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**GOVERNMENT OF ANGOLA
MINISTRY OF AGRICULTURE
AGRICULTURE DEVELOPMENT INSTITUTE**

**SMALLHOLDER AGRICULTURE DEVELOPMENT AND
COMMERCIALIZATION PROJECT - MOSAP II**

ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK

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List of Acronyms

AWPB	Annual Work Plan and Budget
CGIAR	Consortium of International Agricultural Research Centers
EC	Environmental Coordination
EDA	Agrarian Development Station
EFL	Environmental Framework Law
ESIA	Environmental and Social Impact Assessment
EMBRAPA	Brasilian Company for Agriculture and Livestock
ESMF	Environmental and Social Management Framework
ESMP	Environmental Social Management Plan
FFS	Farmer Field School
GAPs	Good Agricultural Practices
GoA	Government of Angola
HIV/AIDs	Human immunodeficiency virus infection and acquired immune deficiency syndrome
IIA	Institue of Agrarian Research
IDA	Institute for Agrarian Development
IPM	Integrated Pest Management
IRLADP	Irrigation Rural Livelihoods and Agricultural Development Programme
M&E	Monitoring & Evaluation
MINAGRI	Ministry of Agriculture
MOSAP	Market Oriented Smallholder Agriculture Project
MOSAP II	Smallholder Agriculture Development and Commercialization Project
NGO	Non Governmental Organization
PAPAGRO	Programme for Acquisition of Agriculture and Livestock Products
PCO	Programme Coordination Office
	Project Implementation Unit
PNGA	National Environmental Management Plan
QGAS	Quadro de gestão Ambiental e Social
RAP	Resettlement Action Plan
R & D	Research & Development
RPF	Resettlement Policy Framework
SADC	Southern Africa Development Community
SESA	Strategic Environmental and Social Assessment
STD	Sexually Transmitted Diseases

TA	Technical Assistance
WB	World Bank
WHO	World Health Organization
WUA	Water User Association

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Sumário Executivo

O Grupo Banco Mundial (WB) está apoiar o Governo de Angola (GoA) na implementação do Projecto Desenvolvimento de Agricultura Familiar e Comercialização (SADCP também conhecido em Angola como MOSAPII), previsto para se iniciar em 2016 e com uma duração esperada de 5 anos. O MOSAP II abrangerá as Províncias de Malanje, Bié e Huambo e está organizado sob três componentes:

Componente 1. Capacitação e Desenvolvimento Institucional

O objectivo desta componente é fortalecer as capacidades técnicas, institucionais, de gestão e de marketing de 150.000 beneficiários e reforçar a capacidade dos serviços de extensão rural governamentais, instituições de investigação agrícola, provedores de serviços agrícolas privados e ONG's ligadas a diferentes aspectos da agricultura, incluindo cadeias de valor. Os resultados esperados são: (i) organizações de pequenos agricultores estabelecidas e reforçadas; (ii) competência técnica e de gestão dos pequenos agricultores melhorada; e (iii) a capacidade do Governo para apoiar a produção agrícola dos pequenos agricultores e comercialização na área do projecto reforçada.

Esta componente terá as seguintes três subcomponentes: (i) Fortalecimento da Capacidade de Pequenos Agricultores e Organizações de Agricultores através das Escolas de Campo; (ii) Fortalecimento Institucional de Unidades Locais, Provinciais e Nacionais do Ministério da Agricultura; e (iii) Reforço da Capacidade e Conhecimento Global para lidar com os Problemas de Investigação Emergentes

1.1 Fortalecimento da Capacidade de Pequenos Agricultores e Organizações de Agricultores através das Escolas de Campo

A primeira sub-componente lida com a formação de pequenos agricultores através das ECAs. O principal foco da formação será em (i) estabelecer e reforçar as organizações de pequenos agricultores; (ii) reforçar o conhecimento dos agricultores sobre práticas agrícolas melhoradas, tecnologia agrícola moderna, o uso de melhores insumos agrícolas e de comercialização agrícola; (iii) reforçar a alfabetização funcional e aritmética dos agricultores; (iv) melhorar a nutrição das famílias através da diversificação de culturas, mais variedades e nutritivas e melhores técnicas de preparação de alimentos; (v) melhorar a fertilidade do solo e gestão integrado de nutrientes; e (vi) promoção da agricultura de conservação, incluindo a formação em práticas agrícolas climaticamente inteligentes relacionadas com a conservação do solo, uso racional da água, fertilizantes, gestão integrada de nutrientes (INM) e promoção da gestão integrada de pragas. HIV / SIDA e questões de género serão sistematicamente integradas nas FFS, como questões transversais.

A capacidade dos pequenos agricultores e organizações de agricultores serão reforçadas em todos os aspectos críticos relacionados com a agricultura, utilizando e ampliando as Escolas de Campo, que estão actualmente a ser implementadas pela FAO, em conjunto com os serviços de extensão IDA/EDA's, nas três províncias a serem abrangidas pelo projecto proposto. As ECAs deverão beneficiar 150 mil pequenos agricultores. A metodologia capacita os pequenos agricultores para definir a sua própria agenda e toma medidas para

melhorar o seu conhecimento agrícola e situação económica. Também inclui formação de formadores-mestre (principalmente extensionistas das EDAs), que por sua vez treinarão outros extensionistas do Governo e facilitadores dos agricultores, utilizando o currículo reforçado e melhorado.

Para a aplicação efectiva da metodologia das ECAs, o Governo deve-se certificar de que cada comuna tenha pelo menos três extensionistas em cada EDA. Em termos de cobertura geográfica, espera-se que o projecto abranja todas as 80 comunas em 26 municípios até ao final do terceiro ano. O projecto visa cobrir pelo menos 30 comunas no primeiro, 60 no segundo e 80 por todo o terceiro ano. Isso irá garantir que todos os agricultores do grupo-alvo vão beneficiar pelo menos um ciclo de formação de ECA completo durante o projecto.

1.2: Fortalecimento Institucional de Unidades Locais, Provinciais e Nacionais do Ministério da Agricultura (MINAGRI)

A segunda subcomponente visa fortalecer a capacidade institucional do MINAGRI a nível nacional e descentralizado para fornecer os serviços complementares necessários para os investimentos do MOSAP II ao nível do terreno em áreas críticas de extensão rural, serviços de irrigação, informações de mercado, estatísticas agrícolas e análise de políticas. Em particular, o financiamento será fornecido para o seguinte:

- *Dados e estatística:* Apoio para expandir a recolha de dados para previsões de colheita (incluindo previsões) e pesquisas de pós-colheita através de financiamento para a formação dos recenseadores e a recolha de dados orientada nas áreas do projecto; produzir estatísticas regulares e relatórios a nível nacional; e apoio para o Censo Agrícola nacional previsto para 2016, conforme necessário.
- *Análise de políticas:* Apoio orientado para a capacitação em políticas e processos anuais de revisão sector, possivelmente com ligação para o compromisso de Angola ao abrigo do CAADP para instituir avaliações bianuais regulares do sector agrícola.
- *Sistemas de informação de mercado:* Apoio ao desenvolvimento de sistemas de informação de mercado; exploração de possíveis sistemas a serem desenvolvidos por grupos de agricultores ou comerciantes; e ligações com iniciativas do Ministério de Comércio em torno de sistemas de informação do mercado no contexto do PAPAGRO sob o Ministério do Comércio.
- *Pequenos sistemas de irrigação:* A reabilitação e desenvolvimento de pequenos sistemas de irrigação é parte das funções do IDA, dentro de seu mandato para apoiar o desenvolvimento da agricultura familiar no país, enquanto o desenvolvimento de sistemas de irrigação maiores enquadram-se no Departamento de Hidráulica do Ministério da Agricultura. O projecto irá fornecer formação técnica em sistemas de irrigação alimentados por gravidade a nível provincial e municipal para permitir o apoio técnico para as actividades de irrigação para o pessoal do IDA e apoio na preparação da regulamentação das Associações de Utilizadores de Água (AUA) ao GEPE dentro do MINAGRI.
- *Infra-estruturas para os extensionistas:* Há uma necessidade de reabilitar e/ou construir instalações de suporte à extensão rural ao nível local. Isso vai exigir a

construção e reabilitação de complexos de escritórios de extensão rural nas comunas seleccionadas. Estima-se que cerca de 40 novas residências e 10 novos escritórios serão necessários nos 80 municípios beneficiários. Esta actividade será implementada pela UIP/UIPIP's em colaboração com organizações de beneficiários locais. Como parte da contribuição do Governo, o Governo destinará recursos específicos para as operações e manutenção.

1.3 Reforço da Capacidade e Conhecimento Global para lidar com os Problemas de Investigação Emergentes

A terceira subcomponente visa fortalecer o nível da capacidade do sistema de pesquisa agrícola nacional e provincial de Angola para expandir o acesso a tecnologias que aumentem a produção agrícola e a produtividade. Isto incluiria o foco na ampliação da disponibilidade de tecnologias melhoradas dentro de Angola para as organizações de agricultores apoiadas pelo MOSAP II, preenchendo lacunas de conhecimento técnicos relativas a sistemas de cultivo prioritários e trazendo novos conhecimentos e tecnologias disponíveis dentro da região ou globalmente, onde apropriado. É dada especial atenção para as culturas e tecnologias preferidas pelas mulheres.

Seria fornecido, em especial, financiamento ao abrigo MOSAP II para o seguinte:

- *Multiplicação de sementes e material vegetativo.* Intensificar a produção de semente básica dentro do Instituto de Investigação Agrária (IIA), desenvolvimento de parcerias com produtores de sementes para aumentar a produção de sementes certificadas ou de qualidade declarada, e aumentar a produção e difusão de estacas de mandioca livres de vírus através de laboratórios de cultura de tecidos disponíveis (Malanje e Luanda)
- *Desenvolver pacotes tecnológicos recomendados para as culturas dos Projectos (cartas tecnológicas por culturas).* Embalagem e divulgação de recomendações para as culturas prioritárias para serem entregues pelos sistemas de extensão/prestadores de serviços técnicos.
- *Melhorar os serviços de análises de solo (análise de solos e recomendações de fertilizante).* Equipamento, capacitação e custos operacionais no Huambo e Malanje para melhorar as instalações de análises de solo e desenvolvimento de recomendações de fertilização.
- *Formação de investigadores nacionais e sistema de extensão sobre temas técnicos específicos por especialistas internacionais.* Apoio a parcerias para trazer conhecimentos externos para o benefício da investigação nacional e sistemas de extensão de parceiros como a EMBRAPA (Empresa Brasileira de Pesquisa Agropecuária), o CGIAR (Grupo Consultor de Investigação Agrícola Internacional) ou dentro da região da SADC (Comunidade de Desenvolvimento da África Austral).
- *Intensificação de testes/demonstração de novas tecnologias baseadas em tecnologias do CGIAR ou outro.* Apoio às actividades de I&D no IIA para testar novas tecnologias trazidas do sistema CGIAR, EMBRAPA ou de países dentro da região e destinadas às culturas prioritárias.

Componente 2- Apoio para o aumento da Produção e Comercialização

O objectivo desta componente é apoiar o desenvolvimento da cadeia de valor das culturas seleccionadas através de apoio ao investimento baseado na procura para as associações de pequenos agricultores para melhorar a produtividade, produção e acesso ao mercado para 50.000 beneficiários elegíveis como parte de organizações de agricultores. Estes beneficiários de apoio ao investimento serão seleccionados a partir dos beneficiários que foram treinados nas ECAs sob o MOSAP, MOSAP II e qualquer outro programa de formação apropriado. Esta componente apoiaria três tipos de investimentos na cadeia de valor, incluindo: (i) apoio à reabilitação e desenvolvimento de pequenos sistemas de irrigação; (ii) apoio à produção e melhorias de produtividade agrícolas; e (iii) o apoio aos investimentos em agregação de valor, incluindo as instalações de armazenamento, processamento e comercialização.

O Projecto contratará um provedor de serviços experiente e competente para fornecer o apoio necessário na implementação desta componente. O Provedor de Serviços trabalhará dentro das estruturas do IDA e apenas contratará especialistas internacionalmente qualificados para integrarem a equipa e também apoiará o IDA para lidar com problemas técnicos encontrados na cadeia de valor das culturas seleccionadas.

Um Manual de Implementação do Projecto (MIP) para o SADCPC será compilado e incluirá critérios de elegibilidade e do processo de selecção para os subprojectos de investimento. Estes podem variar de acordo com o tipo de apoio necessário, como descrito no anexo 2, mas a elegibilidade para cada investimento subsequente dependerá do desempenho satisfatório na fase de apoio ao investimento anterior, se houver. Um processo detalhado para identificação, avaliação e aprovação de propostas de subprojectos será descrita nas normas de execução constantes do Anexo 4 e detalhes serão também fornecidas no Manual de Implementação do Projecto.

Os pequenos agricultores beneficiários terão de fazer uma contribuição de 10-30 por cento (em espécie ou em dinheiro) para os investimentos financiados pelo projecto, dependendo do tipo de investimento. O processo de aprovação das propostas de subprojectos que procuram o apoio ao investimento é a seguinte:

(i) Comité de Apoio da Implementação do Projecto (CAIP) que aprovará os subprojectos entre US\$50,000 e US\$100,000. As primeiras cinco propostas em cada categoria terão revisão prévia e autorização pelo Banco; e

(ii) Comité de Apoio da Implementação do Projecto Provincial (CAIPP) que aprovará os subprojectos até US\$50,000, com as primeiras duas propostas de cada categoria para serem autorizadas pelo Banco.

O CAIP e o CAIPP terão representantes das ONG e do sector privado, para garantir que haja total transparência no processo de selecção para as propostas de subprojectos. As propostas de subprojectos de organizações de agricultores serão avaliados por um Comité Especial relativamente a critérios de selecção competitivos, como descrito no Anexo 2. Um conjunto

completo de critérios e procedimentos serão definidos no Manual de Implementação do Projecto. As organizações de produtores com fraco desempenho no MOSAP não serão elegíveis para qualquer novo apoio ao investimento ao abrigo MOSAP II. No entanto, todos os esforços serão feitos para chegar a um número diversificado e amplo de organizações de agricultores qualificadas sob o MOSAP II. Por outras palavras, a selecção de organizações de agricultores para o apoio ao investimento irá concentrar-se em ambos os critérios de equidade e eficiência. Estrategicamente, as actividades previstas para implementação no âmbito desta componente irão apoiar a implementação do Objectivo 2 da PND 2013-17, promovendo a cadeia de valor, o agronegócio, o desenvolvimento da irrigação e construção de infra-estruturas de apoio à produção agrícola.

Esta componente será dividida em duas subcomponentes: Subcomponente 2.1 vai lidar com o fornecimento de apoio técnico, enquanto a subcomponente 2.2 vai lidar com o fornecimento de apoio ao investimento para participar de organizações de agricultores e empresas.

2.1. Assistência Técnica

As modalidades de execução na prestação de apoio técnico incluem a contratação de um provedor de serviços experiente e competente para realizar trabalhos de viabilidade inicial para apoio ao investimento, para realizar trabalho de pré-identificação e mobilização da comunidade (incluindo a criação de associações de utilizadores de água), preparar os projectos para os sistemas de irrigação de pequena escala, para ajudar a preparar todas as propostas de subprojectos para apoio ao investimento como parte da iniciativa de subvenções do projecto, para garantir a sustentabilidade ambiental e social para as propostas de subprojectos propostos (em conformidade com as políticas de salvaguarda do Banco Mundial) e para monitorar o desempenho e supervisionar a implementação de todos os subprojectos em apoio ao investimento. O fornecedor de serviços também irá garantir que tecnologias melhoradas e conhecimentos estão disponíveis para organizações de pequenos agricultores e seus membros de tal forma que as propostas de subprojectos sejam economicamente, financeiramente, socialmente e ambientalmente viáveis e sustentáveis. O Provedor de Serviços terá reforçará a capacidade através de capacitações a técnicos seleccionados do MINAGRI ao nível nacional e provincial na implementação do Projecto de forma a melhorar a sustentabilidade.

O fornecedor de serviços vai reforçar a capacidade em três áreas: (i) ajudando as organizações de agricultores a preparar propostas de subprojectos para a procura de financiamento competitivo sob a Componente 2; (ii) reforçar a capacidade dos fornecedores de serviços agrícolas privados para fornecer insumos e serviços agrícolas vitais aos pequenos agricultores; e (iii) a capacidade das empresas privadas será reforçada na comercialização agrícola, pós-colheita, cadeias de valor específicas e processamento para que os pequenos produtores tenham um acesso fácil aos mercados para vender os seus excedentes.

Actividades de desenvolvimento de capacidades específicas em cada uma das três Províncias irão incluir: (a) formação das associações na preparação de propostas de investimento para vários subprojectos para financiamento no âmbito do projecto, bem como apoio para capacidades de gestão e de negócios de novos e existentes empresários do agronegócio; (b) sessões de sensibilização e informações com fornecedores de insumos e prestadores de

serviços de produção agrícolas; e (c) o apoio aos prestadores de serviços sobre a forma de realizar avaliações de mercado, estudo ou desenvolvimento de plano de negócios.

Em coordenação com a UIP, a UPIP e o IDA, o Provedor de Serviços organizará pelo menos três seminários por Província por ano, para cobrir os seguintes públicos-alvo: associações de agricultores, fornecedores de insumos privados e outros intervenientes privados no sector.

2.1.1. Subprojectos de Irrigação.

Quanto à reabilitação e/ou desenvolvimento de sistemas de irrigação, esta será a uma escala piloto e cobrirá apenas 1.000 ha dos potenciais 5.500 ha disponíveis no País. A concepção de sistemas de irrigação e supervisão da construção será feita ao abrigo da subcomponente 2.1, enquanto a construção efectiva e o seu financiamento será feito ao abrigo da subcomponente 2.2.

Dados iniciais indicam que existem cerca de 279 sistemas de irrigação cobrindo cerca de 5.500 ha nas três províncias que requerem reabilitação. Contudo, o nível de reabilitação necessária varia. Dadas as limitações de capacidade e os custos de reabilitação, estima-se que o projecto só vai apoiar a reabilitação de pequenos sistemas de irrigação para cerca de 1.000 ha, beneficiando cerca de 2.000 agricultores (em média, 0,5 ha cada). Assumindo uma média de 32 ha por sistema de irrigação, o projecto cobrirá cerca de 32. O investimento em sistemas de irrigação vai o processo de planeamento e desenvolvimento participatório integrado (detalhes deste processo, tal como os critérios de elegibilidade encontram-se no Anexo 2). As Associações de Utilizadores de Água serão estabelecidas de forma a assegurarem sustentabilidade do investimento e para evitar possíveis conflitos futuros.

2.1.2. Apoio técnico à Produção e subprojectos de gestão pós-colheita

O objectivo desta subcomponente é aumentar a produção de culturas e a parte de produção agrícola que é comercializado pelos pequenos agricultores, acelerando assim a transição da agricultura de subsistência para uma agricultura comercial. O Provedor de Serviços será responsável, entre outras coisas, pelo seguinte: (i) identificar a procura orientada de subprojectos potencialmente críticos para aumentar a produtividade das culturas e produção, bem como a adição de valor pós-colheita e comercialização; (ii) apoiar a elaboração de propostas de subprojectos que cumpram os critérios de elegibilidade para o apoio ao investimento e têm uma boa oportunidade de selecção competitiva para o apoio no âmbito da Componente 2; (iii) fiscalizar a aplicação dos subprojectos propostos que foram seleccionados para o financiamento ao abrigo da Componente 2. Para além disso, o Provedor de Serviços também capacitará técnicos do MINAGRI na implementação do Projecto e assim reforçar as instituições agrícolas no País. É extremamente importante que esta Componente apoie subprojectos agrícolas que sejam viáveis, sustentáveis e possam dar um contributo importante para aumentar a produtividade e comercialização, incluindo a adição de valor.

2.2. Apoio ao Investimento

Será fornecido apoio ao investimento para os sub-projetos inovadores que foram

seleccionados competitivamente e lidam com irrigação, produção ou cadeia de valor individualmente ou num pacote clara e plenamente justificado de investimentos para irrigação, produção ou cadeia de valor. Mais detalhes, critérios de elegibilidade e as despesas elegíveis para cada uma das categorias são fornecidas no Anexo 2. Enquanto o menu de opções de investimento será flexível, os critérios de elegibilidade serão rigorosamente seguidos. Os destinatários dos apoios terão de contribuir com 10-30 por cento dos custos dos subprojectos em espécie ou dinheiro.

2.2.1. Investimentos em Sistemas de Irrigação e Infra-estrutura de Suporte

O objectivo desta componente é financiar a infra-estrutura necessária para aumentar a produtividade e rentabilidade da agricultura familiar irrigada, tendo em conta as salvaguardas ambientais e sociais associadas com as obras de construção civil. Com base nos projectos participativos e critérios de elegibilidade, o MOSAP II financiará os custos de reabilitação/construção de irrigação. O desenvolvimento da infra-estrutura de irrigação é baseado em propostas de investimento claramente articuladas e compromissos dos beneficiários em regime de desenvolvimento e de Operações e Manutenção. Investimentos de infra-estrutura não serão feitos antes de questões críticas como os direitos de utilização de terras e de águas forem garantidos.

Em geral, as obras de reabilitação e construção consistirão no seguinte: (i) modernização da área em torno da tomada e do canal principal (ii) construção de estruturas de colecta para a acumulação de água a ser distribuída e/ou reabilitação de diques danificados; (iii) a instalação de estruturas de controlo como portões de água, (iv) a actualização (de escavação) dos principais canais e, se necessário, revestimento de trechos críticos do sistema de distribuição, (v) uso de plantas local/ relva para controlar a erosão do canal. Em locais onde a instalação de tubos enterrados é viável, os canais de terra cavados à mão podem ser substituído por tubos para evitar perdas de água. Levando-se em conta o custo unitário mais elevado de instalação de sistemas de tubos enterrados gravidade, o custo e os benefícios desta opção será avaliado e discutido com a comunidade antes da instalação de qualquer um desses sistemas.

O MOSAP II irá apoiar uma mistura de métodos de construção, incluindo os métodos de construção à base de plantas e de trabalho intensivo que serão projectados para po seguinte: (i) reforçar a capacidade local na construção e manutenção de irrigação; (ii) criar o empreendedorismo local para fornecimento sustentável de serviços de irrigação, e (iii) entregar investimentos para a construção de irrigação a tempo, de alta qualidade e com custos potencialmente mais baixos de construções de equipamentos baseados em projectos de irrigação passados em Angola. A escolha do método de construção será baseado caso-a-caso na fase de viabilidade, pois isso irá determinar as fases subsequentes do projecto/supervisão e de concurso. Após visitas de campo a algumas das áreas, estimou-se que o custo do desenvolvimento e reabilitação dos sistemas de irrigação de pequena escala rondaria entre os US\$ 1.000-2.000/ha.

2.2.2. Apoio ao Investimento na Produção Agrícola.

1. O principal objectivo desta subcomponente é apoiar um aumento sustentável da

produtividade agrícola dos pequenos agricultores e da produção. Para atingir este objectivo, a subcomponente irá fornecer financiamentos para organizações de pequenos agricultores para investimentos em activos agrícolas. As actividades específicas que são susceptíveis de serem consideradas para o apoio ao investimento são pacotes de tecnologia agrícola à base de procura que são projectados para aumentar a produtividade agrícola e da produção numa base sustentável (ver opções de investimento no Anexo 2). O foco principal será nas culturas que foram identificadas como culturas prioritárias para as áreas de projecto ou seja, milho, feijão, mandioca, batatas e culturas hortícolas.

A fim de obter financiamentos para investimento dos subprojectos, as organizações de agricultores elegíveis terão de apresentar propostas de subprojectos. A subcomponente 2.1 vai ajudar os participantes elegíveis na preparação de propostas detalhadas de subprojectos que permitirão uma decisão informada sobre a sua viabilidade a partir das perspectivas técnicas, económicas, financeiras, sociais e ambientais. Propostas de subprojectos podem ser apresentadas para qualquer investimento que contribua para aumentar a produção e a produtividade da cultura.

As propostas serão identificadas, avaliadas e seleccionadas com base em critérios que foram resumidos no Anexo 4. Um conjunto completo de critérios e procedimentos serão definidos no Manual de Implementação. As propostas serão avaliadas e seleccionadas por um comité técnico independente com base nos critérios definidos. Embora os mecanismos de desembolso e adiantamentos possam variar, tendo em consideração o tipo de subfinanciamento, as despesas elegíveis são para Bens, Obras e Serviços.

2.2.3. Apoio ao Apos –Colheita e Adição de Valor.

O principal objectivo desta actividade é promover investimentos destinados a aumentar a agregação de valor, reduzindo as perdas pós-colheita e fortalecendo vínculos de mercado para as principais culturas e horticultura na área do projecto.

O objectivo final é melhorar o desempenho e a eficiência das cadeias de valor orientadas. Esta actividade irá apoiar investimentos relacionados com as ligações de mercado e comercialização de culturas-chave e horticultura (ver opções de investimento no Anexo 2). Todos os subprojectos que solicitarem financiamento ao abrigo desta subcomponente irão preparar uma proposta de projecto e um plano de negócios que vai passar por um processo de avaliação completa para determinar a sua viabilidade económica e sustentabilidade, também em termos de seu impacto ambiental e social.

Apoios financeiros para as organizações de agricultores e actividades de adição de valor nas empresas rurais são fundamentais para a sustentabilidade do investimento público no desenvolvimento da irrigação em pequena escala, bem como investimentos na produção agrícola. Os beneficiários elegíveis para o apoio ao investimento da cadeia de valor incluem, portanto, as organizações de pequenos agricultores que provaram as capacidades de produção orientada para o mercado e/ou actividades da cadeia de valor. Uma importante característica distintiva desta segunda janela serão subprojectos mais complexos que podem exigir várias fases de apoio ou maior foco em serviços de desenvolvimento empresarial.

Componente 3: Gestão do Projecto, Monitoria e Avaliação

A terceira componente irá financiar a gestão, coordenação e monitoria e avaliação do Projecto e consiste em duas subcomponentes:

3.1 Gestão do Projecto

A finalidade desta subcomponente é assegurar que o projecto seja implementado correctamente, a tempo e de acordo com o Acordo de Empréstimo. Esta seria a responsabilidade de um Coordenador de Projecto e uma pequena equipa de especialistas localizados nos níveis nacional e provinciais ou municipais. Será fornecido financiamento para apoiar actividades de coordenação do projecto, incluindo planeamento e orçamento, gestão e administração, monitoria e avaliação, cumprimento de salvaguardas e compromisso nacional e provincial. Os recursos de contrapartida do Governo serão utilizados para pagar os custos relativos ao pessoal não elegível para financiamento do IBRD. Os arranjos finais para a gestão de projectos irão incorporar as lições aprendidas sob o MOSAP em termos de organização, pessoal e tempo. Despesas elegíveis ao abrigo desta componente poderão incluir actividades de financiamento em conexão com a preparação dos novos sub-projectos agrícolas destinados a apoiar o desenvolvimento da agricultura comercial.

