training and awareness-raising and sensitization activities in order to overcome the difficulties experienced in the previous phase. Whereas the work is planned to be conducted in-house,

a third party may be contracted to assist in the development and implementation of specific capacity building measures during the life of the project.

Budget

The budget for the implementation of the ESMF includes costs for Consultancy Services to prepare (i) Simplified Environmental Impact Studies for Component 2 subprojects; (ii) Social Assessments for the three landscapes; (iii) Strategic Environmental Assessments of zoning plans for Marromeu Complex and Chimanimani; (iv) External audit of the implementation of the ESMF, (v) Training and (vi) Monitoring. The overall budget for implementation of the ESMF is estimated at US$ 1,339,500.00. Funds for ESMF implementation will be made available from the International Development Association (IDA).

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1. INTRODUCTION

The Government of Mozambique, through the Ministry of Land, Environment and Rural Development (MITADER) has been implementing the Mozambique Conservation Areas for Biodiversity and Sustainable Development (MozBio) Series of Projects (SoP) since 2014. MozBio's first project's (MozBio 1) overall objective is *to improve the management of Conservation Areas (CAs) and to enhance the living conditions of communities living in and around these conservation areas*.

The MozBio SoP Program was designed for the long term, to be implemented in phases. The first phase – MozBio 1 (from 2014 to 2019) comprised five components namely: (1) Institutional strengthening for Conservation Areas management, (2) Promotion of Tourism in Conservation Areas (3) Improvement of Conservation Areas Management, (4) Piloting of Sustainable Livelihoods around Conservation Areas, and (5) Project Management, Monitoring and Evaluation. The project included infrastructure and community development subprojects that would require due safeguards consideration thus triggering six out the ten World Bank Safeguards Policies. MozBio 1 was classified as a Category B project per the World Bank safeguards policy OP 4.01 on Environmental Assessment. To address project's environmental and social impacts three Safeguard instruments were prepared: an Environmental and Social Management Framework (ESMF), a Process Framework (PF) and a Pest Management Pan (PMP).

Lessons learned MozBio-1 implementation include the need for an Integrated Landscape Management (ILM) approach that combines rural development operations in support of agriculture, forestry, tourism, transport and other sectors with restoration of degraded areas within the administrative boundaries of a province, adapted to the relevant landscape boundaries of target CAs, their buffers and influence areas. This approach is relevant to the conservation areas since most threats come from outside their borders, including population pressure. Another lesson is that it would be more efficient to focus efforts in fewer CAs. The adoption of co-management approaches with existing partners to achieve a transformational process is another lesson.

The second phase of MozBio (MozBio 2) is being developed for three target CAs and their surrounding landscape: (1) the Elephant Coast Landscape (comprising the Maputo Special Reserve, Ponta do Ouro Marine Reserve and Inhaca island), (2) Chimanimani (including Chimanimani National Reserve and its buffer zone and three Forest Reserves – Moribane, Zomba and Maronga) and (3) the Marromeu Complex Landscape (including Marromeu National Reserve and Coutadas 10, 11 and 14).

MozBio-2, will be implemented from 2018 to 2023. Its Project Development Objective (PDO) is the ***improvement of the management of target Conservation Areas Landscapes and the enhancement of the living conditions of communities in and around these conservation areas*.**

MozBio-2 comprises the following components:

Component 1: Strengthening Capacity of National Conservation Institutions and Financial Sustainability of the CA system

Component 2: Improving Conservation Areas Management in targeted landscapes

Component 3: Promoting conservation-compatible rural development and integrated landscape management in target landscapes

Six of the 10 operational policies of the World Bank have been trigged for the implementation of MozBio 2, respectively, OP 4.01 Environmental Assessment; OP 4.04 Natural Habitats; OP 4.09 Pest Management; OP 4.11 Physical Cultural Resources; OP 4.36 Forests; OP 4.12 Involuntary Resettlement. As in its previous phase, MozBio 2 Project was classified as Category B, thus requiring an Environmental and Social Management Framework (ESMF).

This ESMF for the MozBio 2 Project seeks to ensure compliance with national environmental and social requirements as well as compliance with the World Bank's Social and Environmental Safeguards and the General and Specific Environmental, Health, and Safety (EHS) guidelines[2]. It includes a preliminary identification of potential environmental and social impacts, defines procedures for environmental and social assessment and management of potential impacts and defines the required institutional arrangements, capacity building requirements and budget for implementation.

The ESMF is a dynamic instrument that shall be reviewed periodically in order to be updated and include lessons learned.

The ESMF is complemented by the following instruments:

- Resettlement Policy Framework (RPF) that lays out the policies, procedural guidelines and institutional arrangement for the implementation of any involuntary resettlement interventions that could be required under MozBio 2;
- Process Framework (PF) that describes the process by which potentially affected communities will participate in a more consultative and integrated manner in identifying the impacts of their restrictions on access to land and natural resources and in planning mitigation of these effects, with the overall view of sustainably managing the natural resources in designated CAs;
- Pest Management Plan (PMP) that promotes the integrated pest management and the safe use of agricultural pesticides.

The ESMF for MozBio 2 will be publicly consulted and disclosed in Mozambique and at the World Bank's InfoShop prior to project appraisal. It will then become an integral part of the Project's Implementation Manual and applicable to all investments under MozBio 2.

2. PROJECT DESCRIPTION

[2] https://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/sustainability-at-ifc/policies-standards/ehs-guidelines

2.1 BACKGROUND AND PURPOSE

Mozambique has significant renewable natural resources, including forests, fisheries and wildlife. With 32 million hectares of forest cover (mainly miombo dry forests, but also large mangrove areas), the country is one of the most forested in Africa. Mozambique's oceans harbor extraordinary fish and habitat diversity, including lobsters, crabs, shrimps and prawns. Its coastline, the 4th longest in Africa, is unique in terms of environmental quality, diversity, and abundance of species, and has some of the most spectacular coral reefs in the world. The country has outstanding terrestrial, freshwater, marine and coastal biodiversity, counting more than 10,000 species, 10% of which are endemic or nearly endemic. These renewable natural resources provide global public goods and unique habitat to globally-relevant biodiversity. They also provide goods and services to the local population, such as freshwater, food and fuel sources. The rural population, which accounts for 70% of the total, are highly dependent on the direct use of the country's natural resources.

Mozambique's network of Conservation Areas, makes up 23% of Mozambique's land surface. It is currently made up of seven National Parks, ten National Reserves, one Environmental Protection Area, seventeen Controlled Hunting Areas (*Coutadas*) and two Community Reserves. These CAs aim to preserve biodiversity and the ecosystem, and to contribute to the development and the socio-economic well-being of Mozambicans. CAs and their surroundings provide vital ecosystem goods and services to rural populations and generate income to the national economy. The declared revenue from tourism (including both non-consumptive tourism and sports hunting) in CAs almost tripled from 2012 to 2013, from around US$1 million in 2012 to almost US$3 million in 2013 (Rylance, 2014). Revenues from *Coutadas* (wildlife utilization areas) increased by nearly 500% in the same period.

Conservation Areas are under a lot of pressure. A 'threats and pressures' analysis by the Government of Mozambique (GoM) in 2014 showed that uncontrolled forest fires, tree logging, conversion of land use to grazing and slash and burn agriculture, illegal hunting and fishery are currently posing severe pressures on CAs, and without action they are likely to remain the main threats to conservation in the coming years. **The revenue currently generated from tourism and sports hunting is largely insufficient to finance the management of CAs**. In addition, the levels of re-investment of Park-generated revenues are very low. As a result, CAs are still heavily dependent on donor funding and mechanisms to contribute to financial sustainability are sorely needed.

In 2014, the GoM prepared the MozBio Program to address these challenges and enhance the potential contribution of CAs to rural development (including to the livelihoods of communities around CAs). The MozBioProgram aims to support the conservation of Mozambique's wildlife, biodiversity and ecosystems and contribute to the livelihood of local communities within and surrounding the conservation areas network. This Program builds on the two-phased Transfrontier Conservation Areas (TFCA) Program. Supported by the Bank and other development partners from 1996 to 2013, the TFCA Program raised the conservation agenda to a core development priority. It had significant achievements, including the development of the Conservation Policy and Law, the establishment of the National Administration for Conservation Areas (ANAC) and of the Foundation for Biodiversity Conservation (BioFund), increased management capacity of key TFCAs (including the Limpopo National Park, Maputo Special Reserve and Chimanimani Reserve), and promoted local community development initiatives.

The MozBio Program has four pillars (see Figure 1):

a) Policies, legislation and institutions;
b) Financial sustainability;
c) Biodiversity conservation management; and
d) Community development.

The preparation of MozBio 2 took into consideration lessons learned from MozBio 1, including:

a) Policies, legislation and institutions: Institutional reform is not completed, particularly regarding ANAC, and takes time. A more coherent approach to institutional strengthening with a strong emphasis on results should be pursued;

b) Financial sustainability: Public-Private-Partnerships (PPPs) have great potential to attract additional finance and technical capacity to CA management and MozBio 2 will actively seek to establish such partnerships. Financial sustainability has advanced but remains a long-term goal. The endowment fund (BioFund) continues to be a key instrument, to be supported further. Other sources of revenue (namely from tourism, environmental services and sustainable use of wildlife) should be pursued;

c) Biodiversity conservation management: Supporting a large number of CAs is important to assist with preservation but hampers the possibility of transforming them and enhancing their financial sustainability. MozBio 2 would promote 'transformational changes' by focusing on a smaller number of areas, while continuing to support the enabling environment and financial sustainability of the overall CA system; and

d) Community development: Implementation of value chain activities should be led by actors working outside CAs and in line with the integrated landscape management approach.

MozBio 2 principles are:

- **Maximize Finance for Development:** leverage private financing for managing protected areas through conservation PPPs, promotion of nature-based tourism investment, ecosystem services payments and sustainable wildlife management;
- **Integrated Landscape Management:** promotion of partnerships across stakeholders working in the landscape around the protected areas;
- **Prioritize women and youth as elements of change at the local level.**

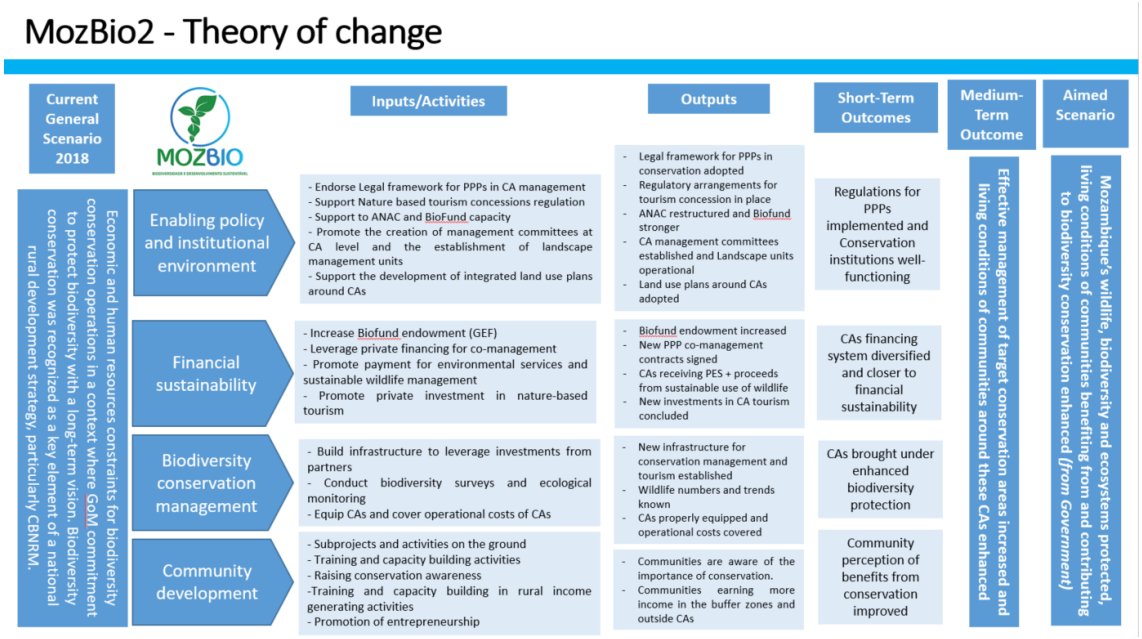

Figure 1- MozBio 2's pillars and Theory of Change

The following three landscapes associated with CAs were selected (see **Error! Reference s ource not found.**):

- **Elephant Coast Landscape**, includes the Maputo Special Reserve, the associated Futi Corredor, Ponta do Ouro Marine Reserve and the immediately adjacent land areas in Matutuine District and the Licuati Forest Reserve;
- **Chimanimani Landscape,** includes the Chimanimani National Reserve (reserve and buffer zone) and immediately adjacent land areas in Sussundenga District, the Forest Reserves of Moribane, Mpunga and Mronga.
- **Marromeu Complex Landscape** comprises the Marromeu Special Reserve, Coutadas 10, 11 and 14, and immediately adjacent land areas in Marromeu, Cheringoma, and Muanza Districts and the Zambezi estuary in Zambezia Province, which are part of a RAMSAR site.

These landscapes were selected due to their unique biodiversity, high level of poverty among communities, strategic locations that encompass both terrestrial and coastal landscapes, opportunities for co-management arrangements and potential synergies with other World Bank Projects such as MozFIP, Sustenta and SwioFish1. Other landscapes may be selected during the implementation of the project, subject to a common understanding between the World Bank and the Government of Mozambique.

Figure 2 –Mozbio 2 Conservation Areas Landscapes

2.2 COMPONENTS OF THE PROJECT

As referred, the MozBio-2 Project comprises the following components:

Component 1: Strengthening Capacity of National Conservation Institutions and Financial Sustainability of the CA system

Component 2: Improving Conservation Areas Management in target landscapes

Component 3: Promoting conservation-compatible rural development and integrated landscape management in target landscapes

While Component 1 is national in scope, with activities aimed at strengthening the three relevant institutions (ANAC, FNDS and BIOFUND) and human resources for the entire CA system, Component 2 and 3 target the three selected landscapes.

The objectives and activities of each component are summarized below:

2.2.1 Component 1: Strengthening Capacity of National Conservation Institutions and Financial Sustainability of the CA system

The objective of this component is to consolidate the national conservation institutions ANAC, FNDS and BIOFUND:

- **Strengthening of ANAC**. The project will support ANAC to become a reference conservation institution in southern Africa, by strengthening its business development capacity to attract investments in support of conservation. The project will finance: a) establishment and functioning of a "Business Unit" to identify, market, manage and monitor public private partnerships for CA management (co-management) and to promote tourism concessioning within CAs, particularly new tourism concessions in the targeted CAs; b) development and piloting of an electronic visa (e-visa) system to facilitate tourists' entry in the country through an online application process; c) participation in national, regional and international conservation meetings to guarantee exchange of knowledge with other partners and institutions; d) technical assistance (firms and individual consultants) to draft regulations (such as for human resources and gender guidelines for CA Management among others); e) office equipment and operating costs (especially for utilities, stationaries, travel to field among others). ANAC will also be supported through the Conservation Leadership Program (below).

- **Strengthening of BIOFUND.** The project will strengthen BIOFUND's capacity to become an international reference on sustainable financing of CAs. The project will finance: a) part of the salaries and operating costs of the BIOFUND secretariat, which will permit full use of the endowment fund for distribution to the operating costs of the CAs thus improving CA management. This will also allow for the endowment fund to continue to build and foster future self-sustainability; b) studies to explore sources of sustainable financing for CAs and to secure such opportunities, including a funds mobilization strategy, assessing the real value of conservation areas for national and local economies, opportunities for payments of ecosystem services, and piloting a biodiversity offset initiative with the private sector. The project intends to contribute to the conservation endowment fund managed by BIOFUND, through GEF 7 funding once available, through an additional finance to the current project.

- **Strengthening of FNDS**. The project will support FNDS to strengthen its role of promoting sustainable rural development, including within the target conservation areas landscapes, and to ensure proper fiduciary and safeguards management for this project. The project will finance: a) salaries of key project management staff (such as the coordinator, a protected area management officer (to oversee Component 2), value chains specialists (to oversee Component 3), community development specialists (to oversee community activities in Components 2 and 3), M&E officers, safeguard officers, financial managers, accountants, and procurement officers (part of FNDS fiduciary support unit); b) operating costs at the national level for equipment maintenance, utilities, travel, communication, and subsistence on the field; c) vehicles, field and office equipment.

To enable the institutional environment and ensure the financial sustainability of the Conservations Areas system, the following are also foreseen:

- **Promotion of the Conservation Leadership Program**. The project will establish and maintain a Conservation Leadership Program to promote a cohort of skilled professionals in biodiversity conservation who is expected to work for the different organizations in Mozambique's CA system. This will be promoted through: a) long- and short-term trainings delivered by national and international organizations, b) professional experience in national and international conservation institutions. The Program will teach a broad set of skills, including leadership (conservation management, planning, monitoring, financial management, etc.), science (ecology, botany, zoology, etc.), and climate change risks. The Program will establish an internship program, grant scholarships and promote an annual conference on biodiversity to raise awareness of conservation skills needs and offers in the country. Targeted beneficiaries are staff currently employed at key conservation institutions (ANAC, BIOFUND and FNDS) and young Mozambicans engaged in conservation. Beneficiaries will be selected through a robust transparent and merit-based process (with at least 10 percent of staff beneficiaries being women and 50 percent of the broader public beneficiaries being women), led by ANAC and BIOFUND. The Program will establish partnerships with international agencies, such as South Africa's Parks (SANParks) and the Brazilian Park's Agency (ICMBio), and collaborate with regional training institutions, such as Southern Africa Wildlife College (SAWC), Mweka Wildlife College, and others, and with domestic knowledge centers, particularly the E.O. Wilson Lab in the Gorongosa National Park and other relevant academic partners.

2.2.2 Component 2: Improving Conservation Areas Management in target landscapes

This component will improve biodiversity conservation management of target CAs, particularly the governance of CAs (including its relationship with surrounding stakeholders), human resources management, infrastructure establishment and maintenance, human-wildlife coexistence, research, resources control and patrolling, promoting environmental awareness and strengthening of community-based organizations (CBOs) among local communities. Activities to be financed will be in line with the CA management plan. Biodiversity conservation management is a pillar of the MozBio Program, to which this component contributes directly. Expected results include significantly improved management effectiveness of the targeted CAs (an average increase of 20 percent in the Management Effectiveness Tracking Tool score across the targeted CAs), ensuring that key species populations are maintained or increased, among others.

- **Enhancing CAs' human resources and fixed assets.** The project will support: a) human resources development, including salaries and training of key staff; b) climate smart and resilient infrastructure, including construction, repair or maintenance of infrastructure mainly for management (headquarters, staff and rangers housing, roads, drifts, fencing, small works for the promotion of human-wildlife co-existence) and tourism (access road, viewing structures, camp site, trails, signage); d) technical assistance for management plans; d) equipment, including vehicles, boats, field equipment, tents,

radios, repeaters; e) research and surveys, including climate change risks to CA management, integrated wildlife and ecosystem management, and pilot a registry of ecosystem degradation and efforts of restoration to feed into the biodiversity offset system; f) translocation of wildlife. These activities will be implemented by FNDS.

- **Supporting CAs' operations.** The project will finance: a) operational costs to strengthen CA governance, including the establishment and functioning of CA management councils; b) resource protection including patrol costs (ration, fuel, bonus, etc.); c) delivery of environmental awareness and education campaigns through the use of cultural activities including local community radio programs (including family planning messages), support to girls' and environmental clubs, scholarships to local youth, and promotion of vocational training; d) strengthening community-based organizations among local communities; and e) a pilot of payments for ecosystem services (PES) in Maputo Special Reserve. These activities will be implemented by BIOFUND.

Activities specific to the targeted CAs are as follows:

a) **Elephant Coast Landscape (Maputo Special Reserve and Ponta do Ouro Marine Reserve).** The project will finance: I. *Related to human resources and fixed assets*: a) staff salaries and training; b) infrastructure development, including a connection road to the park entrance/headquarters building and an all-weather game loop in its vicinity, construction of additional staff housing and rehabilitation of a training center; c) equipment, including field equipment; d) translocation of animals. II. *Related to CAs' operations:* a) supporting operational costs linked to the governance of the CA, including the establishment of its management council; b) enhancing environmental awareness, promotion of girls' clubs, provision of scholarships, community trainings and campaigns including on family planning; c) support to CBOs; d) operating costs, including fuel, rations, equipment maintenance; Peace Parks Foundation (PPF) will act as the co-manager for these CAs through an agreement signed with the GoM.

b) **Chimanimani Landscape (Chimanimani National Reserve).** The project will finance: I. *Related to human resources and fixed assets*: a) staff salaries and training; b) infrastructure construction and maintenance, including staff housing, camps, roads, drifts, trails, signage, c) equipment, including field equipment; d) translocation of animals. II. *Related to CAs' operations*: a) operational costs linked to the governance of the Reserve, including the establishment of its Management Council, b) updating the management plan, c) enhancing environmental awareness, promotion of girls' clubs, provision of scholarships, community trainings and campaigns including on family planning; d) operating costs, including fuel, rations, equipment maintenance. A partnership for the co-management of this CA will be pursued by ANAC.

c) **Marromeu Complex Landscape (Marromeu Reserve and Coutadas 10, 11, 14).** The project will finance I. *Related to human resources and fixed assets*: a) staff salaries and training; b) infrastructure construction and maintenance, including staff housing and office, water and electric access, and road improvement, c) equipment,

including field equipment; d) translocation of animals. II. *Related to CAs' operations*: a) operational costs linked to the governance of the Reserve, including the establishment of its Management Council, b) updating the management plan, c) enhancing environmental awareness, promotion of girls' clubs, provision of scholarships, community trainings and campaigns including on family planning; d) operating costs, including fuel, rations, equipment maintenance; e) research and survey work, including on estuarine and marine ecosystems, considering climate change impacts. A partnership for the co-management of this CA will be pursued by ANAC.

2.2.3 Component 3: Promoting conservation-compatible rural development and sustainable landscape management in target landscapes

This component will promote conservation-compatible rural development in target landscapes through support to sustainable value chains, and promote integrated landscape management, by financing land use planning, establishment of Landscape Management Units, and capacity strengthening of targeted districts to reduce pressure on CAs. Restoration of degraded habitats will be promoted once GEF 7 funds are available. These activities contribute to a pillar of the MozBio Program, and requires addressing several constraints, including limited access to credit, technical assistance and inputs, insufficient market access and employment opportunities. This can only be achieved through an integrated set of interventions across the landscape (integrated landscape management), including spatial planning, and restoration of degraded habitats (land, forests, mangroves, etc.). Conservation-compatible rural development aims to improve the livelihoods of communities living in these landscapes while also reducing pressure on CAs from surrounding communities and restoring degraded habitats. Expected results include an increase in the number of rural households and local communities connected to sustainable value chains, and restoration of degraded habitats. This component draws on the implementation tools of the ongoing Sustenta Program, financed by the Bank. Expected results include: increased number of households included in sustainable value chains, in particular of women-headed households, rural population's financial literacy increased, local land use plans completed, and area of degraded habitats restored.

Promoting conservation-compatible rural development through access to finance and technical assistance (matching grant scheme – *Sustenta Biodiversidade*). The project will finance a) a matching grant scheme targeting local entrepreneurs, community-based organizations (CBOs) and micro, small and medium enterprises (MSMEs) to promote conservation-compatible value chains, including financial literacy of local communities through the establishment of Saving and Credit Groups (PCRs), which primarily comprise women and represents one of the few working mechanisms that help women to increase their financial credit and savings.

Promoting integrated landscape management, particularly landscape zoning, restoration of degraded habitats and reduction of habitat loss in the targeted landscapes. The project will finance: a) operational costs and consultancy to develop participatory and gender sensitive land use zoning plans for the target landscapes, including consultation, mapping, field work, and dissemination; b) operational costs and equipment to establish Landscape Management Units; c) operational costs and equipment to strengthen the capacity of Districts in the targeted landscapes; d) operational costs, equipment and

consultancy to restore degraded habitat, including land restoration, and to halt the loss of critical habitats through the adoption of sustainable land use practices (such as conservation agriculture, agroforestry and reforestation). These sustainable land management activities are expected to be financed through GEF 7 (as additional financing to this project). Land restoration activities will be entered in the national registry to facilitate the financing of ecological restoration activities by the private sector as a potential biodiversity offset asset.

Activities specific to each landscape are mentioned below.

a) Elephant Coast Landscape. The project will support: a) value-chain activities, possibly including: fisheries associations in the bay area of the marine reserve, nature-based tourism private or community/private joint ventures, sustainable wildlife management and cattle farming, conservation-compatible livestock schemes, crab farming, handcrafting, beekeeping; (b) establishment of Savings and Credit Groups. A Special Land Use Plan (PEOT) for the landscape will be the base for the Elephant Coast Management Plan (currently under preparation). With GEF 7 financing, habitat restoration efforts will be conducted (including clearance of alien invasive species in Maputo Special Reserve), as well as reduction of habitat loss in critical areas (such as the Licuati forest reserve) potentially through the establishment of a community conservation area.

b) Chimanimani Landscape. Potential value-chain to be promoted include: a) NBT private or community/private joint ventures, wildlife and cattle farming, forestry, including small-scale plantations; conservation agriculture—e.g. macadamia, coffee, beekeeping, soy, maize, sesame, which also provide opportunities for improved adaptive capacity to manage climate related risks. b) New Savings and Credit Groups will be formed. A detailed land use plan for the Sussudenga District will be conducted. With GEF 7 financing, land restoration, including restoration of areas along the key rivers of the watershed, will be promoted as well as reduction of habitat loss in critical areas potentially through the establishment of community conservation areas.

c) Marromeu Complex Landscape. Potential value-chains to be promoted include: a) fisheries in the estuary and coastal area; private or community/private joint ventures in game farming; forestry, non-timber forest products; conservation agriculture—e.g. cashew nuts, sugar cane, beekeeping, wildlife products; crab farming; b) new Savings and Credit Groups will be formed. A detailed land use plan for the Marromeu District will be conducted, which complements the already existing Zambezi Valley land use plan. With GEF 7 financing, land restoration activities will be promoted, including mangrove and wetland restoration, as well as the reduction of habitat loss in critical areas.

The Matching Grant Scheme (MGS) will provide matching funds to local entrepreneurs, community-based organizations (cooperatives, associations, and natural resources committees, among others), small and medium enterprises and individuals for revenue-generating businesses. At least 30 percent of beneficiaries will be women and/or youth. Businesses to be supported have to be (i) conservation-compatible, (ii) consistent with the

approved zoning for the landscape, (iii) economically viable. Types of businesses to be promoted include value chains based on wildlife products, such as buffalos and crocodile farming, on forest products (timber and non-timber forest products), NBT, agriculture and livestock. The project will provide assistance for the identification, preparation and implementation of the business plans. MGS will follow the procedures currently implemented by the Sustenta project (P149620).

2.4 PROJECT INSTITUTIONAL AND IMPLEMENTATION ARRANGEMENTS

The previous phase of the MozBio project was implemented by the MozBio Unit (MozBio PIU), which was initially embedded within ANAC. Lessons learnt in the early stages of MozBio 1 implementation showed weakness in operational issues and business development, despite the relatively good performance on issues related to strategy, policy and legislation and the coordination of law enforcement. The MozBio PIU was then transferred to MITADER´s **National Sustainable Development Fund (*Fundo Nacional de Desenvolvimento Sustentável* – FNDS)** which became responsible for Project operation.

The **FNDS will be responsible for the overall strategic guidance and will coordinate Project implementation, particularly through its International Funds Management Unit (UGFI).** The FNDS will be responsible for the technical and financial coordination of the Project and will work closely with some of MITADER's technical directorates, mainly the National Agency for Conservation Areas (ANAC) and the National Directorate for Rural Development (DNDR). Each Agency and National Directorate will appoint a Project Focal Point who will participate in Project activities including in the preparation of the annual work plans and budgets, annual progress reports, prepare terms of reference (TORs) in their respective areas of expertise and contribute to the supervision of the actions under their areas of responsibility (see Figure 3).

Project implementation will be carried out by the FNDS/UGFI at central level. The FNDS/UGFI will be tasked with the implementation of all Project activities, including technical supervision and coordination, overall Project planning, quality oversight, communication, safeguards management, reporting, procurement, financial management, monitoring of Project activities and monitoring and reporting on its progress on a regular basis. At the central level, the FNDS will be responsible for the management of fiduciary issues, in conformity with the standards and requirements contained in the legal agreement and agreed upon with the WBG. The FNDS/UGFI Coordinator has appointed a full-time Project Coordinator for MozBio. The FNDS/UGFI project management team includes financial and procurement specialists, as well as monitoring and evaluation officers, a communication specialist, technical specialists for coordination of infrastructure and community development projects as well as a safeguards team that supports all WB Projects under FNDS coordination.

As in the implementation of other WB Projects, FNDS will establish **Landscape Management Units (LMUs),** at the CA landscape level, namely in Sussundenga and Marromeu districts, while in Matutuine district the support will be secured by the central PIU. Thus, at the CA landscape level, Project activities will be coordinated by the LMUs. The LMUs will coordinate and monitor Project implementation progress at the provincial level and interface with the District authorities, both the District Service for Economic Activity (*Serviço Distrital de Actividades Económimas* - SDAE) and the District Service for Infrastructure and Planning (*Serviço Distrital de Planeamento e Infraestructura* - SDPI) in the targeted districts. The CA LMUs will have one coordinator and shall be staffed with technical specialists (infrastructure and value chain areas and a sustainable development specialist who will be responsible for safeguards activities) and administrative support (accountant). They report to the national FNDS/UGFI Coordinator and to the MITADER Provincial Directors and have regular meetings with the Provincial Governors.

The **CA Co-Management structure** will also be deeply involved in MozBio 2 implementation, mainly in the implementation of activities for strengthening conservation areas' development in targeted landscapes, as well as in facilitating conservation-compatible rural development within the buffer zones.

As is the case in the existing LMUs, **Multi-Stakeholder Landscape Forums (MSLFs)** will also be established**.** MSFLs play an important role in Project coordination and in promoting integrated landscape management.

At district level MozBio is already working with the District Service for Economic Activities (SDAE) and the District Service for Planning and Infrastructure (SDPI). The will support the ESMF's recommended sub-project screening and environmental inspection activities. The District Service for Women, Health and Social Action (SDSMAS) supports women's community organizations and vulnerable people.

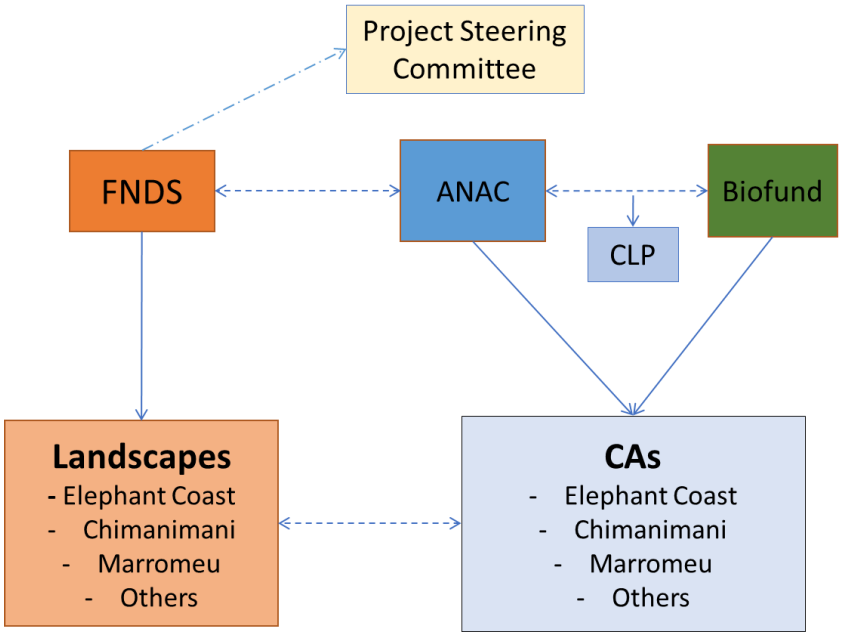

Figure 3 – MozBio-2's Institutional Arrangement

The achievement of objectives and the tracking of progress of MozBio 2 implementation will be systematically measured by indicators defined in the Project Operation Manual. At the end of MozBio 1, the Bank will assess progress and discuss any changes to project implementation arrangements for the second phase with the Government.

3. ESMF's OBJECTIVE AND METHODOLOGY

At the time of writing no details are known regarding the subproject investments under the MozBio 2 Project. It is therefore not possible to assess in detail the environmental and social consequences of potential projects.

In order to comply with the World Bank's OP 4.01 on Environmental Assessment an Environmental and Social Management Framework (ESMF) is required. The ESMF is an *"instrument that examines the issues and impacts associated when a project consists of a program and/or series of sub-projects, and the impacts cannot be determined until the program or sub-project details have been identified. The ESMF sets out the principles, rules, guidelines and procedures to assess the environmental and social impacts. It contains measures and plans to reduce, mitigate and/or offset adverse impacts and enhance positive impacts, provisions for estimating and budgeting the costs of such measures, and information on the agency or agencies responsible for addressing project impacts" (*World Bank OP 4.01, 2013).

This ESMF aims to ensure that environmental and social management is integrated into the development and operation of investments to be financed under MozBio 2 to ensure the effective mitigation of potentially adverse impacts while enhancing benefits.

The main objectives of this ESMF are to:

- Establish procedures for screening all proposed subprojects for potential adverse environmental and social impacts;
- Specify measures for managing, mitigating and monitoring environmental and social impacts during project operation;
- Outline training and capacity-building arrangements needed to implement the ESMF provisions.