3.2 Monitoria e Avaliação do Projecto:

O sistema de Monitoria e Avaliação (M&A) será estabelecido e responsável pela recolha e tratamento de informação adequado para monitorar o desempenho do projecto e medir os resultados e, eventualmente, o impacto das actividades do projecto ao longo do tempo. As informações base também serão recolhidas no início da implementação do projecto.

As actividades do MOSAP II beneficiarão pequenos agricultores com lotes de terreno inserido em sistemas de regadio. O Ministério da Agricultura, através do Instituto de Desenvolvimento Agrário (IDA) será a entidade responsável pela implementação. Enquanto entidade coordenadora, o IDA estabelecerá uma Unidade de Implementação do Projecto (PIU) com subunidades ao nível de cada Província, com a responsabilidade de coordenação e gestão, com recurso a Assistência Técnica, se necessário.

O MOSAP II cobrirá todo o país no que diz respeito às actividades de reforço da capacitação e desenvolvimento institucional. Contudo, ao nível dos investimentos o MOSAP II irá abranger as mesmas três Províncias nas quais se desenvolveu o MOSAP (Bié, Huambo e Malanje), contudo cobrindo um número significativamente maior de municípios. O MOSAP cobriu 12 municípios e 50,000 beneficiários enquanto o MOSAP II pretende expandir o número de municípios e atingir cerca de 175,000 beneficiários directos.

Objectivo do Quadro de Gestão Ambiental e Social (Plano de Salvaguardas Ambientais e Sociais)

Como parte da identificação e gestão efectiva de potenciais impactes sociais e ambientais induzidos pelo MOSAP II, há a considerar diversos instrumentos de gestão ambiental e social, incluindo (i) o Quadro de Gestão Ambiental e Social, (ii) o Plano de Gestão Ambiental e

Social, (iii) a Avaliação de Impacte Ambiental e Social, (iv) o Quadro da Política de Reassentamento, (v) o Plano de Ação para o Reassentamento e (vi) o Plano Integrado de Gestão dos Pesticidas. Sempre e quando necessário, estes instrumentos devem ser desenvolvidos seguindo as normas de boas práticas internacionais bem como as políticas e normas do Banco Mundial e os requisitos da legislação nacional Angolana. O presente Quadro de Gestão Ambiental e Social (QGAS) estabelece o quadro geral relativo às principais considerações ambientais e sociais e fornece orientação para o desenvolvimento dos instrumentos específicos de gestão ambiental e sociais relacionados com as intervenções previstas no MOSAPII.

Este Quadro de Gestão Ambiental e Social (QGAS/ESMF) foi desenvolvido como parte integrante do desenho do MOSAP II, com o objectivo de abordar e integrar as principais questões ambientais e sociais. Assim, os principais objectivos do Quadro de Gestão Ambiental e Social são:

- Identificação e estabelecimento de procedimentos e metodologias para a avaliação dos impactos ambientais e sociais, revisão, aprovação e implementação dos investimentos a ser financiados pelo projecto;
- Especificação dos papéis e responsabilidades e definição dos procedimentos necessários para a gestão e monitorização das questões ambientais e sociais relacionadas com os investimentos do projecto;
- Identificação das necessidades de formação, capacitação e assistência técnica para assegurar a implementação do Quadro de Gestão Ambiental e Social;
- Disponibilização de outra informação relevante para a implementação do Quadro de Gestão Ambiental e Social.

Legislação Nacional

A legislação nacional mais relevante relativamente à gestão ambiental e outros aspectos importantes para o MOSAP II inclui:

- Lei de Bases do Ambiente, Lei nº 5/98, de 19 de Junho.
- Decreto sobre a Avaliação de Impacto Ambiental, Decreto 51/04 de 23 de Julho.
- Decreto sobre Licenciamento Ambiental, Decreto 59/07, de 13 de Julho.
- Lei de Terras, Lei nº 9/04 de, de 9 de Novembro.
- Decreto Executivo nº 92/12, de 1 de Março sobre conformidade dos EIA.
- Decreto Executivo nº 87/12, de 24 de Fevereiro, sobre Consulta Pública no âmbito da AIA.
- Lei nº3/06, de 18 de Janeiro – Lei das Associações de Defesa do Ambiente.
- Decreto nº1/10, de 13 de Janeiro – Auditorias Ambientais.
- Lei 3/04, de 25 de Junho – Lei do Ordenamento do território e do Urbanismo.
- Decreto nº2/06, de 23 de Janeiro – Regulamento Geral dos Planos Territoriais, Urbanísticos e Rurais.
- Portaria nº10.375 de 15 de Outubro de 1958 – Regulamento dos Parques Nacionais.
- Decreto nº40.040, de 20 de Janeiro de 1955 – Regulamento da proteção dos recursos da flora, das espécies vegetais e recursos florestais.

- Decreto Presidencial nº190/12, de 24 de Agosto – Regulamento sobre Gestão de Resíduos.
- Lei 6A/04, de 8 de Outubro – Lei dos Recursos Biológicos Aquáticos.
- Decreto Presidencial 261/2011, de 6 de Outubro – Normas de aferição da qualidade da água na perspectiva da proteção da saúde pública, gestão integrada dos recursos hídricos e preservação do ambiente.
- Decreto Lei nº6/02 de 21 de Junho – Lei das Águas.
- Decreto Presidencial nº82/14, de 21 de Abril – Regulamento Geral de Utilização Geral dos Recursos Hídricos.
- Lei nº14/05, de 7 de Outubro – Lei do Património Cultural.
- Lei nº 2/00, de 11 de Fevereiro – Lei Geral do Trabalho.

Políticas de Salvaguardas Ambientais do Banco Mundial

Durante a concepção do MOSAP II, quatro das políticas de salvaguarda operacionais a 10 + 2 do Banco Mundial foram identificadas como trigered pelas intervenções MOSAP II (Avaliação Ambiental, Reassentamento Involuntário e manejo de pragas).

- **Avaliação Ambiental (OP / BP 4.01):** Tem o objetivo de assegurar que os projectos financiados pelo Banco Mundial são ambientalmente saudáveis e sustentáveis, e que a tomada de decisão é baseada na análise adequada de acções e mitigação de seus impactos ambientais e sociais prováveis. Esta política é acionado se um projeto tem potenciais impactos e riscos ambientais adversas em sua área de influência

O MOSAP II foi designado como Categoria B. A construção e reabilitação de sistemas de irrigação, estradas de acesso e outras infraestruturas, sob a MOSAP II, são susceptíveis de ter impactos ambientais e sociais que requerem mitigação. Portanto, em linha com a Política Operacional, a ESMF foi preparado para rastreio de atividades do MOSAP II.

- **OP 4.09: Maneio de Pragas:** Esta política promove o uso de manejo integrado de pragas (MIP) técnicas que visam minimizar o uso de pesticidas sintéticos, bem como a utilização, manuseamento, armazenamento e eliminação de pesticidas em geral. Esta política aplica-se ao MOSAP II desde pesticidas será financiada, e que a maioria da gestão das bacias hidrográficas e de promoção de meios de subsistência alternativas atividades são irrigação em pequena escala ou outros sistemas de produção onde são utilizados pesticidas

- **Reassentamento Involuntário (OP / BP 4.12):** Esta política se aplica a todos a aquisição de terras e qualquer alteração no acesso aos recursos devido a um sub-projeto. A política se aplica ou não a vítima deve mover-se para outro local.

- **Segurança de Barragens (OP / BP 4.37):** Esta política aplica-se a novos e actuais barragens, incluindo pequenas barragens menos de 15m de altura para a qual requer medidas de segurança de barragens genérica, criada por engenheiros qualificados a ser incorporados.

Política de Salvaguardas National Legal Framework Vs do Banco Mundial

No nível quadro não haja lacunas relevantes entre a legislação ambiental angolana e política e diretrizes de salvaguardas do Banco Mundial. A legislação ambiental em Angola é bastante recente e inspirado pelas convenções internacionais de que Angola é parte. Especialmente em relação com a avaliação de impacto ambiental, também a legislação em vigor abrange os princípios e as melhores práticas mais relevantes. Na legislação Angolana os projectos de irrigação e agro -hidráulico são objecto de AIA [c) eh] do nº1 no anexo do Decreto 51/04 de 23 de Julho] .

Responsabilidades Institucionais

MOSAP II sera implementado pela Unidade de Implementação do Projecto MOSAP existente, incluindo a transferência do pessoal e arranjos de implementação.

Nacional: A nível nacional, o projecto será implementado por MINAGRI. MINAGRI será responsável pela execução global do projecto, em consulta com os outros Ministérios pertinentes a nível nacional, a fim de assegurar que as atividades do projeto são consistentes com as políticas nacionais. Um Comitê de Coordenação do Projecto (PCC), presidido pelo Ministro (ou, por delegação, o Secretário de Estado da Agricultura) supervisionará a implementação global do projecto, incluindo a aprovação do plano de trabalho e do relatório anuais. O Diretor Geral da ADI (dentro MINAGRI) será o gerente de nível executivo do projeto. A Unidade de Implementação do Projecto (PIU), dirigido por um Coordenador de Projeto será estabelecido na ADI e acusado de gestão (nível nacional) do dia-a-dia do projeto. Uma pequena unidade executiva de Implementação do Projeto Sub-Committee (PISC) do PCC será estabelecido para acelerar a implementação do projeto e tomada de decisão.

Provincial: Ao nível provincial, o Instituto de Desenvolvimento da Agricultura (DDA) será responsável pela execução do projecto, em coordenação com a Direcção Provincial da Agricultura e em consulta com outras agências governamentais provinciais relevantes, bem como representantes a nível provincial dos outros ministérios que são envolvidos. A Comissão Provincial de Coordenação do Projecto (PPCC), presidido pelo Vice-Governador responsável pelo desenvolvimento econômico, vai supervisionar a implementação do projecto, incluindo o andamento do projeto de acompanhamento ao nível provincial e tomar decisões em conformidade com os objectivos e disposições institucionais consistentes com o documento do projeto e acordos legais. O Director Provincial da IDA será responsável pela execução do projecto. A Unidade de Projecto Provincial de Implementação (IIPC), dirigido por um Coordenador de Projeto Provincial será estabelecido na ADI provincial e responsável pela administração do dia-a-dia do projeto a nível provincial. Uma pequena unidade executiva Projeto Provincial de Implementação Sub-Committee (PPISC) da PPCC será estabelecido para as decisões e procedimentos de velocidade-up.

Municipal: No nível municipal, o IDA (EDA) será responsável pela execução do projecto, em coordenação e consulta com a administração municipal. A EDA obterá o consentimento da administração municipal antes de encaminhar propostas de sub-projectos a nível provincial. O projeto vai ajudar na capacitação dos EDAs, a prestar melhor assistência aos caompones a nível local.

O projeto será implementado em três províncias; Bié, Huambo e Malanje. Cada província benfeciaria terá uma Unidade de Implementação do Projeto Provincial (PPIU). Além dos

três PPIU o projeto terá uma unidade de coordenação central do projeto, em Luanda, e vai contratar quatro Ambiental e salvaguardas sociais Ponto Focal (SEFP), um para a coordenação a nível nacional e três para coordenação a nível provincial, um para cada um dos três províncias beneficiárias. O SEFP vai garantir o cumprimento das atividades do projeto proposto com leis relevantes Angola e regulamentos ambientais e as políticas de salvaguardas do Banco Mundial acionadas. Eles serão responsáveis pela triagem, acompanhamento e elaboração de relatórios sobre as salvaguardas requisitos, incluindo o apoio necessário e oportuno para a preparação de AIAS / ESMP, conforme necessário. Esta iniciativa será acompanhada de uma série de seminários regionais de formação a serem organizadas para todos os atores envolvidos, como a equipe de coordenação do projeto em todos os níveis, grupos de beneficiários, empreiteiros e outros parceiros do projeto relevantes, na implementação da política de salvaguardas sociais e ambientais sobre a eficácia do projeto. Os especialistas do Grupo Banco Mundial e salvaguarda ambiental social vai treinar a equipa a nível nacional e provincial / municipal em todas as questões relacionadas com as áreas protegidas, florestas. Além disso, as autoridades competentes, como o Ministério do Meio Ambiente e suas delegações ao nível provincial e municipal vão ser sistematicamente envolvidos.

Processo de preparação, revisão e aprovação da Avaliação de Impacte Ambiental e Planos de Gestão Ambiental

O Quadro de Gestão Ambiental e Social estabelece os procedimentos, responsabilidades e forma de reporte a adoptar pela Unidade de Implementação do Projecto relativas aos impactes ambientais e sociais, incluindo:

- Avaliação preliminar dos subprojectos
- Categorização Ambiental e Social das intervenções
- Passos a seguir na Avaliação Ambiental e Social, incluindo a submissão para aprovação
- Procedimentos relativos à consulta e participação pública
- Revisões e relatórios periódicos
- Auditoria ambiental e social anual
- Orientações relativas aos potenciais impactes ambientais e sociais dos subprojectos
- Mecanismos de cumprimento de regulamentos
- Descrição de responsabilidades.

Principais impactos ambientais e sociais do MOSAP II

Embora os locais reais dos projetos e subprojetos a serem apoiados não são conhecidos, os impactos potenciais apresentados no ESMF são baseadas em visitas de campo e consultas realizadas e servem como orientação para uma avaliação exaustiva uma vez que os locais e os subprojetos forem selecionados.

O projeto proposto é um projeto de Categoria B como todos os impactos potenciais identificados para os sub-projectos são específicos do local; poucos se algum deles sera irreversível; e em todos os casos as medidas de mitigação podem ser facilmente projetadas.. A maioria das actividades visam a intensificação da agricultura e aumentar o nível de produtividade das culturas seleccionadas. O aumento da produtividade será conseguido

principalmente através da prestação de formação aos agricultores e melhor acesso a insumos (sementes e fertilizantes). Estima-se que famers não irá expandir o areaand média das superfícies cultivadas serão mantidos em 1,37 ha variando 1-2 ha. Em Componente 1 do projeto, haverá algumas obras de construção civil (construção de edifícios), e sob o Componente 2 de produção e pós-colheita sub-projectos agrícolas, reabilitação de sistemas de irrigação, instalações de armazenamento e delimitação de terras. Alguns dos diversos impactos poderiam incluir a erosão do solo e acumulação de água, alteração dos fluxos de água devido a esquemas de irrigação, incluindo os riscos para a saúde humana por esses pesticidas manipulação. Detalhes e localização exacta dessas actividades não será conhecido até que a implementação do projeto. Os impactos sociais podem incluir perda de terras durante a delimitação, a utilização de recursos como a água ea saúde e segurança durante a construção.

Apesar de alguns impactos negativos são esperados a partir deste projeto, há também impactos positivos significativos que neutralizam os negativos. Os impactos positivos incluem: melhoria do rendimento dos agricultores participantes, melhorou a segurança alimentar a nível do agregado familiar, a melhoria das práticas. Assim, da implementação do MOSAP II resultarão alguns impactes ambientais e sociais que podem ser negativos ou positivos. Os principais impactes esperados são os seguintes:

Na fase de construção

Impactes sobre a paisagem, habitats e biodiversidade – durante a fase de construção é expectável a ocorrência de danos sobre o coberto vegetal, devido à instalação de infraestruturas de irrigação a par de remoção localizada de árvores e arbustos por via do alinhamento dos canais. A deposição de materiais removidos para remodelação topográfica, escavação de canais e a construção de pontos de tomada de água, induzirão perdas de solo e degradação da paisagem bem como a fragmentação de habitats e perturbação da vida selvagem.

Ruído, vibrações e emissões – ocorrerão no decurso das actividades de transporte e operação de maquinaria. Emissão de poeiras e gases oriundos da combustão de motores de veículos e maquinaria resultarão na perda de qualidade do ar podendo também induzir implicações na saúde humana.

Produção de resíduos – a construção e reabilitação de acessos gera resíduos de material inerte bem como de construção. A concentração de trabalhadores também contribui para a criação de zonas localizadas de concentração de resíduos.

Impactes sobre sítios de interesse arqueológico ou cultural – apesar de não haver registo de locais de interesse cultural ou patrimonial nas áreas de intervenção do projecto, existe o risco potencial dessa ocorrência, incluindo cemitérios ou campas individuais.

Impactes sociais – impactes sobre o uso informal da terra ou da água podem ocorrer durante as fases de reabilitação de acessos rodoviários a novas áreas de irrigação. As actividades e construção vão gerar oportunidades de emprego a nível local. Por outro lado, o incremento de HIV/SIDA e outras doenças sexualmente transmissíveis é expectável pelo afluxo de população gerado pelas oportunidades de emprego.

Acidentes de trabalho – a fraca capacidade técnica e negligência na operação de veículos e maquinaria podem induzir acidentes. A falta ou uso indevido de equipamento de proteção individual contribui igualmente para acidentes.

Na fase de operação

Gestão ambiental e de recursos naturais- reabilitação de sistemas de regadio e de drenagem trará significativos impactes positivos para a população rural e para as condições ambientais no geral, bem como para a gestão dos recursos naturais, em particular no que diz respeito à água e paisagem. A gestão integrada da água e implementação de boas práticas contribuirá para a redução da perda de recursos naturais e contribuirá decisivamente para a gestão sustentável da paisagem.

Sócio-economia – os sistemas de irrigação e drenagem induzirão significativos impactos positivos nas populações rurais ligadas à agricultura, por via do aumento e diversificação das produções, gerando maiores rendimentos e consequentemente melhores condições de vida. A reabilitação de estradas contribuirá para uma maior segurança e para o acesso a mercados e serviços sociais, de que resultarão impactos positivos na qualidade de vida das populações.

Saúde humana – a produção agrícola em regadios bem organizados levará ao aumento do uso de agroquímicos. O incorreto manuseamento e utilização dos agroquímicos aumentará o risco de problemas de saúde dos utilizadores e consumidores de produtos agrícolas.

A introdução de novas culturas promoverá alterações nos hábitos alimentares com a introdução de novos nutrientes, contribuindo para uma alimentação mais saudável.

Poluição da água e do solo – o uso de agroquímicos pode contribuir para a contaminação do solo e água (superficial e subterrânea). A manutenção de canais de rega, albufeiras e pequenas barragens gera materiais dragados que podem contaminar o solo.

Erosão e retenção de água – a inadequada manutenção das infraestruturas de rega pode gerar pequenas inundações ou criação de charcos e potenciar erosão do solo.

Conservação de habitats e biodiversidade – a identificação e implementação de medidas de conservação para determinadas áreas de interesse conservacionista pode contribuir positivamente para a preservação de algumas espécies. Por outro lado, em algumas áreas existe o potencial conflito com algumas espécies selvagens que podem invadir campos agrícolas (ex.: aves, hipopótamos).

Resiliência às alterações climáticas – a introdução de culturas adaptadas às condições climáticas e a promoção de boas práticas contribui significativamente para a gestão do solo e recuperação de áreas florestais e outras atividades de conservação, aumentando a resiliência natural e social. Os pequenos regadios são em si mesmo instrumentos de adaptação às alterações climáticas e contribuindo para o aumento da resiliência social.

Planos de Mitigação

Será necessário elaborar e implementar Planos de Gestão Ambiental e Social (ESMPs) específicos para cada projecto e área, os quais assegurarão a implementação de medidas de mitigação apropriadas, de modo a evitar e/ou minimizar quaisquer impactes potenciais resultantes das atividades do projecto.

Reforço das capacidades institucionais, capacitação e formação

No âmbito das atividade se organização do MOSAPII, a Coordenação Ambiental fará parte da Coordenação Geral do Projecto, assegurando a coordenação geral das componentes e atividades ambientais e sociais, nas quais se incluem a gestão e supervisão das medidas de salvaguarda ambientais e sociais. Neste sentido a Coordenação Ambiental deve ser capaz de gerir, implementar e monitorizar o Quadro de Gestão Ambiental e Social (QGAS) e assegurar a coordenação com todas as entidades relevantes.

Recomenda-se a reserva de fundos para assegurar assistência técnica no apoio à implementação das atividades do Plano de Salvaguardas Ambientais e Sociais, incluindo-se nestas seminários e ações de formação e monitorização da implementação do Plano, entre outras.

Monitorização

O Quadro de Gestão Ambiental e Social estabelece um conjunto de indicadores ao nível da sua implementação, os quais deverão ser incluídos na monitorização geral de desenvolvimento do MOSAPII. Adicionalmente, deverá ser implementado um programa de auditorias anuais relativas à implementação do Plano de Salvaguardas Ambientais e Sociais, sob supervisão do Banco Mundial e, se necessário, incluindo a implementação dos Planos de Gestão Ambiental e Social e a respectiva revisão.

Proposta de orçamento

Estima-se que a implementação das medidas propostas no Plano de Salvaguardas Ambientais e Sociais, incluindo as ações de formação e capacitação institucional ascendam a USD 1.015.000.

Executive Summary

Introduction

The World Bank Group (WB) is supporting the Government of Angola (GoA) to implement a Smallholder Agriculture Development and Commercialization Project (SADCP also known in Angola as MOSAP II) starting in 2016 and with an expected duration of 5 years. MOSAP II will target support to the Provinces of Malanje, Bié and Huambo.

The MOSAP II consists of three components:

Component 1. Capacity Building and Institutional Development

The objective of this component is to improve the technical, institutional, managerial, and marketing skills of 150,000 farmer beneficiaries and to strengthen the capacity of government agricultural extension specialists, agricultural research institutions, private agricultural service providers, and NGOs related to different aspects of agriculture, including value chains. The expected results are: (i) smallholder farmers' organizations established and strengthened; (ii) technical and managerial competence of smallholder farmers improved; and (iii) government capacity to support smallholder agricultural production and commercialization enhanced.

This component consists of three subcomponents: (i) Strengthening Capacity of Smallholder Farmers and Farmers' Organizations through Farmers' Field Schools; (ii) Institutional Strengthening of Local, Provincial, and National Units of the MINAGRI; and (iii) Strengthening Capacity and Global Knowledge to Address Emerging Research Problems.

1.1 Strengthening Capacity of Smallholder Farmers and Farmers' Organizations through Farmers' Field

The first subcomponent deals with training of smallholder farmers through FFS. The main focus of the training will be on: (i) establishing and strengthening smallholder farmers' organizations; (ii) strengthening farmers' knowledge about improved agricultural practices, modern agricultural technology, use of improved agricultural inputs, and agricultural marketing; (iii) strengthening farmers' functional literacy and numeracy; (iv) improving household nutrition through crop diversification, use of more nutritious crops and crop varieties, and better food preparation techniques; (v) improving soil fertility and integrated nutrient management (INM); and (vi) promoting integrated pest management and conservation agriculture, including training on environmental and climate-smart agriculture (CSA) practices related to soil conservation, rational use of water, fertilizers, and INM. HIV/AIDS and gender awareness will be systematically integrated in FFS as cross-cutting issues.

The capacity of smallholder farmers and farmers' organizations will be strengthened in all critical aspects related to agriculture by scaling up the FFS initiative currently being implemented under MOSAP by FAO jointly with local ADI/EDA extension services. The FFS training is expected to benefit 150,000 smallholder farmers. The FFS methodology empowers smallholder farmers to set their own agenda and take steps to improve their agricultural knowledge and economic situation. It also includes training of master trainers

(mainly EDAs' agricultural extension staff), who will in turn train other government extension staff and farmer facilitators by using the enhanced and improved FFS curriculum.

For effective implementation of the FFS approach, the government will ensure that each commune has at least three agricultural extension specialists at each EDA. The project expects to cover all 80 communes in 26 municipalities by the end of the third year, with at least 30 communes covered in the first year and 60 in the second year. This will ensure that all farmers in the target group benefit from at least one full FFS training cycle during the project.

1.2 Institutional Strengthening of Local, Provincial, and National Units of the Ministry of Agriculture (MINAGRI)

The second subcomponent aims to strengthen MINAGRI's institutional capacity at the national and decentralized levels to provide the complementary services needed for SADC farm-level investments in the critical areas of agricultural extension, irrigation services, market information, agricultural statistics, and policy analysis. In particular, project financing will be provided for:

- *Data and statistics:* Targeted support: to expand data collection for crop production (including forecasts) and post-harvest surveys through funding for enumerator training and data collection in the project areas; to produce regular production statistics and reports at the national level; and for the planned national agricultural census in 2016, as needed.
- *Policy analysis:* Targeted support for agricultural policy training and annual sector review processes, possibly with a link to Angola's commitment under CAADP to institute regular reviews twice a year for the agriculture sector.
- *Market information systems:* Support for the development of market information systems; exploration of possible systems to be developed for farmers' or traders' groups; and linkages to Ministry of Commerce initiatives around market information systems within the context of PAPAGRO (*Programa de Adquisição de Productos Agropecuarios*).
- *Small-scale irrigation:* The rehabilitation and development of small-scale irrigation is part of ADI's mandate to support smallholder agriculture development in the country, while development of larger irrigation schemes is within the mandate of MINAGRI's Department of Hydraulics. The project will provide technical training on gravity-fed irrigation systems at provincial and municipal levels to enable technical backstopping for small-scale irrigation systems to ADI staff and policy support such as preparation of water users' association (WUA) regulations to the GEPE (MINAGRI's Division of Statistics under the Department of Planning and Studies).
- *Provision of infrastructures for extension officers:* Critical agricultural extension facilities need to be rehabilitated and/or built at local level. This will require construction and rehabilitation of office-residential complexes for agricultural extension services in selected communes. An estimated 40 new houses and 10 new offices will be required in the 80 beneficiary communes. This activity will be implemented by the PIU/PPIUs (Project Implementation Unit/Provincial Project Implementation Units) in collaboration with local beneficiary organizations. The

government will allocate specific resources for operations and maintenance (O&M) as part of its contribution.

1.3 Strengthening Capacity and Global Knowledge to Address Emerging Research Problems

The third subcomponent aims to strengthen the capacity of Angola's national and provincial-level agricultural research systems to expand access to improved technologies that increase farm productivity and production. This will include scaling up the availability of improved technologies for SADC-supported farmers' organizations, bridging the technical knowledge gaps around priority cropping systems, and bringing in new knowledge and technologies available within the region or globally, where appropriate. Special attention will be paid to crops and technologies preferred by women.

In particular, financing under the SADC will be provided for:

- *Multiplication of seeds and planting material*: Scaling up breeder or foundation seed production within the Institute of Agricultural Research (IIA), developing partnerships with seed producers to increase production of certified or quality declared seed, and scaling up production and dissemination of virus-free cassava cuttings through available tissue culture laboratories (in Malanje and Luanda).
- *Development of recommended technology packages for project crops (cartas tecnologicas por culturas)*: Packaging and disseminating recommendations for priority crops for use by farmers, delivered by extension system/technical service providers.
- *Improvement of soil diagnostic services (soil analysis and fertilizer recommendations)*: Provision of equipment, training, and operational costs within Huambo and Malanje to improve soil testing facilities and development of comprehensive fertilizer recommendations.
- *Training of national research and extension system on specific technical topics by international experts*: Support to partnerships to bring in outside knowledge for the benefit of the national research and extension system from partners such as EMBRAPA (Brazilian Agricultural Research Corporation), CGIAR (Consultative Group for International Agricultural Research) institutes, or within the SADC (Southern African Development Community) region.
- *Scaling up the testing/demonstration of new technologies based on CGIAR research system or others*: Support for R&D activities within IIA to test new technologies brought in from the CGIAR system, EMBRAPA, or countries within the region and targeting priority crops.