The preparation of the MozBio 2 ESMF was based on:

- Review of documents, including CAs' Management Plans and District Profiles;
- Field visits to the three target areas; and
- Consultation with stakeholders, including MozBio, FNDS, CA management teams, district authorities (Matutuine, Sussundenga and Marromeu) and NGOs (MICAIA and PPF).

4. MOZAMBICAN LEGAL AND INSTITUTIONAL FRAMEWORK ON SOCIAL AND ENVIRONMENTAL ASPECTS

4.1 LEGAL FRAMEWORK

The *Constitution of the Mozambican Republic* defines the right of all citizens to live in a balanced and natural environment and their obligation to protect it (Art. 90). It further states that *"The state and local authorities with the cooperation of environmental protection organizations will adopt policies to protect the environment and ensure the rational use of all natural resources."*

The *National Environmental Policy*, approved by Resolution Nr. 5/95, dated 6 December, establishes the basis for all environmental legislation. According to Article 2.1, the main goal of this Policy is to ensure sustainable development in order to maintain an acceptable relationship between socioeconomic development and environmental protection. To reach the aforementioned goal, this Policy must ensure, among other requirements, the management of the country's natural resources – and the environment in general – in order to preserve its functional and productive capacity for present and future generations.

The *Environment Law* (Law Nr. 20/97, dated 7 October) defines the legal basis for the sound use and management of the environment as a means to safeguard sustainable development in the country. This Law applies to all activities in the public or private sectors that may directly or indirectly affect the environment.

Some relevant principles of environmental management included in the National Environment Policy and Environment Law include:

- Environmental management should aim at improving the quality of life of citizens and protection of biodiversity and ecosystems;
- The recognition and appreciation of traditions and knowledge of the local community;
- The priority given to systems that prevent the degradation of the environment;
- A comprehensive and integrated perspective of the environment;
- The importance of public participation;
- The polluter - payer principle; and
- The importance of international cooperation.

The environmental law requires that the Government prepare a National Environmental Management Program and establishes a consultative National Council for Sustainable Development (CONDES). The law requires that in order to protect and preserve the natural environment and maintain/improve the ecosystems that have a recognized ecological and socio-economic value, the government shall establish environmental protection zones ('total or partial protection zones'). It provides for the participation of local communities and other stakeholders in the development of policy and laws for the management, and the enforcement of regulations in these protected areas. A number of provisions in the law reinforce the view that communities in protected areas retain their use rights and that they can use them to negotiate returns on income generated from that land.

4.1.1 Environmental Impact Assessment, Environmental Audit and Inspection

The Environmental Law (Law No. 20/97) is applicable to all public or private activities which may, directly or indirectly, affect the environment. According to the Law, Environmental Impact Assessment (EIA) is an instrument that assists the Government of Mozambique in the decision-making processes relating to the issuance of environmental licenses for development projects. The issuance of an environmental license must precede any other necessary licenses.

The Ministry for Land, Environment and Rural Development (MITADER), through the National Directorate for the Environment (DINAB) is the authority responsible for EIA and environmental licensing of activities. The National Agency for Environmental Quality Control (AQUA) is responsible for environmental auditing and control, and environmental monitoring.

The **Regulation on the Environmental Impact Assessment Process** (Decree No. 54/2015 of 31 December, which repeals Decrees 45/2004 and 42/2008) establishes the rules for the environmental assessment process, namely the categorization process of activities, the level and content of environmental studies required for the different categories, public participation process, review process, environmental licensing stages (Interim, Installation and Operation), responsibilities, inspections, applicable fees and penalties.

The Environmental Impact Assessment process is an instrument that aims to contribute to the environmental and social sustainability of activities. It begins with the Pre-Evaluation of the activity, by the Environmental Impact Assessment Authority (central or provincial level), based on information about the proposed activity and the proposed area of implementation. This information is provided by the proponent, in the designated 'Process Instruction', to be submitted to the Provincial Directorate of Land, Environment and Rural Development (DPTADER) with jurisdiction over the area proposed for implementation.

Article 8, point 3, of the EIA Regulations states that the pre-assessment (screening) conducted by the EIA authority shall include a review of information in article 6 on the competencies of the EIA Authority and the assessment criteria listed in article 9, in addition to a review of the Regulation's annexures on the categorization activities, namely, Annex I – Category A+ Activities, Annex II - Category A Activities, Annex III - Category B Activities, Annex IV - Category C Activities and Annex V – Fatal Flaws. Knowledge of the intended project location and alignment of the proposed project with district plans and land use and zoning plans shall also be considered during the pre-assessment phase. This is a change from the previous Regulations and one that requires a broader review of proposed projects during the categorization of activities by the EIA Authority.

Under the revised EIA Regulations (No. 54 of 2015), projects proposed by the Conservation Area itself, with the objective of improving the area's management, are now listed as a Category B activity.

For subprojects envisaged under MozBio 2, during the planning phase, the FNDS Safeguards team will review the EIA Regulations and its annexures, consider the nature of the projects, and the associated potential impacts on the proposed location or host environment, in order to determine a possible project category and the required level of environmental assessment. Annex 1 - provides an extract of the annexures I-IV on the categorization of activities to assist the team in assessing each project during this initial stage – these extracts were developed based on the types of subprojects likely to be funded by MozBio 2. The indicative project categories are presented per **project type** as well as per the **environmental and social characteristics of the project site** to assist in determining the potential project categorization. The final categorization decision rests with the EIA Authority.

Following the Pre-Evaluation stage, the proposed activity is categorized or rejected. Table 1 presents the EIA categories defined in the EIA Regulations.

Table 1 - Environmental Assessment Categories as per the EIA Regulations (Decree no. 54/2015)

Category A+	Activities which due to their complexity, location and / or irreversibility and magnitude of impacts deserve not only a high level of social and environmental surveillance, but also the involvement of specialists in the EIA processes.
Category A	Activities which may significantly affect living organisms and environmentally sensitive areas and their impacts are of longer duration, intensity, magnitude and significance.
Category B	Activities which do not significantly affect living organisms or environmentally sensitive areas compared with those activities listed under Category A.
Category C	Activities which have negligible, insignificant or minimal negative impacts.

Figure 4 summarizes Mozambique's general EIA process, indicating the studies required by category of activity, the deadlines for delivery of documents to the Environmental Assessment Authority and the deadlines the Authority has for the communication of decisions.

As shown in the figure, activities classified as A + and A require an Environmental Impact Assessment (EIA), preceded by an Environmental Impact Assessment and Scoping Study (EPDA). The EPDA comprises a preliminary assessment that aims to identify potential impacts, to identify aspects that should be studied in more detail (in specialized studies) and to verify whether a fatal flaw that could jeopardizes the environmental and / or social viability of the project exists. The EPDA includes the Terms of Reference to be followed in the preparation of the Environmental Impact Study. Both the EPDA Report and the EIA are the subject of a public participation process which is documented in a Public Participation Process Report (PPP) to be submitted to the Environmental Authority together with the EPDA and EIA reports respectively. The approval of the EPDA allows the issuance of a Provisional Environmental License, while the approval of the EIA leads to the Environmental Installation License (provided that the Resettlement Plan is also presented, in those cases where it is required). The Environmental Installation License allows the construction of the proposed activity to be carried out, but the beginning of the operation is conditional on the issuance of the Operating License, after verification of the full compliance with the EIA and full implementation of the Resettlement Plan.

For Category B activities, a Simplified Environmental Study is required to be prepared in accordance with Terms of Reference previously approved by the provincial level EIA authority. The Simplified Environmental Study (EAS) Report shall undergo a public participation process, before being submitted to the EIA Authority. As in category A activities, the PPP Report is attached to the EAS Report, when submitted to the Environmental Authority for review. The EAS approval allows the issuance of the Environmental License for the activity, issued after payment of the environmental licensing fee.

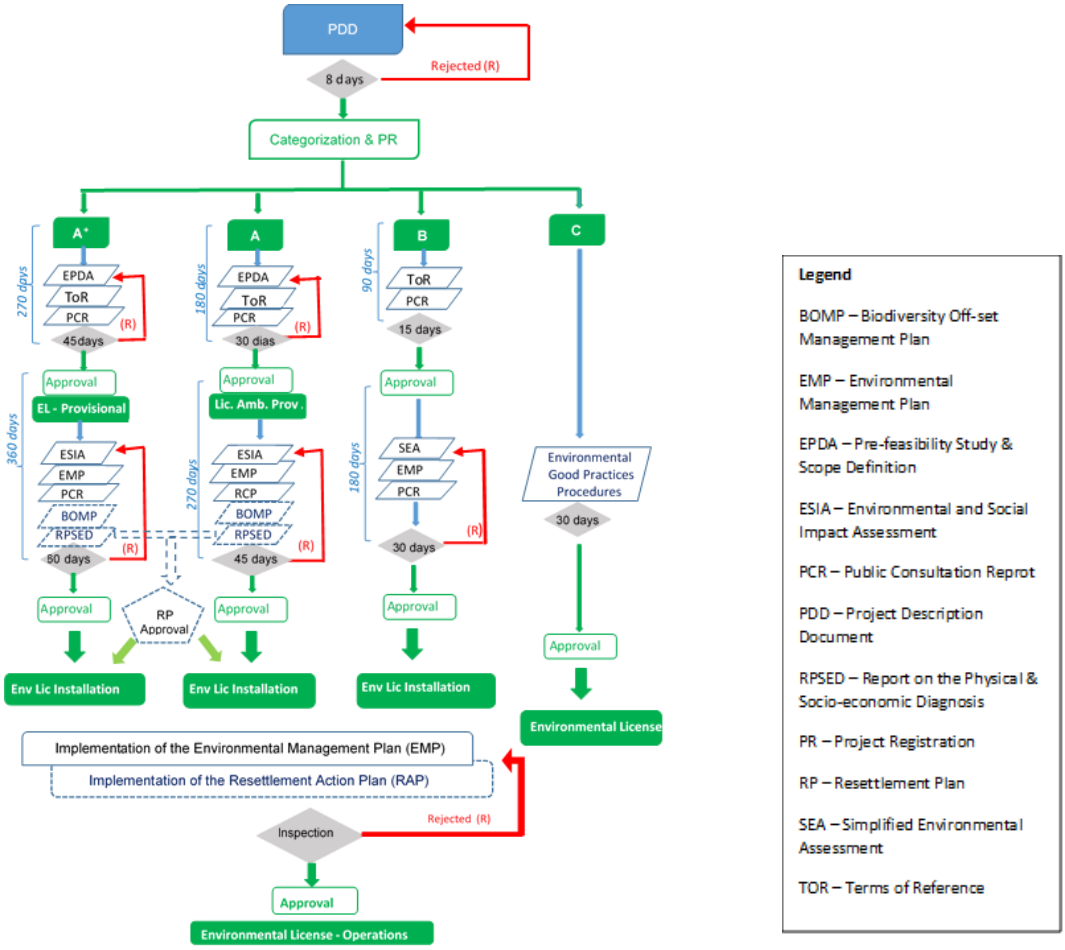

Figure 4 - Environmental Impact Assessment Process as per the EIA Regulations (Decree no. 54/2015)

Activities classified as Category C are only subject to the presentation of Good Environmental Practices Procedures to be prepared by the proponent and approved by the AIA authority (DPTADER).

The EIA process is an instrument to support the decision regarding the environmental and social feasibility of activities. At any stage of the process, prior to the issuance of an Installation License, the Environmental Assessment Authority may question the project's environmental and social viability and request changes to the project – it may also reject the project.

During the construction and operation phases, through **Environmental Audits** (regulated by Decree Nr. 32/2003) or **Environmental Inspections** (regulated by Decree Nr. 11/2006), the Environmental Authority may supervise the implementation of the Environmental Management Plan and suspend activities, in case of non-compliance and infractions.

4.1.2 Conservation Law and Regulation

The Conservation and Biodiversity Law (Law Nr. 16/2014, revised in 2017) establishes provides for the legal establishment of Conservation Area Management Boards (CGAC), advisory bodies covering one or more Conservation Areas composed of representatives of local communities,

the private sector, associations and local state bodies for the protection, conservation and promotion of sustainable development and use of biological diversity.

The conservation legislation addresses the challenge of how to integrate communities residing in conservation areas and buffer zones into the management of the local biodiversity and natural resources therein. It provides for community involvement in protection and policing of Conservation Areas as well as creating mechanisms for the sustainability of the Conservation Areas themselves, and, addressing the development needs, cultural values and quality of life of the communities by: a) actively engaging them in management of the natural resources and biodiversity to encourage their sustainable use and protection; b) providing the option of resettling them out of the conservation areas to locations in the buffer zone that provide comparative conditions but with the added advantage that socio-economic development may be freely pursued; or c) legalizing Conservation Areas boundary changes excising communities from core protected areas. The Law also:

- Legalizes public-private partnerships for CA management and for concession contracts.
- Legalizes the trial and punishment with long jail sentences of people involved in the unauthorized use and trading in illegally obtained protected wildlife and forestry products, and those who set fires directly affecting CA and their buffer zones.
- Presents categories for the classification of protected areas into a) total conservation areas and b) sustainable use conservation areas.
- States that CA management plans must cohere with spatial planning instruments at all levels and special land use plans will be required for the ecological zoning of single or clusters of CAs and their buffer zones, ecological corridors and other areas critical to the preservation of the ecological balance and spatial continuity elements.
- States that the interests and involvement of communities legally inside CAs and their buffer zones, in income generating activities that promote biodiversity conservation and strengthen conservation capacity will be key medium and long-term foci of CA management planning.
- States that community conservation areas with secured land use rights will provide communities with area management options of partnerships and concessions to third parties.
- Indicates that buffer zone development will be guided by CA Management Plans - instruments with the same level of juridical obligation as Land Use Plans and Environmental (and Social) Management Plans.
- Provides for the possibility for the State to resettle people to outside of a CA if their presence is incompatible with the legal status of the conservation area or impedes its good management.

In 2017, Law nº 5 was approved altering the 2014 Conservation Law to cover the conservation of natural resources and biodiversity in and outside of the Conservation Area system and to introduce payment mechanisms for managed carbon stocks and liquid losses of biodiversity as well as criminal prosecution of violators damaging protected natural resources. The updated law is in turn further regulated by Decree Nr. 89/2017.

4.1.3 Overview of Other Relevant Legal Requirements

An overview of the other legal requirements applicable to the MozBio 2 project is presented in Table 2. For additional detail on each of these instruments, refer to Annex 2.

Table 2 - Overview of relevant legal requirements

Water Resources, Water Quality and Water Supply	• Water Law (Law Nr. 16/91 of 3 August) • Environmental Quality Standards and of Emissions and Effluents Regulations (Decree Nr. 18/2004, revised by Decree Nr. 67/2010) • Regulation of public systems of water supply and wastewater disposal (Decree Nr. 30/2003 of 1 July)
Coastal Management	• Regulation for the Prevention of Pollution and Marine and Coastal Environment Protection (Decree Nr. 45/2006 of 30 November) • Regulation on Use of Sea Territory is covered by (Decree nr. 21/2017)
Air Emissions, Air Quality and Noise	• Environmental Quality Standards and Wastewater Emission (Decree Nr. 18/2004, revised by Decree Nr. 67/2010)
Solid Waste Management	• Regulation of Solid Waste Management (Decree Nr. 13/2006) • Regulations on the Management of Hazardous Wastes (Decree nº83/2014) • Regulation on Urban Waste Management (Decree nº94 / 2014)
Pesticides	• Pesticides Management Regulation (Decree Nr. 6/2009 of 31 March 2009)
Land Ownership	• Land Law (Law Nr. 19/2007 of 18 July) and its regulations (Decree Nr. 23/2002)
Land Use Planning	• Land Use Planning Law (Law Nr 19/2007) and its regulation (Decree Nr. 23/2008
Cultural Heritage	• Cultural Heritage Act (Law Nr. 10/88) • Archaeological Heritage Protection Regulation (Decree 27/94, of 20 July)
Involuntary Resettlement	• Decree Nr.31/2012 • Diploma Nr. 155/2014 on the Internal Regulation for Resettlement Technical Commission • Diploma Nr. 156/2014 Technical Guidelines for Preparation and Implementation of Resettlement Action Plan

4.1.4 Relevant International Conventions and Protocols

Mozambique is signatory of several international conventions and protocols. Table 3 shows conventions ratified by Mozambique for biodiversity conservation

Table 3 Conventions ratified by Mozambique for biodiversity conservation

Convention	Year of ratification	Biodiversity related topics
African Convention on the Conservation of Nature and Natural Resources	1981 (Resolution 18/81)	Recognizes the vital importance of natural resources, e.g. flora, fauna, water and soil, to the well-being of African populations.
Convention on International Trade in Endangered Species (CITES)	1981 (Resolution 20/81)	Recognizes that various species, animals and plants represent an irreplaceable part of natural ecosystems.
Bamako Convention on the Protection of the Ozone Layer	1993 (Resolution 8/93)	Recognizes the effects of changes in ozone layer on ecosystems and organisms.
Framework Convention on Climate Change (UNFCCC)	1994 (Resolution 1/94)	Recognizes the elevated natural greenhouse effect, caused by human activities, and evaluates the extent they affect adversely the natural ecosystems and humankind; also recognizes the role of terrestrial and marine ecosystems as carbon sinks.
Convention on Biological Diversity (CBD)	1994 (Resolution 2/94)	
Convention on the Protection, Management and Development Marine and Coastal East Africa Region	1996 (Resolution 17/96)	Recognizes the special characteristics of marine ecosystems (hydrographic and ecological), and the threats they face from pollution and poor integration in the development process.
Bamako Convention on the Prohibition of Hazardous Waste Import, and controls Transboundary movements of such wastes in Africa	1996 (Resolution 19/96)	Recognizes the increasing complexity of production and toxic waste and the effects on human health and biodiversity.
Convention to Combat Drought and Desertification (UNCCD)	1996 (Resolution 20/96)	Recognizes that desertification is caused by complex interactions among physical, biological, political, socio-economic and cultural factors.

Cartagena Protocol on Biosafety	2001 (Resolution 11/2001)	Establishes mechanisms to protect biodiversity and human health risks of Genetically Modified Organisms (GMOs)
Convention on the Protection of Wetlands (RAMSAR)	2003 (Resolution 45/03)	Recognizes the ecological importance of wetlands as regulators of hydrological regimes and habitats of specific flora and fauna species (including migratory).
Stockholm Convention on Persistent Organic Pollutants	2004 (Resolution 56/04)	Recognizes the toxic effects of pollutants on biological tissues and transported across borders.
Bonn Convention on Migratory Species (CMS) –	2009	Recognizes the importance of conservation of special habitats of migratory species.
Nagoya Protocol	2014	Supplementary agreement to the CBD for regulating access to genetic resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization (ABS).
Model of sustainability from the *International Financial Corporation (IFC)* - environmental and social performance standards (PS 6)		Provides guidelines for identifying risks and impacts from development activities, ensuring the conservation aspects of biodiversity.

4.2 INSTITUTIONAL FRAMEWORK

The establishment of the Ministry for Land, Environment and Rural Development (MITADER) in 2015 brought a new approach to multiple and transversal intervention (Land, Environment and Rural Development), generating an opportunity to focus the Government's priority policies and ensure the implementation of a National Program for Sustainable Development, in an integrated and comprehensive manner. The mission of MITADER focuses on reducing socio-economic inequalities with emphasis on the rural environment through the promotion of a diversified and inclusive economy.

MITADER's mandate includes:

- Land use planning and management;
- Management and sustainable use of forest and wildlife;
- Management of the national network of conservation areas;
- Planning, promotion and coordination of integrated rural and sustainable development;
- Promotion of development of knowledge in the domain of land, environment, rural development and related themes;
- Planning, promotion and coordination of cooperation related to the environment;
- Definition and implementation of an education and awareness strategy; and
- Intersectoral coordination and sustainable use of available resources to promote sustainable development.

The MITADER's organization is showed in Figure 5 - MITADER's organizational chart.

In addition to several national directorates, MITADER supervises institutions such as the National Administration for Conservation Areas (ANAC) and the National Sustainable Development Fund (FNDS).

The National Administration for Conservation Areas (ANAC) has autonomous financial, administrative and property responsibility. This agency was established in 2011 aiming a greater dynamism in the management of conservation areas in Mozambique, by promoting biodiversity conservation initiatives, promoting the sustainable use of protected areas, and establishing partnerships for their development. Decree nº 8/2016 updated the roles and responsibilities of ANAC, which comprise, among others the following:

- To promote conservation activities in accordance with the policy of territorial planning and local, national and international development
- Guarantee the effective management of conservation areas, with a view to bringing positive impacts on the quality of life and addressing climate change;
- To stimulate scientific research and use information generated to guide the actions of exploration and sustainable use of natural resources, including the development of game;

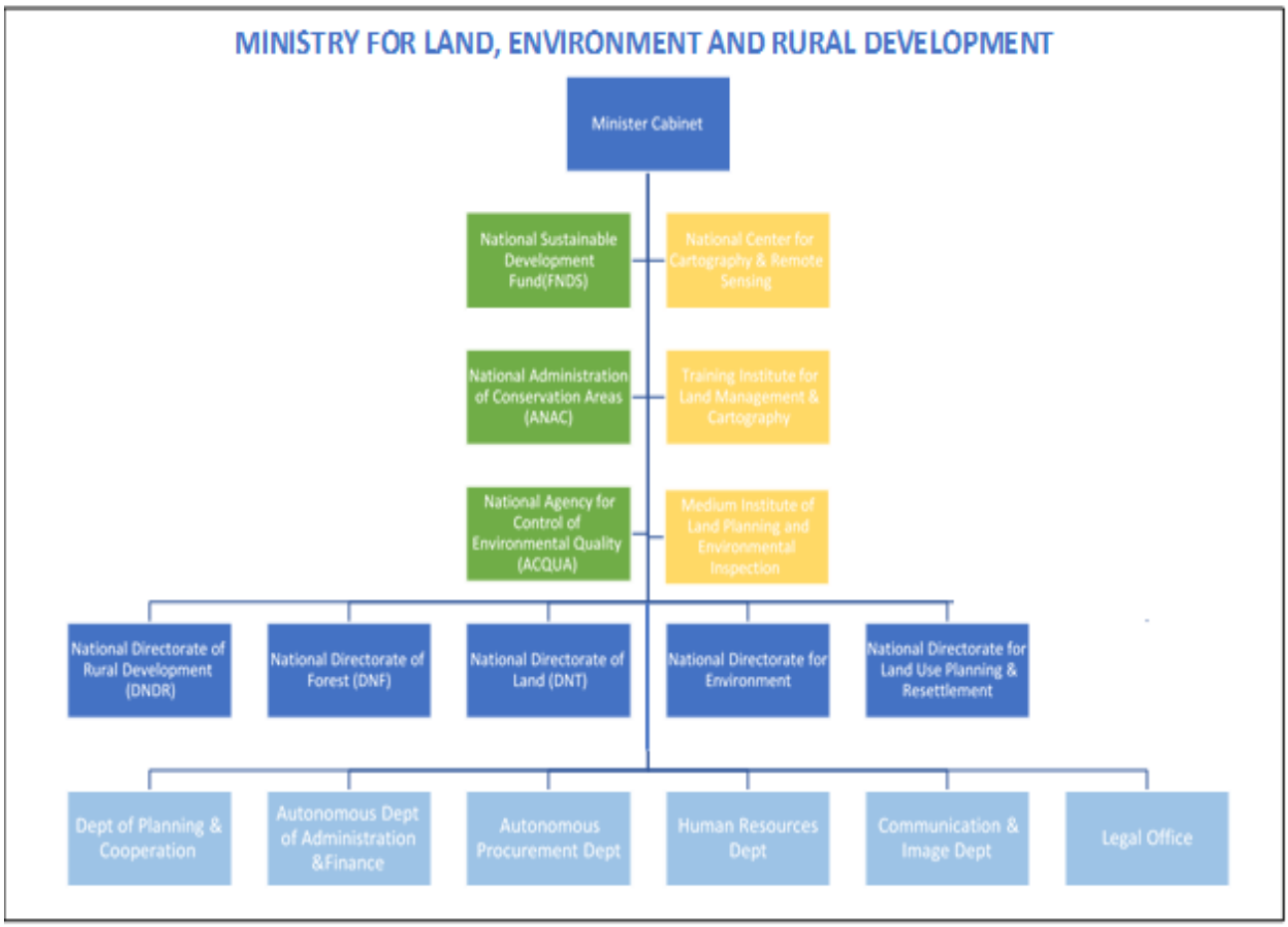

Figure 5 - MITADER's organizational chart

- To manage, train and train technically and professionally personnel in conservation areas;
- Ensure articulation and cooperation with national and international entities with converging interests;
- Define norms and monitor the performance of conservation areas, ensuring that the primary objective of biodiversity conservation is achieved;
- Implement management plans, resource inventory programs, and their monitoring;
- Ensure the creation and operation of the Management Councils, as advisory bodies of the conservation areas, contributing to the preparation of business plans, management plans and the development of partnerships with private operators and local communities;
- To conclude contracts and agreements within the framework of public-private partnerships and to guarantee their implementation.

The National Sustainable Development Fund (FNDS) created in 2016 has the objective to promote and finance programs and projects that ensure sustainable, harmonious and inclusive development, with particular emphasis on rural areas. Therefore, it aims to collect, manage and invest funds linked to environment, forestry and land, and to manage donor-funded projects, such as the WB funded projects. Besides being supervised by MITADER this Fund is financially supervised by the Minister of Finance.

Figure 6 shows the FND's organization chart. The Project Management Sector is responsible for managing all the projects (such as MozBio Project). Each project has a coordinator and a specific technical team (Project Implementation Unit – PIU). Activities related with Procurement or Finance are under the responsibility of FNDS's Procurement and Finance Sector respectively. Other teams under the Project Management Sector provide support to all projects on Safeguards, Forest and National Resources, Land Value Chains and GIS mapping.

In addition, it should be noted that at provincial level MITADER is represented by the Provincial Directorate for Land, Environment and Rural Development (DPTADER). DPTADER is responsible for the environmental and social screening and the subsequent subproject's categorization and is responsible for conducting the environmental licensing projects of activities classified as Category B or C.

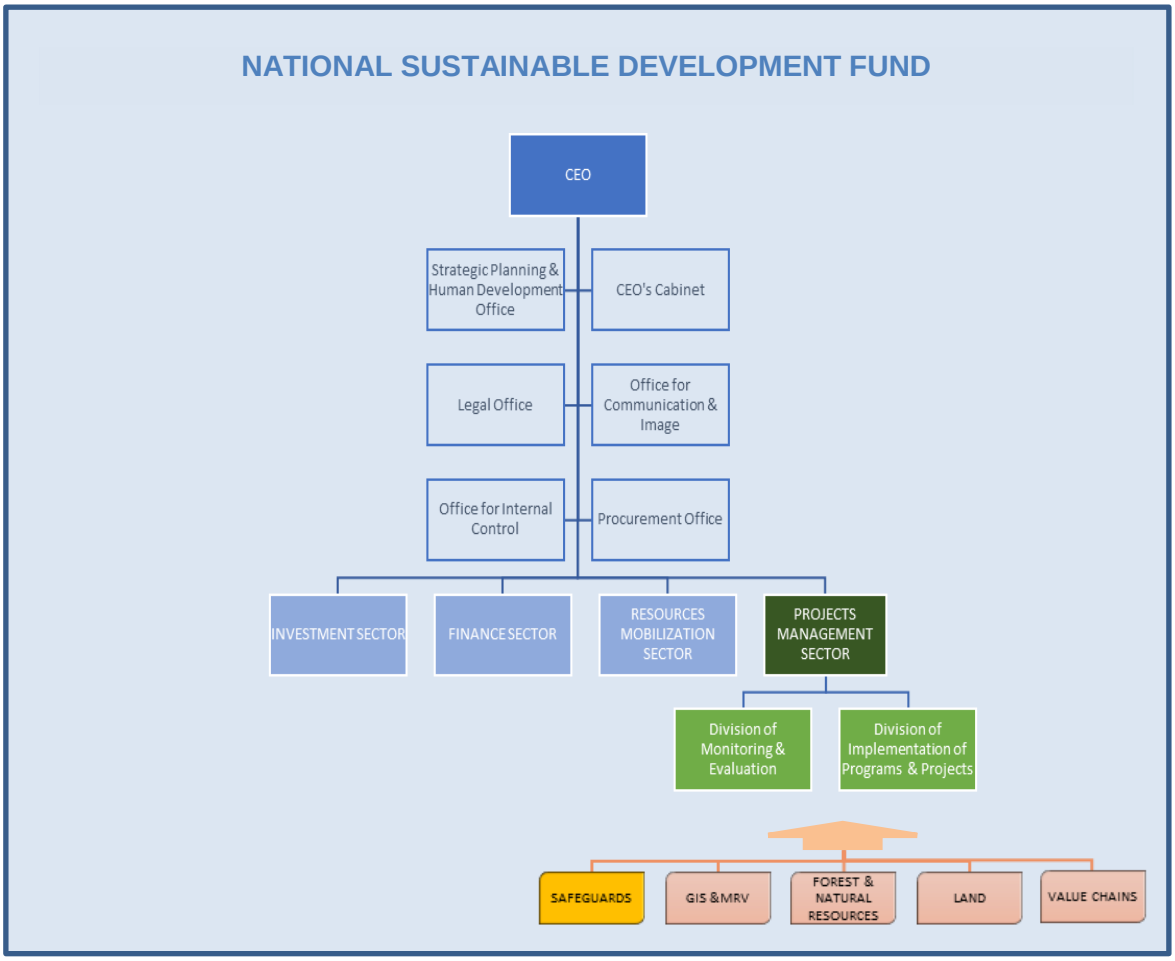

Figure 6 - FNDS's Organizational Chart

5. THE WORLD BANK'S SAFEGUARD POLICIES

5.1 OVERVIEW

The World Bank's Environmental and Social Safeguard Policies are the basis for sustainable poverty reduction. The aim of these policies is to prevent and mitigate potential damage to the environment and communities generated in the development process. These policies give the Bank and borrowers, guidelines on the identification, preparation and implementation of programs and projects.

There are ten safeguard policies in the World Bank, created to inform decision making, ensuring that projects financed by the Bank are environmentally and socially sustainable. These Operational Policies include:

- Environmental Assessment (OP/BP 4.01)
- Natural Habitats (OP/PB 4.04)
- Forestry (OP/BP 4.36)
- Pest Management (OP 4.09)
- Physical Cultural Resources (OP/BP 4.11)
- Indigenous Peoples (OP/BP 4.10)
- Involuntary Resettlement (OP/BP 4.12)
- Safety of Dams (OP/BP 4.37)
- Projects on International Waterways (OP/BP 7.50)
- Projects in Disputed areas (OP/BP 7.60)

Table 4 presents the main objectives of each operational policy and its applicability.

MozBio 2 triggered six of the World Bank's Safeguard Policies, namely OP 4.01 Environmental Assessment, OP 4.04 Natural Habitats, OP 4.36 Forestry, OP 4.09 Pest Management, OP 4.11 Cultural Heritage and OP 4.12 Involuntary Resettlement.

According to OP 4.01 the proposed MozBio 2 Project activities have been categorized as Category B. Similarly, to MozBio 1, it is anticipated that the potential direct negative environmental and social impacts will be minor, site specific, reversible and easily manageable. Since the subprojects investments and their potential negative localized impacts will not be firmed-up prior to appraisal, the appropriate safeguard document to comply with OP4.01 at appraisal is an Environmental and Social Management Framework (ESMF). An ESMF establishes a unified process for addressing all environmental and social safeguards issues relating to subprojects from preparation, through review and approval, to implementation. Effective implementation of an ESMF will ensure that the substantive concerns of all World Bank safeguards policies will be satisfactorily addressed.

In addition, a Pest Management Plan is required to comply with OP 4.09 - Pest Management as well as a Process Framework to comply with OP 4.12 - Involuntary Resettlement.

Table 4 – WB' Safeguards Policies: Main Objectives, Applicability and Trigger by MozBio

Safeguard Policies	Main Objective	Applicability	Application to MozBio
OP 4.01 Environmental Assessment	The objective of this policy is to ensure that projects financed by the World Bank are environmentally sound and sustainable, and that decision making is improved through adequate analysis of actions and their possible risks and environmental impacts in the natural environment (air, water and land); human health and safety; social aspects (involuntary resettlement, indigenous peoples, and physical cultural resources) and transboundary and global environmental aspects. (see 5.2 below)	This policy is applicable when a project or sub-project has potential to cause negative environmental and social impacts in its area of influence. Depending on the project and the nature of its impacts, various instruments can be used. An ESMF is required for projects that comprise several subprojects not yet identified at the appraisal. (see 5.2 below)	Like MozBio 1, it is anticipated that potential direct negative environmental and social impacts will be minor, site specific, reversible and easily manageable. Project environmental and social impacts will largely result from construction of civil works for essential and necessary facilities, which will include administrative buildings, small bridges and access roads in selected conservation areas. The construction of these facilities is expected to produce localized adverse environmental and social impacts that are low to moderate while also minimizing impacts of physical displacement. Potential negative impacts include, soil and vegetation disturbance, dust emission, noise and vibration, land clearing, waste generation and risks to the health and safety of contractor's workers and communities. Since details of project footprint are unknown at this point, an ESMF is required that shall be publicly consulted upon and disclosed in country prior to appraisal. The project will also have social impacts resulting from potential access restrictions to forest and natural resources (see also OP 4.12 below. As the project will promote private sector investments in nature-based tourism and other developments in conservation areas, environmental and social impacts resulting from the increase in tourism activities and resources requirements by tourists can be expected. To evaluate these potential social impacts to inform project design in each CA and the application of safeguards instruments, a Social Assessment will be conducted for each CA during project implementation.