Component 2. Support for Increased Production and Commercialization

The objective of this component is to support value chain development of selected crops through demand-based matching investment grants to smallholder farmers' organizations to improve agricultural productivity, production, and market access for 50,000 eligible beneficiaries. The beneficiaries for investment support will be selected from those trained through FFS under MOSAP, the SADC, or any other training program. This component will

support three kinds of investments in the value chain, including: (i) rehabilitation of small-scale irrigation schemes; (ii) agricultural production and productivity improvements; and (iii) post-harvest management for value addition, including storage, processing, and marketing facilities.

The project will hire an experienced and competent service provider to provide necessary support during implementation of this component. The service provider will work within ADI's structures and will only hire internationally qualified experts to integrate in the team and to support ADI to address technical issues along the selected crops' value chains.

A Project Implementation Manual (PIM) will be compiled for the SADCP and will include eligibility criteria and the selection process for investment subprojects. These may vary according to the type of support required, but eligibility for each subsequent investment will be contingent on satisfactory performance in the previous investment support phase, if any. A detailed process for identification, appraisal, and approval of subproject proposals is described in the PIM.

Smallholder farmer beneficiaries will be required to make a 10-30 percent contribution (in-kind or cash) to the matching grants funded by the project, depending on the type of investment. The approval process for the subproject proposals seeking matching grant investment support will be as follows:

- (i) The Project Implementation Support Committee (PISC) will approve subprojects between US\$50,000 and US\$100,000. The first two proposals in each category will require prior review and clearance by the Bank; and
- (ii) The Provincial Project Implementation Support Committee (PPISC) will approve subprojects up to US\$50,000, with the first two proposals in each category to be cleared by the Bank.

The PISC and PPISC will include NGO and private sector representatives to ensure full transparency in the selection process. Subproject proposals from farmers' organizations will be evaluated by a special Project Committee against competitive selection criteria: a full set of criteria and procedures will be outlined in the PIM. Farmers' organizations with a poor performance record under MOSAP will not be eligible for any new investment support under the SADCP, but every effort will be made to reach a diverse and large number of qualified farmers' organizations. In other words, selection of farmers' organization for investment support will focus on both equity and efficiency criteria. Strategically, the activities planned under this component will support implementation of Objective 2 of ADP 2013-17 by promoting value chains, agribusiness, development of irrigation, and construction of infrastructure to support agricultural production.

This component will be divided into two subcomponents: subcomponent 2.1 will provide technical support whereas subcomponent 2.2 will provide investment support to qualified farmers' organizations and enterprises.

2.1 Provision of Technical Support

The implementation modalities for providing technical support include contracting an experienced and competent service provider to: undertake initial feasibility work for investment support; undertake pre-identification and community mobilization work (including the establishment of WUAs); prepare designs for small-scale irrigation schemes; help prepare all subproject proposals for investment support; ensure the environmental and social sustainability of subproject proposals (in accordance with the World Bank's safeguards policies); and supervise implementation of all subprojects under investment support. The service provider will also ensure that improved technologies and skills are available to smallholder farmers' organizations and their members such that subproject proposals are economically, financially, socially, and environmentally viable and sustainable. The service provider will strengthen capacity by training selected MINAGRI staff at the national and provincial levels in project implementation to improve sustainability.

The service provider will strengthen capacity in three areas, by: (i) helping farmers' organizations prepare subproject proposals for competitive funding under Component 2; (ii) strengthening private input suppliers' capacity to respond to the real needs of smallholder farmers; and (iii) improving private enterprises' capacity in agricultural marketing, post-harvest management, and value addition so that smallholder farmers' organizations can more easily access markets.

Specific capacity-development activities in each of the three provinces will include: (i) training farmers' organizations on how to prepare investment proposals, as well as supporting increased managerial and business capacities of new and existing agribusiness entrepreneurs; (ii) information awareness-raising sessions with private input suppliers and private agricultural input suppliers; and (iii) support to farmers' organizations on how to undertake market assessments and studies or business plan development.

In coordination with the PIU, PPIUs, and ADI, the service provider will organize at least three seminars per province per year for the following target audiences: farmers' organizations, private input suppliers, and other private sector actors.

2.1.1 Technical Support to Irrigation Subprojects

Rehabilitation of small-scale irrigation schemes will be at pilot scale and will only cover 1,000 ha of the potential 5,500 ha available in the country. The design of irrigation schemes and construction supervision will be done under subcomponent 2.1 whereas actual construction and its funding will be done under subcomponent 2.2.

Initial data indicate that about 279 irrigation schemes, covering about 5,500 ha in the three beneficiary provinces, require rehabilitation, but the level of rehabilitation required varies. Given capacity constraints and the costs of rehabilitation, the project will only support rehabilitation of about 1,000 ha of small-scale irrigation systems as a pilot program, benefiting about 2,000 farmers (with an average of 0.5 ha each). Assuming an average of 32 ha per irrigation scheme, the project will cover approximately 32 irrigation schemes. The investment in irrigation schemes will adopt an integrated participatory planning and development process. WUAs will be established to ensure the investment's sustainability and to avoid possible future conflicts.

2.1.2 Technical Support to Production and Post-harvest Management Subprojects

The objective of this subcomponent is to increase crop production and marketing by smallholder farmers, thereby accelerating the transition from subsistence agriculture to commercial agriculture. The service provider will have the responsibility to: (i) identify the demand-driven but potentially critical subprojects for increasing crop productivity and production as well as post-harvest value addition and marketing; (ii) support preparation of subproject proposals that meet the eligibility criteria for investment support and have a good chance for competitive selection for support under Component 2; and (iii) supervise the implementation of subproject proposals selected for funding under Component 2. In addition, the service provider will train selected MINAGRI staff in project implementation, thus strengthening Angola's agricultural institutional capacity. It is extremely important that this subcomponent supports subprojects that are viable, sustainable, and likely to make a major contribution to increased productivity, production, and marketing, including value addition.

2.2 Investment Support

Investment support will be provided for those competitively selected innovative subprojects that deal with irrigation, production, or value chains individually or in a fully justified package of investments in a combination of irrigation, production, and value chains. Further details, eligibility criteria, and eligible expenditures in each category are provided in Annex 2 of the Project Appraisal Document (PAD) and will further development in the Project Implementation Manual. While the menu of investment options will be flexible, the eligibility criteria will be strictly followed. Recipients of matching grants will be required to contribute 10-30 percent of the subproject's cost in-kind and/or cash.

2.2.1 Investments in Irrigation Systems and Support Infrastructure

The objective of this pilot activity is to finance the irrigation infrastructure required to increase the productivity and profitability of smallholder irrigated agriculture while taking into account the environmental and social safeguards associated with the civil works. On the basis of participatory designs and the eligibility criteria, the SADCP will finance the costs of the schemes' rehabilitation/construction. Irrigation infrastructure development will be based on clearly articulated investment proposals and commitment from beneficiaries in scheme development and O&M. No infrastructure investments will be made before critical issues like land user rights and water rights have been secured.

In general, the rehabilitation and construction works will consist of: (i) upgrading of the area around the intake and the main canal; (ii) construction of water collecting structures and/or rehabilitation of damaged embankments; (iii) installation of control structures like water gates; (iv) upgrading of the main canals and, where necessary, lining critical stretches of the distribution system; and (v) use of local plants/grass to control canal erosion. In places where the installation of buried pipes is feasible, hand-dug earthen canals may be substituted by pipes if water losses warrant this. Taking into account the higher unit cost of installing gravity-buried pipe systems, the costs and benefits of this option will be evaluated and discussed with the community prior to installation of any such system.

The SADC will endorse a mix of construction methods, including both plant-based and labor-intensive construction methods that are designed to: (i) build local capacity in irrigation construction and maintenance; (ii) create local entrepreneurship for sustainable delivery of irrigation services; and (iii) deliver planned irrigation construction investments on time, of high quality, and at potentially significantly lower cost than contractor and equipment-based constructions experienced in past irrigation projects in Angola. The choice of construction method will be made on a case-by-case basis at feasibility stage, as this will determine subsequent stages of design/supervision and tendering. After field visits to some of the irrigated areas, the cost for small-scale gravity-fed irrigation scheme rehabilitation or development was estimated to be between US\$1,000-2,000/ha.

2.2.2 Investments in Agricultural Production

The main objective of this subcomponent is to support a sustainable increase in smallholder agricultural productivity and production. To achieve this objective, the subcomponent will provide matching grants to smallholder farmers' organizations for investments in farm assets. Specific activities likely to be considered for investment support are demand-based agricultural technology packages and improved inputs designed to increase agricultural productivity and production (see the menu of investment options in Annex 2 of the PAD). The main focus will be on crops identified as a priority for the project areas (i.e., maize, beans, cassava, Irish potatoes, and vegetable crops).

To access matching grants for investment subprojects, eligible farmers' organizations will need to submit subproject proposals. Subcomponent 2.1 will assist eligible participants in the preparation of detailed subproject proposals that will allow an informed decision about their feasibility from technical, economic, financial, social and environmental perspectives. Subproject proposals can be submitted for any investment that will contribute to increasing crop production and productivity.

Proposals will be identified, appraised, and approved based on the criteria summarized in Annex 4 of the PAD. A full set of criteria and procedures will also be defined in the PIM. Proposals will be evaluated and selected by an independent technical committee based on the defined criteria. Although the disbursement mechanisms and advances may vary, taking into consideration the type of grant, the eligible expenditures are for Goods, Works, and Services.

2.2.3 Investments in Post-harvest Management and Value Addition

The main objective of this activity is to promote investments aimed at increasing value addition, reducing post-harvest losses, and strengthening market linkages for key priority food and vegetable crops in the project area.

The ultimate goal is to improve the performance and efficiency of the targeted value chains. This activity will support investments related to market linkages and commercialization of key crops and horticulture (see the menu of investment options in Annex 2 of the PAD). Any subproject requesting financing under this subcomponent will prepare a project proposal and a business plan that will go through a complete appraisal process to determine its economic feasibility and sustainability as well as its environmental and social impacts.

Financial support for farmers' organizations and rural enterprises' value addition activities is crucial for the sustainability of public investment in small-scale irrigation development as well as for investments in agricultural production. Eligible beneficiaries of value chain investment support will therefore include smallholder farmers' organizations that have proven capacities for market-oriented production and/or value chain activities. A key distinguishing feature of this activity will be more complex subprojects that may require multiple stages of support or greater focus on business development services.

Component 3. Project Management, Monitoring, and Evaluation

The third project component will finance management, coordination, and monitoring and evaluation (M&E) of the project. It consists of two subcomponents.

3.3 Project Management

The purpose of this subcomponent is to ensure that the project is implemented correctly, on time, and in accordance with the Loan Agreement. This will be the responsibility of a Project Coordinator (PC) and a team of experts located at the national and provincial levels. Financing will be provided to support project coordination activities, including planning and budgeting, management and administration, procurement, financial management (FM), M&E, safeguards compliance, and national and provincial engagement. Government counterpart resources will be used to pay staff-related costs that are not eligible for IBRD funding. The final arrangements for project management incorporate the lessons learned under MOSAP in terms of organization, staffing, and timing. Eligible expenditures under this component may include funding activities in connection with the preparation of the new agricultural subprojects aimed at supporting the development of commercial agriculture.

3.4 Project Monitoring and Evaluation

An M&E system will be established to collect and process appropriate information to monitor project performance and measure the output, the effects, and eventually the impacts of project activities over time. Baseline information will also be collected at the beginning of project implementation.

The MOSAP II activities will benefit smallholders with land plots in the wider catchment areas and target irrigation schemes. Ministry of Agriculture (MINAGRI) through the Institute for Agrariculture Development (IDA) will be the lead implementing agency. IDA will have the responsibility of coordinating implementation by hosting a Project Implementation Unit (PIU) with sub PIUs at Province level, tasked with the responsibility of MOSAP II coordination and management using Technical Assistance (TA) when needed. The project area will cover the whole country for capacity building and institutional development activities. However, investment will be limited to the same three provinces of Bié, Huambo and Malanje but with more coverage to municipalities. MOSAP was limited to three provinces covering 12 municipalities and only 50,000 beneficiaries. MOSAP II would significantly expand the number of municipalities and communes covered under MOSAP and cover about 175,000 direct beneficiaries (rural households).

Objective of the ESMF

As part of the identification and effective management of potential environmental and social impacts of the MOSAP II, several environmental and social management tools should be considered, including (i) Environment and Social Management Framework, (ii) Environmental and Social Management Plan, (iii) Environmental and Social Impact Assessment (ESIA), (iv) Resettlement Policy Framework (RPF), (v) Resettlement Action Plan (RAP) and (vi) Integrated Pest Management Plan. The present ESMF outlines the major environmental and social considerations and provides practical guidance for determining which of the other environmental and social instruments will be required for the management of potential environmental and social issues associated with future sub-projects under the MOSAP II. If and when required these additional environmental and social instruments will be prepared in accordance with international best practices as well as the WB safeguards policy and GoA requirements.

This Environmental and Social Management Framework (ESMF) was prepared as part of the design of MOSAP II aiming to address all relevant environmental and social safeguards. The main objectives of the ESMF are:

- Identification and establishment of procedures and methodologies for the environmental and social assessment, review, approval and implementation of investments to be financed under the project;
- Specification of roles and responsibilities, and outlining the necessary reporting procedures, for managing and monitoring environmental and social concerns related to project investments;
- Identification of necessary training, capacity building and technical assistance to ensure the implementation of the ESMF provisions;
- Provision of information resources for implementing the ESMF.

National Legal framework

The most relevant environmental management and related legal elements for the MOSAP II are the following:

- The Environmental Framework Law (Lei de Bases do Ambiente, Lei nº 5/98, de 19 de Junho).
- The Decree on Environmental Impact Assessment (Decreto sobre a Avaliação de Impacto Ambiental, Decreto 51/04 de 23 de Julho).
- The Decree on Emission of Environmental Licences (Decreto sobre Licenciamento Ambiental, Decreto 59/07, de 13 de Julho).
- The Land Law (Lei de Terras, Lei nº 9/04 de, de 9 de Novembro).
- The Executive Decree on EIA conformity (Decreto Executivo nº 92/12, de 1 de Março sobre conformidade dos EIA)
- The Executive Decree on EIA Public Consultation (Decreto Executivo nº 87/12, de 24 de Fevereiro, sobre Consulta Pública no âmbito da AIA)
- Law of NGOEnv (Lei nº3/06, de 18 de Janeiro – Lei das Associações de Defesa do Ambiente)

- Decree on Environmental Auditing (Decreto nº1/10, de 13 de Janeiro – Auditorias Ambientais)
- Law on Land Planning and Urbanism (Lei 3/04, de 25 de Junho – Lei do Ordenamento do território e do Urbanismo)
- Decree on Rural, Urban and Territorial Planning (Decreto nº2/06, de 23 de Janeiro – Regulamento Geral dos Planos Territoriais, Urbanísticos e Rurais)
- Land Law (Lei 9/04, de 9 de Novembro – Lei das Terras)
- Regulation of National Parks (Portaria nº10.375 de 15 de Outubro de 1958 – Regulamento dos Parques Nacionais)
- Decree on the Protection of Flora and Forestry Resources (Decreto nº40.040, de 20 de Janeiro de 1955 – Regulamento da protecção dos recursos da flora, das espécies vegetais e recursos florestais)
- Presidential Decree on Waste Management (Decreto Presidencial nº190/12, de 24 de Agosto – Regulamento sobre Gestão de Resíduos)
- Law on the Aquatic Biological Resources (Lei 6A/04, de 8 de Outubro – Lei dos Recursos Biológicos Aquáticos)
- Presidential Decree on Water quality for public health, integrated water management and environment protection (Decreto Presidencial 261/2011, de 6 de Outubro – Normas de aferição da qualidade da água na perspectiva da protecção da saúde pública, gestão integrada dos recursos hídricos e preservação do ambiente)
- Waters Law (Decreto Lei nº6/02 de 21 de Junho – Lei das Águas)
- Presidential Decree on General Use of Water Resources (Decreto Presidencial nº82/14, de 21 de Abril – Regulamento Geral de Utilização Geral dos Recursos Hídricos)
- Cultural Heritage Law (Lei nº14/05, de 7 de Outubro – Lei do Património Cultural)
- General Work Law (Lei nº 2/00, de 11 de Fevereiro – Lei Geral do Trabalho).

World Bank Safeguard Policies

During the design of the MOSAP II, three of the 10+2 World Bank's operational safeguard policies were identified as triggered by the MOSAP II interventions (Environmental Assessment, Involuntary Resettlement and Pest Management).

- ***Environmental Assessment (OP/BP 4.01)***: Has the objective to ensure that World Bank-financed projects are environmentally sound and sustainable, and that decision-making is improved through appropriate analysis of actions and mitigation of their likely environmental and social impacts. This policy is triggered if a project has potential adverse environmental impacts and risks in its area of influence

The MOSAP II was assigned as Category B. The construction and rehabilitation of irrigation schemes, access roads and other infrastructures, under the MOSAP II, are likely to have environmental and social impacts which require mitigation. Therefore, in line with the Operational Policy, the ESMF has been prepared for screening of the MOSAP II's activities.

- **OP 4.09: Pest Management:** This policy promotes the use of integrated pest management (IPM) techniques that seek to minimize synthetic pesticide use, as well as the safe use, handling, storage, and disposal of pesticides in general. This policy applies to the MOSAP II since pesticides will be financed and that most of the catchment management and alternative livelihood promotion activities are small-scale irrigation or other production systems where pesticides are used
- **Involuntary Resettlement (OP/BP 4.12):** This policy applies to all land acquisition and any changes in access to resources due to a sub-project. The policy applies whether or not affected persons must move to another location.
- **Safety of Dams (OP/BP 4.37):** This policy applies to new and existing dams, including small dams less than 15m in height for which it requires generic dam safety measures designed by qualified engineers to be incorporated.

National Legal Framework Vs World Bank's Safeguards Policy

At the framework level there are no relevant gaps between the Angolan environmental legislation and the World Bank's Safeguard policy and guidelines. The environmental legislation in Angola is quite recent and inspired by the international Conventions that Angola takes part. Specially in relation with environmental impact assessment, also the existing legislation covers the most relevant principles and best practices. Under the Angolan legislation irrigation projects and agro-hydraulic projects are subject of EIA [c) and h) of n°1 at the Annex of Decree 51/04 of 23 July].

Institutional roles and responsibilities

MOSAP II will take up the existing MOSAP Project Implementation Unit, including its staff and implementation arrangements.

National: At the national level, the project will be implemented by MINAGRI. MINAGRI will be responsible for the overall implementation of the project, in consultation with the other relevant Ministries at the national level, in order to ensure that the project activities are consistent with national policies. A Project Coordination Committee (PCC), chaired by the Minister (or, by delegation, the Secretary of State of Agriculture) will oversee overall project implementation, including approval of the annual work plan and annual report. The Director General of ADI (within MINAGRI) will be the executive level manager of the project. A Project Implementation Unit (PIU), headed by a Project Coordinator will be established within ADI and charged with (national level) day-to-day management of the project. A small executive Project Implementation Sub-Committee (PISC) of the PCC will be established to speed-up project implementation and decision making.

Provincial: At the provincial level, the Agriculture Development Institute (ADI) will be responsible for project implementation, in coordination with the Provincial Directorate of Agriculture and in consultation with other relevant provincial government agencies as well as provincial level representatives of the other Ministries that are involved. A Provincial Project Coordination Committee (PPCC), chaired by the Vice-Governor responsible for the economic development, will oversee project implementation, including monitoring project progress at the provincial level and making decisions in line with the objectives and institutional

arrangements consistent with the project document and legal agreements. The Provincial Director of ADI will be responsible for project implementation. A Provincial Project Implementation Unit (PPIU), headed by a Provincial Project Coordinator will be established within the provincial ADI and charged with day-to-day management of the project at the provincial level. A small executive Provincial Project Implementation Sub-Committee (PPISC) of the PPCC will be established to speed-up decisions and procedures.

Municipal: At the municipal level, the Agricultural Development Office of ADI (EDA) will be responsible for project implementation, in coordination and consultation with the Municipal administration. The EDA will obtain the consent of the Municipal administration before forwarding sub-project proposals to the provincial level. The project will assist in capacity building of the EDAs, provide technical assistance to the EDAs, and engage services providers to assist the EDAs in their work related to project implementation.

The project will be implemented in three provinces; Bie, Huambo and Malanje. Each province will have a Provincial Project Implementation Unit (PPIU). In addition to the three PPIU the project will have a central project coordination unit in Luanda and will hire four Environmental and Social Safeguard Focal Point (SEFP), one for the national level coordination and three for provincial level coordination, one for each of the three beneficiary provinces. The SEFP will ensure compliance of the proposed project activities with relevant Angola environmental laws and regulations and the World Bank Safeguards Policies triggered. They will be responsible for the screening, monitoring and reporting on safeguards requirements including providing needful and timely support for the preparation of ESIA/ESMP as required. This initiative will be coupled with a series of regional training workshops to be organized for all actors involved, such as project coordination team at all levels, beneficiary groups, contractors and other relevant project partners in the implementation of social and environmental safeguards policy upon project effectiveness. The WBG Environmental and Social Safeguards specialists will train the team at national and provincial/municipal level in all issues related to protected areas, forestry. Additionally, relevant authorities such as the Ministry of Environment and its affiliates and will be systematically involved throughout the project implementation process.

EIA/ESMP preparation, review and appraisal process

The ESMF establishes the process for identifying the E&S requirements for each MOSAP II project – whether it will require EIA or further studies to identify the impacts and mitigation requirements, and the most appropriate mechanism for delivering the mitigation (for example, through an ESMP or through inclusion of pertinent generic mitigation clauses in works contracts, including generic dam safety measures). The ESMF sets out clearly the responsibilities of the PIU during the implementation of MOSAP II, and how these responsibilities link with the institutional processes. The process for identifying the E&S impacts and for managing E&S issues throughout the project includes:

- Screening of proposed sub-projects
- Guidelines on the environmental and social impact of potential subprojects;
- Assigning the appropriate Environmental and Social Categories (whether it requires ESIA or further studies, or the application of generic mitigation measures);

- Steps to be taken for preparing an ESIA, including an application for environmental approval;
- Participatory Public Consultation and Disclosure
- Periodical Monitoring Reports and Reviews
- An annual environmental and social audit;
- Compliance mechanisms; and
- Descriptions of roles.

Main environmental and social impacts of the MOSAP II

While the actual project sites and subprojects to be supported are not known, the potential impacts presented in the ESMF are based on field visits and consultations undertaken and serve as a guideline for a thorough assessment once the sites and subprojects have been selected.

The proposed project is a *Category B* project as all identified potential impacts for the sub-projects are site-specific; few if any of them are irreversible; and in all cases mitigation measures can be readily designed.. Most activities are aimed at the intensification of agriculture and increase the level of productivity of the selected crops. The increase in productivity will be achieved mainly through provision of training to farmers and improved access to inputs (seeds and fertilizers). It is estimated that farmers will not expand the cultivated area and the average area will be kept at 1.37 ha ranging from 1-2 ha. Under Component 1 of the project there will be some civil works (construction of buildings), and under Component 2 agricultural production and post-harvesting sub-projects, rehabilitation of irrigation schemes, storage facilities and land delimitation. Some of the diverse impacts could include soil erosion and water logging, alteration of water flows due to irrigation schemes, including risks to the human health by those handling pesticides. Details and precise location of these activities will not be known until project implementation. Social impacts could include loss of land during delimitation, resource use such as water and health and safety during construction.

Although some negative impacts are expected from this project, there are also significant positive impacts that would counteract the negative ones. The positive impacts include: improved income of the participating farmers, improved food security at household level, improved agronomic practices and technologies for selected crops and improved varieties that are adapted to different climatic conditions.

The potential environmental and social impacts (both direct and indirect) of the MOSAP II include the following:

During the construction phase

Impacts on landscape, habitats and biodiversity – During the construction phase it is likely damages to the vegetation cover will occur due to installation of new structures for the irrigation schemes, construction of storage facilities, grinding mills and houses for extensionists, localised land clearing, removal of the trees and shrubs for canal alignment, disposing of excavated materials and land levelling, digging of canals and construction of water off-take points. Losses of soil and landscape degradation are also impacts associated

with these activities. Habitat fragmentation and wildlife disturbance may also occur depending on the sites.

Noise, vibration and emissions – Noise, vibration and emissions will occur in the course of activities such as transportation and operation of machinery and grinding mills facilities. Dust emissions and fuel combustion emissions from vehicles and other equipment will also occur during this phase resulting in loss of air quality and inducing human health implications.

Generation of waste, including construction waste– Construction and road rehabilitation works will generate spoil materials and construction waste. Concentration of workers will also contribute to localized increase of waste.

Impacts on archeological sites – Although no registered or known cultural heritage sites were identified for the areas of intervention the potential risk of encountering archeological sites should be considered, including graveyards.

Social impacts – Impacts on informal land and water use may be caused in the course of roads rehabilitation and access to new irrigation sites. The construction and in-field land preparation will create opportunities for employment at the local level. HIV/AIDS and other STDs will likely increase due to influx of people to the areas in search of employment opportunities.

Work related accidents – Weak technical capacity and negligence on operation of vehicles and machinery are likely to induce accidents. Lack or inadequate use of safety gear may also contribute to accidents that may result in trauma and other casualties.

During Operation Phase

Environmental and Natural Resources Management – Rehabilitation of irrigation and drainage schemes will bring significant positive impacts for the rural population and to the global environmental and natural resources management, in particular water and landscape management. Integrated management of water ensuring efficiency and best practices will generally contribute to reduce the loss of natural resources and to ensure a sustainable management of the landscape.

Socio-economic – Irrigation and drainage schemes will result in a highly positive impact on the rural communities engaged in agriculture. Increase in yields of existing crop production and diversification into higher value crops requiring irrigation, will result in higher incomes and consequently better life conditions.

Rehabilitation of roads will improve safety and access to markets and social services centers amongst the communities bringing improvement of their livelihoods.

Human Health – Agro-production in well-supported irrigated areas will lead to increased use of agrochemicals. Poor handling and application of agrochemicals will increase risks to the health of people exposed to pesticides and the consumers of the agriculture products. Disposal of dredged materials resulting from the maintenance of irrigation infrastructures may contribute to public health problems.

New crops will promote new food habits introducing new nutrients in the diet of the communities and contributing to a healthier nutrition.