Safeguard Policies	Main Objective	Applicability	Application to MozBio
OP 4.04 Natural Habitats	This policy recognizes that the conservation of natural habitats, like other measures that protect and enhance the environment, is essential for long-term sustainable development. Therefore, the Bank supports the protection, maintenance and rehabilitation of natural habitats and their functions by funding in its economic and sector work, project financing, and policy dialogue. By funding projects, the Bank expects borrowers to apply a precautionary approach to natural resource management to ensure opportunities for environmentally sustainable development.	This policy is used by any Project or sub-projects considered as potential originator of significant changes (loss) or degradation of natural habitats, be it directly (through the construction) or indirectly (with the human activities caused by the project).	The project's primary objective is to protect natural habitats. Activities will largely take place within conservation areas, containing natural habitats. The ESMF will include guidance to mitigate potential impacts, such as avoiding land transformation activities in critical natural habitats, reducing generation of waste and emission of effluents, mitigating erosion and runoff impacts during construction (such as sediment traps), and compensating habitat losses by restoring habitats and vegetation cleared by project activities
OP 4.36 Forests	The objective of this policy is to harness the potential of forests to reduce poverty in a sustainable manner, integrate forests effectively into sustainable economic development, and protect the vital local and global environmental services and values of forests. Where forest restoration and plantation development are necessary to meet these objectives, the Bank assists borrowers with forest restoration activities that maintain or enhance biodiversity and ecosystem functionality. The Bank also assists borrowers with the establishment and sustainable management of environmentally appropriate, socially beneficial, and economically viable forest plantations to help meet growing demands for forest goods and services.	This policy is used when a project (i) has potential impacts on forest health and quality and on the rights and welfare of the people who depend on them; or (ii) can cause changes on management, conservation and use of natural forests.	The project will protect natural forests. Some activities may affect forests within conservation areas, or in their buffer zones. Some community development activities might involve the use of forest resources. The ESMF will provide mitigation measures for potential negative impacts, such as deforestation or forest degradation.

Safeguard Policies	Main Objective	Applicability	Application to MozBio
OP 4.09 Pest Management	The objective of this policy is to minimize and manage the environmental and health risks associated with pesticide use and promote and support safe, effective, and environmentally sound pest management. It aims to (I) promote the use of biological or environmental control methods and reduces reliance on synthetic chemical pesticides; and (ii) consolidate the legislative powers of the countries and their institutions to promote and ensure a safe pest management, effective and environmentally sound pest management. More specifically, this policy aims, among other objectives to: (a) Determine which activities related to pest management in Bank-financed operations is based on the principles of integration and seek to reduce the use of synthetic chemical pesticides; (b) ensure that the dangers to health and environmental risks associated with pest management, especially the use of pesticides are minimized and can be managed effectively by the user.	This policy is used if: (I) it is foreseen the acquisition of pesticides or application equipment (both indirectly through the project, as indirectly through co-financing or counter-parties Governments that finance); (ii) the project can affect the Pest Management even though without obtaining pesticides. This includes projects which may (i) conduct extensive use of pesticides and the subsequent increase in risk to health and environment; (ii) maintains or expand current unsustainable Pest Management practices, not based on the principles of IPM, and/or significantly jeopardize health or the environment. Certain projects, as small-scale irrigation, increase of livestock areas, etc., can result in the creation or expansion of pest management plans.	The livelihood activities supported under Component 3 - could support agricultural sub-projects in the vicinity of Conservation Areas (CAs) that may lead to the use of small quantities of agro-chemicals (fertilizers and pesticides). Therefore, similarly to MozBio 1, this policy is triggered to ensure the project's compliance with this Policy. Under MozBio 1, the Borrower prepared and implemented a Pest Management Plan (PMP) which has proven to be functional in promoting and supporting safe, effective, and environmentally sound pest management practices. Hence, the existing PMP will be updated, consulted upon and publicly disclosed prior to appraisal.
OP 4.11 Physical Cultural Resources	The objective of this policy is to assist countries to avoid or mitigate adverse impacts on physical-cultural resources resulting from development project activities, including mitigating measures. For the purposes of this policy "physical-cultural resources" are defined as movable or immovable objects, sites, structures, groups of structures, and natural features and landscapes that have archeological, paleontological, historical, architectural, religious, aesthetic or cultural significance. Such resources may be located in urban or rural settings and may be above or below ground or underwater. Their cultural interest may be at local, provincial or national level, or within the international community.	This policy is applied whenever negative impacts are expected in physical-cultural or religious properties (sacred areas, cemeteries, cultural sites) All projects classified as Category A or B, which requires environmental assessment under directive OP 4.01 also, should follow this policy.	It is possible that the project will affect or involve physical cultural resources due to civil works that may require some excavations or earth movements. Therefore, the ESMF will include provisions to apply "Chance Finds" procedures in compliance with this policy requirements.

Safeguard Policies	Main Objective	Applicability	Application to MozBio
OP 4.10 Indigenous Peoples	For all projects proposed Bank funding that affect indigenous peoples, the Bank requires the borrower to undertake free, prior and informed consultation with affected Indigenous Peoples to ascertain their broad community support for projects affecting them The project financed by the Bank must include measures to: (a) avoid adverse effects on indigenous populations; or (b) when it is not possible to avoid the effects, minimizes, mitigates, or compensates for such purposes. The projects financed by the Bank are designed with the assurance that indigenous people receive social and economic benefits that are culturally appropriate and adequate gender and inter-generations.	This policy is trigger when the Project affects direct or indirectly indigenous people.	The policy is not triggered because there are no populations/communities in Mozambique that correspond to the definition of Indigenous Peoples as described per the policy.
OP 4.12 Involuntary Resettlement	The objective of this policy is to (i) avoid or minimize involuntary resettlement, where feasible and explore all viable alternative project designs; (ii) assist displaced people in improving their former living standards, income earning capacity, and production levels, or at let in restoring them; (iii) encourage community participation in planning and implementing resettlement; and (iv) provide assistance to affected people regardless of the legality of land tenure.	This policy does not cover only physical relocation but any loss of income sources resulting in: (i) relocation or loss of shelter; (ii) loss of assets or means of livelihood; (iii) loss of income sources or means of subsistence, whether or not the affected people must move to another location. This policy also applies to the involuntary restriction of access to legally designated parks and protected areas, resulting in adverse	MozBio 2 will not finance activities requiring physical resettlement. Activities will also be screened to avoid physical resettlement entirely and economic displacement as much as possible. The project may cause situations involving involuntary restrictions of access to land and natural resources in conservation areas. The livelihood restoration of people affected by the project related to resource access restrictions will be addressed through a Process Framework (PF). For MozBio 2, the team will review and update the PF that was approved for MozBio 1. The revised PF will be consulted upon and disclosed before appraisal. No or minimal resettlement is expected with respect to infrastructure construction. A simplified RPF will be prepared to address screening procedures and criteria for infrastructure projects: (1) seeking to avoid any physical resettlement and livelihoods impacts, to the extent possible,

		impacts on the livelihood of the displaced persons. In these cases, the World Bank requires the establishment of a Resettlement Action Plan (RAP), based on the Resettlement Policy Framework (RPF) for any project or sub-project.	(2) limiting potential direct asset losses to local communities to less than 20% of the PAP's assets/income; and (3) providing the conditions to address any unavoidable impacts. The RPF will be prepared before appraisal and will be included as an Annex to the Project Implementation Manual (PIM). The simplified RPF and updated PF shall be consulted and disclosed prior to appraisal. MozBio 2 will promote skills development and enterprise development activities around the conservation areas aiming to encourage the people to areas outside the CAs.

Safeguard Policies	Main Objective	Applicability	Application to MozBio
OP 4.37 Safety of Dams	The objective of this policy is to assure quality and safety in the design and construction of new dams and the rehabilitation of existing dams, and in carrying out activities that may be affected by an existing dam.	This policy is applied when the Bank finances: (I) projects involving the construction of large dams (15 m or higher) or dams representing hazard; and (ii) a project that is dependent on an existing dam. For small dams, generic dam proposed by qualified coordinators are generally adequate.	MozBio 2 is not expected to finance activities that will include construction or rehabilitation of large dams and/or support other investments related with services of existing dams
OP 7.50 Projects on International Waterways	The policy applies to the following types of projects: (a) hydropower projects, irrigation, flood control, navigation, drainage, supply and sanitation, industries and similar projects involving the use or potential pollution of water courses; and (b) detailed projects and engineering studies involving the nominees above in (a), including those carried out by the Bank, by executing agencies or any other capacity.	This policy is applied if (a) any river, channel, lake or similar watercourse crossing two or more States, whether members or not; (b) any tributary or other shallow water body that is component of any channel described in (a); and (c) the whole bay, straits of gulf, or channel post of two or more States or within a State recognized as a channel of communication with the open sea and other States, and any river that flows in such waters.	Not applicable, since there are no activities in international waters.
OP 7.60 Projects in disputed areas	The objective of this policy is to ensure that projects in disputed areas are treated as soon as possible: (a) so as not to affect relations between the Bank and its member countries; (b) so as not to affect relations between the tenderer and neighboring countries; and (c) so as not to prejudice the position of the Bank or of the countries affected or interested parties	This policy is adopted if the proposed project is located in a "disputed" area. Generally, occur in projects or projects located on the borders between States. The questions to be answered include: Is the proposer involved in some dispute over an area with some of its neighbors? The project is located in an area which is disputed? Can some component financed or likely to be financed as part of the project, located in an area which is disputed?	Not applicable, since no MozBio activity takes place in border areas or zones of conflict with neighboring States.

5.2 ENVIRONMENTAL ASSESSMENT (OP4.01)

As mentioned previously, Operational Policy OP 4.01[3] governs the World Bank's policy on environmental assessment, stating that all projects proposed for funding by the Bank must be subjected to a process of environmental assessment so as to ensure environmental and social sustainability, thereby contributing to an improvement in the decision-making process. It determines very clearly how the assessment should be linked to the project cycle and includes information on consultation mechanisms and provides information to affected local groups and NGOs. It establishes that the environmental assessment is initiated as early as possible in project processing and is integrated closely with the economic, financial, institutional, social, and technical analyses of a proposed project.

The environmental assessment must address the natural and social aspects in an integrated manner and should take into account *inter alia* the country's political, national legislation and institutional capacities related to environmental and social aspects. The environmental assessment process takes into account the natural environment (air, water, and land), human health and safety, social aspects (involuntary resettlement, indigenous peoples and physical cultural resources) (to ensure compliance with the World Bank Group Environment, Health and Safety Guidelines – EHSGs4) and transboundary and global environmental aspects.

Depending on the project, a range of instruments can be used to satisfy the Bank's environmental assessment requirements: environmental and social impact assessment (ESIA), regional or sectorial environmental assessment, strategic environmental and social assessment (SESA), environmental audit, hazard or risk assessment, environmental management plan (EMP) and environmental and social management framework (ESMF).

The type and extent of environmental and social assessment required by the World Bank is a function of the project's environmental impact and hence, its environmental screening category. The World Bank undertakes environmental and social screening of each proposed subproject to determine the appropriate extent and type of environmental and social assessment. The World Bank classifies projects into one of three categories (A, B and C), depending on the type, location, sensitivity, and scale of the project and the nature and magnitude of its potential environmental impacts.

Category A – Requires a full environmental impact assessment. A proposed project is classified as Category A if it is likely to have significant adverse environmental impacts that are sensitive, diverse, or unprecedented with attributes such as pollutant discharges large enough to cause degradation of air, water, or soil; large-scale physical disturbance of the site or surroundings; extraction, consumption or conversion of substantial amounts of forests and other natural resources; measurable modification of hydrological cycles; use of hazardous materials in more than incidental quantities; and involuntary displacement of people and other significant social disturbances. These impacts may affect an area broader than the sites or facilities subject to physical works. For a Category A project, the borrower is responsible for preparing an EIA report.

Category B – Requires an environmental assessment with a narrower scope than that of Category A environmental assessment. The Project could have potential adverse environmental impacts on human populations or environmentally important areas which are less adverse than those of Category A projects. These impacts are site-specific, few if any of them are irreversible, and in most cases mitigation measures can be designed more readily than for Category A projects. The scope of environmental assessment for a Category B project may vary from project to project, but it is narrower than that of Category A environmental assessment. Like Category A

[3]April 2013

[4]See IFC's Performance Standards on Social and Environmental Sustainability, which include the EHS Guidelines that are used by the World Bank Group.

environmental assessment, it examines the project's potential negative and positive environmental impacts and recommends measures required to prevent, minimize, mitigate or compensate for adverse impacts and improve environmental performance.

Category C – Projects classified within this category do not require an environmental impact assessment, as they are likely to have minimal or no adverse environmental impacts. Beyond screening, no further environmental assessment action is required for a Category C project.

"For projects involving the preparation and implementation of annual investment plans or subprojects, identified and developed over the course of the project period during the preparation of each proposed subproject, the project coordinating entity or implementing institution carries out appropriate environmental assessment according to country requirements and the requirements of this policy. The Bank appraises and, if necessary, includes in the SIL components to strengthen, the capabilities of the coordinating entity or the implementing institution to (a) screen subprojects, (b) obtain the necessary expertise to carry out the environmental assessment, (c) review all findings and results of the environmental assessment for individual subprojects, (d) ensure implementation of mitigation measures (including, where applicable, an EMP), and (e) monitor environmental conditions during project implementation. The borrower/coordinating entity/implementing institution remains ultimately responsible for ensuring that subprojects meet Bank requirements. If the Bank is not satisfied that adequate capacity exists for carrying out the environmental assessment, all Category A subprojects and, as appropriate, Category B subprojects--including any EA reports - are subject to prior review and approval by the Bank." (OP 4.01, 2013)

The Environmental and Social Management Framework (ESMF) is an instrument that examines the issues and impacts associated when a project consists of a program and/or series of sub-projects, and the impacts cannot be determined until the program or sub-project details have been identified.

The intensity of public participation will vary with the categorization of the project. For all Category A and B projects proposed for IBRD or IDA financing, during the environmental assessment process, the borrower consults project-affected groups and local NGOs about the project's environmental aspects and takes their views into account. The borrower initiates such consultations as early as possible. For Category A projects, the borrower consults these groups at least twice: (a) shortly after environmental screening and before the terms of reference for the EIA are finalized, and (b) once a draft EIA report is prepared. In addition, the borrower consults with such groups throughout project implementation as necessary to address EIA-related issues that affect them. ESMFs shall also be publicly disclosed in the Bank and in country and require one national level public consultation.

According to OP 4.01, where legal or technical capacity of the borrower is insufficient to perform the functions associated with the environmental assessment (such as analysis, monitoring, inspections or management of mitigating measures) for a given project, the project will include components intended to strengthen such capacity.

In regard to disclosure of the ESMF report, the World Bank requires that the report has to be disclosed as a separate document as a condition for Bank appraisal. The ESMF will be disclosed to the general public to meet this requirement including in the World Bank. The date of disclosure will precede the date for appraisal of the program.

6. NATIONAL LEGAL FRAMEWORK VS WORLD BANK'S SAFEGUARD POLICIES

The World Bank safeguards policies and Mozambican legal framework on Environmental Assessment are generally aligned in principle and objective:

- Both require screening of subproject investments in order to determine which level of environmental assessment is needed;
- Both require detailed ESIA for projects with more significant impacts (Category A), a less detailed EIA study for projects with less significant impacts (Category B) and no ESIA studies for projects likely to have minimal or no adverse environmental impacts (Category C);
- In the ESIA process, the environmental (including climate change, ecosystem services and no net loss concept) and social (including involuntary resettlement, cultural heritage and vulnerable groups) components are included under both systems;
- Both include the mitigation hierarchy approach;
- The Bank requires that stakeholder consultations be undertaken during planning, implementation and operational phases of the project which is equivalent to the MITADER's requirements;
- In addition to ESIA, the national legal framework also regulates the approach towards environmental audit and inspection.

The main discrepancies refer to:

- Although both EIAR and WB requires ESMPs for Category B projects, the WB requires a standalone and more detailed document;
- National legal framework does not include some of the instruments considered in OP 4.01 such as the Strategic Environmental and Social Assessment (SESA), the ESMF or the Process Framework (PF).
- National legislation on Involuntary Resettlement does not include the avoidance principle, contrary to OP 4.12. The plots and housing requirements are very restrictive with additional reequipments for infrastructure and social services, independent of the number of affected persons.
- And lastly, under the national legislation, there is no specific regulation on integrated pest management or organic agricultural production.

7. LESSONS LEARNED FROM THE IMPLEMENTATION OF THE EMSF DURING MozBio 1

Challenges during the implementation of the MozBio 1 ESMF were progressively identified and addressed. The initial delay in the disbursement of MozBio funds resulted in pressure to develop subprojects over short timelines at a stage when the Safeguard Specialist had not yet developed adequate knowledge and familiarity with ESMF procedures.

The lack of awareness regarding the ESMF requirements by procurement personnel, as well as by the infrastructure and community development teams, presented another constraint resulting in tender documents being issued without any environmental and social clauses, limiting the scope for the ESMF's implementation during construction works.

In addition, delays caused by the GoM's Administrative Tribunal in approving contracts for independent environmental consultants, contributed to the delays in the environmental assessment and licensing process for subprojects.

The integration of the MozBio Safeguard Specialist within the FNDS Safeguard Team allowed for the exchange of experiences and improvement in the application of procedures. Currently, the FNDS Safeguard Team comprises four safeguard specialists, with each specialist responsible for specific types of projects (infrastructure, land and forest, community development and value chains). This arrangement appears to be more effective, allowing close collaboration within the team.

The FNDS has shown adequate capacity to implement environmental and social safeguard policies using an integrated approach in dealing with several bank-funded projects (MozFIP, MozBio and Sustenta projects). FNDS currently has 4 specialists at central level who are responsible for particular projects or thematic areas but support each other in an integrated manner. There are 3 safeguards specialists at provincial level (Landscape Management Units). These safeguards specialists are further assisted by 6 Community Officers and 30 Rural Development Extensionists at local level.

Under MozBio 1, a total number of 18 infrastructural and community livelihoods projects were successfully screened for Environmental and Social impacts. Of these, one third had their ESMPs prepared, disclosed and successfully implemented in a way deemed satisfactory to the World Bank. The remaining two thirds consisted of Category C subprojects with their associated Good Practice Manuals which also showed successful implementation. Similarly, for the Grievance Redress Mechanism (Dialogue and Redress Mechanism), a number of 13 grievances where recorded through different channels (e.g. mobile phone, email, letters and personal communication) since it became fully operational in February 2018. From the grievances received, 7 were resolved and 6 were forwarded to the relevant authorities.

Based on the identified challenges and lessons learnt, the following actions are recommended:

- Develop more practical capacity building interventions on the use and application of ESMF procedures;
- Start the preparation of the screening phase at an earlier stage of project development (during project concept development and design for example) in order to integrate environmental and social aspects at this early stage whilst also anticipating the subproject's categorization;
- Develop more descriptive environmental and screening forms allowing their proper verification by the Safeguard and WB teams;
- Develop practical templates for the ESMP and Environmental & Social Management Guidelines; and
- Improve ESMF awareness for all MozBio team members, particularly Procurement and Financial staff.

The FNDS's Safeguard team, with support from the WB Safeguard team, has sought to improve the ESMF procedures by reorganizing the team (enhancing support between all the FNDS safeguard specialists and other key specialists such as Procurement, Communication and Financial Management) as well as by developing new templates.

The present ESMF has considered these lessons and reflects improvements aimed at assisting teams in promoting compliance with the principles and processes contained in the ESMF during the implementation of MozBio 2.

8. ENVIRONMENTAL AND SOCIAL BASELINE CONDITIONS OF TARGET LANDSCAPES

This section describes the overall environmental and social baseline conditions of the three CA landscapes included in MozBio 2:

- The Elephant Coast Conservation Area, that includes and immediately adjacent land areas in Matutuine District;
- Landscape of Chimanimani, including the Chimanimani National Reserve, its buffer and surrounding landscape;
- Marromeu Reserve and Coutadas 10, 11 and 14 and immediately adjacent areas in Marromeu, Cheringoma and Muanza Districts.

The baseline provides a brief description of relevant environment and social conditions of these landscapes.

8.1 ELEPHANT COAST LANDSCAPE

The Elephant Coast Landscape is part of the **Maputaland Centre of Plant Endemism**, a region of approximately 17,000 km^2, which extends through Mozambique, South Africa and Swaziland. It is a Biodiversity Hotspot, well recognized for its high conservation value. The Elephant Coast Landscape has two conservation areas – the **Maputo Special Reserve (MSR**), which integrates the **Futi Corridor** and the **Ponta do Ouro Partial Marine Reserve** (**POPMR**), including Inhaca Island, the **Licuáti Forest Reserve** and the immediately adjacent land areas in Matutine District. Both the MSR and POPMR are part of the **Ponta do Ouro- Kosi Bay Transfrontier Conservation Area**, component of the **Lubombo Transfrontier Conservation Area** (LTFCA).

The landscape presents a tropical humid **climate**, characterized by a dry and cold season (between May and October) and a humid and warm season (between November and April). It is dominated by a **coastal plain with several lagoons**, crossed longitudinally (S-N) by the alluvial plain of both **Maputo and Futi rivers**. The Maputo River constitutes an international river shared between Mozambique, Swaziland and South Africa. The Futi River rises in a marshy area in the south, in the Republic of South Africa, and follows a S-N direction, to a marshy area about 15km from Maputo Bay.

The landscape has a great diversity of marshy natural habitats in the continental zone, associated with the presence of river courses (Futi, Maputo) and lagoon systems (Xinguto, Munde) - riverine and lacustrine zones - interspersed by terrestrial habitats often arranged in mosaics (herbaceous formations, wooded meadows, savanna forest, savannah and bushes), in addition to relevant marine and coastal habitats. Among the forest areas the Licuati Forest Reserve stands out due to the presence of vascular plants endemic to the Maputaland Centre of Endemism[5].

Coastal and marine habitats comprise beaches and rocky shoreline, sub-tidal reefs, mangrove forests and intertidal sand flats, sea grass beds and estuaries[6],[7].

The most abundant species in the MSR are hippo, reedbuck, elephant, grey duiker, red duiker, blue wildebeest and zebra, with the giraffe population increasing steadily. The MSR is home to a breeding

[5] https://repository.up.ac.za/handle/2263/56038
[6] MITUR, Maputo Special Reserve Management Plan, 2009
[7] DNAC, Ponta do Ouro Marine Partial Reserve Management Plan, 2011

population of elephants (the last large population of elephants in Maputo Province), where the corridor along the Futi River (Futi Corridor) is of particular importance.

Maputaland is also blessed with a wide diversity of marine species, some endemic and rare, yet some of these species are being over-exploited, and have as a result become endangered. It is critical that the rare and endemic species are protected and that their conservation is ensured.

The landscape is **prone to floods** mostly due to the torrential regime of rivers and the large areas of plain topography, as well as a weak predictability of flood and drought events, associated with storage and discharges from dams located in upstream countries. Flood risk is expected to increase in the southern part of the country due to **climate change**[8]**.**

Administratively, the landscape is located in the **District of Matutine**, whose headquarters is the village of Bela Vista. The district comprises five administrative posts - Bela Vista, Catembe N'sime, Catuane, Machangulo and Zitundo.

Originally the land inhabited to the large Tsonga population group, mostly represented by the Ronga ethnicity. However, there are also other **ethnic groups**, such as Nguni (linked to both the Zulu family from the Natal region and the Swazi[9] family), Matsuas of Inhambane and the Changanas from Gaza Province and the north of Maputo. The traditional leadership structures have survived, and there are strong allegiances to the Tembe traditional leadership in the south. The dominant mother tongue is xi-shangana, followed by xi-ronga. Due to historical reasons of occupation, the ethnic boundaries between the population of Matutuíne District and those on the other side of the borders with South Africa and Swaziland are very tenuous, and contacts with these neighbouring countries are very frequent. In addition to economic exchanges, marriages are carried out across borders, with some population groups having families on both sides of the border.

Population settlements are scattered, although more concentrated in the north, in Machangulo Peninsula, as well as in the headquarters of the administrative posts where there is more infrastructure and social services.

There are five **communities inside the MSR,** with a total estimated population of 5,000 inhabitants. In 1958, people who lived inside the present boundaries of the MSR, and who typically fished, hunted and gathered wild foods, were forcibly relocated to the village of Salamanga and along the Maputo River. Returnees were again removed in the late 1970s, and again later removed by the Forestry and Wildlife Authorities in 1983/4 to the area between the Maputo and Futi rivers. People were encouraged to farm in the flood plains of the Maputo River until a major flood in 1984 killed many of them - increasing the resentment of these communities towards the Reserve. Other waves of out-migration took place during the peaks of civil unrest in the 1980s. More recently, conflicts with animals and a couple of deaths have lead a few families to request the Reserve's assistance to leave their homes in the CA.

Family is the basis of the local social structure, although different types of structures occur in this area including monogamic, polygamic, single parents and families headed by children (usually orphans). Traditionally, men are the head of the family and are responsible for supporting the family group. However, because of migration of the spouse to South Africa, divorce, widowhood or abandonment of the home by the men, there are families headed by women.

[8] "Climate Changes Report", National Institute for Disaster management, 2009.

[9] Note that the name of the country Swaziland has been changed to eSwatini. However, the people are still referred to as Swazi.

Livelihood is based on subsistence agriculture, small animal production, hunting and fishing in rivers, wetlands and the sea. Fishing in Matutuine District is one of the economic and subsistence alternatives for communities living close to lagoons and along the coast. It is a predominantly male activity. Women are only involved in harvesting of molluscs and crustaceans. Small-scale fishing is an income-generating activity for part of the population, more specifically those that live along the coast of the Indian Ocean. There are fishermen organized in associations selling to the Maputo city market. Overexploitation and lack of respect for the closed season are problems that endanger the fisheries resource. Outside of the sea fishing seasons, families depend on remittances, local labour or small trade opportunities for their livelihoods.

The main highway joining Maputo to Ponta do Ouro is expected to be finalized by the end of 2018. This will have a major impact in the area, placing more pressure on the reserve (plots along the road area being fenced) and the access improvement could result in more pressure on forest resources (mainly for firewood to supply the cities of Maputo and Matola) and also for poaching. It could also create opportunities for tourism development as well as other value chains. Although this is rapidly changing, at present the roads are still in poor condition limited to 4 x 4 vehicles, which has been a constraint for visitors attempting to reach the reserve.

The Special Land Use Plan for the Elephant Coast currently being prepared - along with its Strategic Environmental Assessment - as well as the land use planning instruments[10] to be prepared in the short-term for the main cities of the Elephant Coast Landscape (Machangulo, Bela Vista and Zitundo), is likely to contribute towards improved management of the potential increased pressure.

This area is considered a **Tourism** Priority Area in the Tourism Strategy of Mozambique, investing in the areas of nature conservation, beach tourism and recreational activities. In the Elephant Coast Landscape, Ponta do Ouro is where tourism activities are most developed, with accommodation, restaurants and stores for tourists as well as recreational activities, such as scuba diving and dolphin watching. Other locations with some existing investment in tourism are Mamoli and Malongane, as well as Machangulo Peninsula. Inside the reserve, a community-run lodge has operated for a few years (Chemucane Lodge), with plans to open a new one soon (Milibangalala Lodge).

There are plans for an industrial development, with the construction of the port of Techobanine and associated industrial zone, which would affect and present **a threat** to the reserve and its objectives.

8.2 CHIMANIMANI LANDSCAPE

The Chimanimani Landscape includes the Chimanimani National Reserve [CNR], its buffer zone, three Forest Reserves (Maronga, Moribane and Zomba) and the adjacent land areas in the Sussundenga District. The landscape is part of the **Chimanimani–Nyanga Centre of Endemism**.

The **Chimanimani National Reserve** (CNR)[11] was established in 2003, establishing borders for a total conservation zone (core area) and a multi-use buffer zone (CNR MP, 2010). The CNR is part of the **Chimanimani Transfrontier Conservation Area**, jointly with the Chimanimani National Park in Zimbabwe.

A **management plan for the CNR** was developed in 2010, identifying opportunities and threats and defining a management strategy, which included the revision of the Core Area border, and which was officially approved in 2013 (Decree Nr. 89/2013).

[10] *Plano Parcial de Urbanização (PPU)*
[11] Decree Nr. 34/2003; August 19

Other relevant areas for conservation within the landscape are the **Forest Reserves of Moribane, Mpunga and Maronga** created in 1950's.

The Chimanimani landscape **climate** varies from being generally humid tropical to temperate, with average temperatures varying from 22ºC in the south east lowlands to less than 18ºC on the high mountains, in general lower than in the rest of the country. The main rainy season typically starts in late November and lasts until late March; however, some rain can be experienced throughout the year over the high mountains and foothills.

The Chimanimani landscape is shaped by the presence of the **Chimanimani mountain range** that rises out of plains approximately 200m above sea level to the cool temperate mountains and plateaux at times reaching 2000m. This results in a unique landscape and environment, containing some of the most magnificent and breath-taking mountain scenery in the whole of south east Africa. Monte Binga (2436m) - the highest mountain in Mozambique - is part of the Chimanimani mountain range, bordering Mozambique and Zimbabwe[12].

These mountains contain several **water springs and rivers**, which are the main water source for the Buzi River, an important river in the central region of Mozambique.

The Lucite and Mussapa Grande Rivers drain the southern and central areas of the mountains, while in the north, several rivers flow northward into the Chicamba Dam and then to the Revue River, which in turn flows into the Búzi River (CNR MP, 2010). River flow is heavily influenced by rainfall, turning into torrential rivers during the rainy period, limiting circulation both due to increase of water levels and as the result of the deterioration of the conditions of the roads by erosion[13]. Despite the construction of drifts during the TFCA and MozBio 1 projects which significantly improved this situation, access is still challenging in some areas. In turn, these climatic conditions and the abundant water availability create **suitable conditions for the cultivation of various agricultural crops**, including fruit trees.

The **biodiversity richness** stems from the Afromontane evergreen forest and grassland area, habitat for several species, including endemic flora and fauna species, in addition to large mammals such as sable, eland and elephants. The latter was mainly concentrated in Moribane Forest, but the population seems to be increasing, consequently increasing **human-wildlife conflicts (**mainly in Mpunga and Mahate).

The mountains have been inhabited for centuries, containing important **historical sites** such as rock painting from the Stone Age and ruins dating to the time of the Great Zimbabwe period in the 14th and 15th centuries (CNR MP, 2010), which are areas of interest for tourists.

The main mountain ranges are home to the **Ndau-speaking people** in the south and centre, while **Manica-speaking communities** are found in the north. Communities closer to the border with Zimbabwe have strong connections with Zimbabwe, with families ties and social lives on both sides of the border. It is very common for local men to **emigration** to Zimbabwe or to other districts or provinces in search of opportunities.

Zione is the predominant **religion**, strongly based on the relationship with the natural environment, with many sacred sites associated with natural resources, including sacred forests. **Polygamy** is a common practice which seems to contribute to early marriages, as there is a practice of compensating the bride's family, often in cash. In polygamous families the hierarchy of wives reflects the order of the man's marriages – consequently, the first wife has a higher standing, which in most cases leaves the subsequent and last wives in a more vulnerable position. **Women** are responsible for taking care of the house and children, for collecting firewood and water (the latter two are usually under the responsibility of the younger wives). Traditionally the land is owned by the man and upon his death the man's family may claim all the assets and land from the wife(s). This has implications on women's

[12] Chimanimani National Reserve Management Plan, 2010
[13] Júlio Chirondo (RNC), personal communication

relationship with land, where women tend not to make long-term investments on the land, since in case of the death of the husband they stand to lose all assets. Therefore, in the context of the subprojets, projects with immediate results are more attractive to the local women[14]. Domestic violence is common. There is a wide-reaching domestic violence awareness program being implement by the government, including in Sussundenga District and its administrative levels, informing about the associated penalization.

According to the INE, Sussundenga district has an **illiteracy rate** of 42,9% (higher than the average illiteracy rate of Manica Province – 38,6%). Secondary school attendance has recorded an increasing proportion of girls attending in relation to boys. The last available data (2011) indicates that girls represented 40,6% of students in this school level. This increase in secondary school attendance by girls is probably the result of the government's effort to increase the number of schools (currently all admirative posts of Sussundenga District have secondary schools) as well as the campaigns developed by NGOs such as Save the Children, promoting that girls go to school.

There are no **population settlements** in the high mountain ranges and plateaux. Settlements can be found in the surrounding foot hills and valleys, where irrigation is practiced using furrows channelling water from rivers to the fields where wheat, barley and vegetables are grown (CNR MP, 2010). There are some **communities inside the Total Protection Zone** (TPZ), such as Mussapa Matsiane, Nhabawe, Mahate, Mazundzu, Munawia and Maronga[15]. The revision of the CNR border (2013) led to the removal of communities that were located in the fringes of the TPZ's[16]. However, the 2017 population census indicates a **higher population number inside the TPZ, than was expected** - this is being investigated by the CNR administration. The current figures indicate the presence of approximately 500 families, which is higher than expected. This figure could be an overestimation (incorrectly including inhabitants inside the buffer zone), according to the Chief of Mussapa locality, and could result from the limited coverage area of the 2007 Census[17] or it could be a direct result of encroachment. Satellite imagery[18] indicates recent incursions in the southern area, which will be demarcated within the ROAM exercise for boundary identification of degraded areas, to be visited by the RNC staff as soon as the level of the rivers allows access[19]. The development of new agriculture and forestry[20] projects in Sussundenga and surrounding districts, has led to migration and settlement in the area that could also be one cause of the population increase in the buffer zone and possibly in the TPZ[21]. During the site visit an increase in households along the Mussapa Pequeno valley was observed, on the TPZ side, which reportedly is a result of natural population increase with younger households seeking available areas to settle close to the river.

Livelihoods are based on productive agriculture, use of wild fruits, plants, animals and fish. Agriculture and the use of natural resources (land, wood, gold trade) are the main economic mainstay of the communities. Beekeeping was successfully introduced by Eco-MICAIA[22] through the establishment of a value chain by the creation of the Mozambican Honey Company (MHC) that buys, processes, packs and distributes honey at national level, with plans to export.

The recent (2014) upgrade of the Chimoio - Sussundenga road to a tarmac road has strongly boosted the **economic development of Sussundenga District**, which is resulted in the establishment of new **large agriculture areas**, mainly fruit trees (one litchi project and five projects of macadamia and avocado) established by foreign investors (South African and Australian). Two other projects are expected – vine and sugar-cane. There are **livestock farms** (mainly owned by Mozambicans), with

[14] Milagre Nuvunga (MICAIA), personal communication
[15] Contardo (RNC), personal communication
[16] Milagre (MICAIA), personal communication
[17] Tomás Rice Mugadui (Chief of Mussapa locality), personal communication
[18] Milagre Nuvunga (MICAIA), personal communication
[19] Contardo (RNC), personal communication
[20] Such as the Portucel Project, funded by IFC.
[21] Contardo (RNC), personal communication
[22] Social enterprise created by MICAIA Foundation

an increase expected due to the establishment of a dairy plant in the AP of Moha[23]. One granite quarry is in operation and another is in the exploration phase. It should be noted that the Companhia do Vanduzi[24] has extension activities to outgrowers within Sussundenga District, promoting the production of vegetables for export. Recently the company established a dairy processing plant in Chimoio. The World Bank's PROIRRI Project, aimed at improving irrigation schemes to raise farm productivity, rehabilitated an irrigation scheme in Mussapa Pequeno valley (buffer zone) and improved its access road. In the same area MozBio 1 established synergies with PROIRRI and the Companhia do Vanduzi, introducing conservation agriculture practices in an irrigation scheme rehabilitated by PROIRRI, where small farmers started producing crops for Companhia do Vanduzi. The second phase of PROIRRI, named the IRRIGA Project will continue to implement activities in Sussundenga District, having already identified target areas to install irrigation schemes. The Manica Provincial Government has been encouraging an increase in agricultural production, which in some cases has led to conflicts with natural resource protection objectives in the buffer zone and forest reserves. Sussundenga District also has a high potential for forestry. In the 1980's the IFLOMA Project comprising large plantations of pine and eucalyptus was established in Rodanda, inside the buffer zone.

The upgrade of the Chimoio – Sussundenga road has not yet boosted **tourism**, as expected. Political and security instability (from 2012 - 2017) resulted in a decrease in tourism across the country, but especially in Manica and Sofala provinces. While in 2011 the total number of tourists was over 200, in 2017 it decreased to approximately 50 for the entire calendar year. The lack of tourism infrastructure is considered a current constraint. Accommodation is limited to the Ndzou Camp (run by Eco-MICAIA in Moribane Forest Reserve) and a few tents and a camping area in the CNR Headquarters. It should be noted that some community guides trained during the TFCA Project are still requested to guide tourists to Monte Binga and waterfalls, which is a relevant but weak source of income. Tourism is seen as an opportunity for community development as well as a source of income for the CNR. In Zimbabwe, before the political and economic crisis, the Chimanimani National Park received a high number of tourists per year (12.700 tourists in 1999, of which 4800 were foreigners)[25]. The improvement of the political environment in both countries is creating an opportunity for eco-tourism development (mountain and culture tourism). The continuous increase of scientific expeditions should be noted, namely through the MICAIA Foundation that has partnering agreements with universities in the United Kingdom.

One of the largest threats that the CNR has faced has been the presence of **illegal gold panners**. The CNR Management Plan refers to the presence of thousands of miners (mainly Zimbabwean) within the TPZ since 2004, reporting the serious challenges in dealing with the problem. Due to the recent reduced availability of the resource and the rudimentary techniques used, as well as the improvement in the economic situation in Zimbabwe, most of the mining has now been abandoned within the TPZ, although a few cases are still reported[26]. In the buffer zone there are also artisanal mining sites at the foot of Mount Tsetsera and along some rivers, namely the Lucite River. In Tsetsera, an association of artisanal miners was established, and sustainable practices training was provided resulting in the improvement of environmental conditions. However, serious water quality problems affect the Lucite River, mainly due to illegal mining activities in Zimbabwe. Recently, a joint multi-sectoral meeting was held with representatives of the Zimbabwean and Mozambican Governments and a joint committee was established to define an action plan to address this problem[27]. It should be noted that gold artisanal mining activities have been associated with violence and criminality.

[23] Castigo Mouzinho Bofane (Director of SDAE), personal communication
[24] Agrobusiness company that exports vegetables to RAS and European countries (http://www.fundocatalitico.co.mz/pages/projecto-de-chirodzo)
[25] CNR Management Plan, 2010
[26] Júlio Chirondo and Contardo (RNC), personal communication
[27] Lionel da Silva Massicane (CNR Administrator)

Uncontrolled fires are also a concern, though the importance of regular fires is recognized for the maintenance of the Chimanimani ecosystem, as a great part of its endemic flora is fire dependant. The implementation of beekeeping and small-scale commercial agriculture projects have been contributing to the reduction of uncontrolled fires[28].

There are **Natural Resources Management Committees** established in the communities within the TPZA and buffer zone. The distribution of 20% of the revenue delivered to CNR by ANAC is based on the community performance in natural resource conservation.

8.3 MARROMEU COMPLEX LANDSCAPE

The Marromeu Complex Landscape is located in the central region of Mozambique, in the Zambezi River Delta. It comprises most of the **Ramsar's Wetland of International Importance** in the south bank of the Zambezi Delta, including the Marromeu National Reserve, Coutadas 10, 11, and 14, the Nhapacué and Inhamitanga Forest Reserves and adjacent land areas in Marromeu, Cheringoma, and Muanza Districts. The Landscape is part of the **Zambezian Coastal Flooded Savanna ecoregion**, a flat alluvial plain irrigated by the Zambezi River Delta.

The **climate** is tropical humid, with an average annual temperature of 25ºC and an annual total rainfall of 1200mm. The landscape is marked by **plains** with altitudes varying between 0 and 200 m, crossed by numerous rivers that constitute the delta, particularly the Zambezi River.

The **hydrographic network** has a natural seasonal hydrological regime, with floods during the rainy season. The construction of Cahora Bassa dam, which has been in operation since the 1970s, has reduced seasonal flooding and increased erosion of the main river bed in the delta, altering the natural hydrography and habitats that depended on it. The Salone River, which drained seasonally from the Zambezi River to the Marromeu Complex Landscape, failed to do so due to erosion on the Zambezi River. This area is prone to floods and is vulnerable to increased flooding and saline intrusion due to climate change Alluvial soils are highly suitable for agriculture and pasture (MITADER, 2015).

The landscape includes a **variety of habitats** ranging from Zambezian coastal flooded savanna, coastal dunes, grassland, freshwater swamps, *dambos* associated with miombo forest, mangroves and seagrass beds. These habitats are of great importance for several avifauna species, but also for populations of buffalo and antelope amongst others. In the 1960's, the area's buffalo population was considered one of the largest in the world – however, as a result of the years of armed conflict and slaughtering campaigns carried out in the 1980's, it sharply declined. Indications are that in recent years the buffalo population has been growing – should the growth trend continue, the number of individuals may reach values close to those before the civil war (MICOA, 2014).

People living in the Zambezi Delta site are **ethnically Sena** and this is also the predominant language. The majority are Phozo ethnic groups from Luabo in Zambezia, Sena people from Cheringoma, Caia, Mutarara, Morrumbala and Mopeia, as well as some Macua, Chuábo, Ndau and Ngoni who originally came as labour to the plantations. Many new immigrants still come in search of employment and to hunt illegally. Local traditional leadership is still very influential.

The Marromeu Complex Landscape covers the **Marromeu, Cheringoma and Muanza districts** of Sofala Province.

The highest concentrations of **settlements** are to the northeast of the Marromeu Complex Landscape, along the strip between the R219 road inside the northern boundary of Coutada 11 and the Zambezi River, and to the southwest in the vicinity of Inhaminga. The high population figures of Coutada 11 refer to the area north of the railway line as far as the northern boundary. The principal urban settlements on the periphery of the Marromeu Complex Landscape are the district centres of

[28] Júlio Chirondo and Contardo (RNC), personal communication

Marromeu and Inhaminga, and also Chupanga. Outside of these urban centres, the alluvial areas along the banks of the Zambezi River extending in places onto the floodplain, support markedly higher densities of settlement than elsewhere in the complex. The other Coutada with a high resident population is Coutada 14 due to an overlap of boundaries and the encroachment of the Sena Sugar Company, in an area of around 7,000ha, into the Coutada. There are settlements inside the sugar cane plantations (*Companhia do Sena*) as these were historically permitted and these have grown. Settlements along the MNR's coast, are seasonal, based on hot wet season high fishery productivity. Fishers and traders arrive from Zambézia, Sofala and even Tanzania and stay in the area temporarily.

It is estimated that a total population of **4,400 inhabitants live inside the MNR** and **about a total of 43,000 live inside the *Coutadas***. *Coutada*s 10 and 11 attempted some resettlement, but without success. Part of the resident inhabitants between the northern boundary of Coutada 11 and the Zambezi River were resettled there by INGC, following the floods of 2000.

In 2017, 69 cases of **human-wildlife conflict** were recorded in Marromeu District. Most destruction of crops were caused by hippopotamus (43 cases), followed by buffalo (10 cases) and attacks by crocodiles (16 cases). These 69 cases resulted in 5 deaths and 2 injuries. Compared to 44 cases in 2016 that resulted in 5 deaths and 1 wounded, there was a growth in cases of 56.8%.

Livelihoods are based on subsistence agriculture, complemented by extensive use of local resources to supplement diets and income and to fulfil basic needs for items such as fuel, shelter, household items and medicine. Sweet potato and rice are grown in the flood plains. Limited income is available from jobs in the Coutadas. The largest employer is the **Sena Sugar Company** which draws in 3-4000 migrants at peak periods of the year. This employment seasonality influences local social dynamics - more cases of social ills incidents are recorded during the working season, with more thefts being recorded during those times when worker numbers hired by *Companhia do Sena* decrease. The latter is the main private economic activity in the Landscape. *Companhia do Sena* occupies approximately 5,000 ha with the possibility of expanding its activity to another 15,000 ha (MITADER, 2015). All of the Coutada operators are hunters (except Coutada 12) and conduct legally required benefit sharing with communities inside their boundaries. Meat from all animals hunted is provided to communities who also all receive 20% of revenue back from the GOM - even if late. In Coutada 11, communities also receive a community quota, but the community is not clear on how this quota is calculated.

In the District of Marromeu, about 10% of single-parent households are headed by women. In some cases, in the **family structure**, there are polygamous families. In these families all women depend economically and financially on the first wife of the husband who is called "older woman" regardless of age and is the manager of all of the family's property.

Literacy rates are low, under 10% in some areas, with a large disparity between the genders, with significantly higher levels of illiteracy in women. Less than half of all students are girls.

9. KEY POTENTIAL ENVIRONMENTAL AND SOCIAL IMPACTS

The main objectives of the MozBio 2 Project are to *improve management of target conservation area landscapes and to enhance the living conditions of communities around these conservation areas*. Therefore, the implementation of MozBio 2 subprojects will result in positive impacts on biodiversity and environmental conditions in target conservation areas and their landscape, as well as in the improvement of the living conditions of communities directly impacted by the subprojects. Social benefits are expected to include the creation of job opportunities (including for women), improvement in income generation by the establishment of new value chains and improvement in community organization and skills development.

MozBio 2 was classified as a Category B Project since potential direct adverse environmental and social impacts will be minor, site specific and easily manageable.

Within the target CAs, Component 2 activities (Table 5 Table 5) will include the construction of infrastructure and facilities that could result in environmental and social impacts. It will comprise the construction or rehabilitation of new buildings in their headquarters (for staff and visitor's accommodation in the CNR and training center in the MSR) and the improvement of accesses in both CAs. For MSR the development of a major tourism development program is planned, as well as the additional translocation of animals, while the facilitation of the establishment of a community-private partnership for a tourism camp is planned for CNR.

Table 5 – Planned activities within the CAs (Component 2), with potential environmental and/or social impact

Maputo Special Reserve (MSR)

- Infrastructure development, including a connection road to the park entrance/headquarters' building and an all-weather game loop in its vicinity, construction of additional staff housing and rehabilitation of a Training Centre
- A major tourism development program that includes the marketing of three beach concessions (Membene, Dobela and Milibangalala) and other potential tourism sites within the reserve, the development of tourism products such as 4x4 trails, and development of local operators, and
- Additional translocation of animals.

Chimanimani National Reserve (CNR)

- Update of the Management Plan with clear ties to the Zimbabwe side of the trans-frontier conservation area,
- Open and maintain roads, crossings, trails and signage,
- Construct staff houses and an education centre,
- Facilitate community-private partnership for a tourism camp at the base of the various trails

Marromeu National Reserve (MNR)

- Construct an office and staff housing including water and electrical supply as well as grading of the access road to the reserve.

Adverse impacts due to construction of buildings will be very localized, in areas that are already disturbed (with minor impacts). In the case of the opening of new or improvements to access roads, adverse impacts will occur throughout the corridor, in greater magnitude and significance, including loss of vegetation, habitat fragmentation and communities. On the other hand, construction works constitute an employment opportunity for local people, which is a positive impact.

The opening, rehabilitation or upgrade of roads, in addition to benefiting the CA's management would also contribute to an increase in tourist numbers, since the current poor conditions constitute a limiting

factor. The same will happen following the establishment of a major tourism development program in the MSR and tourism camps in the CNR. These are likely to bring benefits due to the creation of new sources of income, although it could also have implications on the existing social structures and dynamics, as well as affect local communities' access to natural resources. Social Assessments (SA) will be carried out during implementation to evaluate the potential social impacts of the specific activities selected in each of the larger landscapes and to inform project design and monitoring in each landscape and the application of safeguards instruments. The TORs of the SA will be integrated in the Project Implementation Manual (PIM). While the team intends to initiate these as soon as possible, it is not necessary to complete them before appraisal, as the results can be taken into account in the ongoing design and implementation of community projects, stakeholder engagement, and impact management, and can also be included as updates to the PIM if necessary.

It is not expected that there will be a need for involuntary displacement of populations, but damage to assets or property may occur and will require adequate compensation in accordance with the MozBio 2 Resettlement Policy Framework (RPF).

Outside the Conservation Areas, under Component 3 of MozBio 2, the project foresees the strengthening of landscape zoning, the promotion of access to finance for the development of value chains compatible with conservation, the construction of basic social infrastructures and promotion of land restoration (conservation agriculture, reforestation and reduction of deforestation) in the target landscape (Table 6). At present, activities under the value chains are yet to be defined. Value chain specialists are expected to be contracted during the first stage of MozBio 2 implementation to develop the required business plans defining the potential value-chain activities. Table 8 lists key potential environmental and social impacts associated with possible activities under the proposed value chains, **which shall be revised during the preparation of the business plans.**

The natural increase in animal numbers within Conservation Areas could lead to an increase in the potential for human-wildlife conflict both within the CA and the buffer zone, including an increase in safety concerns (fatalities have been recorded inside the CA). This could lead to the need for resettlement (voluntary or involuntary) of families to areas of lower risk, which will also require the application of the RPF. The management of this process and associated impacts will be discussed in greater detail in MozBio 2's RPF.

Agricultural, livestock and forestry projects can have an impact on land occupation, cause habitat transformation and fragmentation, affect the availability of water for downstream users, and result in soil and water pollution as a result of pesticide, fertilizers and antibiotic misuse, depending on the type of activity. Activities that involve the processing of agricultural, forestry, livestock or fishing value chain products may in addition generate effluents, residues and odors that affect the quality of the environment and the health of populations requiring the adoption of specific environmental management measures.

Table 6 - Planned activities outside the CAs (Component 3), with potential environmental and/or social impact

Elephant Coast Landscape (ECL)

- Zoning plan based on the Special Land Use Plan (PEOT) that is already underway
- Potential value-chain activities may include support for:
  - Fisheries associations in the bay area of the marine reserve,
  - Private tourism investment or community/private-sector joint ventures
  - Establishment of CCA along the Futi Corridor with value chain activities that may include game (wildlife) and cattle farming,
  - Conservation-compatible livestock schemes, as well as

Chimanimani Landscape (CL)

- Full buffer area zoning plan
- Potential value-chain activities may include support for:
  - Tourism private or community/private joint ventures;
  - Establishment of one or several CCAs - private or community- owned-with value chain that may include wildlife and cattle farming;
  - Artisanal mining, forestry or conservation-compatible agriculture - e.g. eucalyptus, coffee, honey schemes;
  - More socially flexible schemes designed to help the households that wish to relocate from within the reserve.

Marromeu Complex Landscape (MCL)

- Potential value-chain activities may include support for:
  - Fisheries associations in the estuary and coastal area,
  - Private or community/private joint ventures in tourism or sport hunting,
  - NTFP, forestry or conservation-compatible agriculture - e.g. Cashew nuts, honey, crocodile eggs
  - More socially flexible schemes designed to help the households that wish to relocate from within the reserve

Both zoning plans foreseen to be undertake for the ECL and CL could have environmental and social implications associated with limitations on access to land and natural resources use. The ECL will be based on the PEOT and its associated Strategic Environmental and Social Assessment (SESA). Both zoning plans **shall also have associated SESAs to ensure adequate integration of environmental and social matters.**

The environmental and social aspects that could be directly affected by the foreseen subprojects's activities are listed in Table 7.

Table 7 – Environmental and Social Aspects potentially affected by the foreseen subprojects's activities

Environment Aspects

- Soils: which may be eroded due to civil works or agriculture activities and/or polluted with solid wastes, pesticides, leakage or spill of hazardous materials and;
- Water resource: including freshwater and seawater which could be affected by abstractions and diversions or due to the discharge of fertilizers, nutrients, different chemicals to be used for pest management, civil works, oil spills, etc.;
- Air quality: which has the potential to be negatively affected by dust generated from the various construction/rehabilitation and project operations as by pollutant (including greenhouse gases) emissions from vehicles, machinery (including diesel generators);
- Noise environment: generated from the various activities during civil works as well as during some project operations
- Vegetation: may be locally affected due to clearance for construction and even rehabilitation of new infrastructures, tourism and community development projects;
- Fauna: can be disturbed during construction and operation activities;
- Landscape: that can be affected by new infrastructures, tourism and community development projects

Social Aspects

- Loss of access to resources and livelihoods
- Physical displacement and/or loss of land and/or other assets
- Employment: positive impact for local communities

- Conflicts with local community: due to use of natural resources and/or cultural “foreigner” workers and visitors
- Public health: increase spread of diseases, as sexual transmitted diseases (HIV/AIDS), and water-borne diseases.
- Public safety: accidents with vehicles/machinery and pedestrians)
- Health & Safety of construction workers
- Cultural heritage: destruction or disturbance of cemeteries, sacred sites or sites with archaeological, historical or aesthetic value.

The preliminary identification of potential key environmental and social impacts associated with subprojects that at present, are expected to be funded under Components 2 and 3 (as listed in Section 2.3) are listed in Table 8. This is a generic list. Each subproject will be screened and assessed based on the nature and scale of the activities and impacts, as well as the sensitivity of the environment and community. The mitigation measures will be project-specific.

A more detailed version of this table is contained in Annex 7, to assist the Safeguards Specialists in the preparation of the ESMP.

Table 8 – Key Potential Environmental and Social Impacts per Type of Project

CIVIL WORKS: Infrastructure such as roads, bridges, drifts, buildings (accommodation, offices), water supply, sanitation.
Key Impacts
Buildings • Conflicts over access to land / ownership of land. • Disturbance to natural habitats. • Soil erosion. • Noise and dust generation. • Natural resource extraction. • Disturbance to natural landscape. Roads • Conflicts over access to land / ownership of land. • Disturbance to natural habitats. • Soil erosion and associated sediment discharge after rain events. • Noise and dust generation and associated nuisance to road users / neighbours / crops (dust). • Injuries or fatalities resulting from vehicle accidents. • Spread of communicable diseases. • Non-local workers / migrants who may disrupt traditional lifestyles and authority structures • Temporary or permanent damage to or loss of assets, loss of access to resources. • Disruption / damage to graves and physical and cultural resources.
AGRICULTURE: Community agriculture, Irrigation agriculture, Ecological agriculture, Semi-industrial agriculture and Horticulture

- Disturbance to / fragmentation of natural habitats resulting from land take.
- Soil erosion.
- Dust generation.
- Introduction of genetically modified species.
- Natural resource use resulting from water abstraction.
- Diversion of water from other users – reducing water availability for downstream / competing users.
- Soil and water pollution / overloading / leaching resulting from the improver / overuse of fertilizers and pesticides.
- Spills or leaks of hazardous substances resulting in soil and water pollution.
- Impact on local subsistence livelihoods.
- Temporary or permanent damage to or loss of assets, loss of access to resources.
- Conflicts over access to land / ownership of land.

LIVESTOCK FARMING: Cattle, poultry, pigs

- Disturbance to / fragmentation of natural habitats resulting from land take.
- Temporary or permanent damage to or loss of assets, loss of access to resources.
- Conflicts over access to land / ownership of land.
- Reduced air quality and nuisance resulting from (intensive) livestock farming odour exposure.
- Soil and water pollution / overloading / leaching resulting from the overuse of pesticides.

FORESTRY AND FOREST PRODUCTS: Forest plantation, Non-wood forest resource use, Honey production,

- Disturbance to / fragmentation of natural habitats resulting from land take.
- Biodiversity impacts (habitat reduction / transformation)
- Temporary or permanent damage to or loss of assets, loss of access to resources.
- Conflicts over access to land / ownership of land.
- Natural resource use resulting from water abstraction.
- Diversion of water from other users.
- Soil and water pollution / overloading / leaching resulting from the overuse of fertilizers and pesticides.
- Impacts on existing / neighbouring and fauna and changes to natural cycles. .
- Fire risks – monoculture / high risk

AQUACULTURE

- Disturbance to / fragmentation of natural habitats due to land take.
- Temporary or permanent damage to or loss of assets, loss of access to resources.
- Biodiversity impacts (habitat reduction / transformation)
- Introduction of exotic / species which will compete with existing species, leading to changes in species composition.
- Natural resource use resulting from water abstraction.
- Diversion of water from other users – reducing water availability for downstream users.
- Reduced water quality of the receiving environment as a result of discharge of effluent / release of pond water into the natural environment
- Overuse of antibiotic may result in persistence of antibiotics in natural environment and development of resistance.
- Soil and water pollution / overloading / leaching resulting from the overuse of pesticides.
- Disease outbreak affecting neighbouring / downstream communities.

TOURISM: Ecotourism, conservation product markets, accommodation, recreational facilities, game farms
Increased tourist numbers • Transformation / fragmentation of natural habitats from overexploitation • Induced development along access routes (kiosks, farms, housing, accommodation) • Destruction or desecration of historic sites • Conflicts in natural resource use • Impacts on social dynamics
Game farms • Introduction of game species leading to human/wildlife conflict.
VALUE-CHAIN / PROCESSING
General food/plant processing • Untreated discharge of wastewater and sludges, contaminating water bodies • Inappropriate disposal of wastes • Noise • Odours • Health and Safety – occupational injuries
Infrastructure: new or upgraded market places, road upgrades • Refer to civils works section above.
Value-chain logistics • Increased road traffic impacting on safety of other road users • Competition for utilities – power, water, mobile phone • Competition for jobs and resulting impact on community structure and dynamics

10. GUIDELINES FOR ESMF IMPLEMENTATION

10.1 INTRODUCTION

The comparative analysis of the Environmental Impact Assessment Process legally established in Mozambique (EIAR - Decree Nr. 54/2015) with the World Bank's OP 4.01 on Environmental Assessment indicates parallels between the two.

As in MozBio 1, all subprojects shall be subjected to a review and screening process in order to determine the level of required environmental and social assessment. As stated in Chapter 9, subprojects under Components 2 and 3 would potentially generate environmental and social impacts within the CA (infrastructures) or within the surrounding landscape (community development subprojects under Component 3).

This section of the ESMF describes the process for ensuring that environmental and social concerns are adequately addressed through institutional arrangements and procedures employed by MozBio 2 for managing the identification, preparation, approval and implementation of subprojects, throughout the subproject cycle.

Figure 7 presents the environmental and social management steps to be followed, during the subproject cycle.

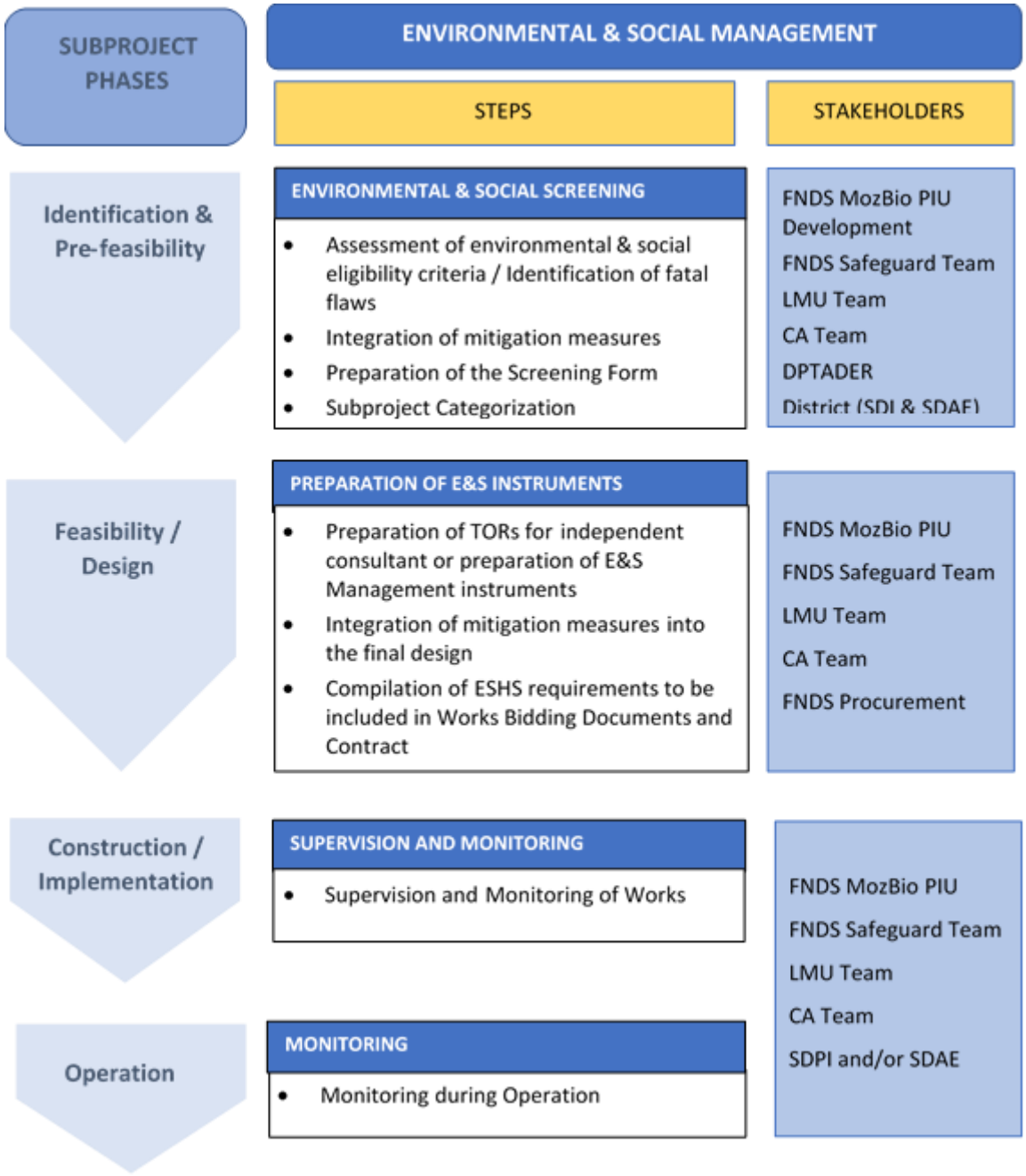

Figure 7 - Environmental and Social Management Steps and Stakeholders, during the Subproject Cycle

The following sections detail tasks for each project phase.

Key stakeholders and their responsibilities for ESMF Implementation are summarized in Chapter 11 – Institutional Organization.

10.2 ENVIRONMENTAL AND SOCIAL SCREENING

The objective of the Environmental and Social Screening step is to ensure that proposed subprojects are subject to the appropriate type and extent of environmental and social assessment, crucial to ensuring compliance with OP 4.01. As discussed earlier (Section 4.1), the environmental licensing process regulated by the EIAR, also starts with this step.

Screening of subprojects (see Figure 8) shall commence at the time of project identification when the basic subproject details are known, including nature and scope, proposed location and area, among other available information.

The Environmental and Social Screening Checklist (Annex 3) will be prepared by the Safeguard Specialist based in the CA LMU, in collaboration with the assistants involved in the preparation of the subproject proposal, with support from the CA Co-management structure and district directorates. It will require close interaction with the team involved in the preparation of the subproject proposal, as well as desktop study and site reconnaissance.

The checklist comprises six sections, as follows:

1. Subproject identification
2. Description of activities (*supported by specific tables for different types of projects* in the Appendix of the Checklist – *Buildings, Roads, Agriculture, Forestry & Forest Resources, Livestock, Aquaculture, Tourism, Processing Activity)*
3. Site description (environmental and social conditions)
4. Stakeholder engagement
5. Initial screening of impacts and impact management
6. Subproject categorization

Thus, the Screening Checklist will provide information about the proposed subproject activities (type and scale), the environmental and social conditions of the proposed subproject area and any concerns / expectations identified by stakeholders.

This information will assist in the identification of the nature and magnitude of the potential environmental and social impacts and risks, which in turn will be the basis for the subproject categorization by the FNDS Safeguard Team.

The FNDS Safeguard Team will revise the Screening Checklist and require any additional clarification in order to categorize the subproject under OP4.01 and the foreseen categorization based on the EIAR. The final screening form will be submitted to the WB for review and approval.

The Screening Checklist will provide inputs to complete the Preliminary Environmental Information Sheet (Annex 4).

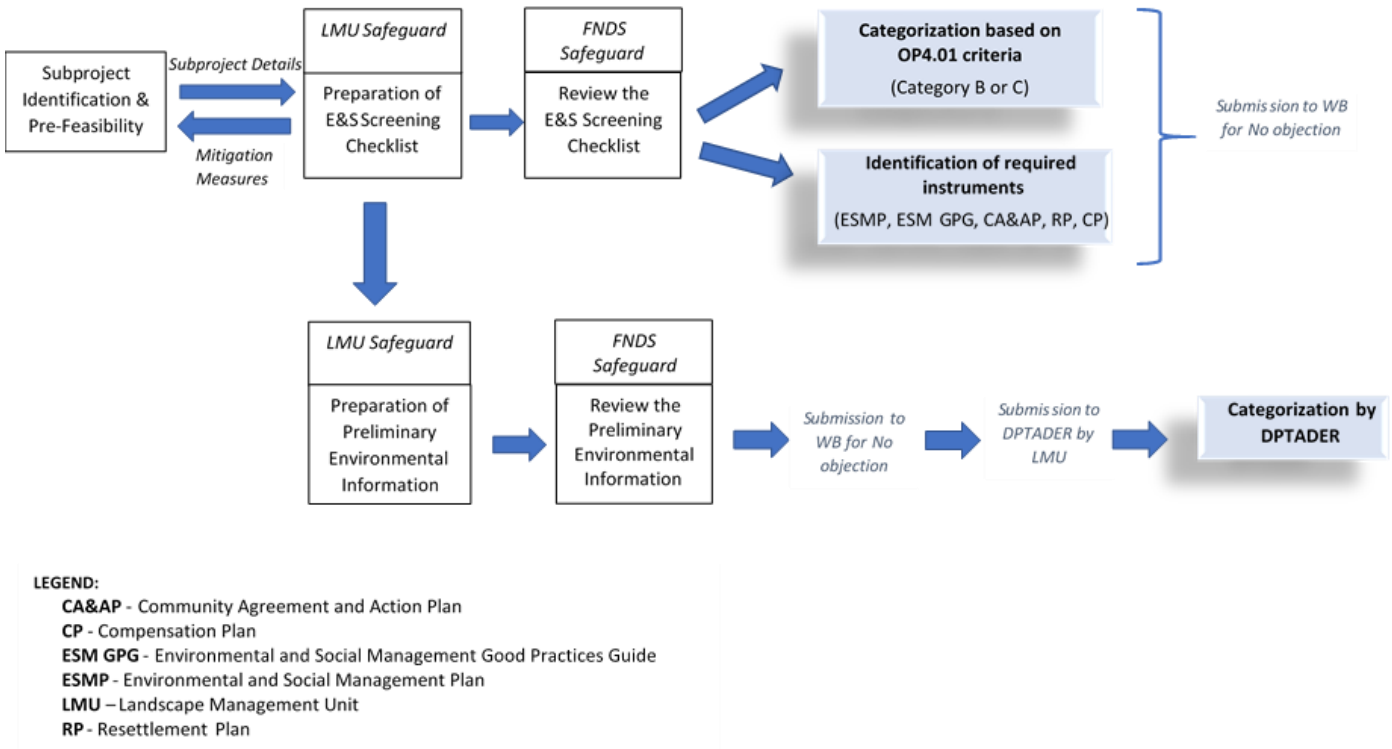

Figure 8 - Screening process

The FNDS Safeguards Team will submit the results of the safeguards screening to the World Bank, proposing a categorization. As the MozBio 2 Project was classified by the WB as a Category B Project, any subproject classified as Category A or A+ will not be eligible for funding under MozBio 2. Therefore, all MozBio 2 subprojects will be classified as Categories B or C.