Soil and water pollution – the use of agrochemicals will contribute to soil and water (surface and groundwater) contamination with hazardous pollutants. Maintenance of irrigation infrastructures such as dams and canals will generate dredged materials whose disposal may result in soil contamination.

Erosion and water logging – weak maintenance of irrigation infrastructures may lead to local flooding, inducing soil erosion. Failure of earth embankments around water storage areas, dams or dyke walls may result erosion, water logging and present a safety risk, as well as threaten the success of the project.

Biodiversity and habitats conservation – The identification and implementation of conservation measures for special conservation areas, habitats and relevant species will contribute to the preservation of biodiversity at species, habitats and ecosystem levels. Nevertheless there is also a potential of conflicts with wildlife that may invade farmland (e.g. birds, hippos)

Climate change resilience – Agricultural best practices and the introduction of crops adapted to the climate change conditions will contribute to soil management and restoration and the implementation of reforestation and other conservation activities, increasing social and natural resilience. Small irrigation schemes are in themselves sustainable ways to adapt and be more climate change resilient.

Mitigation plans

Environmental and Social Management Plans (ESMPs) will need to be prepared and implemented. The ESMPs will ensure that the appropriate mitigation measures, including measures to ensure the safety of earth embankments/dams, have been employed to avoid and/or minimize any potential impacts resulting from the proposed activity.

ESMF Monitoring Requirements

An annual plan for the implementation of the ESMF will be prepared. Indicators of ESMF implementation are: Number of national, provincial, municipal level staff trained in implementation of this ESMF; Number staff attending training course in ESIA and ESMF implementation; Number of sub-projects correctly submitted for approval; Number of mitigation measures implemented; Number of written warnings of violation of ESMPs issued to project proponents; Number of recommendations from the Audit that have been implemented.

These indicators should be integrated into MOSAP II Monitoring and Evaluation (M&E) system to guarantee that the ESMF will be implemented in full.

Proposed implementation budget

It is estimated that the implementation of the ESMF including the required provisions, training and capacity building will cost approximately \$1.015.000.

The costs of preparing and implementing the safeguards aspects of the project are estimates as the size, type and location of the subprojects are not fully determined at this stage.

1. Introduction

This document corresponds to the Environmental and Social Management Framework (ESMF) for the Smallholder Agriculture Development and Commercialization Project (SADCP also known in Angola as MOSAP II), in Angola. A Resettlement Policy Framework and an Integrated Pest Management Plan were also prepared as standalone documents for this Project.

MOSAP II, is a nationwide project targeting support to Provinces of Bié, Malanje and Huambo. The activities will benefit smallholders aiming to increase their agriculture productivity, production and marketing. Ministry of Agriculture (MINAGRI) through the Institute for Agricultural Development (IDA) will be the lead implementing agency. IDA will have the responsibility of coordinating implementation. IDA will host a national PIU tasked with the responsibility of MOSAP II coordination and management, with the support of Province based sub-coordination units and using TA when needed. The programme is expected to be implemented over a five-year period.

The ESMF aims to set out the approach for effective management of environmental and social issues in the different MOSAP II projects, and not only sets out the positive development impacts of each project, but also the potential mitigation to be delivered to ameliorate potential adverse impacts. The ESMF will also ensure the delivery of the Government of Angola (GoA) and World Bank's (WB) policies, guidelines and procedures for the management of environmental and social development issues during the project.

As the precise size, locations and potential localized impacts of future subprojects could not be identified at this stage, the ESMF provides the basis for identifying when Environmental and Social Impact Assessments (ESIAs) and/or Environmental and Social Management Plans (ESMPs) will be undertaken, if required at all.

2. Project Description

2.1. Project Background

The MOSAP II Project is designed to address two critical constraints to agricultural development in Angola. First, it is designed to increase agriculture institutional capacity through training programs, both nationally and in the project areas. Second, it is designed to address critical bottlenecks in the value chain, including extension, irrigation, production and post-harvest value addition, and market linkages of selected crops.

The project will be implemented over a period of five years, from April 2016 through June 2021. The total project cost is estimated at US\$95 million, of which US\$20 million equivalent will be in-kind and cash contributions from the Government of Angola and US\$5 million equivalent will be in-kind and/or cash contributions from project beneficiaries. A US\$70 million IBRD loan will constitute the remainder of the total project cost.

The MOSAP II builds on the experience gained under MOSAP, from which it differs in the following important aspects: (i) it is larger in scope in terms of absolute funding and number of beneficiaries; (ii) it includes a subcomponent to support development of small-scale irrigated agriculture; (iii) in addition to food crops (maize, cassava, beans, and Irish potatoes), it emphasizes the production of high-value crops, particularly vegetables; and (iv) it further strengthens commercialization of agriculture, including market linkages and contract farming.

The proposed project has three components: Component 1- Capacity Building and Institutional Development; Component 2- Support for Increased Production and Commercialization; and Component 3- Project Management, Monitoring, and Evaluation. Details are provided in Annex 2 of the Project Appraisal Document (PAD).

2.2. Aim and objectives

The MOSAP II intends to scale-up activities being implemented under the currently ongoing MOSAP and will also finance critical new activities, as per government's medium and long-term agriculture programs. MOSAP is scheduled to close on December 31, 2015. The implementation of the new project is expected to start on April 1, 2016. Given the popularity of MOSAP in the project areas as well as with national and provincial agencies dealing with agriculture, government indicated preference for keeping the name of MOSAP and call this project MOSAP II.

Overall, the project is expected to support about 175,000 direct beneficiaries (rural households). The target beneficiaries are smallholder farmers cultivating on average 1-2 hectares of cropland. About 25,000 beneficiaries of the target group (14 percent) are expected to have received initial support from MOSAP and will be targeted under this project to further improve their organization structures, and benefit from targeted interventions to further improve specific technical skills and production investments to increase level of production and productivity and markets links, through contract farming or out-growers schemes. Most of the beneficiaries under this project, about 150,000 smallholder will be new beneficiaries that are currently producing at subsistence level with high level of poverty and food insecurity, but with potential for production increases in terms of expansion of cultivated area per farmer and increase productivity per unit of labor.

2.3 Project components

The MOSAP II will have three components:

- Component 1 - Capacity Building and Institutional Development;
- Component 2 - Support for increased Production and Commercialization; and
- Component 3 - Project Management, Monitoring and Evaluation.

The proposed project is expected to be implemented over a period of five years from April 2016 through June 30, 2021.

The proposed project deals with smallholder agricultural development and has been designed to be climate smart, gender and jobs responsive and nutrition sensitive. The project is consistent with the main agriculture development programs in the country. Angola tends to experience seasonal rain variability and sometimes even long periods of drought that affect agricultural production. The MOSAP II will promote appropriate adaptation practices, including irrigated agriculture, to reduce such production losses. The project will support the participation of women in different project components, including farmers associations, production, marketing and training. The project will also have a positive impact on employment and job creation in the rural areas by contributing to increased agricultural

production, marketing, agri-business and value addition as well as increased demand for agricultural inputs and services. Finally, since the project will promote the production of food crops, beans and vegetables, it is likely to have a positive impact on the food security as well as human nutrition of rural households.

2.4 Project area

The project area will cover the whole country for capacity building and institutional development activities. However, investment will be limited to the same three provinces of Bié, Huambo and Malanje but with more coverage to municipalities. MOSAP was limited to three provinces covering 12 municipalities and only 50,000 beneficiaries. MOSAP II would significantly expand the number of municipalities and communes covered under MOSAP and cover about 175,000 direct beneficiaries (rural households).

The project area is expected to cover 80 communes, which are part of 25 municipalities in the three Provinces of Bié, Huambo and Malanje. The population census of 2014 estimates that the three provinces have a total population of 4.2 million representing about 17.2 percent of the total population in Angola.¹ The total number of rural households in Angola is estimated to be 1.8 million. Almost one quarter of these, about 440,000, live in the project area. An estimated 175,000 rural households (with a total of about 0.875 million people) are expected to be direct project beneficiaries. The project beneficiaries thus account for 40% of all the rural households in the three provinces and for nearly 10% of all rural households in Angola.

Table 1. Population Data of the Project Area

Provincia		Municipality	Commune	Population of Communes
Bie	1	Andulo	Sede	108,104
	2		Cassumbe	16,301
	3		Calunginga	74,148
	4		Chivaulo	36,238
	5	Catabola	Sede	56,079
	6		Sande	15,167
	7		Caiuera	13,403
	8		Chiuca	13,157
	9		Chipeta	20,479
	10	Chinguar	Sede	36,353
	11		Cangote	33,762
	12		Cutato	47,355
	13	Camacupa	Sede	68,850
	14		Ringoma	14,505
	15		Umpulo	9,875

¹ Anon. 2014. Censo 2014: Resultados preliminares do recenseamento geral da população e da habitação de Angola 2014.

	16		Muinha	17,876
	17		Kuanza	30,654
	18	Kuito	Kunje	127,088
	19		Chicala	8,69
	20		Cambandula	45,125
	21		Trumba	8,150
	22	Nhareia	Sede	47,805
	23		Gamba	7,873
	24		Cayeye	18,390
	25	Chitembo	Sede	33,318
	26		Cachingues	11,929
	27		Mumbue	13,456
	28		Mutumbo	5,493
Sub-total of potential target beneficiaries of Bie		7	28	930,942
Total		9		1,338,923
Huambo	29	Bailundo	Bimbe	21,470
	30		Hengue	39,200
	31		Luvemba	40,692
	32		Comuna Sede Bailundo	121,570
	33		Lunge	59,218
	34	Londuimbali	Comuna Sede Londuimbali	33,776
	35		Cumbila	14,653
	36		Galanga	32,525
	37		Alto Hama	28,810
	38		Ussoque	14,684
	39	Mungo	Comuna Sede Mungo	69,838
	40		Cambuengo	40,291
	41	Cachiungo	Comuna Sede Cachiungo	52,928
	42		Chiumbo	23,587
	43		Chinhama	39,148
	44	Chicala Cholohanga	Comuna sede Chicala Cholohanga	36,690
	45		Sambo	26,497
	46		Samboto	20,382
47	Huambo	Chipipa	37,372	
48		Calima	75,473	
49	Caála	Comuna sede	132,479	
50		Calenga	37,120	
51		Cuima	58,123	

	52		Catata	31,761
	53	Ekunha	Comuna Sede Ecunha	53,617
	54		Tchipeio	25,231
Sub-total of potencial target beneficiaries (Huambo)		8	27	1,167,135
Total (Huambo)		11		1,896,147
Malanje	55	Cacuso	Cacuso	27,738
	56		Lombe	13,683
	57		Quizenga	10,120
	58		Soqueco	8,000
	59	Kalandula	Kuale	14,257
	60		Kota	18,621
	61		Kalandula	23,310
	62		Cateco Kangola	9,899
	63		Quale	14,257
	64		Kinge	7,486
	65	Caculana	Caculama	17,700
	66		Caxinga	6,250
	67		Muquixe	5,087
	68	kiwaba-Nzaji	Mufuma	5,100
	69		Kiwaba-Nzaji	9,303
	70	Malanje	Cambaxe	2,164
	71		N'gola-Luije	6,990
	72	Cahombo	Sede	9,103
	73		Cambo Sunginge	4,048
	74	K. Katembo	Sede	21,663
75	Talamungongo		3,131	
76	Kangandala	Sede	27,857	
77	Kunda dia base	Sede	27,857	
78	Massango	Sede	12,332	
79	Queda	Sede	9,263	
80		Xandel	8,004	
Sub-total of potencial target beneficiaries (Malanje)		11	26	323,223
Total		14		968,135
Total Population in the project areas		34	-	4,203,205.00

Bié

Bié has an area of 70 314 km² and an approximated population of 1.794 000 inhabitants. Provincial capital is Kuito, with the following municipalities: Andulo, Camacupa, Catabola, Chinguar, Chitembo, Cuemba, Cunhinga, Kuito and Nharea.

Climate is tropical, hot and humid, with two seasons: from October to April (7 months) hot with rains, and from May to September (5 months) dry. During the rainy season, it's common and short dry period that usually takes around two weeks. Temperature varies between 2°C and 10°C in colder months to 18°C - 25°C in hotter ones. Annual rainfall in the region is around 1.200 mm to 1.500 mm.

Regarding soils it presents a plateau relief, with an average altitude above 1,000 meters (superior, to 1.500m in the SW quadrant), framed in two scenic drives - the Old Plateau and Upper Kwanza. The dominant soils are ferralitic and psamítico.

Agriculture is the major economic activity in the Region. Major crops are maize and beans.

Huambo

Huambo has an area of 35.771 Km², and a population of 1.890.147. Provincial capital is Huambo, with the following municipalities: Huambo, Bailundo, Caála, Londuimbali, Catchihungo, Ecuinha, Longonjo, Ucuma, Chinjenje, Mungo e Chicala Cholonhanga.

Average temperature varies between 19°C e 20°C, and Annual rainfall in the region is around 1.100 mm a 1.400 mm. Climate is tropical, humid with two seasons like Bié.

Regarding soils, most common are ferralitics, with a sandy to argilo-arenosa texture, deep and well drained, with low organic matter and mineral nutrients.

Hydric resources are rich in Huambo with Queve, Cunene and Cubango rivers. They offer significant agricultural irrigation potential, beside fishery.

Agriculture is the major economic activity, with maize, potato, beans and horticulture as main crops.

Malanje

Malanje Province covers an area of 97,602 km² and has a population of 968.135 inhabitants. It is administratively divided into 14 municipalities and 37 communes, with the city of Malange as its capital.

The weather is humid tropical mesothermic and varies between 20° C and 25° C. The coldest month is June with the hottest months of March and April. There are two seasons: the rainy season that includes the months of August to May and the other, the dry season (cacimbo), the remaining period. Rainfall varies between 900 and 1400 mm/year.

The predominant soils in the Province are fersialíticos and pesamíticos, varying in altitude from 500 to 1,500m relative to sea level. It's bathed by several rivers most notably the Kwanza and its tributaries, including: Lucala, Kuije, Malanje, Lutete, Cassamba, and Cuhambaetc.

The population consists mostly in smallholder farmers, being cassava and beans the most frequent crops in the region.

2.5 Components description

Component 1. Capacity Building and Institutional Development

The objective of this component is to improve the technical, institutional, managerial, and marketing skills of 150,000 farmer beneficiaries and to strengthen the capacity of government

agricultural extension specialists, agricultural research institutions, private agricultural service providers, and NGOs related to different aspects of agriculture, including value chains. The expected results are: (i) smallholder farmers' organizations established and strengthened; (ii) technical and managerial competence of smallholder farmers improved; and (iii) government capacity to support smallholder agricultural production and commercialization enhanced.

This component consists of three subcomponents: (i) Strengthening Capacity of Smallholder Farmers and Farmers' Organizations through Farmers' Field Schools; (ii) Institutional Strengthening of Local, Provincial, and National Units of the MINAGRI; and (iii) Strengthening Capacity and Global Knowledge to Address Emerging Research Problems.

1.4 Strengthening Capacity of Smallholder Farmers and Farmers' Organizations through Farmers' Field

The first subcomponent deals with training of smallholder farmers through FFS. The main focus of the training will be on: (i) establishing and strengthening smallholder farmers' organizations; (ii) strengthening farmers' knowledge about improved agricultural practices, modern agricultural technology, use of improved agricultural inputs, and agricultural marketing; (iii) strengthening farmers' functional literacy and numeracy; (iv) improving household nutrition through crop diversification, use of more nutritious crops and crop varieties, and better food preparation techniques; (v) improving soil fertility and integrated nutrient management (INM); and (vi) promoting integrated pest management and conservation agriculture, including training on environmental and climate-smart agriculture (CSA) practices related to soil conservation, rational use of water, fertilizers, and INM. HIV/AIDS and gender awareness will be systematically integrated in FFS as cross-cutting issues.

The capacity of smallholder farmers and farmers' organizations will be strengthened in all critical aspects related to agriculture by scaling up the FFS initiative currently being implemented under MOSAP by FAO jointly with local ADI/EDA extension services. The FFS training is expected to benefit 150,000 smallholder farmers. The FFS methodology empowers smallholder farmers to set their own agenda and take steps to improve their agricultural knowledge and economic situation. It also includes training of master trainers (mainly EDAs' agricultural extension staff), who will in turn train other government extension staff and farmer facilitators by using the enhanced and improved FFS curriculum.

For effective implementation of the FFS approach, the government will ensure that each commune has at least three agricultural extension specialists at each EDA. The project expects to cover all 80 communes in 26 municipalities by the end of the third year, with at least 30 communes covered in the first year and 60 in the second year. This will ensure that all farmers in the target group benefit from at least one full FFS training cycle during the project.

1.5 Institutional Strengthening of Local, Provincial, and National Units of the Ministry of Agriculture (MINAGRI)

The second subcomponent aims to strengthen MINAGRI's institutional capacity at the national and decentralized levels to provide the complementary services needed for SADCP

farm-level investments in the critical areas of agricultural extension, irrigation services, market information, agricultural statistics, and policy analysis. In particular, project financing will be provided for:

- *Data and statistics:* Targeted support: to expand data collection for crop production (including forecasts) and post-harvest surveys through funding for enumerator training and data collection in the project areas; to produce regular production statistics and reports at the national level; and for the planned national agricultural census in 2016, as needed.
- *Policy analysis:* Targeted support for agricultural policy training and annual sector review processes, possibly with a link to Angola's commitment under CAADP to institute regular reviews twice a year for the agriculture sector.
- *Market information systems:* Support for the development of market information systems; exploration of possible systems to be developed for farmers' or traders' groups; and linkages to Ministry of Commerce initiatives around market information systems within the context of PAPAGRO (*Programa de Adquisição de Productos Agropecuarios*).
- *Small-scale irrigation:* The rehabilitation and development of small-scale irrigation is part of ADI's mandate to support smallholder agriculture development in the country, while development of larger irrigation schemes is within the mandate of MINAGRI's Department of Hydraulics. The project will provide technical training on gravity-fed irrigation systems at provincial and municipal levels to enable technical backstopping for small-scale irrigation systems to ADI staff and policy support such as preparation of water users' association (WUA) regulations to the GEPE (MINAGRI's Division of Statistics under the Department of Planning and Studies).
- *Provision of infrastructures for extension officers:* Critical agricultural extension facilities need to be rehabilitated and/or built at local level. This will require construction and rehabilitation of office-residential complexes for agricultural extension services in selected communes. An estimated 40 new houses and 10 new offices will be required in the 80 beneficiary communes. This activity will be implemented by the PIU/PPIUs (Project Implementation Unit/Provincial Project Implementation Units) in collaboration with local beneficiary organizations. The government will allocate specific resources for operations and maintenance (O&M) as part of its contribution.

1.6 Strengthening Capacity and Global Knowledge to Address Emerging Research Problems- US\$9 million

The third subcomponent aims to strengthen the capacity of Angola's national and provincial-level agricultural research systems to expand access to improved technologies that increase farm productivity and production. This will include scaling up the availability of improved technologies for SADC-supported farmers' organizations, bridging the technical knowledge gaps around priority cropping systems, and bringing in new knowledge and technologies available within the region or globally, where appropriate. Special attention will be paid to crops and technologies preferred by women.

In particular, financing under the SADC will be provided for:

- *Multiplication of seeds and planting material*: Scaling up breeder or foundation seed production within the Institute of Agricultural Research (IIA), developing partnerships with seed producers to increase production of certified or quality declared seed, and scaling up production and dissemination of virus-free cassava cuttings through available tissue culture laboratories (in Malanje and Luanda).
- *Development of recommended technology packages for project crops (cartas tecnologicas por culturas)*: Packaging and disseminating recommendations for priority crops for use by farmers, delivered by extension system/technical service providers.
- *Improvement of soil diagnostic services (soil analysis and fertilizer recommendations)*: Provision of equipment, training, and operational costs within Huambo and Malanje to improve soil testing facilities and development of comprehensive fertilizer recommendations.
- *Training of national research and extension system on specific technical topics by international experts*: Support to partnerships to bring in outside knowledge for the benefit of the national research and extension system from partners such as EMBRAPA (Brazilian Agricultural Research Corporation), CGIAR (Consultative Group for International Agricultural Research) institutes, or within the SADC (Southern African Development Community) region.
- *Scaling up the testing/demonstration of new technologies based on CGIAR research system or others*: Support for R&D activities within IIA to test new technologies brought in from the CGIAR system, EMBRAPA, or countries within the region and targeting priority crops.

Component 2. Support for Increased Production and Commercialization

The objective of this component is to support value chain development of selected crops through demand-based matching investment grants to smallholder farmers' organizations to improve agricultural productivity, production, and market access for 50,000 eligible beneficiaries. The beneficiaries for investment support will be selected from those trained through FFS under MOSAP, the SADCP, or any other training program. This component will support three kinds of investments in the value chain, including: (i) rehabilitation of small-scale irrigation schemes; (ii) agricultural production and productivity improvements; and (iii) post-harvest management for value addition, including storage, processing, and marketing facilities.

The project will hire an experienced and competent service provider to provide necessary support during implementation of this component. The service provider will work within ADI's structures and will only hire internationally qualified experts to integrate in the team and to support ADI to address technical issues along the selected crops' value chains.

A Project Implementation Manual (PIM) will be compiled for the SADCP and will include eligibility criteria and the selection process for investment subprojects. These may vary according to the type of support required, as described in Annex 2 of the PAD, but eligibility for each subsequent investment will be contingent on satisfactory performance in the previous investment support phase, if any. A detailed process for identification, appraisal, and approval

of subproject proposals is described in the implementation arrangement in Annex 4 of the PAD and details will also be provided in the PIM.

Smallholder farmer beneficiaries will be required to make a 10-30 percent contribution (in-kind or cash) to the matching grants funded by the project, depending on the type of investment. The approval process for the subproject proposals seeking matching grant investment support will be as follows:

(iii) The Project Implementation Support Committee (PISC) will approve subprojects between US\$50,000 and US\$100,000. The first two proposals in each category will require prior review and clearance by the Bank; and

(iv) The Provincial Project Implementation Support Committee (PPISC) will approve subprojects up to US\$50,000, with the first two proposals in each category to be cleared by the Bank.

The PISC and PPISC will include NGO and private sector representatives to ensure full transparency in the selection process. Subproject proposals from farmers' organizations will be evaluated by a special Project Committee against competitive selection criteria, as outlined in Annex 2 of the PAD. A full set of criteria and procedures will be outlined in the PIM. Farmers' organizations with a poor performance record under MOSAP will not be eligible for any new investment support under the SADCP, but every effort will be made to reach a diverse and large number of qualified farmers' organizations. In other words, selection of farmers' organization for investment support will focus on both equity and efficiency criteria. Strategically, the activities planned under this component will support implementation of Objective 2 of ADP 2013-17 by promoting value chains, agribusiness, development of irrigation, and construction of infrastructure to support agricultural production.

This component will be divided into two subcomponents: subcomponent 2.1 will provide technical support whereas subcomponent 2.2 will provide investment support to qualified farmers' organizations and enterprises.

2.1 Provision of Technical Support

The implementation modalities for providing technical support include contracting an experienced and competent service provider to: undertake initial feasibility work for investment support; undertake pre-identification and community mobilization work (including the establishment of WUAs); prepare designs for small-scale irrigation schemes; help prepare all subproject proposals for investment support; ensure the environmental and social sustainability of subproject proposals (in accordance with the World Bank's safeguards policies); and supervise implementation of all subprojects under investment support. The service provider will also ensure that improved technologies and skills are available to smallholder farmers' organizations and their members such that subproject proposals are economically, financially, socially, and environmentally viable and sustainable. The service provider will strengthen capacity by training selected MINAGRI staff at the national and provincial levels in project implementation to improve sustainability.

The service provider will strengthen capacity in three areas, by: (i) helping farmers' organizations prepare subproject proposals for competitive funding under Component 2; (ii) strengthening private input suppliers' capacity to respond to the real needs of smallholder farmers; and (iii) improving private enterprises' capacity in agricultural marketing, post-harvest management, and value addition so that smallholder farmers' organizations can more easily access markets.

Specific capacity-development activities in each of the three provinces will include: (i) training farmers' organizations on how to prepare investment proposals, as well as supporting increased managerial and business capacities of new and existing agribusiness entrepreneurs; (ii) information awareness-raising sessions with private input suppliers and private agricultural input suppliers; and (iii) support to farmers' organizations on how to undertake market assessments and studies or business plan development.

In coordination with the PIU, PPIUs, and ADI, the service provider will organize at least three seminars per province per year for the following target audiences: farmers' organizations, private input suppliers, and other private sector actors.

2.1.1 Technical Support to Irrigation Subprojects

Rehabilitation of small-scale irrigation schemes will be at pilot scale and will only cover 1,000 ha of the potential 5,500 ha available in the country. The design of irrigation schemes and construction supervision will be done under subcomponent 2.1 whereas actual construction and its funding will be done under subcomponent 2.2.

Initial data indicate that about 279 irrigation schemes, covering about 5,500 ha in the three beneficiary provinces, require rehabilitation, but the level of rehabilitation required varies. Given capacity constraints and the costs of rehabilitation, the project will only support rehabilitation of about 1,000 ha of small-scale irrigation systems as a pilot program, benefiting about 2,000 farmers (with an average of 0.5 ha each). Assuming an average of 32 ha per irrigation scheme, the project will cover approximately 32 irrigation schemes. The investment in irrigation schemes will adopt an integrated participatory planning and development process (details of this process as well the eligibility criteria are given in Annex 2 of the PAD which will be further developed in the project implementation manual). WUAs will be established to ensure the investment's sustainability and to avoid possible future conflicts.

2.1.2 Technical Support to Production and Post-harvest Management Subprojects

The objective of this subcomponent is to increase crop production and marketing by smallholder farmers, thereby accelerating the transition from subsistence agriculture to commercial agriculture. The service provider will have the responsibility to: (i) identify the demand-driven but potentially critical subprojects for increasing crop productivity and production as well as post-harvest value addition and marketing; (ii) support preparation of subproject proposals that meet the eligibility criteria for investment support and have a good chance for competitive selection for support under Component 2; and (iii) supervise the implementation of subproject proposals selected for funding under Component 2. In addition, the service provider will train selected MINAGRI staff in project implementation, thus

strengthening Angola's agricultural institutional capacity. It is extremely important that this subcomponent supports subprojects that are viable, sustainable, and likely to make a major contribution to increased productivity, production, and marketing, including value addition.

2.2 Investment Support

Investment support will be provided for those competitively selected innovative subprojects that deal with irrigation, production, or value chains individually or in a fully justified package of investments in a combination of irrigation, production, and value chains. Further details, eligibility criteria, and eligible expenditures in each category are provided in Annex 2 of the PAD. While the menu of investment options will be flexible, the eligibility criteria will be strictly followed. Recipients of matching grants will be required to contribute 10-30 percent of the subproject's cost in-kind and/or cash.