The FNDS Safeguard Team will be responsible for preparing the required environmental and social assessment and management instruments (ESMP and ESM Good Practices Guide), except in the case of a subproject categorized by the DPTADER, as Category B, where the required Simplified ESIA and ESMP have to be prepared by a third party Environmental Consultant registered with MITADER or when the WB request independent preparation of an ESMP. For both of these exceptions, the Safeguard Team shall prepare terms of Reference for Consultancy Services. Before submission to WB for no-objection, the FNDS Safeguard team will review the ESMP in order to ensure compliance with WB requirements.

The WB categorization could differ from the MITADER categorization. For instance, the WB could categorize a subproject as Category B, requiring an Environmental and Social Management Plan (ESMP), while DPTADER categorizes the same subproject as Category C, requiring only the submission of an Environmental Management Good Practices Document for approval (

Figure 9). In this case both documents shall be prepared to meet the WB and DPTADER requirements.

The Screening Checklist enables the identification, at an early stage, of environmental and/or social issues that could render the project ineligible for funding or as not feasibility. The checklist also allows for the identification of potential environmental and/or social impacts and risks, including the identification of mitigation measures, to be integrated in the initial subproject proposal and the subsequent feasibility study, in order to avoid or mitigate adverse impacts and/or enhance positive impacts. Close collaboration between the team responsible for preparing the subproject proposal (infrastructure, value chain or community development assistants) and the safeguards team is required and necessary from the onset.

causes minor losses of property that do not affect more than 20% of the PAP's livelihoods.

During this phase, subprojects will be assessed to determine whether they trigger OP 4.12 and consequently whether a Process Framework (PF) or Resettlement Process Framework (RPF) would be required.

The PF shall be applied in cases where the subproject may restrict access to the use of natural resources in legally designated conservation areas and may adversely impact livelihoods, requiring the preparation of a Community Agreement and Action Plan through a participatory process involving the affected households, as defined in the PF. The PF defines eligibility criteria and potential mitigation measures to be applied.

The RPF shall be applied where the subproject creates physical and/or economical losses. No physical losses are expected to arise from MozBio 2 subprojects. The RPF defines the eligibility criteria, procedures and institutional responsibilities in case of any lost due to the implementation of MozBio-2 subprojects.

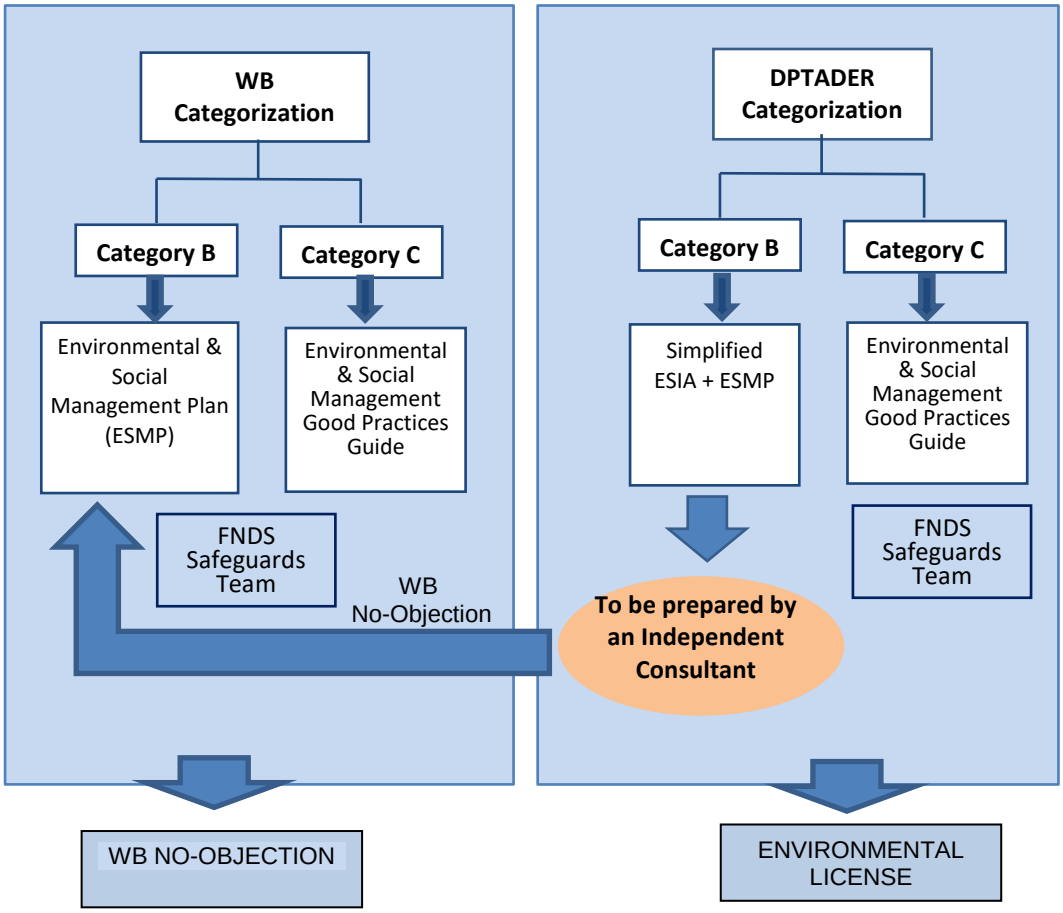

Figure 9 – Environmental & Social Instruments

Figure 10 provides a schematic overview of the tasks to be carried-out during the Environmental and Social Screening step of the Identification and Pre-feasibility Studies for a proposed subproject.

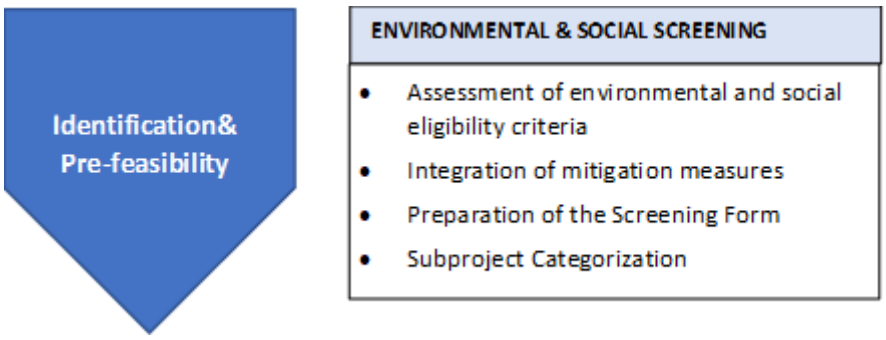

Figure 10 – Tasks during Environmental and Social Screening

10.3 ENVIRONMENTAL AND SOCIAL MANAGEMENT INSTRUMENTS

As described above, all subprojects funded under MozBio 2 will require the preparation of an environmental and social management instrument in accordance with the subproject categorization during the screening phase (Simplified ESIA, ESMP or Good Practices Guide)

While the Simplified ESIA required by MITADER will be prepared by an independent consultant (no affiliated with FNDS or making part of it), the drafting of the remaining instruments will be the responsibility of the FNDS Safeguards Team.

In all cases these instruments shall be prepared in parallel with the drafting of the Feasibility Study or Detailed Design in order to allow for the integration of mitigation measures within the subproject design, therefore avoiding the need for design changes at a later stage (see Figure 11).

The mitigation measures contained in the ESMP or in the Environmental and Social Management Good Practices Guide will then be integrated into the bidding documents for works (see Section 10.4 below).

The guidelines for the elaboration of each of the environmental and social management instruments are presented in the section that follows.

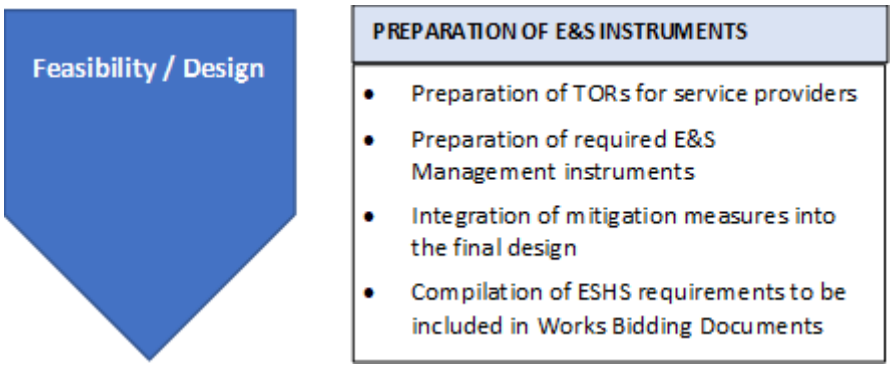

Figure 11 - Tasks during preparation of Environmental and Social Instruments

10.3.1 Simplified ESIA

For activities classified as Category B by the DPTADER, the FNDS Safeguard Team shall prepare Terms of Reference for the appointment of an independent consultant to carry out the Simplified ESIA[29], including drafting the ESMP and conducting the public participation process (see Annex 5). According to the EIAR (Art. 23) only consultants registered with the Environmental Assessment Authority (MITADER) may carry out environmental assessment studies in Mozambique. Consultants must present a valid registration certificate issued by MITADER prior to contract award.

The TORs shall take into consideration potential impacts and risks identified in the Screening Checklist as well as in Section 9 of the present ESMF. The structure and content of the SES shall be as per the requirements detailed in the EIAR (Nr.54/2015). The Public Participation Process shall follow the General Directive of the Public Participation Process (Nr.130/2006).

In addition to the EIAR's requirements for the ESMP (part of the Simplified ESIA), the WB's requirements for the ESMP shall also be fulfilled (see section 10.3.2 below and Annex 6).

The TORs for the Simplified ESIA shall be submitted to the World Bank's Environmental and Social Safeguard specialist for review and issue of a no-objection response.

The FNDS Safeguard Team will review the Simplified ESIA and submit it to the WB for no-objection, prior to submission to the DPTADER. The FNDS shall subsequently adapt this ESMP to meet WB requirements. The Contractor shall demonstrate compliance with this version of the ESMP, which will be included in the bidding documents and in the contract.

Before the start of construction, the Contractor shall prepare and submit to FNDS for approval, a specific Contractor's ESMP (C-ESMP), based on the ESMP attached to the Contract.

[29] *Estudo Ambiental Simplificado*, as per Decree 54/2015

10.3.2 Environmental and Social Management Plan (ESMP)

An Environmental and Social Management Plan (ESMP) is required for subprojects classified as Category B under OP 4.01. This ESMP will be prepared by the FNDS Safeguard Unit, based on the template included in Annex 5 and taking into consideration key management measures indicated in Annex 7 as well as additional key measures to be identified during the process of definition of business values for value chains.

In cases where MITADER classifies a subproject as Category C, while it is categorized under Category B per WB, FNDS will be responsible to prepare the ESMP.

The ESMP shall provide information related to the project as well as the site's environmental and social conditions. It shall include practical mitigation measures to manage impacts identified in the Screening Checklist, clearly identifying the responsibilities for its implementation during the construction and operation phases.

The Draft ESMP shall include a participation process on its contents and requirements, involving the main stakeholders, including local authorities and interested and affected communities.

To ensure that Contractors understand how mitigation measures shall be planned for and executed, the ESMP presents them in sequential manner, in the order that they need to be implemented – as opposed to presenting mitigation measures per impacted aspect.

The ESMP will be attached to the bidding documents. Contractors will be requested to prepare an ESHS Management Strategies and Implementation Plan (MSIP) indicating how they intend to implement the ESMP. Both the ESMP and the Contractor's ESHS MSIP will be attached to the contract.

Contractors will be required to develop a Contractor's Code of Conduct applicable to the nature of the work, based on template in Annex 11. This Code of Conduct shall be approved by FNDS and attached to the contract.

It will be crucial that the ESHS Management Strategies and Implementation Plan (MSIP); comprise awareness training to ensure that contractors and workers understand a project's potential environmental and social impacts, and that they understand their role in mitigating such impacts. Training shall also cover the Contractor's Code of Conduct, expected behaviors and applicable remedies. Awareness training shall be conducted with work teams prior to the start of activities. Refresher training shall also be conducted at key stages during the construction works (such as prior to the start of new activities to review new potential impacts).

10.3.3 Environmental and Social Management Good Practices Guide

The Environmental and Social Management Good Practices Guide (see Annex 8) contains a compilation of basic environmental and social mitigation measures to be implemented during construction and operation of a subproject classified as Category C.

This instrument shall be adapted by FNDS for each subproject, with an introduction stressing the identified potential impacts and including any required additional mitigation measure. General and

Specific Environmental, Health, and Safety (EHS) guidelines[30] shall be considered.

Before submission to the DPTADER the ESM Good Practices Guide shall be sent to the WB for no-objection.

The ESM Good Practices Guide prepared by FNDS shall be included in Bidding Documents and be attached to the Contract, as well as the Contractor's Code of Conduct, previously approved by FNDS.

10.4 COMPILATION OF ESHS REQUIREMENTS FOR BIDDING DOCUMENTS FOR WORKS

The Environmental and Social Management Instruments described above will provide the basis for the preparation of the Environmental, Social, Health and Safety (ESHS) Requirements to be included in Bidding Documents for Works, as per the WB´s Standard Procurement Document dated January 2017.

The ESMP or the ESM Good Practices Guide will be attached to the Bidding Documents, as well as a template with the ESHS clauses that are required to be included in the bidder's Code of Conduct. The Terms of Reference for Works shall specify the need to address the ESHS measures contained in those documents.

A Contractor's ESHS Code of Conduct shall be applied to all contractors and subcontractors' workers. Refer to Annex 11 for the requirements of this Code of Conduct.

During the bidding process, the bidder will be requested to prepare an ESHS Management Strategies and Implementation Plan (MSIP) – to support the implementation of the ESMP or the ESM Good Practice Guide - and to submit an ESHS Code of Conduct. Both documents, the ESHS Management Strategies and Implementation Plan (MSIP) and the Code of Conduct, have to be approved by the FNDS Safeguard Team, prior to Contract signature.

The following documents shall be attached to the contract:

- ESMP or the ESM Good Practice Guide;
- Approved Contractor's ESHS Management Strategies and Implementation Plan (MSIP);
- Approved Contractor's ESHS Code of Conduct.

During the bidding process, the bidder shall submit the following additional documents in its Bid:

- **Code of Conduct (ESHS)**

  The Bidder shall submit its Code of Conduct that will apply to Contractor's Personnel, to ensure compliance with its Environmental, Social, Health and Safety (ESHS) obligations under the contract and to manage risks associated with: labour influx, spread of communicable diseases, sexual harassment, gender-based violence, sexual engagement with minors, illicit behaviour and crime and maintaining a safe environment, amongst others identified by the contractor.

  The Bidder shall detail how this Code of Conduct will be implemented including how it will be introduced into conditions of employment/engagement, what training will be provided, how it will be monitored and how the Contractor proposes to address any breaches.

[30] https://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/sustainability-at-ifc/policies-standards/ehs-guidelines

The Contractor shall be required to implement the agreed Code of Conduct.

- **Management Strategies and Implementation Plans (MSIP) to manage the (ESHS) risks**

The Bidder shall submit Management Strategies and Implementation Plans (MSIP) to manage the key Environmental, Social, Health and Safety (ESHS) risks including a Traffic Management Plan to ensure safety of local communities from construction traffic; a Water Resource Protection Plan to prevent contamination of drinking water; a Bio-diversity Protection Plan and a Strategy for obtaining Consents/Permits prior to the start of relevant works such as opening a quarry or borrow pit.

The Contractor shall be required to submit for approval, and subsequently implement, the Contractor's Environment and Social Management Plan (C-ESMP), including the agreed Management Strategies and Implementation Plans.

The FNDS will not approve any deviations from instruments without prior approval of WB and will consult as necessary.

10.5 SUPERVISION AND MONITORING

Both during the execution of works and in the post-construction phase, the CA LMU's Safeguard Assistant, shall monitor the implementation of and compliance with the Environmental and Social Management Plan or ESM Good Practices Guide, as well as the Contractor's Code of Conduct and ESHS Management Strategies and Implementation Plan (MSIP).

Compliance monitoring comprises on-site inspection of activities to verify that measures identified in the ESMP, PMP and/or RP are being implemented. This type of monitoring is similar to the normal tasks of a supervising engineer whose job is to ensure that the Contractor adheres to the contractual obligations with regard to environmental, social, health and safety practices during construction, as prescribed in the Social and Environmental Clauses (SEC) included in the bidding documents and Contracts or as described in the ESMP, Contractor's Code of Conduct and ESHS Management Strategies and Implementation Plan.

During the implementation of subprojects requiring civil works, the SDPI will be involved in the works' supervision whilst also being responsible for verifying compliance with the environmental and social management measures, primarily relating to labour, health and safety measures. **Where the role of Civil Works Supervisor is outsourced/contracted out, its TOR shall make provision for the supervision of the implementation of the Environmental and Social Management Measures**.

Where non-compliances by the Contractor are identified, the MozBio 2 Conservation Area LMU and the Conservation Area's Administrator shall be immediately informed, so that a joint discussion on the required actions takes place. On the other hand, if the supervisor identifies any environmental or social damage, he should consult the MozBio 2 Landscape PIU Safeguard Assistant to identify the applicable remediation measures.

The MozBio 2 Procurement and Finance team shall ensure the withholding of contactors' payments against receipt of an acceptable Safeguards Performance Report (template included in Annex 9) as per new procurement standards. Such procurement standards shall be communicated to Contractor prior to contract award, preferably as part of Bidding Documents.

In addition, the FNDS's Safeguard Team should undertake regular inspections to verify the nature and magnitude of actual impacts, verify the effectiveness of the implementation of mitigation measures, and to determine the need for additional mitigation or changes to existing measures. These may initially be quarterly visits, to be adapted based on the type and size of the subprojects, including the associated impacts.

Annex 10 contains a Template for Worksite Inspection and Supervision that will be used by the MozBio 2 CA LMU during regular supervision visits, as well as by the Safeguard Assistant and FNDS Safeguard Team during inspections.

To gauge progress, the World Bank shall receive quarterly reports from the FNDS Safeguards Team regarding project implementation. In addition, Supervision visits / Mid-Term Reviews (*Missão de Supervisão e Acompanhamento*) shall be carried out by the World Bank every six months.

An **External Audit** shall be undertaken at the end of the second year of implementation to assess MozBio 2 project's performance against stated objectives and targets and to identify areas for improvement. It is envisaged that this audit shall be carried out by a competent third party and that the scope will complement the work done by the World Bank during its supervision missions.

10.6 REPORTING

The process implemented within the scope of this ESMF should be adequately recorded for future reference and for audit purposes. This would include at least the Screening Checklists, Pre-Environmental Assessment Sheets, DUATs or other land use authorization, correspondence with MITADER/DPTADER, reports produced by consultants, georeferenced maps, photographic records, records of public consultation or complaints received and, where appropriate, the environmental permit.

The FNDS Safeguard Team will submit to the World Bank Safeguard Team quarterly, semester and annual reports, on the status of ESMF implementation for each MozBio 2 subproject. The team will report on the activities carried out under the ESMF, indicating the process carried out for each subproject undertaken, and conducting an assessment of the level of performance achieved, challenges, lessons learnt and measures to be implemented to improve environmental and social performance.

The annual report must also describe the training activities carried out, dully indicating its content, duration and participants.

11. INSTITUTIONAL ORGANIZATION FOR ESMF IMPLEMENTATION

FNDS will be responsible for ensuring adherence to the ESMF, PF, RPF and PMP in all subprojects to be funded by the MozBio 2 Project. The FNDS's Safeguard Team will be responsible for the implementation of all the procedures contained in the present ESMF, with support from the Safeguard Assistants of the LMUs and the CA' Co-Management structures.

As referred in Chapter 7, FNDS currently has four specialists at central level who are responsible for particular projects or thematic areas but who support each other in an integrated manner. It also has three safeguards specialists at provincial level (Landscape Management Units). These safeguards specialists are further assisted by 6 Community Officers and 30 Rural Development Extensionists at local level.

Given MozBio 2's focus on fewer, yet areas with transformational potential, it is expected that the safeguards staff involved in the project will consist of: (i) 1 environmental and social safeguards specialist at central level, part of the FNDS safeguards team at national level; and (ii) 3 social safeguards and 3 Community Officers based in the 3 target landscapes. A total of 7 persons will be directly involved in implementing and monitoring MozBio 2 safeguards instruments, who will in turn be supported by the FNDS Safeguards at national level.

The FNDS interacts with other Directorates within MITADER to ensure compliance with national environmental legislation. The National Directorate for Environmental Assessment (DINAB) is responsible for the development of policies, reviewing environmental and social impact studies and mitigation plans, and issuing of environmental licenses for Category A+ and A. In turn, the Provincial Directorates for Land, Environment and Rural Development (DPTADER) are the local institutions responsible for implementing measures for integrated and sustainable management of the rural, urban and marine-coastal environment and will play a significant role in screening, reviewing and issuing Category B and C environmental permits to subproject investments under MozBio 2. Environmental and Social inspection and auditing is now being overseen by AQUA (National Agency for Environmental Quality) a statutory body under MITADER's mandate. All participating government (ANAC) and non-governmental (BIOFUND) agencies in MozBio 2 will report to the FNDS on related safeguards issues.

At District level, as during the implementation of MozBio 1, the SDPI will be involved in the supervision of civil works, being responsible for verifying compliance with labour, health and safety contract requirements. The SDAE will be involved in the preparation and implementation of rural development subprojects.

In order to ensure the implementation of the identified environmental and social measures, close collaboration between the safeguard team and the project concept development teams, at national and landscape level (infrastructure, value chain and community development), as well as the MozBio procurement team, would be required.

This integration shall also occur during the planning phases, namely during the definition of value chains and the preparation of associated business plans. Safeguard specialists shall be involved at this stage in order to integrate environmental and social concerns, and if required, to develop additional and more specific guidelines to complement those included in this ESMF. Table 9 provides an overview of the key stakeholders involved and their responsibilities for environmental and social management.

Table 10 synthesize the distribution of responsibilities per institution and per activity.

Table 9 - Key stakeholders and responsibilities for environmental and social management during project execution

Entity	Stakeholders	Responsibilities
	Safeguards	• Input into concept development & project design • Assessment of environmental & social eligibility criteria / identification of fatal flaws • Review of Screening Form • Preparation of TORS for independent consultant or preparation of E&S management instruments • Integration of mitigation measures into final design • Supervision and monitoring of works

Entity	Stakeholders	Responsibilities
FNDS		• Assessment of grievances • Stakeholder engagement
	Procurement	• Inclusion of ESHS requirements in Works Bidding Documents and Contracts
	Financial	• Supervision and monitoring of works • Application of contractual remedies in case of non-compliance with contractual ESHS requirements
	PIU	• Input into concept development & project design • Input into the Screening Form • Supervision and monitoring of works
LMU	LMU Safeguards	• Input into assessment of environmental & social eligibility criteria / identification of fatal flaws • Preparation of Screening Form • Supervision and monitoring of works • Input into assessment of grievances • Stakeholder engagement
CA	Administration	• Input into concept development & project design • Input into the Screening Form • Supervision and monitoring of works
	Community Officer	• Input into concept development & project design • Input into the Screening Form • Supervision and monitoring of works • Stakeholder engagement
Provincial Authorities	DPTADER	• Subproject categorization • Environmental Assessment • Verification of environmental compliance
District Administration	SDPI	• Supervision of works • Verification of compliance with labour, health and safety requirements • Verification of environmental compliance
	SDAE	• Input into concept development & project design – rural development subprojects • Supervision and monitoring • Grievance monitoring
AQUA		• Environmental and Social inspection and auditing
Community		• Monitoring of works • Grievance monitoring
Civil Society		• Stakeholder engagement • Grievance monitoring

Table 10 – Safeguards responsibilities within the ESMF Institutional organization, per activity

Activity	Responsibility	Assistance	Revision
Screening	LMU	CA, SDPI, SDAE	FNDS Safeguards
Prep. ToR Simplified ESIA	FNDS Safeguards	LMU	
Prep. Simplified ESIA	Independent Consultant	LMU	FNDS Safeguards
Prep. ESMPs & ESMGP Guide	FNDS	LMU	
Prep. ESHS requirements for Bidding Docs and	FNDS Safeguards	FNDS Procurement	
Supervision & Monitoring implementation of	LMU	CA, SDPI, SDAE	FNDS Safeguards
Stakeholder Engagement	LMU	CA, SDPI, SDAE	FNDS Safeguards
Grievance Mechanism	LMU	CA, District Adm.	FNDS Safeguards
Independent Audit of ESMF Implementation	Independent Auditor	FNDS Safeguards	

12. GRIEVANCE REDRESS MECHANISM

MozBio 2 will rely on the common Grievance and Redress Mechanism that has been established for all projects included in the World Bank's Integrated Landscape Management Portfolio in Mozambique – called the "Dialogue and Grievance Mechanism (MDR)"[31]. A manual of procedures and a communication strategy were prepared, and an IT platform was designed to register and monitor the reported cases. This mechanism has been discussed with key stakeholders, including local communities, and has been tested in the Maputo Special Reserve to validate its procedures. The MDR is in the process of being implemented and will be operationalized in all Project areas either as part of MozBio1 or at the inception of MozBio 2. This is illustrated in the outline below:

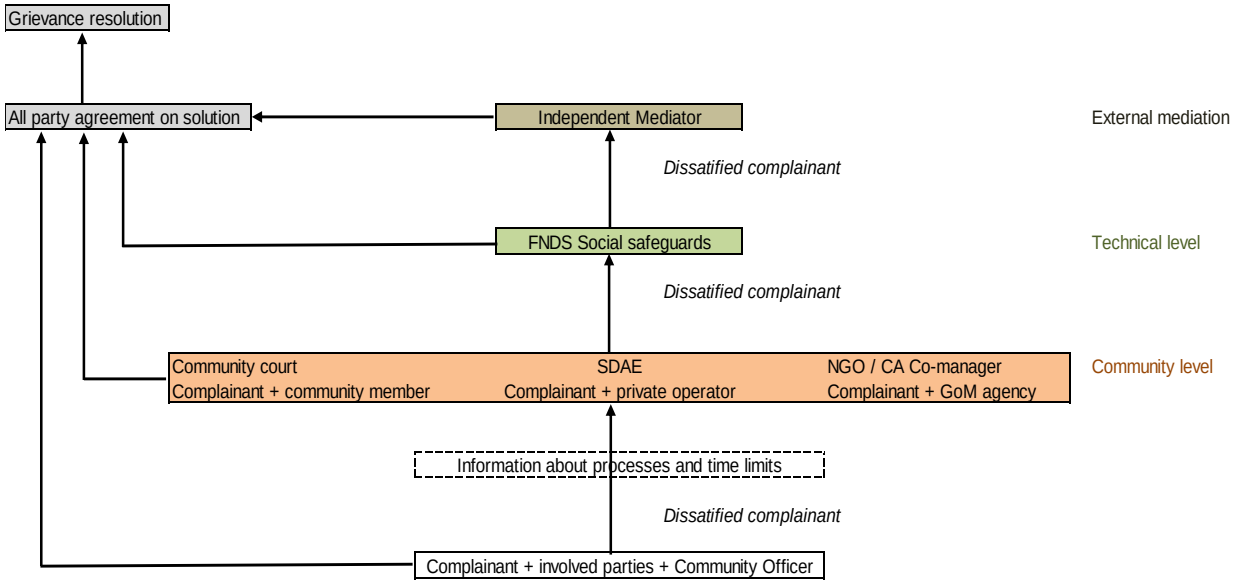

Figure 12 - Grievance resolution process outlines according to the MDR

Figure 12 shows the presentation of complaints directly to first level recipients at community level where these may be resolved immediately if possible. Should they require technical support from FNDS Social Safeguards Specialists these may be sought as a second level recourse. Finally, should a case not be resolvable internally, it may be referred by FNDS to an independent mediator for resolution. Decisions on resolution and communication to the complainant must be made in a timely fashion at all levels. Should affected persons not be satisfied by the informal process used, or if the nature of the complaint requires higher level appeal, national legislation provides for making complaints in various sectors at the highest levels of Government such as National Directors and Ministers.

In addition, should either party be dissatisfied, the affected party may bring the complaint to court, where it will be treated in accordance with Mozambican law. In principle, a community may take a Company to court for failing to comply with the terms of an Environmental Management Plan.

In the latter case, all citizens have the right to submit complaints to the Public Prosecutor's Office, which is responsible for ensuring the correct application of the law, particularly in the development of territorial management instruments and their implementation.

The FNDS, will ensure that a "Complaints Register" is maintained and landscape level. The complaint records should contain: i) the complainant's contact details and information on the complaint itself, ii) the results of investigations and responses provided, iii) measures taken by MozBio 2 Project

[31] See: https://drive.google.com/file/d/1qJ6SgclpBP9n7gVs6hiwchUqWyqE37LL/view

management, iv) necessary follow-up actions and v) internal communications made in response to complaints and solutions.

In all cases where complaints are made about the implementation of Project activities, FND is obliged to investigate the complaint and resolve it internally by applying the Process Framework and MDR manual in use in the Project and returning the response within a period of less than 15 days.

13. CONSULTATION AND DISCLOSURE

The development of this ESMF included a consultation process with key stakeholders, including the administrations of the target conservation areas, district government, local authorities, NGOs that have been working in the CAs, amongst others. Table 11 presents the contents and a summary of discussions held.

In addition, consultation meetings on the MozBio 2 Safeguards were held in the three landscapes, with the participation of members of the district consultative councils, including representatives of district government, local authorities, civil society and the private sector. The minutes of these meetings and the lists of attendees are included in Annex 12.

Table 11 - Consultation meetings to present the draft Safeguard Instruments

Landscape	Date	Location	Nr. of Participants
Elephant Coast	02.07.2018	Bela Vista town	37
Chimanimani	29.06.2018	Sussundenga town	60
Marromeu Complex	30.06.2018	Marromeu town	66

At all meetings, the MozBio 2 project was welcomed and perceived as an opportunity for socioeconomic development of the affected landscapes and for the minimization of conflicts with the conservation objectives of the target Conservation Areas.

Meetings held in the Elephant Coast and Chimanimani landscapes indicate a clear understanding of conservation objectives on the part of stakeholders and in particular an understanding of how tourism opportunities could benefit communities. The development of value chain activities outside the buffer zones was welcomed and additional products were proposed. In Chimanimani some concern was raised regarding the possible issuance of DUATs and the establishment of development activities within the buffer zone as this is the area where wildlife is present.

In Marromeu the conflicts due to encroachment of public and private activities and installations into Coutadas 11 and 14 are giving rise to a strong desire for new zoning and land use planning to clearly define land use boundaries. In addition, opportunities for the large community in Malingapanse Administrative Post in Marromeu Reserve to assist the district develop economically due to its highly marketable sweet potatoes and freshwater fish have established a strong linkage of this location with markets in Marromeu and beyond. However, access roads to Malingapanse and to the Marromeu Reserve were identified as great constraints to their development and to tourism. Education in schools and awareness-raising among adults and rangers was raised as a priority given that almost all of Marromeu District is covered with protected areas and conflicts between community members and rangers are frequent. In addition, livelihood development was strongly supported and contributions regarding potential income generation activities ranged from sugarcane outgrowing to honey

production. These ideas will be followed up during Project implementation, through the initial Social Assessment and the process for identifying and supporting sub-projects in Component 3. The zoning process is included in Project design and will be supported by participatory methods identified in the Process Framework that endorse stakeholder identification and trade-off facilitation to reach agreements on the alternatives that are legally possible and that are favoured by those affected by them.

The ESMF for MozBio 2 will be publicly consulted and disclosed in Mozambique and in the World Bank's InfoShop prior to project appraisal.

14. CAPACITY BUILDING

Successful implementation of the MozBio 2 Project will depend among others on the effective implementation of the environmental and social management measures outlined in the ESMPs, PF, RPF and PMP. Capacity building will be necessary for all key stakeholders in order to ensure that they have the appropriate knowledge and skills to implement the ESMF's procedures and guidelines.

Capacity building should be viewed as more than training. It is human resource development and includes the process of equipping individuals with the understanding, skills and access to information, knowledge and training that enables them to perform effectively. Therefore, it should also include awareness-raising and sensitization, in addition to technical training.

Awareness-raising for stakeholders who need to appreciate the significance/ relevance of environmental and social issues throughout the project life cycle.

Sensitization for stakeholders who need to be sufficiently familiar with the issues so that they can make informed and specific requests for technical assistance.

Technical training for stakeholders who will need to use the ESMF tools, analyze potentially adverse environmental and social impacts, to prescribe mitigation approaches and measures, and to prepare and supervise the implementation of management plans.

One of the lessons learnt during MozBio 1 implementation was that there were difficulties with ESMF implementation due to lack of domain on its procedures and guidelines and on the practical application of safeguard instruments.

The WB has been supporting the strengthening of capacity of the FNDS safeguards team including the MozBio safeguards specialist. In 2017, one national and four regional safeguards training workshops were administrated to FNDS and other institutions including provincial and district government and service providers. In addition to complying with WB policies and guidelines, the FNDS has to implement the project and subprojects according to national legislation. Therefore DINAB, AQUA, DPTADERs and local institutions were also trained to help improve both the awareness of safeguards policies, as well as of other crosscutting issues related to gender, the inclusion of vulnerable groups, and the understanding of how to implement mitigation and inclusion measures. Moreover, the current MozFIP and Landscape projects continue to support the improvement of capacity and systems of the FNDS. New training workshops are planned for the near future, in addition to using a coaching approach and on-the-job training to address specific issues and gaps.

MozBio 2 shall include a practical capacity building process comprising technical training and awareness-raising and sensitization activities in order to overcome the difficulties experienced in the previous phase. Whereas the work is planned to be conducted in-house, a third party may be contracted to assist in the development and implementation of specific capacity building measures during the life of the project.

A **technical workshop** will be held be developed and facilitated by the FNDS Safeguard Team and the LMU Safeguards assistants, providing practical training on the use of the MozBio 2 ESMF templates (Screening Checklist, ESMP, E&S Management Good Practice Guide and Supervision & Inspection). This workshop shall include exercises for applying these templates on case studies based on the different types of subprojects and a range of environmental and social conditions. Participation of representatives of the WB Safeguard Team is required in order to ensure a common understanding regarding the application of the templates, to promote discussion and exchange of knowledge and experience on the application of similar tools elsewhere and to ensure alignment on expectations.

The FNDS Safeguard Team and the LMU Safeguards assistants shall then prepare **technical workshops in the CA Landscape,** for all those involved in the preparation of the Screening Checklist and in the supervision of the implementation of environmental and social management measures, namely DPTADER, SDPI, SDAE and the target CA's technical staff. This training shall be practical, including clear and practical messages on the importance of the safeguards, whilst presenting examples of the importance of considering them in the early stages of the subproject cycle in order to mitigate impacts and risks. It shall also include practical examples and exercises on how to prepare the Screening Checklist and conduct field supervision and inspection visits to verify compliance with agreed Environmental and Social management measures.

Specific training sessions will be developed to address specific training needs or themes, as identified during project monitoring and supervision activities.

Technical training sessions for key MozBio 2 staff responsible for procurement and all the subprojects categories (such as infrastructure, community development, value chains, etc.). The aim of these sessions is to ensure that these support functions understand the safeguard instruments and tools developed to support the implementation of the project. These sessions should be practical, clearly defining the roles of the various individuals and teams and the steps recommended in the safeguard documents. The training sessions should ensure that participants understand the subproject cycle and the oversight required to promote compliance.

Awareness and sensitization sessions to be held by the LMU Safeguard shall be included in all subprojects in order to ensure awareness on the following:

- Conservation of natural resources and sustainable exploration
- Workplace and community Health and Safety
- Vulnerable groups - ensuring protection against increased vulnerability
- Gender – ensuring representation and inclusivity
- Gender Base Violence and Sexual Exploitation and Abuse issues

15. ESMF IMPLEMENTATION BUDGET

Table 12 presents an estimated budget for the implementation of the MozBio 2 ESMF. The budget for the implementation of the ESMF includes costs for Consultancy Services to prepare (i) Simplified Environmental Impact Studies for Component 2 subprojects; (ii) Social Assessments for the three landscapes; (iii) Strategic Environmental Assessments of zoning plans for Marromeu Complex and Chimanimani; (iv) External audit of the implementation of the ESMF, (v) Training and (vi) Monitoring.

The overall budget for implementation of the ESMF is estimated at **US$ 1,339,500.00**, this includes salaries of staff as well as the operation costs related to capacity building and monitoring of beneficiaries and subprojects for implementing the ESMF (and other environmental safeguards instruments). Moreover, the budget includes the associated grievance redress mechanism that will be developed under the Process Framework. Funds for ESMF implementation will be made available from the International Development Association (IDA).

Table 12 – Estimated ESMF Implementation Budget

Instrument	Cost	Identification line in Project Costab
Safeguard Team		
Safeguard specialist - central level	$ 170,500.00	C1.3 Strengthening FNDS (DT.3-A1)
Social safeguard- (LMU's Marromeu)	$ 162,100.00	C3.1 MARROMEU Landscape (DT8-A1)
Social safeguard (LMU's Chimanimani)	$ 162,100.00	C3.2 CHIMANIMANI Landscape (DT9-A1)
Social Safeguard (LMU Maputo)	$ 162,100.00	C3.3 MAPUTO Landscape (DT10-A1)
ESMF		
Environment and social study's_infraestructure (AC Marromeu)	$ 30,000.00	C.2.1 RN MARROMEU (DT5.3)
Environment and social study's _infraestructure (AC Chimanimani)	$ 30,000.00	C.2.2 RN CHIMANIMANI (DT6.3)
Environment and social study's _infraestructure (AC REM)	$ 30,900.00	C2.3 RE MAPUTO (DT7.3)
Training	$ 20,000.00	C1.3 Strengthening FNDS ANAC (DT3. 4)
External audit (Mid term)	$ 25,000.00	C1.3 Strengthening FNDS (DT3. 4)
Monitoring (Travel)	$ 30,000.00	C1.3 Strengthening FNDS (DT3. 4)
Social assesment/SAPA (AC Marromeu)	$ 38,900.00	C.2.1 RN MARROMEU (DT5. B2)
Social assesment/SAPA (AC Chimanimani)	$ 38,900.00	C.2.2 RN CHIMANIMANI (DT6. B2)
Social assesment/SAPA (AC REM)	$ 38,900.00	C2.3 RE MAPUTO (DT7. B3)
SESA PDUT Marromeu	$ 40,000.00	C3.1 MARROMEU Landscape (DT8-C1)
SESA PDUT Chimanimani	$ 40,000.00	C3.2 CHIMANIMANI Landscape (DT9-C)
PF		
Grievance Redress	$ 30,000.00	C1.3 Strengthening FNDS (DT3. 4)
TOTAL	**$ 1,339,500.00**	

16. REFERENCES

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http://micaia.org/eco/

http://www.peaceparks.org/programme.php?pid=25&mid=1108

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ANNEXES

Annex 1 – EIA Regulations (Decree No. 54/2015)– Categorization of Activities

EIA Regulations – Categorization of Activities

To determine the type and level of environmental assessment required – or category of activity – Article 8, point 3, of the EIA Regulations states that the pre-assessment (screening), conducted by the EIA authority, shall include a review of information in article 6 on the competencies of the EIA Authority and the assessment criteria listed in article 9. It shall also include a review of the Regulation's annexures on the categorization activities, namely, Annex I – Category A+ Activities, Annex II - Category A Activities, Annex III - Category B Activities, Annex IV - Category C Activities (summarized in Tables 1 and 2 of this Annex) and Annex V – Fatal Flaws.

Knowledge of the project location, and alignment of the proposed project with district plans and land use and zoning plans, shall also be considered during the pre-assessment phase. This is a change from the previous Regulations and one that requires a broader review of proposed projects during the categorization of activities by the EIA Authority.

Under the revised EIA Regulations (No. 54 of 2015), projects proposed by the Conservation Area itself, such as some of the subprojects under Component 2, with the objective of improving the area's management, are now included under the Category B list of activities. This outcome is the result of engagement between MozBio 1 and the competent authorities to streamline environmental assessment processes in respect of activities proposed within Conservation Areas.

For sub-projects envisaged under MozBio 2, an overview of the indicative project categories per **project type** as well as per the **environmental and social characteristics of the project site** are presented in Table 1 and Table 2 respectively, based on the EIA Regulations (Annexures I to IV). Note that it is not possible to provide any further guidance on the likely categorization of activities, beyond what is presented here. These are therefore indicative categorizations and the final categorization decision rests with the EIA Authority.

Although projects under category A+ and A will not be financed by MozBio 2, they are included here to assist the FNDS Safeguards Team during project planning and screening - in the comparative analysis of proposed subprojects – to determine activity categorization.

Table 1 - Indicative EIA category per <u>project type</u> for possible MozBio 2 subprojects

Subproject Type	Category A+	Category A	Category B	Category C
Main subprojects				
Building				
Buildings inside conservation areas (when the proponent is the Conservation Area itself)			x	
Road				
Mains roads outside urban areas		x		
Small bridges / drifts				
Bridges longer than 100m		x		
Agriculture				
Sub-division of land for agriculture in areas greater than 350ha (with irrigation) and 100ha (without irrigation)		x		
Introduction of new or exotic crops		x		
Irrigation systems for areas greater than 350ha		x		
Spraying (aerial or ground) of individual or cumulative areas greater than 1000ha		x		

Irrigation agriculture with individual or cumulative area between 50-100ha				x
Livestock farming				
Intensive livestock farming with more than: • 50,000 poultry animals/year; • 1,500 male pigs and/or 100 breeding female pigs/year; • 500 cattle/year in individual or cumulative area of 1000ha (smaller, equal or greater than)		x		
Extensive livestock farming with more than: • 500 cattle/year in area of 2000ha (4ha/animal) (smaller, equal or greater than) • 2000 animals/year (small ruminants - goats and sheep)		x		
Poultry production - 1000-1500 animals/year			x	
Poultry production – 1000 animals/year				x
Forestry and Forest Products				
Vegetation clearing (indigenous vegetation), sub-division and exploration in areas greater than 100ha		x		
All deforestation activities greater than 50ha and reforestation and forestation in areas greater than 250ha		x		
Fisheries				
Industrial fishing activities which place greater pressure on fisheries resources		x		
Aquaculture				
Aquaculture activities with production greater than 100t/year		x		
Processing (plant and animal)				
Industrial flour mills			x	
Abattoir / slaughterhouse			x	
Fish processing			x	
Milk and associated products processing			x	
Juice production			x	
Food and drink processing with production rates greater than 10t/day			x	
Processing and conservation of fruits and horticulture products – 300t/day				x
Bakery / bread production				x
Supporting activities				
Water supply, sanitation and effluent disposal				
Water pipes with diameter greater than 0.5m and longer than 10kms		x		
Water supply, sanitation and effluent disposal			x	
Vegetation clearing				
Vegetation clearing (indigenous vegetation) in areas 100-200 ha			x	
Electricity supply and distribution				
Transmission and distribution lines greater than 66KV		x		
Transmission and distribution lines less than 66KV			x	
Transmission and distribution with 33KV				x

Table 2 - Indicative EIA category per environmental and social characteristics of the project site for potential MozBio 2 subprojects, which corresponds to an exclusion list for MozBio 2

Issue	Category A+	Category A
Number of affected persons and communities		Populated areas requiring resettlement
Affected ecosystems, plants and animals, and their relevance for biodiversity and ecosystem services	Activities in areas of high biodiversity value: • Habitats of significant importance for critically endangered or endangered species in terms of national and international law • Habitats of significant importance for endemic species/those with limited range • Habitats of significant importance for in-country protected species • Habitats that create conditions for the significant concentration of migratory / congregational species • Highly threatened or unique ecosystems • Areas associated with key evolutionary processes such as mangroves Activities whose execution would directly affect (…) primary dunes, mangroves or marshes/swamps in areas greater than 1ha Native forests Unique scenery Areas with plant/animal species, habitats and ecosystem in extinction Processing of products involving GMOs/their derivatives (*NB for agriculture and aquaculture projects*)	Areas and ecosystems with special protection status under national and internal law such as: • Areas prone to erosion • Areas of archeological, historical and cultural value for protection • Areas containing springs • Groundwater reservoirs

Annex 2 – Other Relevant Legal Requirements

Other Relevant Legal Requirements

Water Resources and Water Quality

The management of water resources in Mozambique is set by the National Water Policy and the Water Law (Law Nr. 16/91 of 3 August). According to Article 18 of the Water Law, the Regional Water Administrations (ARA), organized on the basis of river basins, are the institutions responsible for water management.

The Water Law defines as a basis for the management of water resources the principle of "user pays" and "polluter pays" and the system of concessions and licenses. These factors are based on principles of environmental sustainability.

The Environmental Quality Standards and of Emissions and Effluents Regulations (Decree Nr. 18/2004) regulates certain parameters of water quality, such as the use of agricultural and recreational purposes, as well as the parameters of the emissions and industrial and domestic effluents.

Standards of water quality for human consumption are included in the Regulation on the Quality of Water for Human Consumption approved by Ministerial Decree Nr. 180/2004. This Regulation applies to supply systems for drinking water, including surface and groundwater used for direct consumption or for production of water for human consumption. The Ministry of Health is the authority responsible for ensuring the quality of water for human consumption.

Regulation of public systems of water supply and wastewater disposal (Decree Nr. 30/2003 of 1 July) defines technical provisions for these projects.

Coastal Management

Regulation for the Prevention of Pollution and Marine and Coastal Environment Protection (Decree Nr. 45/2006 of 30 November) states, among others, the legal basis for the prevention of marine and coastal pollution by land-based sources, and the protection and conservation of public areas such as maritime, lake and river, beaches and fragile ecosystems, where the following should be emphasized:

- Article 66 defines Partial Protection Areas, which include, among others, the band of coastline and contour of islands, bays and estuaries, measured from the maximum high-water mark of the sea, 100 meters into the territory. The rights of use and enjoyment of land cannot be acquired and can only be issued special permits for the exercise of certain activities.

  The construction of infrastructure in the areas identified above should only be made by compliance with standards and standards of environmental quality and landscape. It should also be made in such a way that, for every 100 meters, there is free access to the beach for any citizen, especially for local communities.

- Article 67 further stipulates that in zones of partial protection and fragile ecosystems, including mangroves and dunes, is only permissible – by special permit – the construction of basic infrastructure such as water, electricity,

telecommunications, drainage of sewage, solid waste services, small constructions and other removable material of a similar nature.

The Use of Sea Territory is covered by (Decree nr. 21/2017) that prioritises the preservation, protection and restoration of marine biodiversity and the maintenance of ecosystem services. It sets out two distinct marine-based spatial planning and management instruments:

1. the Status Plan, is a sea use plan that maps existent natural and cultural resources as well as current and planned uses, requiring a strategic environmental assessment (SEA). The preparation of this plan is responsibility of the Ministry of Sea;
2. the Allocation Plan, refers to new proposals of sea use, to be submitted by public or private proponents) for approval of the Ministry of Sea. It requires an ESIA. When the proposed uses are approved, they become an integral part of that Plan.

This regulation also defines that marine areas may be used as either public or private domain. Private use, however, requires a Private Use Title, similar to the titles for land use rights.

Air Emissions, Air Quality and Noise

The Environment Law prohibits the release of any toxic and polluting substance to the atmosphere outside the legally established limits. The Regulation on Environmental Quality Standards and Wastewater Emission (Decree Nr. 18/2004, revised by Decree Nr. 67/2010) sets emission standards for pollutants for stationary and mobile sources as well as key parameters that should characterize the air quality.

Regarding noise, the Regulation on Environmental Quality Standards and Wastewater Emission states that MITADER will approve the noise patterns (by the date of this report these standards had not yet been published).

Solid Waste Management

The Regulation of Solid Waste Management was recently approved by Decree Nr. 13/2006. The purpose of this regulation is to establish rules concerning production, storage in soil and subsoil, the launch for water or atmosphere of any toxic substances and pollution, as well as the practice of polluting activities that accelerate environmental degradation in order to prevent or minimize their negative impacts on health and the environment.

The Regulation classifies waste as hazardous and non-hazardous and attributes to MICOA the power regarding management of hazardous wastes, including the licensing of establishments engaged in the management of hazardous or toxic waste.

This regulation states that the public and private entities that generate waste should have a Plan of Waste Management before the start of their activities with a five years validity period from the date of its approval.

Regulations on the Management of Hazardous Wastes (Decree nº83/2014) it establishes the legal framework on the management of hazardous waste. Hazardous solid waste should be segregated according to the classes defined in the regulation, and each

producer or manufacturer must have at least technical conditions for the disposal of the waste in its possession (Ar. 13). Collection of hazardous solid waste is the sole responsibility of the producing entities (Art.15). Hazardous solid waste may only be transported outside the premises of the entities by transport operators previously certified for this purpose (Article 16)

The Regulation on Urban Waste Management (Decree nº94 / 2014) establishes the legal framework on the management of municipal solid waste and industrial and hospital waste, similar to urban waste, and is applied to all natural and legal persons, public and private

Pesticides

The Pesticides Management Regulation (Decree Nr. 6/2009 of 31 March 2009) applies to the registration, production, donation, trading, importation, exportation, packing, storage, transport, handling, use and elimination of pesticides and adjuvants, by individual or collective persons, for agricultural, animal rearing, forestry, public health protection, domestic and other purposes. According to this regulation only pesticides registered with the National Directorate of Agrarian Services (DNSA) can be used in Mozambique. These include a list of pesticides products that are regularly published, including the product classification according to their toxic potential (Article 9).

There is no regulation on integrated pest management or organic production.

Ownership of Land and Land Use Planning

According to Article 3 of the Land Law (Law Nr. 19/97) the earth is owned by the state.

The Land Law (Law Nr. 19/2007 of 18 July) aims to ensure the organization of national space and sustainable use of its natural resources, observing the legal, administrative, cultural and material conducive to social and economic development of the country, promoting quality of life and the protection of the environment.

Defines that it is the State and Local Government responsibility to promote, coordinate and monitor spatial planning in an articulated fashion (Article 6). At the local administrative level, it sets as tools for land planning the Urban Structure Plans, General Plans and Partial Urban and Detailed Plans.

The Land Law is regulated by Decree Nr. 23/200 of 1 July, which describes in detail the purpose and content of the instruments for land planning, and regulates the land classification. It also establishes that the approval of development plans includes a public participation process.

The Land Use Planning Law (Law Nr 19/2007) provides the legal framework for regional planning. It delegates specific competencies for regional planning to the State and municipalities. The Regulation on Land Use Planning Law (Decree Nr. 23/2008) enacts the provisions of the law and establishes guidelines for the different categories of regional land uses, including the Provincial Territorial Development Plan[32] and the District Land Use Plan[33].

The Law of the State Local Bodies (2003) sets out the functions, responsibilities and organization of government structure at different spheres of governance (provincial, district, administrative, and local). The law enables the involvement of all spheres of

[32]Plano Provincial de Desenvolvimento Territorial (PPDT)
[33]Plano Distrital de Uso da Terra (PDUT)

government in key decision-making (e.g. district administrators approve land use and territorial plans, and identify protected areas).

Cultural Heritage

The Cultural Heritage Act (Law Nr. 10/88) was designed to legally protect the tangible and intangible cultural heritage of Mozambique. For the purposes of the Act, the Cultural Heritage is defined as "a set of tangible and intangible assets created or integrated by the Mozambican people throughout history, with relevance for the definition of Mozambique's cultural identity."

The cultural properties include: monuments, groups of buildings of historical, artistic or scientific relevance, locations or sites (with archaeological, historical, aesthetic, ethnological or anthropological interest), and natural elements (physical and biological formations with particular interest from the aesthetic or scientific point of view).

Article 13 stipulates that in case of discovery of any places, buildings, objects or documents that may be classified as goods of cultural heritage, it shall be reported to the nearest administrative authority within 48 hours (Article 10).

It should be stressed that the Mozambican legal framework is provided by the Law of Forestry and Wildlife of the existence of conservation areas in the protection zones, Areas of Use and Historical and Cultural Value, for the conservation of places of historical importance or with use cultural benefit to local communities.

Archaeological heritage is regulated by the Archaeological Heritage Protection Regulation (Decree 27/94, of 20 July) which defines such heritage as: "assets of archaeological, anthropological or geological value, which relate to previous generations and which are discovered by accident, during prospecting and survey or during archaeological digs".

Protected and Conservation Areas

The Land Law, approved by Law Nr. 19/97, classifies as public areas the total and partial protection areas, where the right of land use is not allowed. Conservation Areas are classified as total protection zones (Article 7), where any activity could only by allowed through a special license (Art. 9) to be issued by the Ministry uncharged of the conservation area, through the model defined in Decree Nr. 53/2011.

Under the Regulation of Land Law, the partial protection areas include, among others, the stretch of sea, and in contour lines, bays and estuaries as the line of maximum high tide to 100 meters into the territory, land occupied by roads, with a bordering strip of 30 meters for primary roads and 15 meters for secondary and tertiary roads, bordering strip of 50 m on each side of telecommunications carriers, electricity and water and range land 100 meters adjoining military installations and other facilities for defense and state security (Article 8).

The Regulations for Forestry and Wildlife, determine communities as having have an inalienable right to draw benefit from conservation that uses land and resources over which they have tenure or hold rights of access and use.

- It proposes 20% of concession fees should go to local communities living inside the concession area.
- Communities associated with a conservation area have a right to participate in decision making that affects them, their livelihood and wellbeing.
- Local Participatory Management Councils (COGEPs) constituted as associations with representation of all stakeholders with interests in the use of natural resources in a given area may be created as a mechanism for articulating and defend participants' interests.

The Ministerial Diploma Nr. 93/2005 of May 4th creates the mechanisms for channeling and utilizing the 20% of taxes to benefit local communities. This stipulates that funds can only be received by a community organized in a legalized association with a bank account prior to distribution to beneficiaries. Associations may be related to the use of marine or terrestrial resources as are local Fisheries Community Councils (CCP) and management *fora* at local, district and provincial levels - Co-Management Committees (Fisheries legislation) and Natural Resource Management Committees (CGRN) (Forestry and wildlife legislation).

Involuntary Resettlement

After many years of not having a single instrument to guide resettlement planning and action on 8 August 2012 the GOM decided to fill the gap by approving this instrument through Decree Nr. 31/2012.

Article 15 indicates that a Resettlement Action Plan is part of the Environmental Impacts Assessment, as per Decree 45/2004, of September 29 of the latter process. In December 2015, after a long consultative process this decree was replaced by Decree 54/2015, which will be enacted soon (1st of April 2016) to be the main guiding document for ESIA processes. In many aspects and particularly those related with resettlement the new decree is similar to the aforementioned.

In terms of principles the new (resettlement) regulation establishes that the resettlement process should ensure social cohesion, social equity and direct benefits in that affected people should directly benefit from the interventions that caused their resettlement and respective socioeconomic impacts.

In the definition of objectives, the regulation restates the principle of turning resettlement into a development opportunity by allowing affected people to enjoy quality life, social equity and ensuring the sustainability of the physical, environmental, social and economic aspects around them.

In line with the ultimate interest of linking resettlement with District Land Use Plans, it also indicates that District Governments should approve resettlement action plans and that this should be done by the department that supervises land use planning at that level. As said the links between resettlement and land use plans have been further reinforced by the recent establishment of a national directorate that deals cumulatively with land use plan and resettlement, i.e. the national directorate of land use planning and resettlement (DNPTR), within MITADER,

In relation to the rights of the affected people, the regulation states that these are entitled to:

1. The reestablishment of income and living standards that are equal and/or superior to what they had before resettlement;
2. Have their assets transported to the new site;
3. Live in an area with adequate social and economic infrastructure;
4. Have enough space to develop their subsistence activities; and
5. Give their opinions throughout the entire resettlement process.

It then elaborates on the various units that, from the government side, should closely supervise, monitor and evaluate the resettlement process to ensure that the best practices are adopted and that lessons are learnt to benefit the process at hand and other related processes in the country.

Article 13 of the Regulation deals with “Public Participation” and emphasizes that resettlement should be participatory throughout its phases and that major public meetings should be formally made known. Article 14 highlights the importance of the “Right to Information” by affected people and other relevant stakeholders. In relation to public participation and disclosure in general, Article 23 clearly states that the planning, preparation and implementation of a RAP should result in at least four (4) public meetings, which should be heralded in local media.

Articles 16, 17 and 18 deal with specific aspects related with the types of resettlement, land and housing specifications, including details about the social and economic infrastructure that should be made available to the resettled people.

Articles 19, 20, 21 and 22 delve into the steps and work contents related with the planning, preparation and implementation of the RAP and provide the guidelines to be adhered to.

In 2014 additional regulations were enacted aimed at providing greater guidance on the practical aspects of implementing the main decree, namely Decree Nr. 155/2014 on the Internal Regulation for Resettlement Technical Commission and Decree Nr. 156/2014 Technical Guidelines for Preparation and Implementation of Resettlement Action Plan.

Annex 3 - Environmental and Social Screening Checklist

MozBio 2

Environmental and Social Screening Checklist

This Environmental and Social Screening Checklist aims to support the evaluation of eligibility for funding of proposed MOZBIO-2 subprojects. It assists in the identification of required safeguard / environmental and social management instruments.

The checklist comprises six sections, as follows:

1. **Subproject identification**
2. **Description of activities** (*supported by specific tables for different types of projects* in the Appendix of this Checklist – *Buildings, Roads, Agriculture, Forestry & Forest Resources, Livestock, Aquaculture, Tourism, Processing Activity).*
3. **Site description** (environmental and social conditions)
4. **Stakeholder engagement**
5. **Initial screening of impacts and impact management**
6. **Subproject categorization**

1 - SUBPROJECT IDENTIFICATION						
To be filled by the CA Landscape PIU Safeguard jointly with the team preparing the subproject proposal						
Subproject title						
MozBio 2 Component (Component 2 or 3)						
Location • CA Landscape and target area	Elephant Coast		Chimanimani		Marromeu	
	Inside the CA		Landscape			
• District						
• Administrative Post						
• Community						
• Coordinates						
Subproject Proponent (where applicable)						
• Contact Person						
• Cell phone						
• Email						

2 - DESCRIPTION OF ACTIVITIES

Select the applicable Description of Activities *Table(s) from the Appendix to this Checklist – i.e*

- *Building*
- *Roads*
- *Agriculture*
- *Forestry and Forest Products*
- *Livestock*
- *Tourism*
- *Processing Activity*

Note that a subproject could require filling out more than one Description of Activities *table, for example, an agriculture subproject could include construction of warehouse (building) or a processing plant would require filling information related both to the building and the processing activity.*

To be filled by the Safeguard Assistant of the MozBio 2 Landscape Management Unit jointly with the team preparing the subproject proposal

3- SITE DESCRIPTION	
To be filled by the CA Landscape PIU Safeguard	
(Include two Google Images: one showing the subproject surrounding area and another zooming in of the subproject site, highlighting relevant features)	
Land tenure (DUAT, Provisional DUAT, voluntary agreement for land use, other) and its duration (attach copy of document). In the absence of formal land tenure document, follow the FNDS's Land Tenure Regularization Screening Process.	
PHYSICAL ENVIRONMENT	
Description of key landscape features in the area (mountain, inselberg, coast line).	
Describe the type of soil (predominantly sandy/ clay / rocky;) predominant soil colour (white / red / brown).	
Describe the topography of the subproject site (hill, slope, plain area, etc).	
Is the area in pristine condition (natural forest or landscape) or is the area already transformed (agriculture, residential, natural resource extraction area, etc).	
Are there any signs of erosion at the site or surrounding areas (gullies, ravines, etc) – include photo.	
Is there a water body (water line, river, lagoon, water fall) within or in close proximity to the site? Please indicate approximate distance and location (include rough drawing). Is the water body permanent or temporary? Include photo.	

Is the site in an area prone to inundation or flooding? When was the last recorded event when flooding occurred? Please provide details (when, recorded damage, etc).	
What are the current water uses (in the site, upstream and downstream) - drinking, washing, agriculture, cattle, fishing, mining, recreational activities, others? Please provide an indication of distances from site where the above activities take place.	
Are there known existing sources of pollution to air, water or land in the vicinity of the project area? Please consider the following activities as sources of pollutants: artisanal mining, commercial agriculture, manufacturing, food processing, tourism and recreational activities, etc.	
BIOTIC ENVIRONMENT	
Identify the type of vegetation unit where the site is integrated (miombo, costal forest, grassland, etc), describe the level of disturbance and its causes.	
Describe the type of vegetation within the site (identify plant species, mainly trees and include photos). Identify known or potential sensitive habitats within the site or close by such as riparian vegetation, wetlands, swamps, mangroves, dunes. (Please provide location on GoogleEarth image and include photos).	
List wildlife occurring in and around the site and provide the source of the information (ranger, community member, tourism operators, etc.). Indicate whether known or potential human-wildlife conflicts have occurred / are likely to occur in future. Provide the	

source of the information (ranger, community member, tourism operators, etc.).	
LAND USE AND USE OF NATURAL RESOURCES – consider communities within a 10km radius, likely to be involved in / affected by the project (refer to the Social Assessment).	
Describe the current land use(s) at project site and immediate surroundings (paths, subsistence agriculture, pasture, collection of forest resources such as wood, thatch, medicinal plants, exploitation of mineral resources such as sand, rock, etc).	
Distances to the closest 1 – 3 communities and the closest house(s) (locate in Google Earth image and include photos). Describe the type of settlement – clustered, scattered, located along the road – and indicate density (high, medium, low).	
LIVELIHOOD AND ECONOMIC ACTIVITIES – consider communities within a 10km radius, likely to be involved in / affected by the project and others with known functional linkages (refer to the Social Assessment)..	
List the main livelihood activities: subsistence agriculture (identify crops and size of plots), livestock (cattle, goats, poultry), fishing, mineral resources extraction (gold, sand, stones, others), forestry resources (wood, charcoal, reeds, clay, food and medicinal plants), etc. List the general system and inputs into production: use of manual and/or mechanized equipment (type); use of pesticides, herbicides and fertilizers (agriculture); use of antibiotics and pesticides (livestock).	
Existing economic activities: commercial agriculture (identify crops, size of plots and/or production yields, and where activity is already connected to a value chain, identify the company/program, livestock farming, etc).	

Indicate the approximate distances between the project site and the above activities. List the general system and inputs into production: use of manual and/or mechanized equipment (type); use of pesticides, herbicides and fertilizers (agriculture); use of antibiotics and pesticides (livestock).	
SOCIAL INFRASTRUCTURE AND EQUIPMENT	
Infrastructure at / close to the project site: access road (paved/unpaved and general condition); travel time to district headquarters); utilities such as water supply (water network, borehole, hand pump), electricity (generator, solar panel, municipal grid), communication (mobile phone, internet), public transport, others. Identify distances or travel time where relevant.	
Social and economic infrastructure and services close to the project site and distances between facilities and the communities: education, health, police, court, market, shop, bank, etc.	
COMMUNITY DYNAMICS – consider communities within a 10km radius, likely to be involved in / affected by the project.	
Ethnic group(s) and religion(s). Indicate whether there is a predominant group and/or religion. Known cultural and religious practices: rights to property including land, puberty rites, marriage (bride price/lobola, polygamy, divorce), family size, etc.	
Education: Describe literacy levels and provide data on completion rates for girls and boys from the local EP1 and EP2 schools (District data from INE could be one source of information, that could be complemented by information from the DDE).	
Employment: What are the main sources of employment and income in the area?	

Are women employed? In what sectors and in what types of jobs?	
What are the trends of population migration within the area (to or from where, by whom men/women, youth?)?	
Are there indications / signs of social ills (alcoholism, drug abuse, domestic violence, prostitution or other forms of sexual abuse and exploitation, public violence) or criminality? Are these observations or are there records of incidents such as with police, traditional authorities, etc? Please explain if are there any specific trends associated with the occurrence (ex: seasonal higher income, influx of emigrants, etc.	
Are there CBO or NGOs active in the area? Identify names and types of activity carried out locally (agriculture, health, education, gender, conservation, etc). Do they collect or earn money and have bank accounts?	
Are women in the community involved in community groups and CBOs? Do women have the right to own or co-own land ? Do women inherit land and do they inherit other property? Do men inherit the wives of deceased family members? Are women involved in activities other than agriculture? What activities? Are there women in leadership positions within the community (including in CBO?) What are the main activities carried out by young girls? – to help the family, for leisure?	

And for young men? What are the school attendance levels for boys and girls? What aspirations does each group have for the future of the area, and their own futures?	
Are there identified vulnerable individuals or groups / families in the surrounding area (ex: households led by children or the elderly, or families with chronic disease or disabilities)? Do these individuals and/or families receive social assistance? If yes, which entities provide assistance?	
CULTURAL HERITAGE	
Are there any sacred sites or sites of cultural heritage (ex: churches, sacred sites, sacred forests, graves) within the site or in the surrounding area? Are there any sites of community importance for social or recreational activities.	

4 - STAKEHOLDER ENGAGEMENT	
Identify when / where consultation regarding the project took place. Which stakeholders where involved? What key issues were raised and what outcomes were noted? Did those who participated sign minutes of the meeting? Please attach a photo of these.	

5 - INITIAL SCREENING OF IMPACTS AND IMPACT MANAGEMENT			
To be filled by the by the CA Landscape PIU Safeguard with support from the FNDS Safeguard Team			
IDENTIFICATION OF POTENTIAL IMPACT / RISK			**PRELIMINARY IMPACT / RISK ASSESSMENT**
IMPACT / RISK	**YES / NO**	**JUSTIFICATION** *To describe the potential impact and any mitigation measure already included in the subproject*	High Medium Low Negligible
Is there a risk of the subproject accelerating erosion by water and/or wind? (eg. due to channelling or pooling of storm water or by exposing soil?)			
Are there risks of changing the natural water drainage patterns (eg. due to embankment of drainage line or wetland)			
Are there any risks of contamination of water resources (eg. due to discharge of waste water, disposal of toxic products or solid wastes, use of fertilizers or pesticides)			
Are there risks relating to impacts on critical habitats such as wetlands, riparian forest, mountain forest, mangroves, dunes?			
Could the subproject generate impacts on endemic, rare or vulnerable species (eg. in IUCN Red List)? What types of impacts? Consider the introduction of exotic plant and / or animal species, habitat change or loss, etc.?			