Subcomponent 2.2.1 Investments in Irrigation Systems and Support Infrastructure

The objective of this pilot activity is to finance the irrigation infrastructure required to increase the productivity and profitability of smallholder irrigated agriculture while taking into account the environmental and social safeguards associated with the civil works. On the basis of participatory designs and the eligibility criteria, the SADCP will finance the costs of the schemes' rehabilitation/construction. Irrigation infrastructure development will be based on clearly articulated investment proposals and commitment from beneficiaries in scheme development and O&M. No infrastructure investments will be made before critical issues like land user rights and water rights have been secured.

In general, the rehabilitation and construction works will consist of: (i) upgrading of the area around the intake and the main canal; (ii) construction of water collecting structures and/or rehabilitation of damaged embankments; (iii) installation of control structures like water gates; (iv) upgrading of the main canals and, where necessary, lining critical stretches of the distribution system; and (v) use of local plants/grass to control canal erosion. In places where the installation of buried pipes is feasible, hand-dug earthen canals may be substituted by pipes if water losses warrant this. Taking into account the higher unit cost of installing gravity-buried pipe systems, the costs and benefits of this option will be evaluated and discussed with the community prior to installation of any such system.

The SADCP will endorse a mix of construction methods, including both plant-based and labor-intensive construction methods that are designed to: (i) build local capacity in irrigation construction and maintenance; (ii) create local entrepreneurship for sustainable delivery of irrigation services; and (iii) deliver planned irrigation construction investments on time, of high quality, and at potentially significantly lower cost than contractor and equipment-based constructions experienced in past irrigation projects in Angola. The choice of construction method will be made on a case-by-case basis at feasibility stage, as this will determine subsequent stages of design/supervision and tendering. After field visits to some of the irrigated areas, the cost for small-scale gravity-fed irrigation scheme rehabilitation or development was estimated to be between US\$1,000-2,000/ha.

Subcomponent 2.2.2 Investments in Agricultural Production

The main objective of this subcomponent is to support a sustainable increase in smallholder agricultural productivity and production. To achieve this objective, the subcomponent will provide matching grants to smallholder farmers' organizations for investments in farm assets. Specific activities likely to be considered for investment support are demand-based agricultural technology packages and improved inputs designed to increase agricultural productivity and production (see the menu of investment options in Annex 2 of the PAD). The main focus will be on crops identified as a priority for the project areas (i.e., maize, beans, cassava, Irish potatoes, and vegetable crops).

To access matching grants for investment subprojects, eligible farmers' organizations will need to submit subproject proposals. Subcomponent 2.1 will assist eligible participants in the preparation of detailed subproject proposals that will allow an informed decision about their feasibility from technical, economic, financial, social and environmental perspectives. Subproject proposals can be submitted for any investment that will contribute to increasing crop production and productivity.

Proposals will be identified, appraised, and approved based on the criteria summarized in Annex 4 of PAD. A full set of criteria and procedures will also be defined in the PIM. Proposals will be evaluated and selected by an independent technical committee based on the defined criteria. Although the disbursement mechanisms and advances may vary, taking into consideration the type of grant, the eligible expenditures are for Goods, Works, and Services.

2.2.3 Investments in Post-harvest Management and Value Addition

The main objective of this activity is to promote investments aimed at increasing value addition, reducing post-harvest losses, and strengthening market linkages for key priority food and vegetable crops in the project area.

The ultimate goal is to improve the performance and efficiency of the targeted value chains. This activity will support investments related to market linkages and commercialization of key crops and horticulture (see the menu of investment options in Annex 2 of the PAD). Any subproject requesting financing under this subcomponent will prepare a project proposal and a business plan that will go through a complete appraisal process to determine its economic feasibility and sustainability as well as its environmental and social impacts.

Financial support for farmers' organizations and rural enterprises' value addition activities is crucial for the sustainability of public investment in small-scale irrigation development as well as for investments in agricultural production. Eligible beneficiaries of value chain investment support will therefore include smallholder farmers' organizations that have proven capacities for market-oriented production and/or value chain activities. A key distinguishing feature of this activity will be more complex subprojects that may require multiple stages of support or greater focus on business development services.

Component 3. Project Management, Monitoring, and Evaluation

The third project component will finance management, coordination, and monitoring and evaluation (M&E) of the project. It consists of two subcomponents.

Project Management

The purpose of this subcomponent is to ensure that the project is implemented correctly, on time, and in accordance with the Loan Agreement. This will be the responsibility of a Project Coordinator (PC) and a team of experts located at the national and provincial levels. Financing will be provided to support project coordination activities, including planning and budgeting, management and administration, procurement, financial management (FM), M&E, safeguards compliance, and national and provincial engagement. Government counterpart resources will be used to pay staff-related costs that are not eligible for IBRD funding. The final arrangements for project management incorporate the lessons learned under MOSAP in terms of organization, staffing, and timing. Eligible expenditures under this component may include funding activities in connection with the preparation of the new agricultural subprojects aimed at supporting the development of commercial agriculture.

Project Monitoring and Evaluation

An M&E system will be established to collect and process appropriate information to monitor project performance and measure the output, the effects, and eventually the impacts of project activities over time. Baseline information will also be collected at the beginning of project implementation.

The MOSAP II activities will benefit smallholders with land plots in the wider catchment areas and target irrigation schemes. Ministry of Agriculture (MINAGRI) through the Institute for Agrariculture Development (IDA) will be the lead implementing agency. IDA will have the responsibility of coordinating implementation by hosting a Project Implementation Unit (PIU) with sub PIUs at Province level, tasked with the responsibility of MOSAP II coordination and management using Technical Assistance (TA) when needed. The project area will cover the whole country for capacity building and institutional development activities. However, investment will be limited to the same three provinces of Bié, Huambo and Malanje but with more coverage to municipalities. MOSAP was limited to three provinces covering 12 municipalities and only 50,000 beneficiaries. MOSAP II would significantly expand the number of municipalities and communes covered under MOSAP and cover about 175,000 direct beneficiaries (rural households).

2.6 Environmental and social context

2.6.1. Demography, socieconomy and gender equality

According to the projection of the National Statistics Institute (Instituto Nacional de Estatística), in 2012 there were 20.609.294 Angolan citizens. The population of the capital Luanda is about 5.3 million.

The population is predominately quite young, with 48.1% between the ages of less than one and 14 years old. 49.3% of the population is between the ages of 15 and 64 years old. 3% are 65 years and over, 148,944 males and 186,367 females as of 2006.

With 38.4% of urban population Angola has one of the lowest urbanization rates in Africa and in the world.

Around 85 % of Angola's rural populations live off subsistence agriculture. Conditions remain particularly harsh, a number of factors hampering recovery and development of the rural areas, despite progress in opening up areas for resettlement and agriculture after the war. There are limited and fragmented social services and staffing for extension, health and education sectors remain problematic.

The MOSAP II will cover 80 communes belonging to 26 municipalities in the three selected Provinces of Bié, Huambo and Malanje. The population census of 2014 estimates that the three provinces have a total population of 4.2 million, representing about 17.2 percent of the total population in Angola.² The total number of rural households in Angola is estimated to be 1.8 million. Almost one quarter of these, about 440,000, live in the project area. An estimated 175,000 rural households (with a total of about 875,000 people) are expected to be direct and indirect project beneficiaries. The project beneficiaries thus account for 40% of all the rural households in the three provinces and for nearly 10% of all rural households in Angola.

Concerning gender equality in general, it is undeniable that discrimination against women is still widespread in Angola, which ranks 124th on UNDP's Gender related development index (out of 140 countries). According to some specific surveys carried out over the years women conditions are getting worse as a result of negative impacts of population displacement, poverty, low food security, working conditions in agriculture, employment mostly in the informal sector with no protection (especially in urban areas) and inequalities in access to education. Also general discrimination against women in Angola continues due to cultural practices. Some specific and outstanding manifestations of gender issues are:

- A deeply ingrained notion of male supremacy, shared by both men and women;
- Because of their major role in subsistence food production, women share relatively equal status with men in the household, reinforced during the colonial period when men had been often separated from their families through an extensive system of forced labour on plantations (and subsequent migrant labour).
- Negative impacts of war on women have included a substantial increase in female-headed households and a growing population of mine-injured women. But women separated from their home communities needed to learn to speak Portuguese as "língua franca" and had opportunities to develop skills and experience in taking over jobs and activities while men were absent.
- Studies concerning rural areas indicate that poverty of female-headed households is deeper and more severe on average than in male-headed households and that they are more vulnerable, because they are deprived of male labour for land clearance and ploughing.
- Extreme poverty is highest in families led by widowed and divorced women. Women remaining disadvantaged to men in terms of employment opportunities, reinforced by higher levels of illiteracy among women than men, as well as ownership of assets and inheritance (land law issues are significant here).

² Anon. 2014. Censo 2014: Resultados preliminares do recenseamento geral da população e da habitação de Angola 2014.

2.6.2. Climate

Angola has two seasons: the rainy season, also hotter, (from September to April) and the dry season (from May to August), also known as “cacimbo”. The mean temperature in Angola is between 25 and 33°C in the rainy season and between 18°C and 22°C during the “cacimbo”.

The coastal regions, relatively humid, presents an annual rainfall of over 600 mm, dropping from the North to the South from 800 mm on the Cabinda coast to 50 mm in the South (Namibe), with an average temperature of above 23° C.

The project target areas fall into the climatic interior zones, integrating two sub-zones the northern zone, with high rainfall (above 2000 mm per year) and high temperatures and the zone of altitude, on the central plateaus, characterized by annual average temperatures close to 18° C, with minimum temperatures accentuated in the dry season.

2.6.3. Soil

The MOSAPII area of intervention covers the most important soils for agriculture in Angola, particularly the Malanje high plateau and the central plateau where Bié and Huambo are located. The predominant soils in Bié and Huambo Provinces are ferralitic while in Malanje the soils are more diverse including, besides ferralitic and psamitic soil, also alluvial and caliche soils. The lack of adequate land and landscape and water management together with lack of knowledge on the use of inputs and low level of awareness on the economic benefits of soil protection and natural resources management in general induces agriculture under an unsustainable trend. The decline in soil fertility demands for more and new land resulting on the destruction of natural habitats and loss of ecosystem goods and services.

2.6.4. Biodiversity

Angola hosts a very rich biodiversity, resulting in a diversity of ecosystems ranging from Namibe desert in the southwest, going through Okavango and Zambezi basin in Southeast to the tropical forest in the Congo basin in Northeast. The main biomes are: Guinea-congolese in the North, Zambezi (which entails more than 80% of the country's territory) Afromontano, and Karro-Namib in the South.

The main type of vegetation occurring in the high plateau correspond to open forest and the savanna, being the last more frequent in the lower areas of the plateau. The most characteristic tree species of the open forest are: *Brachystegia wangermeeana*, *B. spiciformis*, *B. tamarindoides* and *Isorbelina angolensis* together with other frequent species such as *Julbernardia paniculada*, *Parinari curatellifolia*, *Pteleopsis anisoptera* and *Monotes caloneurus*.

The “panda forest” is also a typical forestry community occurring predominantly in the N-NE area of the plateau, corresponding to the association of species such as *Marquesia macroura*, *Daniellia alsteeniana*, *Berlinia giorgii*, *Parinari curatellifolia*, *Cussonia angolensis* and *Uapaca* spp.

Other types vegetation communities also occur restricted to special habitats as the lower and narrower parts of the valleys, benefiting from the presence of water and including species like *Diospyros mespiliformis*, *Pterocarpus tinctorius*, *Lonchocarpus sericeus* and *Adina*

microcephala. *Adansonia digitata* is also another frequent and significant occurrence on these habitats.

According to IUCN (2002), about 75% of animals and plants occurring in Angola are listed in red list as being vulnerable, endangered, critically endangered or of which there are no available data, including three species of insects, 37 bird species, 90 mammals, 7 species of reptiles, 10 species of gastropods and 29 magnoliopsidics. Among the species critically endangered *Hippotragus niger varini* (Palanca Negra gigante) is reported for some areas close to the Northern limits of Malanje Province. Hippopotamus are reported for some of the water courses, especially in the main rivers, along the MOSAPII target area which may lead to eventual conflicts.

The MOSAP II physical interventions will not occur in natural areas as the aim is to rehabilitate and develop irrigation systems in areas already used for agriculture activities. No direct impacts or interference with natural or protected areas are expected.

There are two expected types of sub-projects with physical interventions. 1 development of new irrigation infrastructures and rehabilitation works. The Irrigation development will be restricted to schemes that are clearly feasible from a technical point of view and viable economically and there is firm commitment from potential beneficiaries to scheme development and to Operation and Maintenance (O&M). The rehabilitation works will consist of: (i) upgrading of the area around the intake and the main canal (ii) construction of collecting structures for the accumulation of water to be distributed and/or rehabilitation of damaged embankments; (iii) installation of control structures like water gates, (iv) upgrading (digging) of the main canals and, where necessary, lining critical stretches of the distribution system, (v) use of local plants/grass to control canal erosion. In places where the installation of buried pipes is feasible, the hand-dug earthen canals may be substituted by pipes if water losses warrant this. Taking into account the higher unit cost of installing gravity buried pipes systems, the cost and benefits of this option will be evaluated and discussed with the community prior to the installation of any such systems.

3. Objectives and Methodology of the Environmental and Social Management Framework

3.1 Objectives

As part of the identification and effective management of potential environmental and social impacts of the MOSAP II, several environmental and social management tools should be considered, including (i) Environment and Social Management Framework, (ii) Environmental and Social Impact Assessment, (iii) Resettlement Policy Framework and (iv) Integrated Pest Management Plan. Some of these environmental and social instruments should be prepared in accordance with international best practices as well as the World Bank safeguards and GoA requirements. The present ESMF outlines the major environmental and social considerations and provides practical guidance for these environmental and social instruments for the management of potential environmental and social issues associated with future sub-projects under the MOSAP II.

This Environmental and Social Management Framework (ESMF) was prepared as part of the design of MOSAP II aiming to address all relevant environmental and social safeguards. The main objectives of the ESMF are:

- Identification and establishment of procedures and methodologies for the environmental and social assessment, review, approval and implementation of investments to be financed under the project;
- Specification of roles and responsibilities, and outlining the necessary reporting procedures, for managing and monitoring environmental and social concerns related to project investments;
- Identification of necessary training, capacity building and technical assistance to ensure the implementation of the ESMF provisions;
- Provision of information resources for implementing the ESMF.

3.2 Methodology

The general methodology and approach used in the development of the ESMF followed the following steps:

- Reading of information regarding biophysical and social conditions of the proposed project areas;
- Review of typical implementation approach and processes for the proposed project activities;
- Identification and analysis of potential environmental and social impacts the project activities are likely to trigger and generate within and around the project areas;
- Development of the appropriate screening process for the proposed project sites and project activities.
- Identification of appropriate generic mitigation measures for the likely potential negative environmental and social impacts and;
- Compilation of a generic management and monitoring plan for addressing the impacts during planning and design, implementation, operation and maintenance of the project activities.

Information for preparation of the ESMF has been collected through a number of research methods, including review of related literature from published and unpublished documents, field investigations and consultation with key stakeholders. Previous experience and field visits to the ongoing MOSAP Project also provided background information and identification of main environmental and social considerations.

3.3 Lessons learned

The MOSAP's environmental performance has shown that although the legislation and understanding of the importance of environmental management, there is a lack of cooperation between agriculture and environmental departments. Lack of environmental skills within the agriculture sector is also evident thus the ESMF proposes measures to ensure basic training on environmental topics such as management, impact assessment and monitoring.

In relation with the implementation arrangements a close cooperation between MOSAPII and the Provincial Environmental Departments is stringly encouraged, especially dealig with environmental screening and monitoring activities as well as with the preparation and implementation of the ESMPs and all environmental reporting.

The integration of environmental and social safeguards specialists within the PIU at national and provincial levels as well as external technical assistance will contribute to a high environmental performance of MOSAP II. Permanent contacts and cooperation through sectoral focal points at national and provincial levels are also proposed as a contribution to a more efficient follow up and compliance of the environmental and social safeguards.

3.4 Public Consultations and Participation

Throughout the design of this project and the preparation of its safeguard instruments, extensive consultation workshops were held in Luanda (central level) and in the beneficiary provinces and districts. Beneficiaries were given full presentation of the project, and were able to provide invaluable feedback and contribution that influenced the design of the project and the way the safeguards instruments were prepared. Issues of gender inclusion and youth participation were also discussed at length, as the Government intends to strengthen its youth strategy in the Agriculture sector. The choice of commodities per province (i.e. maize, cassava, beans, potatoes, and vegetables) as well as the emphasis of encouraging the usage of locally developed natural fertilizers and pesticides in respect to the environment based on locally grounded knowledge is another tangible proof of how local communities ideas, preferences and knowledge were effectively captured in the design of project activities.

During the design of MOSAPII field investigations and public consultations were conducted and key stakeholders consulted included central government officers in Luanda, officials from the provinces, districts and communities as well as persons who would be affected either positively or negatively by the project. Several workshops and public sessions were organized in the three Provinces where the MOSAPII will be implemented, gathering public departments, NGOs, communities's representatives, farmer associations, research institutions and public in general. These sessions were used to promote the project and explain the main objectives and areas/sectors of intervention as well as to collect opinions, sugestions and

informal data on environmental and social concerns. Also best practices and lessons learned from previous initiatives such as the MOSAP were shared and used for discussing environmental principles and practices to be implemented during the MOSAP II. Among these, conservation agriculture was underlined as an effective way of contributing to the conservation and sustainable use of the soil and water. Crop rotation, usage of organic fertilizers as well as planting vegetation on channels's walls to reduce erosion on the earthen-made channels, assessment of environmental and social water uses downstream were some of the topics analysed, Annex IX provides an example of a Public Consultation Session and attending list.

The present document is going to be subject of Public consultation and participation. It is expected that amply consultation upon and publicly disclosed both in-country, through various media channels and means of communication, with extensive usage of local languages to ensure communities understanding and buy-ins, as well as at the WBG InfoShop. Overall, these series of public/stakeholders consultations encouraged more ownership built-in behavior towards the project, which communities welcomed highly, especially learning from positive outcomes under MOSAP I. Such an ownership is foreseen to foster more social accountability, both of which are expected to ultimately pave the road to more sustainability of the project activities. Since stakeholder consultation and participation is an iterative process, this will be maintained throughout the lifespan of this project.

3.5 Grievance Redress Mechanism

As a safeguard instrument there will also be a Grievance Redress Mechanism to properly address project affected parties's complaints on their potential unaccounted environmental and social impacts. The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns.

At local level, it will be established for each Province, committees with the aim of receiving all grievances. This committee will comprise local authorities and traditional leaders. The committees will keep records of grievances and complaints with minutes of discussions, recommendations and decisions achieved. The ESMPs will establish detailed mechanisms for the grievance and complaint process, describing format, language, time for reply, and alternative resources, including access to Courts of Law as a last resort after exhausting all the viable peaceful local alternatives/options.

Permanent and open dialogue is the most suitable way of peacefully addressing any grievance expressed. MOSAPII shall promote dialogue between the parties involved in order to achieve consensus, a dialogue grounded on local culture, which PAPs are mostly familiar with. However during consensus, negotiation and conflict resolution it should be clear to whom and when all communications and decisions should be addressed.

Project affected communities and individuals may also submit their complaint to the WB's independent Inspection Panel, which determines whether harm occurred, or could occur, as a result of WB non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank's attention, and Bank Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank's corporate Grievance Redress Service (GRS), please visit www.worldbank.org/grs. For information on how to submit complaints to the World Bank Inspection Panel, please visit www.inspectionpanel.org.

4. Overview of Angola's legal and institutional framework for environmental management

4.1 Environmental Policy

The Constitution of the Republic of Angola (Constituição da República de Angola) was signed into law in 1992 and provides the basis for the Environment Framework Act through two articles that enable environmental protection and conservation, and the right to a healthy and unpolluted environment. Article 12: “All natural resources existing in the soil and subsoil, in internal and territorial waters, on the continental shelf and in the exclusive economic area, shall be the property of the State, which shall determine under what terms they are used, developed and exploited. The State shall promote the protection and conservation of natural resources guiding the exploitation and use thereof for the benefit of the community as a whole. Land, which is by origin the property of the State, may be transferred to individuals or corporate bodies, with a view to rational and full use thereof, in accordance with the law. The State shall respect and protect people's property, whether individuals or corporate bodies, and the property and ownership of land by peasants, without prejudice to the possibility of expropriation in the public interest, in accordance with the law”.

Article 24: “All citizens shall have the right to live in a healthy and unpolluted environment. The State shall take the requisite measures to protect the environment and national species of flora and fauna throughout the national territory and maintain ecological balance. Acts that damage or directly or indirectly jeopardise conservation of the environment shall be punishable by law”.

In 1993 the National Secretariat for the Environment was established, which became, in 1997, the Ministry for the Environment. Over the years, the name of this Ministry has changed several times, but it is currently known again as the Ministry of Environment.

The Ministry is responsible for the development and coordination of the country's environmental policy and for implementing the National Environmental Management Programme (PNGA). As the key authority responsible for the implementation of the Environmental Framework Law, No. 5/98 (EFL), the Environmental Licensing Law, No. 59/07 and all associated regulations, the Ministry is also responsible for the review and regulation of environmental impact assessments (EIAs). Depending on the type of project to be developed, the EIA report should also be approved by the appropriate line ministry. This ensures that the EIA not only addresses the requirements of the Environmental Framework Law and EIA Decree, but also relevant sectoral legislation.

Direct responsibility for EIA falls under the National Directorate for Protection and Environmental Impact Assessment, which, among other things, is responsible for reviewing and commenting on EIA reports.

The granting of an environmental license for a proposed project is based on the results and recommendations of the EIA done on that project. If required, different institutions and stakeholders are invited by the Ministry of Environment to give comments and suggestions on the final report. Although there are efforts to identify partners for this process, the Ministry of

Environment currently retains full control of the EIA process and there is no decentralisation in decision-making to lower government levels.

Cooperation between the Ministry of Environment and other ministries is evident from the well-established Multi-sectoral Commission dealing with environmental matters, which has representation from over 12 different ministries and three environmental NGOs, as well as a number of environmental experts. However, there is a need to strengthen and improve this co-operation in a way that effectively addresses issues such as bureaucracy, lack of skills, and lack of continuity.

4.2 National Legal Framework

The most relevant environmental management and related legal elements for the MOSAP II are the following:

- The Environmental Framework Law (Lei de Bases do Ambiente, Lei nº 5/98, de 19 de Junho).
- The Decree on Environmental Impact Assessment (Decreto sobre a Avaliação de Impacte Ambiental, Decreto 51/04 de 23 de Julho).
- The Decree on emission of Environmental Licences (Decreto sobre Licenciamento Ambiental, Decreto 59/07, de 13 de Julho).
- The Land Law (Lei de Terras, Lei nº 9/04 de, de 9 de Novembro).
- The Executive Decree on EIA conformity (Decreto Executivo nº 92/12, de 1 de Março sobre conformidade dos EIA)
- The Executive Decree on EIA Public Consultation (Decreto Executivo nº 87/12, de 24 de Fevereiro, sobre Consulta Pública no âmbito da AIA)
- Law of NGOEnv (Lei nº3/06, de 18 de Janeiro – Lei das Associações de Defesa do Ambiente)
- Decree on Environmental Auditing (Decreto nº1/10, de 13 de Janeiro – Auditorias Ambientais)
- Law on Land Planning and Urbanism (Lei 3/04, de 25 de Junho – Lei do Ordenamento do Território e do Urbanismo)
- Decree on Rural, Urban and Territorial Planning (Decreto nº2/06, de 23 de Janeiro – Regulamento Geral dos Planos Territoriais, Urbanísticos e Rurais)
- Regulation of National Parks (Portaria nº10.375 de 15 de Outubro de 1958 – Regulamento dos Parques Nacionais)
- Decree on the Protection of Flora and Forestry Resources (Decreto nº40.040, de 20 de Janeiro de 1955 – Regulamento da protecção dos recursos da flora, das espécies vegetais e recursos florestais)
- Presidential Decree on Waste Management (Decreto Presidencial nº190/12, de 24 de Agosto – Regulamento sobre Gestão de Resíduos)
- Law on the Aquatic Biological Resources (Lei 6A/04, de 8 de Outubro – Lei dos Recursos Biológicos Aquáticos)
- Presidential Decree on Water quality for public health, integrated water management and environment protection (Decreto Presidencial 261/2011, de 6 de Outubro – Normas de aferição da qualidade da água na perspectiva da protecção da saúde pública, gestão integrada dos recursos hídricos e preservação do ambiente)
- Waters Law (Decreto Lei nº6/02 de 21 de Junho – Lei das Águas)

- Presidential Decree on General Use of Water Resources (Decreto Presidencial nº82/14, de 21 de Abril – Regulamento Geral de Utilização Geral dos Recursos Hídricos)
- Cultural Heritage Law (Lei nº14/05, de 7 de Outubro – Lei do Património Clutural)
- General Work Law (Lei nº 2/00, de 11 de Fevereiro – Lei Geral do Trabalho).

5. World Bank Safeguard Policies

During the design of the MOSAP II, three of the 10+2 World Bank’s operational safeguard policies were identified as triggered by the MOSAP II interventions (Environmental Assessment, Involuntary Resettlement and Pest Management).

5.1 Environmental Assessment (OP/BP 4.01)

OP/BP 4.01 has the objective to ensure that World Bank-financed projects are environmentally sound and sustainable, and that decision-making is improved through appropriate analysis of actions and mitigation of their likely environmental and social impacts. This policy is triggered if a project has potential adverse environmental impacts and risks in its area of influence. The World Bank’s classification of projects, with respect to significance of environmental and social impacts is as follows:

(a) Category A projects are likely to have significant adverse environmental and social impacts that are sensitive, diverse, or unprecedented. These impacts may affect an area broader than the sites or facilities of the physical works. EA for a Category A project examines the project's potential negative and positive environmental and social impacts, compares them with feasible alternatives (including the "without project" situation), and recommends measures needed to prevent, minimize, mitigate or compensate for adverse impacts and improve environmental and social performance. For a Category A project, the borrower is responsible for preparing a safeguards document, normally either a Framework (Environmental and Social Management Framework – ESMF whenever there is still an unclear definition of the project intervention footprint); or an ESIA (or a suitably comprehensive sectoral EA) that includes as necessary, other elements such as environmental audits or hazard or risk assessments or when such a footprint of project intervention zone is made known.

(b) Category B projects have potential adverse environmental and social impacts (on human populations or environmentally important areas - including wetlands, forests, grasslands, and other natural habitats) which are less adverse than those of Category A projects. These impacts are site-specific and easy to deal with; few if any of them are irreversible; and in most cases appropriate mitigatory measures can be designed more readily than for Category A projects. The scope of EA for a Category B project may vary from project to project, but it is narrower than that of Category “A” EA. Like Category A EA, it examines the project's potential negative and positive environmental and social impacts and recommends any measures needed to prevent, minimize, mitigate, or compensate for adverse impacts and improve environmental and social performance.

(c) Category C: A proposed project is classified as Category C if it is likely to have minimal or no adverse environmental and social impacts. Beyond screening, no further EA action is required for a Category C project.

(d) Category FI: A proposed project is classified as Category FI if it involves investment of Bank funds through a financial intermediary, in subprojects that might result in adverse environmental impacts.

The MOSAP II was assigned as Category B. The construction and rehabilitation of irrigation schemes, access roads and other infrastructures, under the MOSAP II, are likely to have environmental and social impacts which require mitigation. Therefore, in line with the Operational Policy, the ESMF has been prepared for screening of the MOSAP II's activities.

5.2 OP 4.09: Pest Management

This policy promotes the use of integrated pest management (IPM) techniques that seek to minimize synthetic pesticide use, as well as the safe use, handling, storage, and disposal of pesticides in general.

This policy applies to the MOSAP II since pesticides will be financed and that most of the catchment management and alternative livelihood promotion activities are small-scale irrigation or other production systems where pesticides are used. In such cases, the relevant sub-project investments will include technical assistance to farmers to promote IPMP, as well as safer pesticide use where needed. A standalone document corresponding to an Integrated Pest Management Plan will be prepared for MOSAPII:

5.3 Involuntary Resettlement (OP/BP 4.12)

OP 4.12 applies to all land acquisition and any changes in access to resources due to a sub-project. The policy applies whether or not affected persons must move to another location. The objective of OP 4.12 is to avoid or minimize involuntary resettlement where feasible by exploring all viable alternative project designs. Where resettlement is unavoidable, OP 4.12 is intended to assist displaced persons in maintaining or improving their living standards. It encourages community participation in planning and implementing resettlement and in providing assistance to affected people.

This policy is triggered not only if physical relocation occurs, but also by any taking of land resulting in: (i) relocation or loss of shelter; (ii) loss of assets or access to assets; and (iii) loss of income sources or means of livelihood, whether or not the affected people must move to another location. The Bank's policy requires a full Resettlement Action Plan (RAP) if over 200 people must be relocated or if these people are not physically displaced but lose over 10% of their assets due to the project. If the impact is less than this an Abbreviated Resettlement Action Plan should be prepared instead.

A Resettlement Policy Framework (RPF) will be prepared separately as a standalone safeguard instrument. The ESMF also provides criteria for determining the need for resettlement in the Environmental and Social Screening Form (Annex I) and guidelines for a Resettlement Policy

Framework (RPF) and the development of a Resettlement Action Plan (Annex IV), to guide any resettlement and related assistance that might be needed.

5.4 Safety of Dams (OP/BP 4.37)

This policy applies to new and existing dams, including small dams less than 15m in height, such as earth embankments used around reservoirs. The aim of the policy is to ensure that any dams created for a project are appropriately designed and managed to ensure their safety, and any dams affected by the project (for example, used as a source of irrigation water) do not propose a risk to the project. The policy requires for small dams to incorporate generic dam safety measures designed by qualified engineers, and for appropriate inspections to be undertaken as specified in those generic measures.

6. National Legal Framework Vs World Bank's Safeguards Policy

At the framework level there are no relevant gaps between the Angolan environmental legislation and the World Bank's Safeguard policy and guidelines. The environmental legislation in Angola is quite recent and inspired by the international Conventions that Angola takes part. Specially in relation with environmental impact assessment, also the existing legislation covers the most relevant principles and best practices, including public consultation and participation, monitoring and licensing procedures.

Under the Angolan legislation irrigation projects and agro-hydraulic projects are subject of EIA [c) and h) of n°1 at the Annex of Decree 51/04 of 23 July]. However, most of sub-project activities are rehabilitation and expansion of gravity earthen-made irrigation schemes, not including new irrigation schemes.

7. Potential Environmental and Social impacts due to project investments

If adequately managed the proposed interventions are not likely to result in significant adverse environmental or social impacts. However, if not carefully designed and implemented, the subprojects can result into negative environmental and social impacts, particularly those which entail investments in infrastructure development and construction (e.g. irrigation and drainage schemes, road rehabilitation, storages, deforestation and expansion of cultivated areas, small embankments, land levelling) and changes in the immediate hydrology of the intervention areas (particularly run-off).

Weak or inadequate capacity for designing, managing and monitoring subprojects can lead to a low environmental and social performance of the project, exacerbating adverse impacts and limited enhancement of the positive impacts.

The early identification of potential risks during the preparation and design stages of the project, considering two levels, is of extreme importance: a) the project's overall design and, b) the specific activities.

The major beneficial impacts of the project will be the expected increase of production and productivity and consequently income of the farmer communities. Also it is expected an improvement of the environmental conditions of the sites as a result of a better organization of land use, availability of infrastructures, capacitation and market orientation, which will allow a substantial production and income increase. New marketing opportunities and diversification of local economies as well as improved life conditions will be the other significant social impacts of the project. Training on the use of inputs (fertilizers and pesticides) and awareness increase in the use of natural resources and waste management will promote sustainable management of the agricultural activities, which will have significant positive impact on the environment through enhanced quality and value of agriculture production as well as reduction in the loss soil and water availability and quality.

The project is not expected to induce any resettlements as well as the expected negative impacts during the construction phase are restricted to the areas already in use with the exception of new agriculture areas and small infrastructures.

A Resettlement Policy Framework as a separate document was prepared covering the requirements, procedures and compensation measures.

The potential positive and negative environmental and social impacts of the MOSAP II are described below, for the construction and operation phases.

7.1 Impacts during Construction Phase

Impacts on landscape, habitats and biodiversity – During the construction phase it is likely that damages to the vegetation cover will occur due to installation of new structures (storage facilities and extensionist's houses), the irrigation schemes, localised land clearing, removal of the trees and shrubs for canal alignment, disposing of excavated materials and land levelling, digging of canals and construction of water off-take points. Losses of soil and landscape degradation are also potential impacts associated with these activities. Habitat fragmentation and wildlife disturbance may also occur depending on the sites.

Noise, vibration and emissions – Noise, vibration and emissions will occur in the course of activities such as transportation and operation of machinery, including grinding mills. Dust emissions and fuel combustion emissions from vehicles and other equipment will also occur during this phase resulting in loss of air quality and inducing human health implications.

Generation of waste, including construction waste – Construction and road rehabilitation works will generate spoil materials and construction waste. Concentration of workers will also contribute to localized increase of waste.

Impacts on archeological sites – Although no registered or known cultural heritage sites were identified for the areas of intervention the potential risk of encountering archeological sites should be considered. This includes graveyards.

Social impacts – Impacts on informal land and water use may be caused in the course of roads rehabilitation, construction of storage facilities access to new irrigation sites and grinding

mills operation. The construction and in-field land preparation will create opportunities for employment at the local level.

HIV/AIDS and other STDs will likely increase due to influx and concentration of people to the areas in search of employment opportunities.

Work related accidents – Weak technical capacity and negligence on operation of vehicles and machinery are likely to induce accidents. Lack or inadequate use of safety gear may also contribute to accidents that may result in trauma and other casualties.

7.2 Impacts during Operation Phase

Environmental and Natural Resources Management – Rehabilitation of irrigation and drainage schemes will bring significant positive impacts for the rural population and to the global environmental and natural resources management, in particular water and landscape management. Integrated management of water ensuring efficiency and best practices will generally contribute to reduce the loss of natural resources and to ensure a sustainable management of the landscape. The use of fertilizers promotes the generation of nitrogen gases that will pass to the atmosphere and contribute to the greenhouse green effect.

Impacts on environmental flows of watercourses – these impacts are expected as the result of the construction of small dams and embankments. When placed on streams and rivers, they constitute an obstacle to the flow pattern, they interrupt fish migration routes, they capture sediments thereby reducing the nutritional value of the water for the aquatic ecosystem.

Socio-economic – Irrigation and drainage schemes will result in a highly positive impact on the rural communities engaged in agriculture. Increase in yields of existing crop production and diversification into higher value crops requiring irrigation, will result in higher incomes and consequently better life conditions.

Rehabilitation of roads will improve safety and access to markets and social services centers amongst the communities bringing improvement of their livelihoods.

Social groups - The project is designed to provide a positive impact on vulnerable groups, especially to women, but also to youth and elderly headed-households, by ensuring that these reach consistent levels of participation on FFS and other project components.

Human Health – Agro-production in well-supported irrigated areas will lead to increased use of agrochemicals. Poor handling and application of agrochemicals will increase risks to the health of people exposed to pesticides and the consumers of the agriculture products.

Disposal of dredged materials resulting from the maintenance of irrigation infrastructures may contribute to public health problems.

New crops will promote new food habits introducing new nutrients in the diet of the communities and contributing to a healthier nutrition.

Soil and water pollution – the use of agrochemicals will contribute to soil and water (surface and groundwater) eutrophication and contamination with hazardous pollutants. Maintenance of irrigation infrastructures such as embankments and canals will generate dredged materials whose disposal may result in soil contamination.

Erosion and water logging – weak maintenance of irrigation infrastructures may lead to local flooding, inducing soil erosion. Failure of earth embankments around water storage areas, dams or dyke walls may result erosion, water logging and present a safety risk, as well as threaten the success of the project.

Biodiversity and habitats conservation – The identification and implementation of conservation measures for special conservation areas, habitats and relevant species will contribute to the preservation of biodiversity at species, habitats and ecosystem levels. However the expansion of farmlands may induce conflicts with wildlife, including protected species (e.g. hippos, birds).

Climate change resilience – Agricultural best practices and the introduction of crops adapted to the climate change conditions will contribute to soil management and restoration and the implementation of reforestation and other conservation activities, increasing social and natural resilience. Small irrigation schemes are also practical climate change adaptation and resilience strengthening tools.

7.3 Impacts from Pesticides

The increase in irrigation activities will result in the increase of chemical pesticides use, thus inducing potential significant impacts such as:

- Air contamination through application of pesticides;
- Soil and water contamination;
- Risk of pesticides poisoning; and
- Misuse of pesticides

The World Bank's Pest Management policy (OP 4.09) promotes the use of IPM techniques that seek to minimize synthetic pesticide use. It promotes safe use, handling, storage, and disposal of approved chemical pesticides in general. OP 4.09 applies to MOSAP II since the interventions will essentially promote small-scale irrigation where pesticides are used and financed as input. Thus the interventions will include technical assistance to farmers to promote IPM, as well as safe pesticide use where needed.

Any project-supported pesticide procurement under the MOSAP II would have to comply with the following guidelines:

- Pesticides would have to be procured from registered markets. The pesticides would have to be among those registered according to the crops and the target pests and diseases and the suppliers would have to show documentation of all import permits and licenses for selling and storage of pesticides.

The procurement of any pesticide in a Bank-financed project is contingent on an assessment of the nature and degree of associated risks, taking into account the proposed use and the intended users. For classification of pesticides and their specific formulations, the Bank refers to the World Health Organization's Recommended Classification of

Pesticides by Hazard and Guidelines to Classification (Geneva: WHO 1994-95). The following criteria apply to the selection and use of pesticides in Bank-financed projects:

- They must have negligible adverse human health effects.
- They must be shown to be effective against the target species.
- They must have minimal effect on non-target species and the natural environment.
- The methods, timing, and frequency of pesticide application are aimed to minimize damage to natural enemies.
- Pesticides used in public health programs must be demonstrated to be safe for inhabitants and domestic animals in the treated areas, as well as for personnel applying them.
- Their use must take into account the need to prevent the development of resistance in pests.

The Bank requires that any pesticides it finances be manufactured, packaged, labelled, handled, stored, disposed of, and applied according to standards acceptable to the Bank. The Bank does not finance formulated products that fall in WHO classes IA and IB, or formulations of products in Class II, if (a) the country lacks restrictions on their distribution and use; or (b) they are likely to be used by, or be accessible to, lay personnel, farmers, or others without training, equipment, and facilities to handle, store, and apply these products properly.

MOSAP I have already been promoting the use of bio pesticides (“Biol”) at FFS, an important practice to reduce its environmental and social impact. MOSAP II will increase awareness amongst farmers through FFS on bio pesticides usage, in order to minimize soil and water contamination with chemical pesticides.

Annex VI provides guidelines for the development and implementation of an Integrated Pest Management Plan that will be produced as a separate document.

7.4 Cumulative impacts

The MOSAP II will promote a series of activities that will promote a set of positive cumulative impacts as the target areas and communities will potentially be scaled-up in the future as sustainable water and soil management experiences.

In the other way, if poorly planned and developed, the irrigation schemes could cause significant cumulative impacts such as the loss and contamination of water and soil and reduction of the environmental flows of watercourses.

Synergies between the agriculture sector and research will also result from the successful implementation of environmental management and monitoring systems that will provide base line information. Enhancing the knowledge base and capacity in key water, soil and landscape management management related institutions can reach sectors and institutions far beyond the project intervention areas promoting effective management.

8. Mitigation and Monitoring Measures

Most of the expected negative environmental and social impacts may be effectively mitigated through measures that should be established for the different phases and components of the

project. The mitigation measures will ensure compliance with the national and international environmental and social best practices, guidelines and procedures, and include generic dam safety measures. The ESMF presents a basic and generic set of mitigation measures that should be included and complemented in the Environmental and Social Management Plans (ESMPs) for each subproject. Each ESMP will be budgeted in the technical specifications of each subproject.

8.1 Mitigation Measures during the Design Phase

Environmental and social issues will be taken into consideration during the design phase for the rehabilitation works and new irrigation infrastructures design in order to avoid or minimize the potential negative impacts and enhance the positive impacts.

The design documentation will include lists with suggested borrow pits and vendors of construction materials in proximity of sub-project sites for disposal of spoil and waste; suggested locations for construction camps, vehicles and other equipment servicing, and storage facilities as required.

8.2 Mitigation Measures during Construction Phase

Landscape, habitats and soil erosion – Earthwork, including material borrowing implies risks for landscape conservation and may induce soil erosion and habitat disturbance.

Examples of mitigation measures addressing these negative impacts are:

- strip and store topsoil separately in the nearest location without natural vegetation;
- pile up excavated earth separately from topsoil, in the convenient location without natural vegetation;
- backfill excavated material to full extent and remove residual amount to the preliminary agreed upon location;
- reinstate the work site by spreading topsoil and stimulating re-vegetation as appropriate;
- apply slope stabilization techniques – terracing, drainage, gabions, greening, etc.- as appropriate on the steep slopes prone to erosion;
- do not extract gravel from watercourses. Mine for the material in the river beds away from water streams and reinstate the areas by leveling;
- ensure proper lining of canals and adequate assembling of pipes to avoid water filtration which may cause erosion along the canals.

In general, landscape degradation may be minimized using the already existing quarries and spoil disposal sites. If required, constructions camps should be located in areas with minimum natural vegetation cover and away from any important or classified area for animal and plant conservation.

Waste management – waste will be temporarily stored in designated locations at the work sites before final disposal at appropriate sites agreed with local authorities.

Noise and emissions – dust at construction sites will be minimized, especially closer to residential areas by using closed/covered trucks for transportation of construction materials and debris and watering work sites in dry season. The vehicles and machinery will have

proper maintenance and will be checked regularly in order to avoid excessive emissions and noise.

Construction run-offs – Accidental spills will be prevented with impermeable flooring of sites for storage of oil and lubricants and servicing of vehicles and machinery. Work camps will be equipped with adequate sanitary facilities avoiding water and soil pollution.

Chance findings – in the event of any archaeological finds, including graveyards or even individual graves, the contractor will hold activity and inform the MOSAP II coordination unit. MOSAP II coordination shall contact the national authorities responsible for protection of historical and cultural monuments and seek guidance on the further course of action.

Workers health and safety – contractors will ensure that construction materials and equipment are maintained in proper technical conditions. All staff and visitors in work sites must be supplied with adequate personal safety gear and instructed to permanently use it.

Social impacts and health – local workers will be targeted for the recruitment of casual labor. As there is a potential increase in STDs (and also HIV/AIDS) following the concentration of workers into the project areas and surroundings, awareness campaigns will be carried out on Sexually Transmitted Diseases (STDs) including HIV/AIDS. The construction workers should be protected against water and waste borne diseases.

8.3 Mitigation Measures during Operation Phase

Managing erosion, flooding and water logging – In order to prevent the erosion of lands of the irrigation schemes, it is vital to undertake anti-erosion measures on arable lands during cultivation. Awareness and best practices on land management, soil conservation and cultivation will be provided to farmers. Proper maintenance of irrigation infrastructures, including erosion protection measures, is essential for minimizing sedimentation; water logging and flooding which are significant causes of erosion.

Managing irrigation water quality – water quality control is important in order to prevent pollution of agricultural lands and products with toxic compounds.

Dam/embankment safety - Basic, periodic and consistent dam safety procedures shall be undertaken during Operation Phase on all dikes and embankments integrated in the financed irrigation schemes.

Pesticide and fertilizers use – It is expected that the improvement and extension of irrigation services will enhance intensity of agriculture leading to increased use of fertilizers and pesticides. In order to reduce public health and environmental risks of excessive, unsafe or improper use of pesticides and fertilizers, farmers will receive training and awareness on integrated pest management and principles and guidelines on safe storing, handling and application of pesticides and fertilizers.

The best practices recommend that the use of chemical pesticides should be avoided or considered as a last resort, when other methods of pesticide control have failed. Alternative options to the use of pesticides can be crop variety resistance, pest monitoring, scouting and

counting, intercropping and crop rotation that should be promoted for the MOSAP II aiming to contribute to a general improvement of the environmental and socioeconomic sustainability of the farmer communities. Bio pesticides should also be promoted as part of Integrated Pest Management Plan (IPMP), encouraging the use of cultural, biological and other methods as much as possible, in place of chemical methods.

The IPMP provides detailed options and alternatives related with pesticide and fertilizers use.

9. Guidelines for ESMF Implementation

The overall objective of this ESMF is to provide an overview of the anticipated environmental and social impacts, establishing the principles and guidelines for the environmental and social management of the project and propose mitigation and enhancement measures for the identified impacts of the MOSAPII. The ESMF fits within a menu of safeguard instruments that address the full spectrum of environmental, social and legal safeguards issues, including relevant steps and stages, described below. In implementing the ESMF, reference will be made to the generic and sector specific World Bank Group Environmental, Health and Safety Guidelines (www.ifc.org/ehsguidelines).

9.1 Environmental and Social Screening Process

A sound environmental management of MOSAP II should ensure the determination of the appropriate studies and follow-up measures that might be needed. This is the essential objective of the environmental screening process. The screening process here proposed follows OP 4.01 of the World Bank and the Angolan policy and legal framework on Environmental Impact Assessment.

Screening will be developed for each specific sub-project sites, once they have been identified and established during implementation of the MOSAP II. The screening process is a direct responsibility of the PIUs through the environmental coordinator and should be developed in close cooperation with the local/provincial environmental departments. The main objectives of the screening process for MOSAP II interventions are to:

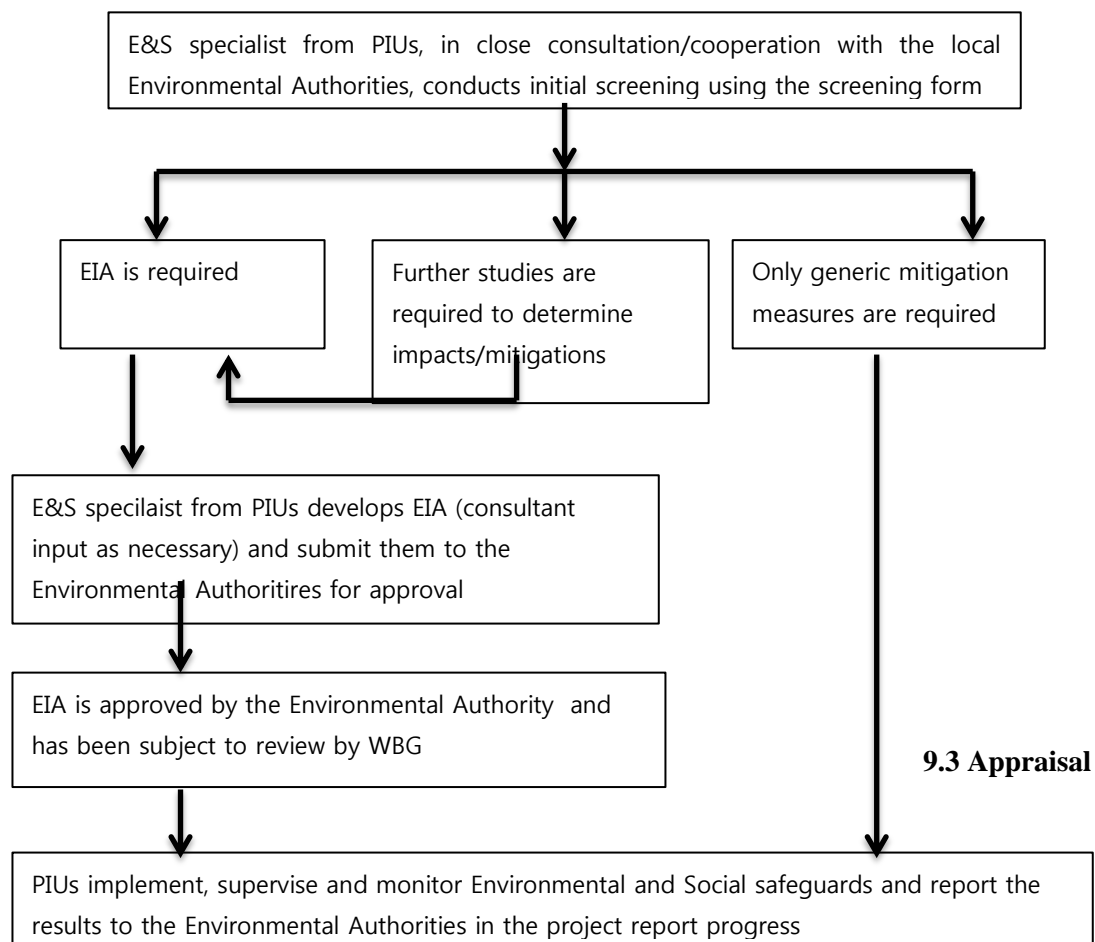
- Determine which construction and rehabilitation activities have potential negative environmental and social impacts;
- Determine the level of environmental analysis and follow-up environmental management work required according to the type/nature, location, sensitivity and scale of the project;
- Determine appropriate mitigation measures for addressing adverse impacts;
- Incorporate mitigation/enhancement measures into sub-project construction and operation;
- Indicate the need for any Resettlement Action Plan (RAP), which would be prepared in line with the Resettlement Policy Framework (RPF) ;
- Facilitate the review and approval of the construction and rehabilitation proposals and;
- Provide guidance for environmental compliance and outcome monitoring of environmental parameters during construction, rehabilitation, operation and maintenance of infrastructures and related activities developed during MOSAP II.

The extent of environmental assessment work that might be required, prior to the commencement of construction and rehabilitation activities of the MOSAP II, will depend on the outcome of the screening process described below.

9.2 Screening

Each subproject to be submitted for financing will have to be screened using the screening form provided as Annex I³. The MOSAP II Project Provincial Implementation Units will be responsible for carrying out the initial screening in the field and, when required, will submit screening forms along with their work plans to the Environmental Authorities who will determine what level of environmental and social assessment is required, according with the Angolan environmental legislation. The screening process will follow the scheme below.

Screening flow chart



After analysing the data contained in the environmental and social screening form and after having assigned an environmental category and level of assessment needed, the MOSAP II

³ The screening form may be previously discussed with the Environmental Authorities and may be adapted according with the specific requirements of each subproject.

Provincial Project Implementation Unit (PPIU) will make a recommendation to the Environmental Authority establishing whether: (a) any environmental appraisal will be required to establish impacts or identify mitigation; (b) the implementation of generic mitigation measures via an ESMP (and associated management plans, i.e. Pest Management Plan, Dam Safety Plan, and Resettlement Action Plans -RAPs) will be enough; or (c) a separate EIA is required.

In case of need to carry out an EIA, the EIA will identify and assess the potential environmental and social impacts for the planned activities, assess alternative solutions and present the mitigation, management and monitoring measures to be adopted. These measures will be quoted in the ESMPs that will be prepared as part of the ESIA for each subproject. The preparation of the ESIA and the ESMPs will be done in consultation with all relevant stakeholders and project affected people and will follow the structure presented in the Template provided in Annex II, that may be adjusted in accordance with the existing legislation (e.g. Executive decree n°92/12) and/or any guidelines provided by the Environmental Authorities and the WB.

9.4 Preparation of an ESMP

The format for the ESMPs will follow the requirements under the Angolan environmental legislation and the World Bank's environmental policy procedures requirements. As part of the EA process, ESMPs will need to be prepared and implemented for Category B subprojects. For those subprojects, which trigger the issues related with pest management, dam safety or cultural property, associated plans will be required (e.g. a pest management plan or dam safety plan). The ESMP should include the following contents:

- Description of the possible adverse effects that the ESMP is intended to address, describing their nature, incidence, magnitude, reversibility, significance;
- Identification of project design alternatives that would meet similar objectives, and a description of why these projects are not viable, especially if they have a lesser environmental or social impact;
- Description of planned mitigation measures, and how and when they will be implemented
- Program for monitoring the environmental and social impacts of the project, both positive and negative;
- Description of who will be responsible for implementing the ESMP; and
- Cost estimate and source of funds.

A Template for an ESMP is provided in Annex III. Annex V provides a sample example of a Monitoring Program.

In the event that Resettlement Action Plans (RAPs) will have to be prepared for MOSAPII activities, these would be reviewed and approved by the Province Authorities, consistent with the Resettlement Policy Framework; prior to commencement of project activities.

9.5 Environmental and Social clauses for contractor agreements

Environmental and Social Clauses (ESC) should be included in the Technical Specifications and be accounted for as part of the Project investment's overall implementation budget. Annex VII provides a set of recommended contract clauses to include in contractor agreements. It should also be stated that the PPIUs will appoint a Social and Environmental Focal Point (SEFP) to ensure proper application and compliance with principles and prerogatives in these ESC. The SEFP will prepare quarterly report to submit to the project implementation unit at the central level, and join the field supervision missions jointly organized with the World Bank Group twice a year. Terms of Reference for hiring a SEFP are provided in Annex X.

9.6 Public Disclosure of subproject information

In compliance with WB's environmental procedures and Angola EIA regulations, before a subproject is approved, the applicable documents (EIA, ESMP and/or RAP and associated management plans) must be made available for public review at a place accessible to local people (*e.g.* at a local government office), and in a form, manner and language they can understand. The ESMPs and RAPs will be disclosed in the same location that the community development plans are made public to ensure that there is wide access to the documents and at least one month before the expected date of starting the works. ESMPs will be disclosed at WB InfoShop.

9.7 Monitoring and Annual Reports

Monitoring and evaluation of safeguards compliance will be done by the Project Coordination at the PPIU, precisely the Social and Environmental Safeguards Focal Point. The WBG social and Environmental Safeguards specialists will train the ESFP at the national and provincial/municipal level in close issues related to the E&S performance of the project, the relevant authorities will be systematically involved throughout the project implementation process.