Could the subproject affect the surrounding areas due to significant noise, emission of dust and odours, during construction and operation phases?			
Are there any conflicts over land or resources that may affect the subproject or which may be affected by the subproject? Consider access to land and resources and whether the project might obstruct access or make the access harder for current users and therefore impact on their livelihoods. Please provide details.			
May the project cause to temporary or permanent damage to housing, other private structures or economic activities (eg: fruit trees, agriculture plots)?			
Might the project cause a household to be displaced and have to move to another location. How many households would be affected this way?			
Could the project affect cultural heritage aspects? (Eg. Loss of access to sacred sites, exhumation of graves, etc).			
What could be the impacts on local communities, resource users and others, during construction or operation?			
How will women and vulnerable groups be affected by, or benefit from the project, during construction and operation?			
What are the potential safety issues during construction or operation (ex: risk of road accidents, risk of accidents with children in the work site, risk of			

accidents with workers) during construction and/or operation?			
Could the subproject contribute to the spread of communicable diseases or other diseases (as malaria) during construction and or operation?			
Could the subproject affect food security? How?			
Would the project interfere with subsistence socially important areas? Explain where and how.			
Might the subproject induce to labour influx? Specify rough estimation of workers.			
Other issues			

6 - SUBPROJECT CATEGORIZATION

To be filled by the FNDS Safeguard Team

As per OP4.01

☐ ☐ **Category A** The subproject is likely to have significant adverse environmental and social impacts that are sensitive, diverse (wide ranging), or unprecedented for the CA landscape.

This project cannot be funded under MozBio 2. Decline the subproject proposal or make recommendations for improvement to reduce the subproject scope and risk to a Category B.

☐ **Category B** The subproject has potential adverse environmental impacts on human populations or environmentally important areas--including wetlands, forests, grasslands, and other natural habitats--are less adverse than those of Category A projects. These impacts are site-specific; few if any of them are irreversible; and in most cases mitigation measures can be designed more readily than for Category A projects.

☐ **Category C** The subproject has negligible construction and operation related environmental or social impacts

Indicative categorization as per EIAR (Decree nr. 54/2015) – to be confirmed by DPTADER

☐ **Category A and A+** The subproject has at least one activity on the Category A or A+ list that may have potentially significant environmental or social impacts, nationally significant or of a large scale.

This project cannot be funded under MozBio 2. Decline the subproject proposal or make recommendations for improvement to reduce the subproject scope and risk to a Category B.

☐ **Category B** The subproject has at least one activity on the Category B list that may have potentially moderate environmental or social impacts.

☐ **Category C** The subproject does not have any impacts on Categories A and B list and is likely to have no or low environmental or social impact, with the positive impacts outweighing the negative impacts. Has activities included on the Category C list.

Safeguard Instrument required
☐ **Environmental and Social Impact Assessment (ESIA)** The potential impacts require project-specific assessment and measurement. This is required for any subproject where significant impacts are likely (as identified in the screening checklist above) and / or the Activity is Category A or A+. The nature and scale of assessment and impact mitigation relates to the nature and scale of the project and its potential impacts. All ESIA include an ESMP (check the box below).:
☐ **Environmental and Social Management Plan (ESMP)** All subprojects with an ESIA also require an ESMP. A standalone ESMP (without an ESIA) is required where a subproject has potential adverse impacts which are not significant (as determined in the checklist above) but require mitigation and management. In many cases mitigation measures are standardized and can be readily adapted for the subproject (work site establishment, land clearance and restoration, dust control, etc.).
☐ **Environmental and Social Management Good Practices Guide (ESM GPG)** For subprojects with negligible or low impacts. Includes standardized mitigation measures that can be readily adapted for the subproject.
☐ **Community Agreement and Action Plan (CA&AP)** The subproject will cause restrictions in access and use of natural resources in legally designated conservation area or will adversely impact livelihoods. (see Process Framework)
☐ **Abbreviated Resettlement Plan (RP)** or **Compensation Plan (CP)** if the subproject causes minor losses of property . (see Resettlement Policy Framework)
Foreseen EIAR Instrument required
☐ **Simplified Environmental Assessment (ESIA) and Environmental Management Plan (ESMP)** to be developed by an Independent Environmental Consultant registered in MITADER as environmental consultant.
☐ **Manual of Good Practices for Environmental and Social Management** Includes codes of conduct to be adhered by the subproject during construction and operation phases.

On behalf of the FNDS Safeguard Team

Name:_____ Title: _____

Signature: Date:_____/_____/_____

Additional contributors (where applicable):

Name:_____Title: _____

Name:_____ Title: _____

Appendix –Description of Activity

BUILDING

2 - DESCRIPTION OF ACTIVITIY - **BUILDING**	
Subproject Purpose (Eg. office, residence, education centre, warehouse, processing plant, etc)	
Estimated area to be occupied – including infrastructure and associated grounds (footprint …m x…m)	
Construction Phase	
What type of building materials will be used to build the project (conventional building, local materials, prefabricated, etc). Indicate possible locations and estimated distances to the location(s) where materials will be sourced from, especially aggregates, water and stones.	
Will support facilities be required for construction (access road, quarries, wharf/jetty, water supply, etc). If yes, please indicate which.	
Will water supply be required? If yes identify the water source (existing or new water source and system, such as borehole, river, dam, etc).	
Operations Phase	
Will water supply be required? If yes identify the water source (existing or new water source and system, such as borehole, river, dam, etc).	
What effluent treatment and disposal system will be used (improved latrine, septic tank, grease/water separators, sewage treatment plant)? What is the planned final discharge point for the liquid waste stream (pit, soak-away, drainage line/river, lake, bush, etc).	
Will electricity be required? If yes, identify the source (electricity network, generator and type of fuel, solar panel, etc).	

If electricity will be generated on site via generator, please indicate planned fuel storage type and capacity (above / below ground tank, drums, etc).	
Labour – Construction	
What is the planned total number of workers: <10; 10-25; 25-50; >50 (specify how many if greater than 50).	
Where will the workforce be sourced from? Can workers be recruited locally?	
Are there opportunities for women to be involved in construction activities? Describe these opportunities (eg. House-keeping, cooking, flag-women, administrative support, etc).	
Labour – Operations	
What is the planned total number of workers: <10; 10-25; 25-50; >50 (specify how many if greater than 50).	
Where will the workforce be sourced from? How many of these workers can be locally recruited?	
Are there opportunities for women to be involved in operational activities? Describe these opportunities (eg. House-keeping, general labour, administrative support, etc).	
What infrastructure and support will be provided to the workforce during operations (transport, accommodation, training, etc).	
Benefits	
What social benefits is the project likely to bring? Consider employment, training, income generating opportunities, improved livelihoods / production yields, etc.	
What environmental benefits is the project likely to bring? Consider improved conservation outcomes, improved landscape management, habitat remediation, improved environmental	

management practices (including pollution prevention), etc.	
ASSOCIATED ACTIVITIES	
Associated activities (ex: construction/improvement of access road, irrigation scheme, warehouse, market, etc) *to be described in specific subproject Description Of Activities table*	

ROAD

2 - DESCRIPTION OF ACTIVITY - **ROAD**	
Subproject Purpose (to connect … to …. / to improve access conditions for….)	
New road or upgrade to existing road?	
Length of road	
Width of road	
To be paved / unpaved road surface (compacted sand, tar, blocks)	
Will the road require embankments and/or excavations greater than 1 metre? If yes indicate the approximate maximum height.	
Will the road include bridges or drifts? If yes indicate length and materials to be used. Include photos (site, upstream and downstream) of the waterway to be crossed.	
Construction Phase	
What type of building materials will be used to build the project (conventional building, local materials, etc). Indicate possible locations and estimated distances to the location(s) where materials will be sourced from, especially aggregates, water and stones.	
Will support facilities be required for construction (access road, quarries, wharf/jetty, water supply, etc). If yes, please indicate which.	
Will water supply be required? If yes identify the water source (existing or new water source and system, such as borehole, river, dam, etc).	
Labour – Construction	
What is the planned total number of workers: <10; 10-25; 25-50; >50 (specify how many if greater than 50).	
Where will the workforce be sourced from?	

Can workers be recruited locally?	
Are there opportunities for women to be involved in construction activities? Describe these opportunities (eg. House-keeping, cooking, flag-women, administrative support, etc).	
ASSOCIATED ACTIVITIES	
Associated activities (ex: construction/improvement of access road, irrigation scheme, warehouse, market, etc) *to be described in specific Description Of Activities table*	

AGRICULTURE

DESCRIPTION OF ACTIVITY - AGRICULTURE	
Purpose of the project	
Subsistence or commercial agriculture?	
New, expansion or improvement of existing activity? If existing activity, briefly describe this.	
Is it related to any outgrower scheme? If yes, identify which.	
Number of agriculture plots to be included (if more than one).	
Total area (including all plots) (m^2 or hectares).	
Proposed crops List existing (if applicable) crops and future crops. Are these crops already being produced in the landscape?	
Rainfed or irrigation (if irrigation is planned, then identify the water source and the irrigation system – open channels, sprinklers, drop, other)	
Will synthetic fertilizers and/or pesticides be used?	
Pest management strategy to be applied?	
What markets are being targeted for the final product?	
Labour – Operations	
What is the planned total number of workers: <10; 10-25; 25-50; >50 (specify how many if greater than 50).	
Where will the workforce be sourced from? How many of these workers can be locally recruited?	
Are there opportunities for women to be involved in operational activities? Describe these opportunities (eg. general labour, administrative support, etc).	
What infrastructure and support will be provided to the workforce during operations (transport, accommodation, training, etc).	
Benefits	
What social benefits is the project likely to bring? Consider employment, training, income generating opportunities, improved livelihoods / production yields, etc.	
What environmental benefits is the project likely to bring? Consider improved conservation outcomes, improved landscape management, habitat remediation, improved environmental management practices (including pollution prevention), etc.	
ASSOCIATED ACTIVITIES	

Associated activities (ex: construction/improvement of access road, irrigation scheme, warehouse, market, etc) *to be described in specific Description Of Activities Table*	

FORESTRY AND FOREST RESOURCES

DESCRIPTION OF ACTIVITY – FORESTRY AND FOREST RESOURCES	
Purpose of the project (community forest, commercial forest, rehabilitation of degraded area, collection of forest resources, beekeeping, etc)	
Total area (including all plots) (m^2 or hectares)	
New, expansion or improvement of existing activity? If existing activity, briefly describe this.	
Proposed tree species.	
Rainfed or irrigation (if irrigation is planned, then identify the water source and the irrigation system – open channels, sprinklers, drop, other)	
Will synthetic fertilizers and/or pesticides be used?	
What markets are being targeted for the final product?	
Labour – Operations	
What is the planned total number of workers: <10; 10-25; 25-50; >50 (specify how many if greater than 50).	
Where will the workforce be sourced from? How many of these workers can be locally recruited?	
Are there opportunities for women to be involved in operational activities? Describe these opportunities (eg. general labour, administrative support, etc).	
What infrastructure and support will be provided to the workforce during operations (transport, accommodation, training, etc).	
Benefits	
What social benefits is the project likely to bring? Consider employment, training, income generating opportunities, improved livelihoods / production yields, etc.	
What environmental benefits is the project likely to bring? Consider improved conservation outcomes, improved landscape management, habitat remediation, improved environmental management practices (including pollution prevention), etc.	

ASSOCIATED ACTIVITIES	
Associated activities (ex: construction/improvement of access road, irrigation scheme, warehouse, market, etc) *to be described in specific Description of Activities Table*	

LIVESTOCK

DESCRIPTION OF ACTIVITIES - **LIVESTOCK**	
Purpose of the project	
New or expansion of existing activity? If existing activity, briefly describe this.	
Identify the species to be created and the number of animals foreseen	
In case of open grazing, identify the size of the grazing area.	
Labour – Operations	
What is the planned total number of workers: <10; 10-25; 25-50; >50 (specify how many if greater than 50).	
Where will the workforce be sourced from? How many of these workers can be locally recruited?	
Are there opportunities for women to be involved in operational activities? Describe these opportunities (eg. general labour, administrative support, etc).	
What infrastructure and support will be provided to the workforce during operations (transport, accommodation, training, etc).	
Benefits	
What social benefits is the project likely to bring? Consider employment, training, income generating opportunities, improved livelihoods / production yields, etc.	
What environmental benefits is the project likely to bring? Consider improved conservation outcomes, improved landscape management, habitat remediation, improved environmental management practices (including pollution prevention), etc.	
ASSOCIATED ACTIVITIES	
Associated activities (eg: construction/improvement of access road, irrigation scheme, warehouse, market, etc) *to be described in specific Description of Activities Table*	

AQUACULTURE

DESCRIPTION OF ACTIVITIES - **AQUACULTURE**	
Purpose of the project	
New or expansion of existing activity? If existing activity, briefly describe this.	
Identify the species to be produced	
Will the project use purpose-built tanks/ponds or will a natural water body be used? If in a natural body identify (sea, lagoon, etc)	
If in tanks identify the size of the total area to be used (m^2 or hectares)	
For purpose-built tanks, identify the source of the water. Describe other potential users of water from the same source (type of use).	
If in water bodies describe the technology to be used, and if there are already other aquaculture projects in the same water body (in case of lagoon) or in close proximity in the case of projects planned for the sea.	
Provide an overview of pollution prevention measures that are built into the design (eg. Water treatment prior to discharge, others).	
Will antibiotics, pesticides or other chemicals be used?	
Labour – Operations	
What is the planned total number of workers: <10; 10-25; 25-50; >50 (specify how many if greater than 50).	
Where will the workforce be sourced from? How many of these workers can be locally recruited?	
Are there opportunities for women to be involved in operational activities? Describe these opportunities (eg. general labour, administrative support, etc).	
What infrastructure and support will be provided to the workforce during operations (transport, accommodation, training, etc).	
What markets are being targeted for the final product?	
Benefits	
What social benefits is the project likely to bring? Consider employment, training, income generating opportunities, improved livelihoods / production yields, etc.	
What environmental benefits is the project likely to bring? Consider improved conservation outcomes, improved landscape management, habitat remediation, improved environmental management practices (including pollution prevention), etc.	
ASSOCIATED ACTIVITIES	
Associated activities (ex: construction/improvement of access road, warehouse, market, etc) *to be described in specific Description of Activities table*	

TOURISM

DESCRIPTION OF ACTIVITIES - **TOURISM**	
Purpose of the project (accommodation, recreational activity, game farming, other)	
New or rehabilitation expansion of existing activity? If existing activity, briefly describe this.	
In case of accommodation identify the number of beds	
In case of recreational activity describe it and if applicable provide information about the size of the area to be used.	
In case of game farming provide information about the area and the species to be introduced.	
Labour – Operations	
What is the planned total number of workers: <10; 10-25; 25-50; >50 (specify how many if greater than 50).	
Where will the workforce be sourced from? How many of these workers can be locally recruited?	
Are there opportunities for women to be involved in operational activities? Describe these opportunities (eg. general labour, administrative support, etc).	
What infrastructure and support will be provided to the workforce during operations (transport, accommodation, training, etc).	
Benefits	
What social benefits is the project likely to bring? Consider employment, training, income generating opportunities, improved livelihoods / production yields, etc.	
What environmental benefits is the project likely to bring? Consider improved conservation outcomes, improved landscape management, habitat remediation, improved environmental management practices (including pollution prevention), etc.	
ASSOCIATED ACTIVITIES	
Associated activities (ex: construction/improvement of access road, buildings, etc) *to be described in specific Description of Activities table*	

PROCESSING ACTIVITY

DESCRIPTION OF ACTIVITIES- **PROCESSING ACTIVITY**	
Purpose of the project	
New or rehabilitation / expansion of existing activity? If existing activity, briefly describe this.	
List the raw materials to be processed	
Identify the technology(ies) to be used (eg. cereal mill, drying, boiling, sorting and packaging, cold chain storage, other)	
If the process requires water, identify the water source (existing water supply system/network, borehole, river); estimated water demand, water efficiency measures already considered, proposed wastewater treatment system, proposed site for wastewater discharge	
Will the process require electricity? If yes identify the source (electricity network, generator and its fuel, solar panel, etc)	
Identify type of solid wastes to be generated and any proposed management measures already being considered (to avoid, reuse, recycle, treat or dispose the waste)	
Does the process generate dust? If yes, identify any measures already being considered to avoid the emission of particulate matter and its impacts on surrounding sensitive receptors	
Does the process generate noise and vibration? If yes, identify any measures already being considered to avoid noise and vibrations and their impacts on surrounding sensitive receptors	
Does the process generate odours? If yes, identify any measures already being considered to minimize/prevent odours and it impacts on surrounding sensitive receptors	
What markets are being targeted for the final product(s)?	
Labour – Operations	
What is the planned total number of workers: <10; 10-25; 25-50; >50 (specify how many if greater than 50).	
Where will the workforce be sourced from? How many of these workers can be locally recruited?	
Are there opportunities for women to be involved in operational activities? Describe these opportunities (eg. general labour, administrative support, etc).	
What infrastructure and support will be provided to the workforce during operations (transport, accommodation, training, etc).	
Benefits	
What social benefits is the project likely to bring?	

Consider employment, training, income generating opportunities, improved livelihoods / production yields, etc.	
What environmental benefits is the project likely to bring? Consider improved conservation outcomes, improved landscape management, habitat remediation, improved environmental management practices (including pollution prevention), etc.	
ASSOCIATED ACTIVITIES	
Associated activities (ex: construction/improvement of access road, construction of buildings etc) *to be described in specific Description of Activity table*	

Annex 4 - Preliminary Environmental Information Sheet (Annex IV – Decree 54/2015)

1. Nome da Actividade: _____

2. Tipo de Actividade:

a)

Turística ☐ Industrial ☐ Agro-pecuária ☐ Outro ☐

b)

Novo ☐ Reabilitação ☐ Expansão ☐

3. Identificação do(s) Proponente(s):

4. Endereço/Contacto:

5. Localização da Actividade:

5.1 Localização Administrativa

Bairro de_____Vila/Cidade_____

Localidade_____Distrito_____

Província_____

Coordenadas Geográficas_____

5.2 Meio de Inserção:

Urbana ☐ Rural ☐

6. Enquadramento no zoneamento

Espaço habitacional ☐ Industrial ☐ Serviços ☐ Área Verde ☐

7. Descrição da Actividade

7.1 Infra-estruturas da actividade, suas dimensões e capacidade instalada :*(utilizar sempre que possivel peças escritas e desenhadas da actividade)*

.....
.....

7.2 Actividades Associadas:

.....
.....

7.3 Breve descrição da tecnologia de construção e operação:

.....
.....

7.4 Actividades principais e complementares:
.....
.....

7.5 Tipo, origem e quantidade de mão de obra:
.....
.....

7.6 Tipo, origem e quantidade de matéria-prima:
.....
.....

7.7 Produtos químicos citados quimicamente a serem utilizados
.....
.....

7.8 Tipo, origem e quantidade de consumo de água e energia:
.....
.....

7.9 Origem e quantidade de combustíveis e lubrificantes a serem usados:
.....
.....

7.10 Outras recursos necessários:
.....
.....

8. Posse da Terra (situação legal relativa a aquisição de espaço físico):
.....
.....

9. Alternativas para localização das actividades: *(Motivo da escolha do local de implantação da actividade, indicando pelo menos dois locaisl alternativos)*
.....
.....

10. Breve informação relativa a situação ambiental de referência local e regional:

10.1 Características físicas do local de realização das actividades:

Planície ☐ Planalto ☐ Vale ☐ Montanha ☐

10.2 Ecossistemas Predominantes:

Rio ☐ Lago ☐ Mar ☐ Terrestre ☐

10.3 Zona de localização:

Zona Costeira ☐ Zona do Interior ☐ Ilha ☐

10.4 Tipo de Vegetação Predominante:

Floresta ☐ Savana ☐ Outro ☐
(especifique)_____

10.5 Uso do solo segundo o plano de estrutura o ou política vigente:

Agricultura ☐ Residencial ☐ Industrial ☐ Protecção ☐ Outro ☐
(especifique)_____

10.6 Principais infra-estruturas existentes em redor da área de actividade:
.....
.....

11. Informação complementar através de mapas

- *Mapa de localização (à escala conveniente)*
- *Mapa de enquadramento da actividade na zona de localização (à escala conveniente)*
- *Outra informação que julgar relevante*

Maputo...., de.....de 200...

Annex 5 - Guidelines for preparation of TOR for Simplified Environmental Assessment and Specific Environmental and Social Management Plan

1. Objectives of the ToR

This section should identify the subproject and its proponent, and the services required, based on the result of the screening process.

2. Background Information

The ToR should provide pertinent background information for preparing the SES and ESMP. This would include a brief description of information about the MozBio project (global objective and objective of the component that includes the subproject), the implementing agency - ANAC, Project components, especially those that will finance the subproject).

Also include a description of other project preparation activities underway (e.g., biodiversity studies, social assessment, baseline study) since the consultant preparing the SES will need to coordinate with other teams to ensure an effective and efficient information exchange.

3. EA Requirements/Regulations

This paragraph should identify the regulations and guidelines which will govern the conduct of the assessment or specify the content of its report as per Decree 45/2004 and Law 16/2014.

4. Study Area and Likely Major Impacts

Specify the area involved and the boundaries of the study area for the assessment, identifying clearly its location in relation to the boundaries of the conservation area. Where appropriate specify the right-of-way (ROW)-width and alignment of roads, pipelines or other linear infrastructure. Identify adjacent or remote areas which should be considered with respect to impacts of particular aspects of the project.

5. Scope of Work

The consultant services shall comprise the following tasks:

Task 1. Description of the Proposed Subproject. Provide a brief description of the relevant parts of the project, using maps (at appropriate scale) and including the following information: location of all project related development sites and ROW's; general layout; size, capacity; pre-construction activities; construction activities; schedule; staffing and support; facilities and services; commissioning, operation and maintenance activities; required offsite investments; and life expectancy for major components. Provide maps at appropriate scales to illustrate the general setting of project-related development sites and ROW's, as well as surrounding areas likely to be impacted. These maps should include topographic contours, as available, as well as locations of major surface waters, roads, railways, settlements, conservation area, and administrative boundaries.

Task 2. Description of the Environment (baseline condition). Assemble, evaluate and present baseline data on the relevant physical, biological, and socio-economic characteristics of the development area and area of influence, including the identification of the CA management plan zoning, its main attributes and threats. Include information on any changes anticipated before the project commences.

Task 3. Legislative and Regulatory Considerations. Describe the pertinent regulations and standards governing environmental quality, health and safety, protection of sensitive areas, protection of endangered species, siting, land use control, etc., at international, national, regional and local levels (The TOR should specify those that are known and require the consultant to

investigate for others.) If transboundary impacts are likely, relevant international conventions should be described.

Task 4. Determination of the Potential Impacts of the Proposed Project. Predict and assess all significant impacts that the project is likely to generate. Assess the impacts from changes brought about by the project on baseline environmental conditions as described under Task 2. Identify potential impacts to be assessed based on the list provided in Annex 7.

In this analysis, distinguish between significant positive and negative impacts, direct, indirect, and cumulative impacts, and immediate and long-term impacts. Identify impacts that may occur due to accidental events. Identify impacts which are unavoidable or irreversible. Wherever possible, describe impacts quantitatively, in terms of environmental costs and benefits. Assign economic values when feasible. Impact analyses for sub projects should be divided between construction impacts and operational impacts.

Task 5. Analysis of Alternatives to the Proposed subproject. Describe alternatives that were examined in the course of developing the proposed subproject and identify other alternatives which would achieve the same objectives. The concept of alternatives extends to siting, design, technology selection, construction techniques and phasing, and operating and maintenance procedures. Compare alternatives in terms of potential environmental impacts; capital and operating costs; suitability under local conditions; and institutional, training, and monitoring requirements. When describing the impacts, indicate which are irreversible or unavoidable and which can be mitigated. To the extent possible, quantify the costs and benefits of each alternative, incorporating the estimated costs of any associated mitigating measures.

Include the alternative of not constructing the project to demonstrate environmental conditions without it. Alternatives should include the following: the “no action” alternative (as mentioned above); alternative means of meeting the energy requirements; the alternative of upgrading existing facilities; alternative routes and sites; alternative design; and alternative methods of construction, including costs and reliability.

Task 6. Development of an Environmental and Social Management Plan (ESMP). Recommend feasible and cost-effective measures to prevent or reduce significant negative impacts to acceptable levels. Include measures to address emergency response requirements for accidental events.

Prepare a management plan including proposed work programs, budget estimates, schedules, staffing and training requirements, and other necessary support services to implement the mitigating measures. Provide environmental protection clauses for application by contractors and consultants.

Task 7. Development of a Monitoring Plan. Prepare a detailed plan to monitor the implementation of mitigating measures and the impacts of the project during construction and operation. Include in the plan an estimate of capital and operating costs and a description of other inputs (such as training and institutional strengthening) needed to implement the plan.

Task 8. Public Participation. Conduct a public participation process since the early stage of the study in order to include in the SES any concerns and/or expectations of the direct and indirect affected parties. The consultant shall indicate the strategy for public participation, which shall bear in mind the national guidelines for public participation in ESIA process. The public participation report shall be included in the SES.

6. Reports

The consultant shall prepare a draft report to be revised by FNDS's Safeguard Team.

The structure of the report shall follow the requirements of Decree 54/2015.

7. Team

The consultant shall propose a team coordinated by an environmental and social assessment specialist with more than 10-years of experience. The team shall include at a minimum, an ecologist/specialist in natural resources management and a social specialist.

The consultant shall be registered with MITADER as an environmental consultant.

8. Time

The Consultant shall propose a workplan identifying all the phases, including the public participation process and the time for revision by the environmental authority.

Annex 6 -Template for Environmental and Social Management Plan

Environmental and Social Management Plan (ESMP) Template

This template is relevant for any subproject under the MOozBio 2 Project which requires a stand-alone ESMP. Use this template as a guide for preparing an ESMP that will satisfy World Bank safeguards policy OP/BP4.01 Environmental Assessment and the EIA Regulations (54/2015).

1. INTRODUCTION

Provide an overview of the subproject, environmental and social context and the purpose of this ESMP.

2. PROJECT DESCRIPTION

Describe the subproject, the construction works required, the activities associated with the operational phase and planned decommissioning information. Include project components that may have an environmental or social impact, including:

- *Types of materials required during construction (aggregates, fresh water)*
- *Source and transportation of materials during construction*
- *Waste management (solid and liquid waste) – construction and operations*
- *Hazardous materials management*
- *Labour management practices*
- *Proposed improvements or benefits resulting from the subproject which will accrue to the local community, environment and economy.*

Provide an overview of project timelines.

Include a map of the general area.

(Take into consideration the information already provided in the Environmental & Social Checklist prepared for the subproject and complement/detail/update, where possible).

3. ENVIRONMENTAL AND SOCIAL BASELINE

Describe the project location and land use (agricultural land, residential), closest dwelling(s), water body that will receive drainage, natural habitats (protected areas, significant or relevant ecosystems, flora and /or fauna in the area.).

Describe the community, formal and community leadership structures, describe any unique aspects of culture and language. Describe the existing social services such as education, health, law and order as well as economic activities (commerce, trading). Provide information on existing land titles. The social context should also describe occupations and sources of livelihood, gender roles and issues, land tenure and connections to land, and the socio-economic conditions, including any commentary on poverty, vulnerability due to gender,

ethnicity or culture group, age or disability in the community, resource allocation and access and income distribution, where relevant.

(Take into consideration the information already provided in the Environmental & Social Checklist prepared for the subproject and complement/detail/update, where possible).

4. LEGAL AND INSTITUTIONAL CONTEXT

Provide an overview of the relevant laws, regulations and policies and how this ESMP provides the relevant information in support of an environmental approval.

Provide an overview of how the ESMP meets the requirements of the World Bank safeguard policies.

Provide an overview of the key institutions with jurisdiction over the subproject.

(See Sections 4 and 5 of MozBio 2 ESMF*).*

5. SIGNIFICANT IMPACTS AND MITIGATION

Provide an overview of the significant environmental and social impacts associated with the subproject and indicate how the project will manage these to incorporate applicable safeguards policy and regulatory requirements.

(See issues already identified in the Environmental & Social Screening Checklist, as well as Section 9 of MozBio 2 ESMF).

6. ORGANIZATION AND MANAGEMENT STRUCTURE

Identify and define the responsibilities and authority of the various persons and organisations that will be involved in the sub-project.

7. MANAGEMENT MEASURES

List the key environmental and social impacts, per relevant project phase, and indicate recommended management measures and responsibility for ensuring measures are met.

(Ensure that measures contained in the Guide on Good Practices for Environmental and Social Management are included).

Examples are provided below in italics.

CONSTRUCTION PHASE			
Activity	**Impact / Risk**	**Mitigation**	**Responsibility**
Work Camp and Work Site Establishment	*Loss of natural vegetation, loss of physical and economic activities, change in natural water drainage, soil & water contamination, community health & safety*	*Work site selection shall take in account environmental & social aspects:* - *Preference shall be given to already disturbed areas,* - *'No-go' areas shall be clearly identified and marked. These shall include areas with large trees (>200 mm in diameter at chest height), cultivated lands or fruit trees, wetlands, grave sites or any sensitive environment or social site/area identified by the Safeguard Assistant,* - *Proximity to schools, health posts and households with vulnerable families (such as elderly, household members with chronic diseases) shall be avoided,* - *The worksite shall be clearly identified, and hazardous areas clearly marked (red tape / barricading of risk areas).*	*Contractor, LMU Safeguard Assistant and SDPI*
Labour Recruitment	*Employment of locals*	- *Promote the recruitment of local workers, including women.* - *The recruitment process shall be transparent promote the recruitment of women and be non-discriminatory (eg on the basis of family status, ethnicity, race, gender, religion, language, marital status, birth, age, disability or political convictions)*	*Contractor*
OPERATIONAL PHASE			
Activity	**Impact / Risk**	**Mitigation**	**Responsibility**
DECOMMISSIONING PHASE			
Activity	**Impact / Risk**	**Mitigation**	**Responsibility**

8. MONITORING MEASURES

Define and list the key indicators that will be monitored to track progress in managing known environmental and social risks and impacts. List responsibilities for monitoring.

Examples are provided below in italics.

CONSTRUCTION PHASE				
Environmental & Social aspect/impact	**What** (will be measured)	**How** (it will be measured)	**When** (it will be measured)	**Responsibility**
Vegetation clearing	*Extent of clearing – mature trees left in place where possible.*	*Visual observation by Environmental Officer.*	*Daily during vegetation clearing.*	*Contractor*
Air quality	*Dust (PM10)*	*Passive samplers deployed on site.*	*Samplers to be deployed prior to start of activities. Samplers to be read daily.*	*Contractor*
OPERATIONAL PHASE				
Environmental & Social aspect/impact	**What** (will be measured)	**How** (it will be measured)	**When** (it will be measured)	**Responsibility**
DECOMMISSIONING PHASE				
Environmental & Social aspect/impact	**What** (will be measured)	**How** (it will be measured)	**When** (it will be measured)	**Responsibility**

9. INSTITUTIONAL ARRANGEMENTS

Provide an overview of the key roles and responsibilities for ensuring that the objectives of this ESMP are met. Include organizational charts detailing key positions and their responsibilities.

10. CAPACITY BUILDING AND TRAINING

Describe the activities and equipment that are required for the MozBio 2 project to support the proponent and subproject contractors and others to implement the recommended environmental and social management measures:

- Equipment purchases (personal protective equipment, monitoring equipment etc.)
- Training (workshops, formal training, health and safety training)
- Consultancy fees / Technical assistance (workshops, on-the-job training, monitoring services).

11. STAKEHOLDER ENGAGEMENT AND GRIEVANCE MECHANISM

Develop a high-level stakeholder engagement / consultation plan and provide records of what was carried out, who participated (men and women) and what the outcomes were, and how the feedback was incorporated into the final ESMP.

12. REFERENCES

List relevant documents and information consulted in developing the ESMP.

13. ANNEXES (supporting information, technical reports, specialist studies, records of key meetings, records of key correspondence, etc.)

Include supporting documents that will provide greater understanding of the project and its impacts, and planned mitigation measures.