The Project Implementation Unit is responsible for undertaking the monitoring exercises in sequences and frequencies stipulated in the Project Implementation Schedule including where appropriate a Maintenance Schedule.

The Project Implementation Unit (PIU), more precisely the SESU in conjunction with the relevant Province Directorates and district level will monitor the implementation of social and environmental mitigation measures based on the Contractor's work plan for subproject investments.

9.8 Monitoring and Reporting of Subproject Mitigation and Management Plans

Supervision of the ESMP, along with other aspects of the project, will cover monitoring, evaluative review and reporting in order to achieve, among others, the following objectives:

- determine whether the project is being carried out in conformity with environmental and social safeguards and legal agreements;
- identify issues as they arise during implementation and recommend means to resolve them;
- recommend changes in project concept/design, as appropriate, as the project evolves or circumstances change; and
- identify the key risks to project sustainability and recommend appropriate risk management strategies to the Proponent.

An appropriate social and environmental supervision plan will be developed aiming to ensure the successful implementation of the ESMP.

Quarterly, the environmental, agriculture and water authorities in collaboration with the Project Implementation, will monitor the implementation of the environment mitigation measures. Annually, the Project Implementation in collaboration with the Environmental Authorities will develop a global assessment of subproject performance in environment and natural resource management as part of the Project's overall monitoring program.

The Project Implementation at national and provincial levels, in collaboration with all relevant authorities will be responsible for the monitoring of the compliance of project implementation with the mitigation measures set out in the ESMPs and associated management plans. The ESFPs will have responsibility for carrying out this monitoring by regularly visiting the projects, and pursuing the following corrective measures as required. Compliance monitoring comprises on-site inspection of construction activities to verify that measures identified in the ESMPs are included in the clauses for contractors are being implemented. This type of monitoring is similar to the normal technical supervision tasks ensuring that the Contractor is achieving the required standards and quality of work.

9.9 Annual reviews

An independently commissioned environmental and social audit will be carried out on an annual basis. The audit team will report to Project Coordination and the WB, who will lead the implementation of any corrective measures that are required. This audit will ensure:

- that the ESMF process is being implemented appropriately,
- that mitigation measures are being identified and implemented.

The audit will be able to identify any amendments in the ESMF approach that are required to improve its effectiveness.

The annual audit also provides a strong incentive for the MOSAP II to ensure that the ESMF will be implemented, and the individual ESMPs will be developed and implemented.

An annual audit report will include:

- A summary of the environmental performance based on EIAs, if required, and ESMPs;
- A presentation of compliance and progress in the implementation of the subproject ESMPs;
- Number of staff/officers trained in implementation of the ESMF;
- Number of relevant Municipal and/or Province Offices' staff attending training courses and workshops in ESMPs and EIA;
- Number of written warnings of violation of EIAs/ESMPs issued to project proponents;
- A synopsis of the environmental monitoring results from individual subproject monitoring measures (as set out in the subproject ESIA/ESMPs).

A template for the annual environment report is provided in Annex VIII

10. Capacity Building, Training and Technical Assistance

Training and capacity building is the key to the successful implementation of the ESMF and the RPF. The objective of the training is to:

- Train MINAGRI staff and the PPIUs, extension teams and communities to identify, prepare, implement and manage the environmental and social aspects of their subprojects.
- Ensure that municipality, provincial and national level officials have the capacity to appraise, approve and supervise the implementation of subprojects.

Three levels of training are proposed namely: awareness raising, sensitization and in-depth technical training. In any case it will mostly be conducted through workshops and refresher courses. Training will include case studies of actual sub-project interventions using the environmental checklist and visiting sites. The focus of the training will mainly be SADCP, selected farmers and extension officers who will in turn train community members to implement components of the ESMF at the community level.

Appropriate training and assistance will also be provided for district, provincial and national level agencies. Technical assistance under the project will support ADI, extension teams and communities to implement the ESMF including the preparation of ESMPs, PMPs, and RAPs.

10.1 Institutional Strengthening

The existing MOSAP PIU, staff and implementation arrangements will remain in place for coordinating implementation of SADCP.

National: At the national level, the project will be implemented by MINAGRI. MINAGRI will be responsible for the overall implementation of the project, in consultation with the other relevant Ministries at the national level, in order to ensure that the project activities are consistent with national policies. A Project Coordination Committee (PCC), chaired by the Minister (or, by delegation, the Secretary of State of Agriculture) will oversee overall project implementation, including approval of the annual work plan and annual report. The Director General of ADI (within MINAGRI) will be the executive level manager of the project. A Project Implementation Unit (PIU), headed by a Project Coordinator will be established within ADI and charged with (national level) day-to-day management of the project. A small executive Project Implementation Sub-Committee (PISC) of the PCC will be established to speed-up project implementation and decision making.

Provincial: At the provincial level, the Agriculture Development Institute (ADI) will be responsible for project implementation, in coordination with the Provincial Directorate of Agriculture and in consultation with other relevant provincial government agencies as well as provincial level representatives of the other Ministries that are involved. A Provincial Project Coordination Committee (PPCC), chaired by the Vice-Governor responsible for the economic development, will oversee project implementation, including monitoring project progress at the provincial level and making decisions in line with the objectives and institutional arrangements consistent with the project document and legal agreements. The Provincial Director of ADI will be responsible for project implementation. A Provincial Project Implementation Unit (PPIU), headed by a Provincial Project Coordinator will be established within the provincial ADI and charged with day-to-day management of the project at the provincial level. A small executive Provincial Project Implementation Sub-Committee (PPISC) of the PPCC will be established to speed-up decisions and procedures.

Municipal: At the municipal level, the Agricultural Development Office of ADI (EDA) will be responsible for project implementation, in coordination and consultation with the Municipal administration. The EDA will obtain the consent of the Municipal administration before forwarding sub-project proposals to the provincial level. The project will assist in capacity building of the EDAs, provide technical assistance to the EDAs, and engage services providers to assist the EDAs in their work related to project implementation.

The project will be implemented in three provinces; Bie, Huambo and Malanje. Each province will have a Provincial Project Implementation Unit (PPIU). In addition to the three PPIU the project will have a central project coordination unit in Luanda and will hire four Social and Environmental Safeguard Focal Points (SEFP), one for the national level coordination and three for provincial level coordination, one for each of the three beneficiary provinces. The SEFP will ensure compliance of the proposed project activities with relevant Angola environmental laws and regulations and the World Bank Safeguards Policies triggered. They will be responsible for the screening, monitoring and reporting on safeguards requirements including providing needful and timely support for the preparation of ESIA/ESMP as required. This initiative will be coupled with a series of regional training workshops to be organized for all actors involved, such as project coordination team at all

levels, beneficiary groups, contractors and other relevant project partners in the implementation of social and environmental safeguards policy upon project effectiveness. The WBG Environmental and Social Safeguards specialists will train the team at national and provincial/municipal level in all issues related to protected areas, forestry. Additionally, relevant authorities such as the Ministry of Environment and its affiliates and will be systematically involved throughout the project implementation process.

10.2 Environmental and Social Awareness, capacity building and training

A sound environmental and social general management and an effective implementation of ESMPs implies awareness and training on environmental and social issues. It is required to communicate and work with community and understanding the environmental and socio-political dynamics prevalent in the area under the influence of the MOSAP II. Thus it is recommended to provide the technical assistance, training and awareness to support the capacity needs of those responsible for the implementation of the ESMF in order to ensure effective implementation of the ESMF throughout the life of the Project (namely environmental safeguard specialist, social safeguard specialist and the three provincial environmental and social safeguards Focal Points).

During the first year of the project a 5-days training/awareness program should be organized for Project Implementation Units, Project Staff and other relevant stakeholders at national and Province level. The training program outline as detailed below aims to provide attendees with the basic approach to implementing the guidelines provided in the ESMF combined with the use of the appropriate tools, such as the screening form, ESMP, EIA and related relevant subjects. 2-day refreshment courses should also be held as needed during the course of the programme lifecycle. A provisional program for a 5-day workshop is proposed in Table 1.

Table 1– Provisional program for a 5-day workshop

Subject	Target Group	Method
<ul style="list-style-type: none"> ▪ Environmental and Social Awareness ▪ Environmental and Social Impact Assessment Methods and Process ▪ Environmental Regulations, Acts & Legislation 	Senior level officers involved in planning. All Staff at irrigation schemes sites and EC	Workshops and Lectures
<ul style="list-style-type: none"> ▪ Environmental and Social Management Plan ▪ Mitigation and Enhancement Measures ▪ Monitoring & Evaluation ▪ Environmental and Social Management Budget 	Water Management Related authorities All Field Engineers EC	Workshops and Lectures
<ul style="list-style-type: none"> ▪ Environmentally and Socially Sound Construction Practice ▪ Clean Construction Technology ▪ Waste Minimization and Management ▪ Storage and maintenance of equipment ▪ Control on Soil Erosion ▪ Transplantation and Plantation ▪ Construction Camp Management ▪ Safety Practices 	All Field Engineers Water Management Related authorities Authority EC	Workshops and Lectures
<ul style="list-style-type: none"> ▪ Participatory Irrigation Management ▪ Formation of WUA 	All Field Engineers	Workshops, Lectures and

<ul style="list-style-type: none"> ▪ Water Conservation Techniques ▪ Record Keeping 	EC WUA	Site Visit
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As part of best practice, and in order to comply with best practices and international standards for Occupational, Health and Safety (OHS), contractors and supervision consultants should be provided with awareness raising and environmental and OHS training on site. These should focus not only on the construction phase but also operational phase of the Project.

A proposed format for a 1-day training is provided in the following Table.

Table 2 - Awareness raising and training for civil work contractors and supervision consultants

Topic	
<i>Awareness raising</i> <ul style="list-style-type: none"> • Environmental and Social awareness and the importance of effective mitigation • Practice mitigation measures and environmentally sound construction techniques • Compliance with local legislation on OHS, EIA and ESMP requirements 	0.5 day
<i>Technical training</i> <ul style="list-style-type: none"> • Implementation of the ESMP (contract clauses) • Monitoring of ESMPs • Preparation of budgets 	0.5 day
Total	1 day

10.3 Technical Assistance

Environmental and Social technical assistance will be provided to support Project Coordination Unit (SESU) and teams in order to support the ESMF, RPF and IMPM implementation (and review, if required), especially where more detailed ESMPs, ESIA (including RAP) may be required as well as for training, awareness and capacity building activities. The TA will be used for indepth safeguards training to be led by the WBG safeguards specialist and/or contracted out to professionals with the relevant technical skills and experience for preparation of ESMFs, ESMPs, ESIA, training and other related inputs.

11. ESMF Implementation Budget

It is estimated that the implementation of the ESMF including the required provisions, training and capacity building will cost approximately **\$650,000 USD**.

The costs of preparing and implementing the safeguards aspects of the project are estimates as the size, type and location of the subprojects are not fully determined at this stage.

The costs outlined below may vary depending on when and how the ESMF implementation takes place; therefore it can be expected that the proposed ESMF budget may increase or decrease depending on the work plan agreed upon.

The costs related with capacity building, training, preparation, implementation and monitoring of the environmental and social safeguards are integrated within the overall project budget.

Table 3- Budget Estimate for the Implementation of the ESMF

Recommendation	Responsible authority	Schedule	Estimated cost
<ul style="list-style-type: none"> • Environmental safeguard specialist • Social safeguard specialist • Environmental and social safeguard focal points (3) 	PIU	2016 – 2020 Annually	\$60,000 \$60,000 \$45,000 \$45,000
<ul style="list-style-type: none"> • Preparation, implementation and monitoring of EIAs, ESMPs and related safeguard management plans 	PIU with TA	2016 - 2020	\$350,000
<ul style="list-style-type: none"> • 5 days training program on general understanding of environmental management and its applications 	PIU in cooperation with MINAGI with TA	2016	\$25,000
<ul style="list-style-type: none"> • 1-day training for contractors and supervision consultants. • 2-day Refresher trainings on ESMF implementation and other topics such as EIAs, Environmental Information Systems/Water Catchment Planning, Community Consultation/Participatory Planning, and Water Quality Management to District level Water Management 	EC/MoNRE with TA	2016 – 2020 Annually	\$45,000
<ul style="list-style-type: none"> • TOTAL 			\$650,000

12. Lessons learned and recommendations

The overall Environmental and social assessment of MOSAP II suggests that expected negative impacts will be minimal and localised, site specific and easy to manage. Generic provisions for mitigating/enhancing the identified negative impacts are included in sample ESMP.

Capacity building and training will be essential on the screening process for project activities and sites in order to identify potential impacts of the project and determine appropriate environmental and social category of the project leading to identification of impacts. Key staff (project, municipal and provincial officers) should receive training. This will be critical for implementation of the ESMF and the general Environmental performance of MOSAP II. From the lessons learned from the previous MOSAP project, the lack of technical capacity on environmental management led to inadequate implementation of integrated environmental and social safeguards as well as lack of relevant environmental information in the general reporting of the project. Several environmental measures were also not implemented thus resulting impossible to audit and assess the environmental performance of the project as well as the monitoring of the environmental impacts induced by the project. Therefore and in order to fill this gap identified during the MOSAP, it is recommended to hire Environmental and Social Specialists that will be integrated within the PIUs at central and provincial level, which will be responsible for the implementation of the specific safeguards and the integration of the environmental and social components within the general management of the MOSAPII. Environmental technical assistance should be provided to support Project Coordination and Provincial teams in order to support the ESMF implementation (and review, if required), especially where more detailed ESMPs and/or EIAs may be required as well as for training, awareness and capacity building activities.

Successful implementation of the ESMF will depend to a large extent on the involvement and participation of local communities and the local institutions. It is therefore recommended that these stakeholders should be involved in the implementation of the project and the ESMF. The stakeholders should adopt and adapt the screening process, checklists and the ESMP to suit local conditions. It is further recommended that:

- Using the Screening Form, ESMPs should be prepared for each project activity with potentially significant adverse environmental impacts, to ensure that negative impacts are properly mitigated and that positive impacts are enhanced;
- Environmental and Social awareness and education for the key stakeholders and affected communities should be an integral part of ESMP implementation;
- Community/Municipal/Province and local community structures should be adequately trained to implement the screening process and to develop and implement appropriate Environmental Management and Monitoring Plans;
- The environmental and social management and monitoring plans, prepared on the basis of the ESMF, should be regularly updated to respond to changing local conditions and should incorporate lessons learned from implementing various components of the project activities;
- The Community/Municipal/Province authorities/officers should be assisted to develop appropriate information management systems to support the environmental management process;

- The local/province Environmental Authorities and Project Management Units should be empowered to monitor and adequately administer the ESMF and should be given the necessary support and resources to ensure effective implementation.

13. Public consultations and Participation

Public consultation and participation are key components of the development and implementation of the environmental and social management and arrangements of MOSAP II. These activities are developed under the existing Angolan legislation, international best practices and in line with the WBG safeguards and disclosure policies. Concerning disclosure, principles, exceptions, routine and request driven are common elements. Disclosure of documents should be made available (including summaries of the project and environmental assessment) in local language, at public places and accessible to project-affected people and all local relevant stakeholders. The MoA/IAD as borrower representatives are responsible for the in-country disclosure while the WBG is responsible for disclosure in the InfoShop.

The development of the ESMF⁴ (as well as the RPF & IPMP) benefited from extensive consultations and participation sessions organized during the project identification and planning stage as well as from other contacts and previous visits to the sites where MOSAP is being implemented. Inputs were received from the provincial implementation units of MOSAP, including coordinators, technicians and officers as well as from the design team of MOSAP II, including heads of offices and technicians from IDA, EDAs, FAO and the WB. Focus group meetings with women, farmers' associations, individuals who own farms, agricultural cooperative unions were also conducted during different field trips carried out while preparing the ESMF, RPF and IPMP). Visits to Bié Province communities that are participating in the MOSAP as well as to new sites identified and selected for MOSAP II (Chinguar, Canguli, Andulo, Kunje, Chindondo, Calussinga) provided the chance to meet and discuss with individual farmers, associations and community leaders (community, municipal and provincial administration and traditional/informal leaders), suppliers and market structures and responsible people (Chinguar PAPAGRO, supermarkets machinery, seeds and inputs suppliers).

During the final stage of the development of the ESMF, a robust draft version of the document was turned available, during 3 weeks, for public consultation at the MOSAP Province offices. Although this consultation didn't reached a vast public, officers and technical staff had the chance to review and be informed about the environmental and social measures and considerations addressed by the MOSAPII. A final Public Presentation and Consultation Workshop was held on the 20th of May 2015 (see the list of Participants in the Annex to this report).

Once completed, the ESMF was disclosed and fully available at any moment for public consultation, through continued interaction with stakeholders using contacts gathered during the field visits, meetings and public sessions. All public presentation of the MOSAPII included also the communication of the project's environmental and social management measures and findings during its implementation.

During the implementation phase the MOSAPII will use local radio programs and other media forms to further disseminate information and ensure consultation and participation during the implementation of investment project activities as well as during the monitoring and evaluation process. Selection of ways to consult, and expand participation of stakeholders, will take into consideration literacy levels prevalent in affected communities; gender; ethnicity and cultural aspects; and practical conditions (like distance).

⁴ The ESMF and RPF were developed in parallel and simultaneously allowing to benefit from the same field visits, consultations and participation events.

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Annexes

Annex I - The environmental and social screening check-list (General Example)⁵

Sub-project name:	
Subproject Location (include map/sketch):	
Type of activity:	(e.g. new construction, rehabilitation, periodic maintenance)
Estimated Cost:	
Proposed Date of Commencement of Work:	
Technical Drawing/Specifications Reviewed:	(circle answer): Yes No

1. Site Selection:

Physical data:	Yes/No answers and bullet lists preferred except where descriptive detail is essential.
Site area in ha	
Extension of/or changes to existing alignment	
Any existing property to transfer to sub-project	
Any plans for new construction	

Insert location map and longitude – latitude coordinates (GPS reading):

⁵ It is advisable to verify and agree with the Environment Authorities the final version to be used

Refer to project application for this information (criteria).

Issues	Site Sensitivity			Raiting (L,M,H)
	Low (L)	Medium (M)	High (H)	
Natural habitats	No natural habitats present of any kind	No critical natural habitats; other natural habitats occur	Critical natural habitats present	
Water quality and water resource availability and use	Water flows exceed any existing demand; low intensity of water use; potential water use conflicts expected to be low; no potential water quality issues	Medium intensity of water use; multiple water users; water quality issues are important	Intensive water use; multiple water users; potential for conflicts is high; water quality issues are important	
Natural hazards vulnerability, floods, soil stability/ erosion	Flat terrain; no potential stability/erosion problems; no known volcanic/seismic/ flood risks	Medium slopes; some erosion potential; medium risks from volcanic/seismic/ flood/ hurricanes	Mountainous terrain; steep slopes; unstable soils; high erosion potential; volcanic, seismic or flood risks	
Cultural property	No known or suspected cultural heritage sites	Suspected cultural heritage sites; known heritage sites in broader area of influence	Known heritage sites in project area	
Involuntary resettlement	Low population density; dispersed population; legal tenure is well-defined; well-defined water rights	Medium population density; mixed ownership and land tenure; well-defined water rights	High population density; major towns and villages; low-income families and/or illegal ownership of land; communal properties; unclear water rights	
Indigenous peoples	No indigenous population	Dispersed and mixed indigenous populations; highly acculturated indigenous populations	Indigenous territories, reserves and/or lands; vulnerable indigenous populations	

2. Impact identification and classification:

When considering the location of a subproject, rate the sensitivity of the proposed site in the following table according to the given criteria. Higher ratings do not necessarily mean that a site is unsuitable. They do indicate a real risk of causing undesirable adverse environmental and social effects, and that more substantial environmental and/or social planning may be required to adequately avoid, mitigate or manage potential effects. The following table should be used as a reference.

3. Checklist of environmental and social impacts

Roads and Footpaths	Potential for Adverse Impacts				
	None	Low	Med	High	Unknown
Soil erosion or flooding concerns (eg, due to highly erodible soils or steep gradients)					
Number of stream crossings or disturbances					
Wet season excavation					
Creation of quarry sites or borrow pits					
Significant vegetation removal					
Wildlife habitats or populations disturbed					
Environmentally sensitive areas disturbed					
Cultural or religious sites disturbed					
Economic or physical resettlement required					
New settlement pressures created					
Other (specify):					

Irrigation Projects	Potential for Adverse Impacts				
	None	Low	Med	High	Unknown
Existing water sources supply/yield depletion					
Existing water users disrupted					
Downstream water users disrupted					
Water storage requirement and viability (soil permeability)					
Vulnerability to water logging (poor drainage)					
Vulnerability to soil and water salinization					
Sensitive downstream habitats and water bodies					
Environmentally sensitive areas disturbed					
Cultural or religious sites disturbed					
Increased agric. chemicals (pesticides, etc) loading					
Increased social tensions over water allocation					
Local incapacity/inexperience to manage facilities					
Local incapacity/inexperience with irrigated agriculture					
Other (specify):					

Catchment, Forestry, Grasslands Projects	Potential for Adverse Impacts				
	None	Low	Med	High	Unknown
New access (road) construction					
Wet season soil disturbance					
Potential for debris flows or landslides					
Sensitive downstream ecosystems					
Removal of native plant/tree species					
Introduced plant/tree species					
Invasion of native species					
Wildlife habitats or populations disturbed					

Catchment, Forestry, Grasslands Projects	Potential for Adverse Impacts				
	None	Low	Med	High	Unknown
Environmentally sensitive areas disturbed					
Insufficient capacity to manage catchment ponds					
Insufficient capacity to prohibit or control open grazing					
Insufficient capacity to manage new plantations/pastures					
Economic or physical resettlement required					
Other (specify):					

Infrastructure Projects	Potential for Adverse Impacts				
	None	Low	Med	High	Unknown
New access (road) construction					
Alteration of existing drainage conditions					
Vegetation removal					
Wet season soil disturbance					
Construction materials impact on adjacent forests/lands					
Quarries and borrow pits created					
Cultural or religious sites disturbed					
Water supply development effects in available supply					
Effect of sanitation development on existing disposal sites					
Effects of medical waste on existing disposal system					
Economic or physical resettlement required					
Number of potential Project Affected Persons (PAPs)					
In-migration/settlement induced by facilities development					
Local incapacity/inexperience to manage facilities					
Other (specify):					

4. Detailed questions:

Preliminary Environmental Information:	Yes/No answers and bullet lists preferred except where descriptive detail is essential.
State the source of information available at this stage (proponents report, EIA or other environmental study).	
Has there been litigation or complaints of any environmental nature directed against the proponent or sub-project	

Refer to application and/or relevant environmental authority for this information.

Identify type of activities and likely environmental impacts:	Yes/No answers and bullet lists preferred except where descriptive detail is essential.
What are the likely environmental impacts, opportunities, risks and liabilities associated with the subproject?	
<i>Refer to ESMF– Impact Mitigation, Disclosure and Monitoring Guidelines</i>	

Determine environmental screening category:	Yes/No answers and bullet lists preferred except where descriptive detail is essential.
After compiling the above, determine which category the subproject falls under based on the environmental categories established by WB and National Environment authorities	
<i>Refer to ESMF–Screening and Review Process</i>	
Mitigation of Potential Pollution:	Yes/No answers and bullet lists preferred except where descriptive detail is essential.
Does the subproject have the potential to pollute the environment, or contravene any environmental laws and regulations?	
Will the subproject require pesticides/fertilizers use?	
If so, then the proposal must detail the methodology and equipment incorporated in the design to constrain pollution within the laws and regulations and to address pesticide use, storage and handling.	
Does the design adequately detail mitigating measures?	
<i>Refer to ESMF–Impact, Mitigation and Monitoring Guidelines</i>	

Environmental Assessment Report or environmental studies required:	Yes/No answers and bullet lists preferred except where descriptive detail is essential.
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If screening identifies environmental issues that require an EIA or a study, does the proposal include the EIA or study?	
Indicate the scope and time frame of any outstanding environmental study.	
Required Environmental and Social Monitoring Plan:	
If the screening identifies environmental issues that require long term or intermittent monitoring (effluent, gaseous discharges, water quality, soil quality, air quality, noise etc), does the proposal detail adequate monitoring requirements?	
<i>Refer to ESMF– Impact, Mitigation and Monitoring Guidelines</i>	

Public participation/information requirements:	Yes/No answers and bullet lists preferred except where descriptive detail is essential.
Does the proposal require, under national or local laws, the public to be informed, consulted or involved?	
Has consultation been completed?	
Indicate the time frame of any outstanding consultation process.	
Refer to relevant legislative acts in Angola.	
Land and resettlement:	Yes/No answers and bullet lists preferred except where descriptive detail is essential.
Will the subproject require the acquisition of land? If so, what is the likelihood of land purchase for the subproject?	
Is the land public or privately owned?	
How will the proponent go about land purchase?	
What is the plot currently being used for? (e.g. agriculture, gardening, etc.) List the key resources.	
Will people need to be displaced, and therefore require compensation and resettlement assistance?	
Are the relevant authorities aware of the need for a Resettlement Process, involving a census, valuation, consultation, compensation, evaluation and monitoring?	
What level or type of compensation is planned?	
Who will monitor actual payments?	
<i>Refer to the Resettlement Policy Framework.</i>	

Actions:	
List outstanding actions to be cleared before subproject appraisal.	
Approval/rejection	Yes/No answers and bullet lists preferred except where descriptive detail is essential.