Annex 7 - Key Impacts and Key Mitigation Measures

CIVIL WORKS: Infrastructure such as roads, bridges, drifts, buildings (accommodation, offices), water supply, sanitation.			
Activity:	**Key Impacts**	**Key Mitigation Measures**	**Phase for implementing mitigation**
Vegetation clearing	Disturbance to natural habitats. Species loss. Soil erosion. Dust generation.	Design projects to avoid natural habitats and to minimize vegetation removal. Supervise contractors during works.	Design Construction
Sourcing of aggregates for construction (sand, rock, stone)	Natural resource extraction. Disturbance to natural landscape. Reduced aesthetic. Soil / rock /sand erosion. Noise and dust generation.	Source aggregates from permitted / licensed quarries. Monitor quarry practices to minimize impacts – slopes, minimum reinstatement, drainage.	Construction
Road transport	Soil erosion and associated sediment discharge after rain events.	Minimize road traffic, monitor speed, spray road surfaces, install sediment barriers in sensitive areas.	Construction
	Noise and dust generation and associated nuisance to road users / neighbours / crops (dust).	Notify affected persons of planned works. Monitor grievances.	Construction
	Injuries or fatalities resulting from vehicle accidents.	Establish safe driving speeds and driving hours (eg. no night time driving). Ensure all drivers are licensed. Implement disciplinary action in case of traffic violations.	Construction
Water use	Natural resource use resulting from water abstraction.	Design projects to minimize water needs (and resulting levels of abstraction) during operation.	Design
	Diversion of water from other users – reducing water availability for downstream users.	Design projects to minimize diversion of waterways, ensuring water availability for downstream users.	Design
		Monitor water consumption and use to ensure adequate use, no wastage, leaks, etc.	Construction
Solid waste management	Solid waste generation and disposal resulting in litter, vermin, odours, soil and water contamination.	Implement waste management principles (avoidance, minimization, recycling, separation and on-site and -off-site disposal). Train and supervise workers on waste management principles. Monitor waste disposal practices.	Construction
Liquid waste management	Liquid waste generation and disposal resulting in odours, pooling of water, soil and water contamination.	Design projects to minimize liquid effluent generation and use appropriate technology for project type. Train and supervise workers on waste management principles. Monitor waste disposal practices.	Construction
Hazardous substances management (fuel, lubricants, paints, others)	Spills or leaks resulting in soil and water pollution.	Define principles for the safe storage, handling and disposal of hazardous materials. Establish dedicated storage and maintenance activity locations and ensure bunding/lining is in place. Train and supervise contractors on safe handling and disposal practices. Monitor handling and disposal practices.	Design Construction
Labour management	Occupational injuries or loss of life.	Implement Health & Safety training for workers. Train workers to ensure they are competent for the jobs they are hired for. Issue appropriate Personal Protective Equipment (PPE) to workers. Issue Adequate equipment and tools to be available for the jobs at hand.	Construction
	Spread of communicable diseases.	Implement worker training in HIV / AIDs, Malaria prevention, hygiene practices.	Construction

	Non-local workers / migrants who may disrupt traditional lifestyles and authority structures	Early and ongoing engagement with affected persons. Sensitize workers on expected conducted with neighbouring communities.	Design Construction
Involuntary resettlement (refer to RPF and PF)	Temporary or permanent damage to or loss of assets or loss of access to resources affecting the ability of communities to maintain livelihoods.	Early and ongoing engagement with affected persons. Early identification of land requirements. Avoidance of new land requirements where possible (i.e. road alignments). Compensation in case of physical or economical loss.	Design
	Disruption / damage to graves and physical and cultural resources.	Avoid graves and physical cultural resources.	Design
	Conflicts over access to land / ownership of land.	Prioritise the negotiation of agreements for all land access (and avoid compulsory acquisition wherever possible).	Design

AGRICULTURE : Community agriculture, Irrigation agriculture, Ecological agriculture, Semi-industrial agriculture and Horticulture			
Activity	**Impacts**	**Mitigation**	**Phase for implementing mitigation**
Land take	Habitat transformation and potential loss of species.	Minimize land requirements for planned projects.	Design
	Impact on local subsistence livelihoods and potential decreased food security as commercial agriculture takes preference over subsistence agriculture.	Early and ongoing engagement with affected persons.	Design
Involuntary resettlement and compensation (refer to RPF and PF)	Temporary or permanent damage to or loss of assets or loss of access to resources affecting the ability of communities to maintain subsistence livelihoods.	Early and ongoing engagement with affected persons. Early identification of land requirements. Minimize new land requirements where possible. Compensation in case of physical or economical loss	Design
	Disruption / damage to graves and physical and cultural resources.	Avoid graves and physical cultural resources.	Design
	Conflicts over access to land / ownership of land.	Prioritise the negotiation of agreements for all land access (and avoid compulsory acquisition wherever possible).	Design
Vegetation clearing	Disturbance to / fragmentation of natural habitats. Species loss. Soil erosion. Dust generation.	Design projects to avoid natural habitats and to minimize vegetation removal wherever possible. Supervise contractors during works.	Design Operations
Crop selection	Introduction of genetically modified species.	Ensure that crop and seed selection are in accordance with national agricultural policy.	Design
Water use	Natural resource use resulting from water abstraction.	Design project to minimize water needs (and resulting levels of abstraction). Select appropriate irrigation technologies for efficient water use.	Design
	Diversion of water from other users – reducing water availability for downstream / competing users.	Design projects to minimize diversion of waterways, ensuring water availability for downstream users.	Design
		Monitor water consumption and use to ensure adequate use, no wastage, leaks, to minimize evaporation rates, etc.	Operations
Use of fertilizers	Soil and water pollution / overloading / leaching resulting from the overuse of fertilizers.	Assess and select the most appropriate fertilizer (biological/synthetic) for the location and crop. Establish handling and application procedures to prevent excessive release into the environment. Train workers on the safe and adequate handling and application of fertilizers.	Design Operations Operations
Use of pesticides (refer to PMP)	Soil and water pollution / overloading / leaching resulting from the overuse of pesticides. Impacts on existing / neighbouring and fauna and changes to natural cycles.	Assess and select the most appropriate pesticide (biological/synthetic) for the location and crop. Establish handling and application procedures to prevent excessive release into the environment. Train workers on the safe and adequate handling and application of pesticides.	Design Operations Operations

Hazardous substances management (fuel, lubricants, paints, others)	Spills or leaks resulting in soil and water pollution.	Define principles for the safe storage, handling and disposal of hazardous materials. Establish dedicated storage and maintenance activity locations and ensure bunding/lining is in place. Train and supervise contractors on safe handling and disposal practices. Monitor handling and disposal practices.	Design Operations
Labour Management (Recruitment, Conditions of employment, Health and Safety practices)	Recruitment of workers – fair, transparent, non-discriminatory recruitment practices.	Develop and publicize recruitment procedures, including a grievance mechanism. Train workers on conditions of employment (eg. hours, use of PPE) and rights resulting from employment (eg. wages).	Design Operations
	Occupational injuries or loss of life.	Implement Health & Safety training for workers. Train workers to ensure they are competent to perform jobs. Issue appropriate Personal Protective Equipment (PPE) to workers.	Operations
	Spread of communicable diseases.	Implement worker training in HIV / AIDs, Malaria prevention, hygiene practices.	Operations

LIVESTOCK FARMING: Cattle, poultry, pigs			
Activity	**Impacts**	**Mitigation**	**Phase for implementing mitigation**
Land take	Habitat transformation and potential loss of species.	Minimize land requirements for planned projects.	Design
	Impact on local subsistence livelihoods and potential decreased food security as commercial agriculture takes preference over subsistence agriculture.	Early and ongoing engagement with affected persons.	Design
Involuntary resettlement and compensation (grazing area NB) (refer to RPF and PF)	Temporary or permanent loss of assets or loss of access to resources affecting the ability of communities to maintain subsistence livelihoods.	Early and ongoing engagement with affected persons. Early identification of land requirements. Minimize new land requirements where possible. Compensation in case of physical or economical loss.	Design
	Disruption / damage to graves and physical and cultural resources.	Avoid graves and physical cultural resources.	Design
	Conflicts over access to land / ownership of land.	Prioritise the negotiation of agreements for all land access (and avoid compulsory acquisition wherever possible).	Design
Solid waste management	Solid waste generation and disposal resulting in litter, vermin, odours, soil and water contamination.	Implement waste management principles (avoidance, minimization, recycling, separation and on-site and -off-site disposal). Train and supervise workers on waste management principles. Monitor waste disposal practices.	Operations
Liquid waste management	Liquid waste generation and disposal resulting in odours, pooling of water, soil and water contamination.	Design projects to minimize liquid effluent generation and use appropriate technology for project type. Train and supervise workers on waste management principles. Monitor waste disposal practices.	Operations
Odour management	Reduced air quality and nuisance resulting from (intensive) livestock farming odour exposure.	Design livestock farms to include windbreaks. Develop manure management plans to collect, treat and dispose. Monitor odours and register nuisance complaints.	Design. Operations Operations.
Use of pesticides (refer to PMP)	Soil and water pollution / overloading / leaching resulting from the overuse of pesticides. Impacts on existing / neighbouring and fauna and changes to natural cycles.	Assess and select the most appropriate pesticide (biological/synthetic) for the location and crop. Establish handling and application procedures to prevent excessive release into the environment. Train workers on the safe and adequate handling and application of pesticides.	Design Operations Operations
Hazardous substances management (fuel, lubricants, others)	Spills or leaks resulting in soil and water pollution.	Define principles for the safe storage, handling and disposal of hazardous materials. Establish dedicated storage and maintenance activity locations and ensure bunding/lining is in place. Train and supervise workers on safe handling and disposal practices. Monitor handling and disposal practices.	Design Design Operations Operations
Labour Management (Recruitment, Conditions of employment,	Recruitment of workers – fair, transparent, non-discriminatory recruitment practices.	Develop and publicize recruitment procedures, including a grievance mechanism. Train workers on conditions of employment (eg. hours, use of PPE) and rights resulting from employment (eg. wages).	Design Operations

Health and Safety practices)	Occupational injuries.	Implement Health & Safety training for workers. Train workers to ensure they are competent to perform jobs. Issue appropriate Personal Protective Equipment (PPE) to workers.	Operations
Disease outbreak management / community health and safety	Disease outbreak affecting neighbouring communities.	Design and locate facilities at minimum distances from sensitive receptors. Implement livestock farming operating procedures. Monitor livestock farming activities to ensure minimum health and hygiene conditions are maintained.	Design Operations. Operations.

FORESTRY AND FOREST PRODUCTS: Forest plantation, Non-wood forest resource use, Honey production,			
Activity	**Impacts**	**Mitigation**	**Phase for implementing mitigation**
Land take	Habitat transformation and potential loss of species.	Minimize land requirements for planned projects.	Design
	Impact on local subsistence livelihoods and potential decreased food security as commercial agriculture takes preference over subsistence agriculture.	Early and ongoing engagement with affected persons.	Design
Involuntary resettlement and compensation (grazing area NB) (refer to RPF and PF)	Temporary or permanent loss of assets or loss of access to resources affecting the ability of communities to maintain subsistence livelihoods.	Early and ongoing engagement with affected persons. Early identification of land requirements. Minimize new land requirements where possible.	Design
	Disruption / damage to graves and physical and cultural resources.	Avoid graves and physical cultural resources.	Design
	Conflicts over access to land / ownership of land.	Prioritise the negotiation of agreements for all land access (and avoid compulsory acquisition wherever possible).	Design
Vegetation clearing	Disturbance to / fragmentation of natural habitats. Species loss. Soil erosion. Dust generation. Biodiversity impacts (habitat reduction / transformation)	Design projects to avoid natural habitats and to minimize vegetation removal wherever possible. Supervise contractors during works.	Design Operations
Water use	Natural resource use resulting from water abstraction.	Design projects to minimize water needs (and resulting levels of abstraction).	Design
	Diversion of water from other users – reducing water availability for downstream users.	Design projects to minimize diversion of waterways, ensuring water availability for downstream users.	Design
		Monitor water consumption and use to ensure adequate use, no wastage, leaks, etc.	Construction
Use of fertilizers	Soil and water pollution / overloading / leaching resulting from the overuse of fertilizers.	Assess and select the most appropriate fertilizer (biological/synthetic) for the location and crop. Establish handling and application procedures to prevent excessive release into the environment. Train workers on the safe and adequate handling and application of fertilizers.	Design Operations Operations
Use of pesticides (refer to PMP)	Soil and water pollution / overloading / leaching resulting from the overuse of pesticides. Impacts on existing / neighbouring and fauna and changes to natural cycles.	Assess and select the most appropriate pesticide (biological/synthetic) for the location and crop. Establish handling and application procedures to prevent excessive release into the environment. Train workers on the safe and adequate handling and application of pesticides.	Design Operations Operations

Hazardous substances management (fuel, lubricants, paints, others)	Spills or leaks resulting in soil and water pollution.	Define principles for the safe storage, handling and disposal of hazardous materials. Establish dedicated storage and maintenance activity locations and ensure bunding/lining is in place. Train and supervise contractors on safe handling and disposal practices. Monitor handling and disposal practices.	Design Operations
Fire risks – monoculture / high risk			
Soil erosion			
Labour Management (Recruitment, Conditions of employment, Health and Safety practices)	Recruitment of workers – fair, transparent, non-discriminatory recruitment practices.	Develop and publicize recruitment procedures, including a grievance mechanism. Train workers on conditions of employment (eg. hours, use of PPE) and rights resulting from employment (eg. wages).	Design Operations
	Occupational injuries.	Implement Health & Safety training for workers. Train workers to ensure they are competent to perform jobs. Issue appropriate Personal Protective Equipment (PPE) to workers.	Operations
Honey production	Impacts to community and worker health and safety (bee stings and allergies)	Early and on-going engagement regarding health and safety risks and precautions. Workers to be adequately trained on the use of PPE and handling of bees.	Operation
AQUACULTURE			
Activity	**Impacts**	**Mitigation**	**Phase for implementing mitigation**
Land take	Habitat transformation and potential loss of species.	Minimize land requirements for planned projects.	Design
	Impact on local subsistence livelihoods and potential decreased food security as commercial agriculture takes preference over subsistence agriculture.	Early and ongoing engagement with affected persons.	Design
Involuntary resettlement and compensation (grazing area NB) (refer to RPF and PF)	Temporary or permanent loss of assets or loss of access to resources affecting the ability of communities to maintain subsistence livelihoods.	Early and ongoing engagement with affected persons. Early identification of land requirements. Minimize new land requirements where possible. Compensation in case of physical or economical loss.	Design
	Disruption / damage to graves and physical and cultural resources.	Avoid graves and physical cultural resources.	Design
	Conflicts over access to land / ownership of land.	Prioritise the negotiation of agreements for all land access (and avoid compulsory acquisition wherever possible).	Design
Vegetation clearing	Disturbance to / fragmentation of natural habitats. Species loss. Soil erosion. Dust generation. Biodiversity impacts (habitat reduction / transformation)	Design projects to avoid natural habitats and to minimize vegetation removal wherever possible. Supervise contractors during works.	Design Operations
Species introduction – biodiversity impact	Introduction of species which will compete with existing species, leading to changes in species composition.	Ensure that species selection is in accordance with national policy.	Design

Water use	Natural resource use resulting from water abstraction.	Design projects to minimize water needs (and resulting levels of abstraction).	Design
	Diversion of water from other users – reducing water availability for downstream users.	Design projects to minimize diversion of waterways, ensuring water availability for downstream users.	Design
		Monitor water consumption and use to ensure adequate use, no wastage, leaks, etc.	Construction
Water quality	Reduced water quality of the receiving environment as a result of discharge of effluent / release of pond water into the natural environment		
Use of antibiotics -	Overuse of antibiotic may result in persistence of antibiotics in natural environment and development of resistance. Impacts on existing / neighbouring and fauna and changes to natural cycles.	Assess and select the most appropriate antibiotic. Establish handling and application procedures to prevent excessive release into the environment. Train workers on the safe and adequate handling and application of pesticides.	Design Operations Operations
Use of pesticides (refer to PMP)	Soil and water pollution / overloading / leaching resulting from the overuse of pesticides. Impacts on existing / neighbouring and fauna and changes to natural cycles.	Assess and select the most appropriate pesticide (biological/synthetic) for the location and crop. Establish handling and application procedures to prevent excessive release into the environment. Train workers on the safe and adequate handling and application of pesticides.	Design Operations Operations
Hazardous substances management (fuel, lubricants, paints, others)	Spills or leaks resulting in soil and water pollution.	Define principles for the safe storage, handling and disposal of hazardous materials. Establish dedicated storage and maintenance activity locations and ensure bunding/lining is in place. Train and supervise contractors on safe handling and disposal practices. Monitor handling and disposal practices.	Design Operations
Labour management	Influx of semi-skilled workers / traders who may disrupt traditional local economies, lifestyles and authority structures	Early and ongoing engagement with affected persons. Sensitize workers on expected conducted with neighbouring communities. Monitor socio-dynamics and grievances.	Design Operations Operations
Disease outbreak management / community health and safety	Disease outbreak affecting neighbouring / downstream communities.	Design and locate facilities at minimum distances from sensitive receptors. Implement adequate aquaculture operating procedures. Monitor aquaculture activities to ensure minimum health and hygiene conditions are maintained.	Design Operations. Operations.

TOURISM: Ecotourism, conservation product markets, accommodation, recreational facilities, game farms			
Activity	**Impacts**	**Mitigation**	**Phase for implementing mitigation**
Involuntary resettlement and compensation (refer to RPF and PF)	Involuntary resettlement or loss of assets or loss of access to resources leading to a loss of income or other impacts on livelihoods. Conflicts within land owning group. Conflicts between land owners and Govt. Conflicts over 'resource rents' or appropriate 'payments' for natural or cultural sites on custom land.	Early and ongoing engagement with all land owners and other affected people (tenants, squatters, resource users). Identify land requirements early. Prioritise the negotiation of agreements for all land access (and avoid compulsory acquisition wherever possible). Develop benefit sharing options with land owners. Provide entitlements and assistance as per the RPF	Design
	Introduction of game species resulting in community safety incidents / fatalities – human/wildlife conflict.	Ensure game farms are located in areas with low population density and adequately fenced. Early and ongoing engagement with affected persons.	Design. Design.
Vegetation clearing	**Impacts**	**Mitigation**	**Phase for implementing mitigation**
General food/plant processing	Untreated discharge of wastewater and sludges, contaminating water bodies Inappropriate disposal of wastes Noisy operations Odours Health and Safety	Treat all wastewater prior to discharge. Discharge treated wastewater to land where possible. Compost vegetative wastes or dispose at the nearest permitted landfill. Enclose noisy machinery within buildings and locate as far as possible from sensitive receptors. Provide adequate ventilation and exhausts for odours. Locate facilities away from sensitive receptors.	
Infrastructure: New or upgraded market places, road upgrades	Refer to civils works section above.		
Value-chain logistics	Increased road traffic impacting on safety of other road users Competition for utilities – power, water, mobile phone Competition for jobs		

Annex 8 - Template for Environmental & Social Management Good Practices Guide

MozBio 2

Template for Environmental and Social Management Good Practices Guide

This guide contains measures to be applied by Contractors and Subcontractors during construction activities. It shall be adapted for other activities and include any site specific environmental or social issue.

1. INTRODUCTION

Provide an overview of the subproject, environmental and social context and the purpose of this Environmental and Social Management Good Practices.

2. DESCRIPTION OF ACTIVITY

Describe the activity, the construction works required, the activities associated with the operational phase and planned decommissioning information. Include project components that may have an environmental or social impact, including:

3. KEY ENVIRONMENTAL AND SOCIAL IMPACTS AND RISKS

List and describe impacts and risks based on the list provided in Annex 8.

4. ORGANIZATIONAL STRUCTURE AND RESPONSABILITIES

List the key positions involved in project management, execution and supervision, specifically relating to the ESHS matters (including Contractor, MozBio Supervisor (ex. SDPI), LMU Safeguard and Finance).

Define responsibilities for each position.

5. MANAGEMENT RECOMMENDATIONS (example for Civil Works)

1. Prior to the Start of Works

- The Contractor shall visit the work site with the subproject proponent and the Safeguard Assistant

- With the Safeguard Assistant, Contractor shall meet with local authorities, community leaders and residents living next to the project site to:
    - introduce the Contractor to the authorities/community leaders and community,
    - Provide information about works' duration and schedule,
    - Provide information about required work force (foreigner and opportunities for locals),
    - Define the recruitment process, which shall be transparent and non-discriminatory (eg. on the basis of family status, ethnicity, race, gender, religion, language, marital status, birth, age, disability or political convictions). Recruitment of women shall be promoted.
    - Make any request to access or use community infrastructure (such as water supply), land or natural resources (eg. Sand, firewood),
    - Raise awareness about the risks associated with the construction activities and the need to limit access to the work area to third parties and domestic animals,
    - Raise awareness about the opportunities for engagement with the contractor, and
    - Establish a grievance redress mechanism.
- Define area for site establishment (including workers' accommodation, storage, workshop and the worksite itself):
    - Preference shall be given to already disturbed areas,
    - 'No-go' areas shall be clearly identified and marked. These shall include areas with large trees (>200 mm in diameter at chest height), cultivated lands or fruit trees, wetlands, grave sites or any sensitive environment or social site/area identified by the Safeguard Assistant,
    - Proximity to schools, health posts and households with vulnerable families (such as elderly, household members with chronic diseases) shall be avoided,
    - The worksite shall be clearly identified, and hazardous areas clearly marked (red tape / barricading of risk areas).
- Define access route and entry point to the worksite avoiding damage to households and associated structures, cultivated lands, fruit trees or any other potential source of income. In case of damage, the Contractor will be responsible for the payment of compensation to the affected party as per the MozBio 2 Resettlement Policy Framework.

2. Labour and Working Conditions

- Recruitment of children (under 18 years old) or forced labour are prohibited.
- Contractor shall enter into written contracts with all workers, defining tasks, responsibilities, duration of contract, hours of work, wage, and other relevant aspects included in the Labour Law,

- Contractor shall provide personal protective equipment (PPE) for all workers (helmets, boots, gloves, etc) as per the nature of the assigned job/tasks, at no cost to the worker. Contractor will train workers on the correct use of PPE and enforce its use,
- Contractor shall provide the relevant work tools and equipment, in good working condition, at no cost to the worker (eg. hammer, saw, toolbox),
- Contractor shall provide relevant Health and Safety training to workers so that they understand the risks and required precautions,
- Contractor shall provide the following to workers[34]:
    - Dedicated accommodation facilities for non-local workers, with adequate ventilation and thermal conditions, to promote the health, safety and well-being of workers;
    - Dedicated cooking and eating facilities (with shade, food storage and food preparation counters);
    - Potable water supply;
    - Suitable sanitation facilities, adequate for the number of staff on site, in order to minimize impacts on environmental quality and public health and ensure privacy. The use of portable chemical toilets is recommended (whenever possible) at a ratio of 1 toilet per 15 workers. Where portable toilets are not available, at a minimum, improved latrine(s) should be built. Separate washing facilities shall be established (so as not to overload the latrine put).
- Drugs and alcohol shall be prohibited on the construction site. Workers suspected to be under the influence of any such substances shall not be permitted on site – no entry to the accommodation facilities and no access to the work site.
- All workers shall have access to onsite sanitation facilities.
- Contractor shall sensitize workers to convey attitudes of respect and non-discrimination and prohibit attitudes of sexual harassment (such as prohibiting the use of language or behaviour, in particular towards women or children, that is inappropriate, harassing abusive, sexually provocative, demeaning or culturally inappropriate) and prohibit violence or exploration (such as prohibition of the exchange of money, employment, goods or services for sex, including sexual favours or other forms of humiliating, degrading or exploitative behaviour). Disciplinary action shall be taken where violations of the above occur.

3. Community Health and Safety

- Contractor will take steps to reduce risks to community members (especially children), placing warning signs and limiting access to the work area, keeping hazardous products in closed storage / warehouse and making provisions to

[34] These can be simple structures, built with local materials, adequate for the local climate.

prevent accidents involving vehicles and machinery (ex: instruct and enforce drivers to reduce speed in populated areas).

- Contractor shall ensure that neighbouring communities are sensitized of the risks posed by the activities and the care which shall be taken by community members (especially with regards to children and domestic animals).

4. Hazardous Substances, Fuel Storage and Maintenance Activities

- Hazardous substances should be covered from rain and sun, in locked storage areas, and placed on concrete floors (or at least in an area lined with strong plastic sheets). Contractors are encouraged to build bunded concrete floors to capture spills.
- Ensure that all equipment maintenance activities, including oil changes, are conducted within demarcated maintenance areas, adequately lined (eg. where oil changes take place) or using appropriate containment trays (such as a drum cut lengthways).
- Used oils shall not be disposed to the ground or into a water body. Contractors are encouraged to collect used oil, contaminated rags and others in clearly marked containers (such as drums) for removal from site.

5. Water supply

- Abstractions from natural water resources (e.g. springs, streams, lakes) shall be previously approved by the Safeguard Assistant, the SDPI, following consultation with local leaders.

6. Aggregates

- All aggregates required for construction of foundations or platforms shall be from permitted / licensed quarries.

7. Vegetation Clearance

- Contractor shall ensure that all negotiations and compensation for land, crops, trees, houses, grave sites and other relevant items have been satisfactorily completed (as defined in the MozBio 2's Resettlement Policy Framework), before the work site is cleared.
- No soil, vegetation or construction material shall be dumped in wetlands or water bodies.
- No burning of vegetation to clear the site will be permitted.
- The Contractor shall suspend works and notify the MozBio Supervisor if any previously unidentified graves or artefacts of archaeological or cultural significance are uncovered during site clearance. Work shall be stopped while the appropriate authorities are notified. Work may only re-commence once authorities have inspected the site and given approval to proceed.

8. Noise Control

- The Contractor shall keep noise levels within acceptable limits and construction activities shall, where possible, be confined to normal working hours.

9. Dust Control

- Dust is regarded as a nuisance when it reduces visibility, soils private property, is aesthetically displeasing or affects palatability of grazing. Dust generated by construction related activities must be minimised.
- The Contractor shall be responsible for the control of dust arising from activities.
- Control measures shall include regular spraying of working/exposed areas with water at an application rate that will not result in soil erosion or runoff.
- The removal of vegetation shall be avoided until such time as clearance is required and exposed surfaces shall be re-vegetated or stabilised as soon as practically possible.
- The excavation, handling and transport of erodible materials shall be avoid under high wind conditions.
- Where possible, soil stockpiles shall be sheltered from the wind.
- Vehicle speeds shall be limited to minimise the generation of dust on site and on access roads.

10. Sediment Control

- Ground disturbance shall be reduced to a minimum.
- When on a sloping site, Contractor shall trap sediment onsite using brush or silt fences.
- Runoff / water shall be diverted around the construction sites or disturbed areas, using ditches.

11. Waste Management

- The site is to be kept clean, neat and tidy at all times.
- To reduce the amount of waste, the Contractor is encouraged to find local uses for safe left over materials and packaging (ex: timber wastes can be used by community as firewood, empty drums may be triple rinsed and donated for storage). This shall be negotiated and agreed with local leadership to confirm need and agree on a process of distribution of materials.
- Contractor shall ensure the:
    - Provision of sufficient bins (preferably vermin and weatherproof) at the camp and work sites to store the solid waste produced on a daily basis.
    - Contractors are encouraged to promote waste separation.
    - Collection of refuse and waste generated by workers on a daily basis.

- Bio-degradable waste shall be composted on site (buried in dedicated shallow ditches and covered with vegetable matter and soil.
- Contractor is encouraged to recycle part of the waste stream subject to appropriate recycling facilities being available within reasonable travel distance.
- Identification of an appropriate site for depositing waste generated during the construction contract (eg. local borrow pit already in use for waste deposition, appropriate area near the work site for burial and cover of waste in dedicated pits).
- Hazardous waste such as used oil, batteries, etc. shall be kept separately and must be removed from the site by the Contractor prior to the end of the construction period. Contractors are encouraged to channel all hazardous waste to the nearest available facility (Maputo and Beira).
- No stockpiled waste is to be left on site after the work is completed.

12. Fire Prevention and Control

- The Contractor shall take all reasonable and precautionary steps to ensure that fires are not started as a consequence of project activities on site.
- Open fires within the conservation areas are prohibited.
- The Contractor shall ensure that there is basic fire-fighting equipment available on site. This shall include, but not be limited to:
    - Rubber beaters when working in grass/bush areas.
    - At least one fire extinguisher of the appropriate type when welding or other 'hot' activities are undertaken.
- Flammable materials should be stored under conditions that will limit the potential for ignition and the spread of fires.
- The Contractor shall ensure that all site personnel are aware of the fire risks and how to deal with any fires that occur. This shall include, but not be limited to regular fire prevention talks.

13. Restoration

- Rehabilitation shall be required for all areas disturbed by the works.
- The Contractor should implement a programme of progressive rehabilitation, i.e. once works are complete in particular areas.
- Restoration will include, at a minimum, removing unused materials, rubble and foundations, ripping any compacted ground to loosen soil, spreading topsoil evenly over the former site and re-establishing grass cover.
- Rehabilitation of all temporary access tracks, haul roads and any other disturbed areas outside of the approved working areas to their original condition.

14. Decommissioning of the Site

- On completion of the Contract, the Contractor shall decommission the worksite. This shall include the following:
    - Removal of all remaining structures, services, facilities, unless sold or handed over to the community.
    - Removal of all remaining construction rubble and waste, to be disposed of at an appropriate site.
    - Reinstatement and rehabilitation of all remaining disturbed areas, including temporary access routes, turning circles, parking areas, etc.

Annex 9 - Template for Safeguards Performance Report

Template for Safeguards Performance Report

Payments to contractors in respect of work carried out shall be made once the Procurement and Finance team has received an acceptable Safeguards Performance Report, the template of which is presented below.

1. Identification of Project

Name of subproject:

Type of project:

Location of project (including Landscape, Administrative Post, Community):

Status / phase of project implementation (mobilization / site preparation / construction / hand-over / demobilization / etc):

Date of report:

Author(s) of report:

Report prepared for:

2. Overview of compliance with safeguard requirements

Environmental and Social Management Good Practices Guide

Is an ESM Good Practices Guide in place for the project (Yes / No / N/A)?

Did the contractor comply with the requirements of the ESM Good Practices Guide?

Are there any outstanding actions from previous inspections or audits?

Additional comments:

Contractor Environmental and Social Management Plan

Is a Contractor ESMP in place for the project (Yes / No / N/A)?

Did the contractor comply with the requirements of the c-ESMP?

Are there any outstanding actions from previous inspections or audits?

Additional comments:

Contractor ESHS Code of Conduct

Is a Contractor ESMP in place for the project (Yes / No / N/A)?

Did the contractor comply with the requirements of the c-ESMP?

Are there any outstanding actions from previous inspections or audits?

Additional comments:

Contractor Environmental and Social Health and Safety (ESHS) Management Strategies and Implementation Plan (MSIP)

Is a MSIP in place for the project (Yes / No / N/A)?

Did the contractor comply with the requirements of the MSIP?

Are there any outstanding actions from previous inspections or audits?

Additional comments:

3. Recommendation to Procurement and Finance team

Payment is recommended without objection.

Payment is recommended subject to the following conditions and timelines.

Payment is not recommended.

Additional Comments:

Annex 10 - Template for Supervision and Inspection of Implementation of Environmental and Social Measures in Civil Works

MozBio 2

Template for Supervision and Inspection of Implementation of Environmental and Social Measures in Civil Works

TYPE OF ACTIVITY: CIVIL WORKS

This guide contains measures to be applied by Contractors and Subcontractors in construction activities. It shall be adapted for other activities and include any site specific environmental or social issue.

Mitigation Measure	Indicator to verify	Compliance		Observations
		YES	NO	
Camp Site				
Accommodation for workers	Verify its conditions			
Access to potable water	Verify the water source and treatment if required (chemical or boiling)			
Suitable sanitation facilities	Verify its conditions			
Work Site				
Labour				
written agreements with all workers,	Check written contracts			
Solid Waste Management				

Noise, Dust, Odour, others				
	Consult the neighbours to check if is there any grievance			
Hazardous Substances, Fuel Storage and Maintenance Activities				
Social				

Annex 11 – Template for Contractor's ESHS Code of Conduct

Contractor ESHS Code of Conduct

This Contractor ESHS Code of Conduct presents the minimum Code of Conduct requirements to be adhered to by all project contractors.

Contractors shall adapt this Code of Conduct to the nature of the activities they are contracted to perform under MOZBIO-2 subprojects.

CODE OF CONDUCT REQUIREMENTS

The obligations of this Code of Conduct apply to all project staff (including sub-contractors and day workers). Additional obligations may be added to respond to particular concerns of the region, the location or to specific project requirements.

The Code of Conduct shall address:

1. Compliance with applicable laws, rules and regulations
2. Compliance with applicable health and safety requirements (including wearing prescribed personal protective equipment, preventing avoidable accidents and a duty to report conditions or practices that pose a safety hazard or threaten the environment)
3. The use of illegal substances
4. Non-Discrimination (for example on the basis of family status, ethnicity, race, gender, religion, language, marital status, birth, age, disability, or political conviction)
5. Interactions with community members (for example to convey an attitude of respect and non-discrimination)
6. Sexual harassment (for example to prohibit use of language or behavior, in particular towards women or children, that is inappropriate, harassing, abusive, sexually provocative, demeaning or culturally inappropriate)
7. Violence or exploitation (for example the prohibition of the exchange of money, employment, goods, or services for sex, including sexual favors or other forms of humiliating, degrading or exploitative behavior)
8. Protection of children (including prohibitions against abuse, defilement, or otherwise unacceptable behavior with children, limiting interactions with children, and ensuring their safety in project areas)
9. Sanitation requirements (for example, to ensure workers use specified sanitary facilities provided by their employer and not open areas)
10. Avoidance of conflicts of interest (such that benefits, contracts, or employment, or any sort of preferential treatment or favors, are not provided to any person with whom there is a financial, family, or personal connection)
11. Respecting reasonable work instructions (including regarding environmental and social norms)
12. Protection and proper use of property (for example, to prohibit theft, carelessness or waste)
13. Duty to report violations of this Code

14. Non-retaliation against workers who report violations of the Code, if that report is made in good faith.
15. Landscape specific requirements, as detailed in the subproject ESMP, including prohibitions on hunting, illegal fishing, illegal logging and the use of fires to clear vegetation.

The Code of Conduct shall be a succinct document, written in plain language, and translated to local languages where applicable, and signed by each worker to indicate that they have:

- received a copy of the code;
- had the code explained to them;
- acknowledged that adherence to this Code of Conduct is a condition of employment; and
- understood that violations of the Code can result in serious consequences, up to and including dismissal, or referral to legal authorities.

Annex 12 – Summary of Public Consultation Process

Consultation ProcessMozBio II.pd