If proposal is rejected for environmental reasons, should the sub-project be reconsidered, and what additional data would be required for reconsideration?	
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5. Recommendations

Environmental category: _____

- Requires an ESIA to be submitted on date:.
- Requires a RAP to be submitted on date:.
- Requires an ESMP to be submitted on date:.
- Requires preparation of additional plans (e.g. Pest Management Plan or Dam Safety Plan)
- Does not require further environmental or social studies
- Application of simple mitigation measures by qualified staff will suffice (check-list)

Reviewer: _____
 Name: _____
 Signature: _____
 Date: _____

Annex II – Proposed structure of the ESIA reports

- Executive Summary
- Introduction
 - Project description
 - Environmental and Social Baseline
 - Expected Impacts and Mitigation/Enhancement
 - Environmental Management Plan and Monitoring
- Section 1 – Introduction
- Section 2 - Methodology
- Section 3 – Legal and Policy Framework
- Section 4 - Project description
- Section 5 – Analysis of Project Alternatives
- Section 6 – Biophysical and Social Environment
- Section 7 – Potential Impacts
- Section 8 – Mitigation and enhancement Measures
- Section 9 – Environmental Management Plan
- Section 10 – Monitoring Plan
- Section 11 – Conclusions

- Annex 1 – Environmental Management Matrix (environmental and monitoring plans)
- Annex 2 – Public Consultation
- Annex 3 – References
- Annex 4 – Maps, Graphs and Pictures
- Annex 5 – ESIA team Composition

Annex III – Proposed contents and structure of the ESMP reports

The ESMP contents will include the following items:

- *Brief description of the project and key environmental and social components*, including a environmental (biophysical) and social characterization of the sites of intervention as well as the main related issues with and from the project
- *Major environmental and social impacts*, discriminating and disaggregating impacts (positive and negative) by intervention, site, environmental and social issue and also including the eventual effects and/or limitations imposed from the environment itself over the project.
- *Enhancement and mitigation program*, covering mitigation measures for each of the impacts and when not applicable explaining why
- *Monitoring program and complementary initiatives*. The measures to be proposed should be directly aligned with the impacts listed and addressing all relevant issues
- *Institutional arrangements and capacity building requirements*
- *Public consultations and disclosure requirements*
- *Estimated costs*
- *Implementation schedule and reporting*; in line with the project schedule and reporting scheme

A suggestion for the general structure for the ESMP is provided below:

- EXECUTIVE SUMMARY
- INTRODUCTION
 - Objectives and scope of the ESMP
- PROJECT DESCRIPTION
 - Project development objective and expected results
- DESCRIPTION OF THE ENVIRONMENT
 - The physical environment
 - Geography and topography
 - Geology and Soils
 - Climate
 - Climate Change
 - Hydrology
 - The Biological environment
 - Biodiversity (Fauna and Flora)
 - Conservation and Protected Areas
 - The human environment
 - Economy
 - Demography and gender equality
 - Agriculture
 - The farming communities and the environment
- INSTITUTIONAL, LEGAL AND POLICY FRAMEWORK
- BENEFICIAL AND ADVERSE IMPACTS OF THE PROJECT ACTIVITIES
- ENHANCEMENT AND MITIGATION PROGRAM
- MANAGEMENT AND MONITORING PROGRAM
 - Waste and Health Education
 - Education on agriculture best practices
 - Monitoring water quality and soil conservation

- CONSULTATIONS AND DISSEMINATION
- RESPONSIBILITIES AND INSTITUTIONAL ARRANGEMENTS
- ESTIMATED COST
- IMPLEMENTATION SCHEDULE AND REPORTING
 - Proposed schedule for the main ESMP actions
- ANNEXES
 - Technical Assistance
 - Implementation of the Environmental and Social Mitigation Measures and Monitoring Plan

Annex V – Sample of Monitoring Plan

Environmental/ Social Impacts	Recommended Mitigation	Responsible Institution (Design Phase)	Responsible Institution (Implementation Phase)	Means of Verification/Indicators	Frequency of verification
Relocation or loss of shelter	Preparation and implementation of a Resettlement Action Plan, which will include compensation plans.	Project Coordination Ministries and Province/Local authorities,	Project Coordination	Number of people relocated Number of people compensated Amount of money spent % of number of complaints	Reference/Baseline during project planning Annually during project implementation
Loss of assets or access to assets	Preparation and implementation of a Resettlement Policy Plan, which will include compensation plans.	Project Coordination Ministries and Province/Local authorities,	Project Coordination	Cost of lost assets / access to assets Number of complaints	Annually Monthly
Loss of income sources, and or means of livelihood	Preparation and implementation of a Resettlement Policy Plan, which will include compensation plans.	Project Coordination Ministries and District/Province authorities,	Project Coordination	Number of complaints	Monthly
Spread of HIV/AIDS	Strengthen HIV/AIDS Awareness Campaigns in Schools, Training of school administrators and staff in HIV/AIDS issues, encouraging participation of the private and public sectors in HIV/AIDS issues and reinforcement of school curriculum with HIV/AIDS issues.	Ministries and District/Province Authorities Project Coordination, NGOs, Gender and Community Services, Local institutions and committees	Project Coordination Ministries (Health and Education) Local institutions	Number of campaigns % increase in those affected.	Annually Monthly (Monthly statistics from hospital and clinics)
Loss of vegetation	Selective clearing of project sites, reforestation, preservation of protected plant species, use of alternative sources of energy, use of environmental friendly technologies, awareness campaigns.	Contractors Project staff, Local Agric. Officers,	Contractors Project Coordination	Increase in area of land cultivated and deforested	Monthly
Loss of Soil	Stabilization of loose soil, controlled excavation, preservation of vegetation cover, controlled transportation of raw materials, appropriate landscaping.	Contractors, Project staff, District Officers, Forestry Departments,	Contractors Project Coordination	Area and size of gullies formed Amount of silt deposited in watercourses	Monthly
Loss of fragile ecosystems	Conduct feasibility studies before construction, use expert knowledge of ecologists, introduction of ecosystem conservation projects, fencing	Project Coordination, Local, Forestry Department,	Contractors Project Coordination	Size of area affected	Monthly
Soil and water pollution resulting from the	Controlled disposal of wastes and effluent by use of appropriate disposal facilities, use of appropriate drainage		Contractors Project Coordination	Change in chemical and biological water quality	Bi-annually

accumulation of solid and liquid waste Soil and water pollution from chemicals & fertilizers	structures, use of cleaner technologies, proper storage of materials, awareness campaigns				
Dust, Emissions, Strong Light, Noise and Vibration	Controlled operation times, use of appropriate equipment, proper orientation of lights, use of alternative materials, use water sprinklers to control dust, use of scrubbers		Contractors Project Coordination	Number of complaints Extent of property and vegetation soiling	Monthly
Water-borne and / or water related diseases	Provision of potable water supplies and sanitation facilities, capacity building in sanitation and health issues, awareness campaigns		Contractors, Project Coordination, Local Agriculture Officer, NGOs	Increase in water related ailments	Bi-annually
Loss of natural and cultural heritage.	Conduct feasibility studies, fencing, introduce proper antiquity education programmes	Project Coordination, Local Agric. Officer, NGOs	Contractors Project Coordination	Number or size of property lost	Before project implementation During project implementation
Conflict and/or loss of habitats, animals and aquatic life.	Minimize vibrations and strong noise, enforcement of parks and wildlife law, conduct feasibility studies, avoid contamination of soil and water		Contractors Project Coordination, Local Agric. Officer NGOs	Animal count Fish and aquatic life estimates	Before project implementation Annually during project implementation
Disturbance of marginal areas	Avoid extraction of raw materials from marginal areas, no construction of structures in marginal areas.		Project Coordination NGOs	Size of area affected	Bi-annually
Incidence of flooding	Forestation of the catchment areas of the irrigation schemes		Forestry Department Project Coordination, NGO's,	Number of trees planted Area planted with trees Number of people or properties affected by floods	Annually
Exposure to agro-chemicals	Encourage organic farming, and limit the use of Agro-chemicals. Conduct awareness training & workshops	Project Coordination Ministry of Agriculture Scheme Management	Project Coordination Ministry of Agriculture Scheme Management	Number of people affected by agro-chemicals	Annually
Disruption of footpaths	Good irrigation scheme designs Relocation of the footpaths	Project Coordination Scheme Management	Project Coordination Scheme Management	Number of footpaths in use Problems of accessibility	During design During construction
Salinization	Encourage organic farming, limit the use of agro-chemicals and provide water management training to farmers	Project Coordination Ministry of Agriculture	Project Coordination Ministry of Agriculture	Farm productivity (per hectare)	Annually
Disputes over water resources	Provide water management training to farmers and introduce alternative sources of water such as boreholes.	Project Coordination Ministry of Agriculture	Project Coordination Ministry of Agriculture	Water availability Crop productivity Number of complaints	
Water logging	Provide water management training to	Project Coordination	Project Coordination	Prolonged presence of water	Annually

	farmers	NGO's	NGO's	Poor growth of crops Presence of salts on the soil
Invasive plant species	Control crop rotation, promote the agricultural practices on the scheme and promote use of herbicides.		Project Coordination District Agricultural Officer Forest Department	Number of exotic species recorded Annually

Annex VII – Examples of Contract clauses to include in Contractor agreements

Sound environmental management of construction projects can be achieved only with adequate site selection and project design. As such, the EA for projects involving any new construction, or any rehabilitation or reconstruction for existing projects, should provide information as to screening criteria for site selection and design including the following:

Site selection - sites should be chosen based on community needs for additional projects, with specific lots chosen based on geographic and topographic characteristics. The site selection process involves site visits and studies to analyze: (i) the site's, suburban, or rural characteristics; (ii) national, regional, or municipal regulations affecting the proposed sites; (iii) accessibility and distance from inhabited areas; (iv) land ownership, including verification of absence of squatters and/or other potential legal problems with land acquisition; (v) determination of site vulnerability to natural hazards, (i.e. intensity and frequency of floods, earthquakes, landslides, hurricanes, volcanic eruptions); (vi) suitability of soils and sub soils for construction; (vii) site contamination; (viii) flora and fauna characteristics; (ix) presence or absence of natural habitats and/or ecologically important habitats on site or in vicinity (e.g. forests, wetlands, rare or endangered species); and (ix) historic and community characteristics.

The rules (including specific prohibitions and construction management measures) should be incorporated into all relevant bidding documents, contracts, and work orders.

Prohibitions

The following activities are prohibited on or near the project site:

- Cutting of trees for any reason outside the approved construction area;
- Hunting, fishing, wildlife capture, or plant collection;
- Use of unapproved toxic materials, including lead-based paints, asbestos, etc.
- Disturbance to anything with architectural or historical value;
- Building of fires;
- Use of firearms (except authorized security guards);
- Use of alcohol by workers.

Construction Management Measures

Waste Management and Erosion - solid, sanitation and hazardous wastes must be properly controlled, through the implementation of the following measures:

Waste Management:

- Minimize the production of waste that must be treated or eliminated.
- Identify and classify the type of waste generated. If hazardous wastes (including health care wastes) are generated, proper procedures must be taken regarding their storage, collection, transportation and disposal.
- Identify and demarcate disposal areas clearly indicating the specific materials that can be deposited in each.
- Control placement of all construction waste (including earth cuts) to approved disposal sites (>300 m from rivers, streams, lakes, or wetlands). Dispose in

authorized areas all of garbage, metals, used oils, and excess material generated during construction, incorporating recycling systems and the separation of materials.

Maintenance:

- Identify and demarcate equipment maintenance areas (>50m from rivers, streams, lakes or wetlands).
- Ensure that all equipment maintenance activities, including oil changes, are conducted within demarcated maintenance areas; never dispose spent oils on the ground, in water courses, drainage canals or in sewer systems.
- Identify, demarcate and enforce the use of within-site access routes to limit impact to site vegetation.
- Install and maintain an adequate drainage system to prevent erosion on the site during and after construction.

Erosion Control

- Erect erosion control barriers around perimeter of cuts, disposal pits, and roadways.
- Spray water on dirt roads, cuts, fill material and stockpiled soil to reduce wind-induced erosion, as needed.
- Maintain vehicle speeds at or below 10mph within work area at all times.

Stockpiles and Borrow Pits

- Identify and demarcate locations for stockpiles and borrow pits, ensuring that they are 15 meters away from critical areas such as steep slopes, erosion-prone soils, and areas that drain directly into sensitive water bodies.
- Limit extraction of material to approved and demarcated borrow pits.

Site Cleanup

- Establish and enforce daily site clean-up procedures, including maintenance of adequate disposal facilities for construction debris.

Safety during Construction

The Contractor's responsibilities include the protection of every person and nearby property from construction accidents. The Contractor shall be responsible for complying with all national and local safety requirements and any other measures necessary to avoid accidents, including the following:

- Carefully and clearly mark pedestrian-safe access routes.
- If school children are in the vicinity, include traffic safety personnel to direct traffic.
- Eliminate stagnant water to avoid water borne diseases (malaria, cholera).
- Maintain supply of supplies for traffic signs (including paint, easel, sign material, etc.), road marking, and guard rails to maintain pedestrian safety during construction.
- Conduct safety training for construction workers prior to beginning work.
- Provide personal protective equipment and clothing (goggles, gloves, respirators, dust masks, hard hats, steel-toed and –shanked boots, etc.) for construction workers and enforce their use.
- Post Material Safety Data Sheets for each chemical present on the worksite.
- Require that all workers read, or are read, all Material Safety Data Sheets. Clearly explain the risks to them and their partners, especially when pregnant or planning to start a family. Encourage workers to share the information with their physicians, when relevant.
- Ensure that the removal of asbestos-containing materials or other toxic substances be performed and disposed of by specially trained workers.
- During heavy rains or emergencies of any kind, suspend all work.

- Brace electrical and mechanical equipment to withstand seismic events during the construction.

Nuisance and dust control

To control nuisance and dust the Contractor should:

- Maintain all construction-related traffic at or below 15 mph on streets within 200 m of the site.
- Maintain all on-site vehicle speeds at or below 10 mph.
- To the extent possible, maintain noise levels associated with all machinery and equipment at or below 90 db.
- In sensitive areas (including residential neighborhoods, health centers, rest homes, etc.) more strict measures may need to be implemented to prevent undesirable noise levels.
- Minimize production of dust and particulate materials at all times, to avoid impacts on surrounding families and businesses, and especially to vulnerable people (children, elders).
- Phase removal of vegetation to prevent large areas from becoming exposed to wind.
- Place dust screens around construction areas, paying particular attention to areas close to housing, commercial areas, and recreational areas.
- Spray water as needed on dirt roads, cut areas and soil stockpiles or fill material.
- Apply proper measures to minimize disruptions from vibration or noise coming from construction activities.

Community Relations

To enhance adequate community relations the Contractor should:

- Following the country and EA requirements, inform the population about construction and work schedules, interruption of services, traffic detour routes and provisional bus routes, as appropriate.
- Limit construction activities at night. When necessary ensure that night work is carefully scheduled and the community is properly informed so they can take necessary measures.
- At least five days in advance of any service interruption (including water, electricity, telephone, bus routes) the community must be advised through postings at the project site, at bus stops, and in affected homes/businesses.

Chance Find Procedures for Culturally Significant Artifacts

In case culturally valuable materials are uncovered during excavation:

- Stop work immediately following the discovery of any materials with possible archeological, historical, paleontological, or other cultural value, announce findings to project manager and notify relevant authorities;
- Protect artifacts as well as possible using plastic covers, and implement measures to stabilize the area, if necessary, to properly protect artifacts
- Prevent and penalize any unauthorized access to the artifacts
- Restart construction works only upon the authorization of the relevant authorities.

Environmental Supervision during Construction

The bidding documents should indicate how compliance with environmental rules and design specifications would be supervised, along with the penalties for non-compliance by

contractors or workers. Construction supervision requires oversight of compliance with the manual and environmental specifications by the contractor or his designated environmental supervisor. Contractors are also required to comply with national and municipal regulations governing the environment, public health and safety.

Annex VIII - Format of an Annual Environmental and Social Report

Relevant environmental authority:							
Reporting dates:							
Province/Municipality/Commune:							
Subprojects approved:							
Subproject title	Activities	Project phase ⁽¹⁾	Env.category	ESIA / ESMP completed?	Environmental Permit granted?	Effectiveness of ESMP	Issues ⁽²⁾
(name, location, title or reference)	(new construction, rehabilitation, maintenance)	See note below		Yes, No or N/A	Yes, No or N/A	Good, poor, or needs improvement	See note below
1							
2							
3							
Etc							
Subprojects rejected:							
Subproject title	Activities	Reasons for rejection			Remarks ⁽³⁾		
1							
2							
etc							

Notes:

- 1 Subproject phase will be one of the following: (a) under project preparation or appraisal, (b) appraised, or (c) implementation.
- 2 Issues: accidents, litigation, complaints or fines are to be listed.
- 3 e.g. if an environmental permit was not granted, explain why.

Annex IX – Example of Public Session programme and attendance list



REPÚBLICA DE ANGOLA
GOVERNO DA PROVÍNCIA DO BIÉ
SECRETARIA

**PROPOSTA DO PROGRAMA DE VISITA DO BANCO MUNDIAL
A PROVINCIA DO BIÉ – MOSAP 2**

TERÇA-FEIRA DIA 19 DE MAIO/2015		
HORA	ACTIVIDADE	LOCAL
10H00	▪ CHEGADA DA DELEGAÇÃO DO BANCO MUNDIAL A SEDE MUNICIPAL DO CHINGUAR	SEDE DO CHINGUAR
10H30	▪ PEQUENO ALMOÇO	
10H50	▪ ENCONTRO DE CORTESIA COM A SRA. ADMINISTRADORA MUNICIPAL	
11H20	▪ VISITA AO PAPAGRO	ALDEIA DE CANGULI
12H00	▪ VISITA A VALA DE IRRIGAÇÃO	
14H00	▪ VIAGEM DA DELEGAÇÃO AO KUITO	
QUARTA-FEIRA DIA 20 DE MAIO/2015 APRESENTAÇÃO DO MOSAP 2		
HORA	ACTIVIDADE	LOCAL
08H30	▪ REGISTO DOS PARTICIPANTES	INSTITUTO
09H00	▪ APRESENTAÇÃO DO PRESIDUM	
09H05 AS 09H15	▪ ENQUADRAMENTO DO MOSAP – SR. ENG ^o MARCOLINO ROCHA SANDEMBÁ – DIRECTOR PROVINCIAL DA AGRICULTURA E PESCAS	
09H15 AS 09H30	▪ SESSÃO DE ABERTURA A SER PROFERIDO POR SUA EXCELENCIA, DR. ALVARO MANUEL DE BOAVIDA NETO - GOVERNADOR DA PROVINCIA DO BIÉ	
09H35 AS	▪ APRESNTAÇÃO DO PROJECTO MOSAP 2	

10H05		SUPERIOR POLITECNICO - KUITO
10H10 AS 10H30	▪ DEBATES SOBRE A APRESENTAÇÃO	
10H35 AS 11H00	▪ INTERVALO – PEQUENO ALMOÇO	
11H05 AS 11H25	▪ APRESENTAÇÃO DO COMERCIO (COMERCIALIZAÇÃO DE PRODUTOS AGRICOLAS)	
11H30 AS 11H55	▪ APRESENTAÇÃO DA ENERGIA E AGUAS (RECURSOS HIDRICOS)	
12H00 AS 12H20	▪ APRESENTAÇÃO DA FAO - ESCOLAS DE CAMPO	
12H25 AS 12H55	▪ DEBATES SOBRE AS APRESENTAÇÕES	
13H00 AS 14H00	▪ ALMOÇO	
14H05	▪ VISITA A VALA DE IRRIGAÇÃO	KUNJE
QUINTA-FEIRA DIA 21 DE MAIO/2015 VISITA DA DELEGAÇÃO AO ANDULO		
HORA	ACTIVIDADE	LOCAL
6H30	▪ CONCENTRAÇÃO - GOVERNO PROVINCIAL	
07H00	▪ VIAGEM PARA O ANDULO	
09H40	▪ ENCONTRO DE CORTESIA COM O SR. ADMINISTRADOR MUNICIPAL DO ANDULO	
10H15	▪ VISITA DE CAMPO ▪ MERCADO BUANGA ▪ VALA DE IRRIGAÇÃO DO CHINDONDO	
13H30	▪ ALMOÇO	SEDE DE CALUSSINGA
13H30	▪ VIAGEM DA DELEGAÇÃO AO HUAMBO	

SECRETARIA DO GOVERNO DA PROVINCIA DO BIÉ, AOS 11 DE
MAIO DE 2015.-

Apresentação ROSA²
 Escola Superior Politécnica - Instituto I BIE
 20.05.015

LISTA DE PRESENÇA

N/O	NOME	FUNÇÃO	TELEFONE
1	BEATORA HERMINIA MURIN	CONSULTORA FAO - Monitor Escala de Camp	9 31916664
2	MARIANA GARCIA BELAFOS	CONSULTORA IRRIGACÃO - FAO	932650526
3	ANTONIA DANILGOS ARAU	CONSULTORA - IDA	932259162
4	JUAN RANDE GARCIA HOLINA	DELEGADO ONG CODESPA	932576845
5	Simón Rabeber	Engenheiro Ambiental, FAO	938933033
6	Luís Carlos G. S. Soares	Coordenador de Projetos, FAO	919469969
7	ANASSO N. S. Trachada	Ad. Coordenador	923233632
8	Domínguez Tare Fernando	Coord. Nacional de Educação	9324108363
9	Eduardo Samuel Encarnado	Técnicos Agrícola CRYCOR	939699688
10	Felício da Costa	Representante I. D. I.	935334415
11	Felipe B. B. B. B.	Representante - CP	925924026
12	Manuel Spindler Damascos	Representante - IDA	923265383
13	Profa. Sílvia S. S. S.	IDA - Coordenadora	923725681
14	Alcides Lindalva Sabidura	Coordenadora Regional - IDA	930220204
15	Genaro do Brasil	IDA - Coordenador	923350768
16	Benjamin Benjamim Pinto	IDA - Coordenador	9309496113
17	Benjamin Sabidura Almeida F. S.	Coordenador Regional - IDA	945504160
18	Benedito Brito Siqueira	IDA - Coordenador	936394599
19	Miranda Salmeida Siqueira	IDA - Bie	924120187

LISTA DE PRESENÇA

N/O	NOME	FUNÇÃO	TELEFONE
1	Mamede Vincomba	Ad. M. Chaterano	930876297
2	Alcides Costa Teves Gamateia	Ad. N. Gamateia	929497788
3	Joaquim Soares Lopes	Ad. Municipal de C. Tabole	923614201
4	Beauly Lopes de Barros	Ad. Municipal de C. Tabole	924699370
5	Alfonso de Almeida	Ad. Municipal de C. Tabole	931284262
6	Alfonso de Almeida	Ad. Municipal de C. Tabole	923863266
7	José Carlos Ribeiro Avita	Ad. Municipal de C. Tabole	946292025
8	Carolina Vilalva Soares	Ad. Municipal de C. Tabole	923260693
9	Adelia Fontana	Ad. Municipal de C. Tabole	926898909
10	Alfonso de Almeida	Ad. Municipal de C. Tabole	927573354
11	Alfonso de Almeida	Ad. Municipal de C. Tabole	940550970
12	Alfonso de Almeida	Ad. Municipal de C. Tabole	938552236
13	Julia Cantile	Ad. Municipal de C. Tabole	920523647
14	Alfonso de Almeida	Ad. Municipal de C. Tabole	923372251
15	Alfonso de Almeida	Ad. Municipal de C. Tabole	922399692
16	Alfonso de Almeida	Ad. Municipal de C. Tabole	923491528
17	Alfonso de Almeida	Ad. Municipal de C. Tabole	943112271
18	Estelona Sales Massena Augusto	Ad. Municipal de C. Tabole	924393467
19	Alfonso de Almeida	Ad. Municipal de C. Tabole	927944373
20	Alfonso de Almeida	Ad. Municipal de C. Tabole	926391801
21	Alfonso de Almeida	Ad. Municipal de C. Tabole	92371571
22	Alfonso de Almeida	Ad. Municipal de C. Tabole	926628030

LISTA DE PRESENÇA

N/O	NOME	FUNÇÃO	TELEFONE
1	JOSÉ AFRÍDIO CESAR	COORDENADOR	928334182
2	LUIS RAMALHO	CONSULTOR	924350440
3	MANOEL IBRO	ECONOMIST	938931911
4	LACHARNE MARE	AGRO ECONOMISTA	
5	CYPRIEN NDAMBI NDOKI	COORDENADOR COMPONENTE ECU/FHO	9225362786
6	DOMINGOS ROZEE	ADM. COMERCIAL NUTRIMENTO	929498159
7	Julio Lopes	ADM. Comercial do Município	928649405
8	Malacáquina Klara Fila	Edm. Nutri. Comunit. Catequiza	922890993
9	Filipe Sampaio	Edm. Comunal de Nutriç	931553738
10	Baptista Barbosa	Edm. Comunal do Município	924009545
11	Apollônio Augusto Rodas	ADM. Comunal de Nutriç	925734538
12	Elisberto Folly de Avelar	ASSOR - DP: A -	93553842
13	Agostinho Soares Jandara	Edm. Comunal	924179581
14	Silvius Adriano Nereses	Edm. C. Catequiza	938125918
15	Teotônio Brito	Edm. C. Catequiza	934044858
16	Simomanda Garetty	Edm. C. Catequiza	924114989
17	Francisco	F. C. - Bie	932679313
18	Reque Passos Almeida	CATEC. DEPTO. POU. IDA	923275934
19	WILSON GALVÃO	ADM. C. CATEQUIZA	924076246
20	Família de Benedita Langens	Clube Dep. do Sente	923207000
21	Hugo Agostinho	Ger. de Programas - PIN	931869888
22	AM SUTILEZ	ARQUITECTURE ADINOR - PIN	927948091

Annex X – Example of Terms of Reference for the proposed Social and Environmental Focal Point for MOSAP II

SOCIAL AND ENVIRONMENTAL FOCAL POINT (SEFP): Reporting to the PIU, will serve as the main contact person on environment and social and health and safety issues of MOSAPII within the central PIU and coordinating with the province's PIUs. He/she shall ensure that the environmental and social mitigation measures (including resettlement) are followed for all MOSAPII's activities. This position will be based in Luanda.

Duties:

- Assist the MOSAPII Coordinator in identifying and managing: 1) environmental, social, health, and safety impacts of MOSAPII projects, 2) relevant environmental requirements per Angolan environmental law and WBG Environmental and Social Safeguard Policies, and 3) ensure the implementation of relevant mitigation measures.
- Ensure compliance of the proposed project activities with relevant Angola environmental laws and regulations, and the World Bank Policy on Involuntary Resettlement.
- Provide support to MOSAPII's efforts to obtain environmental licenses from relevant government authorities;
- Organize and manage required sessions for stakeholders participation sessions in environmental and social impact issues, in accordance with approved guidelines and procedures;
- Review the contractors' recommendations and ensure that final reception of goods, works or services and for the corresponding closing of contracts are carried out in full compliance with the environmental management plans;
- Ensure that all Environmental Management Plans, Resettlement Action plans, Integrated Pest Management Plans, and other environmental and social plans are properly and effectively developed, managed and implemented;
- Ensure that any complaints, related to environmental and social impact issues, arising from the implementation of MOSAPII activities are resolved in a timely manner and properly documented.
- Monitor the implementation of the Resettlement Action Plans and ensure effective communication with Project Affected Persons (PAPs);
- Other tasks and responsibilities as requested by the MOSAPII General Coordinator and other PIU members.
- Ensure the implementation, by the contractors, of the environmental, health and safety requirements set out in the project's ESMP;
- Communicate issues of environmental and occupational health and safety to MOSAPII General Coordinator and Province Coordinators highlighting the need to address specific urgent environmental, health and safety measures;
- Maintain liaison with the PIU, project specific teams and project managers, ensuring that they are informed about environmental and health and safety management aspects related to their interventions;
- Ensure that non-compliance with the requirements with environmental, health and safety are report to PIU;

- Work with the PIU at Central and Province level to establish procedures for internal and external communication, providing information on emergency and activities taken – This can also be used by MOSAPII’s communication specialist for messaging of important project’s issues to stakeholders;
- Prepare regular reports regarding the projects’ performance with regards to implementation of environmental, health and safety management requirements as established on the EMPs ensuring that these report’s outcomes are incorporated in the general reporting of the project
- Carry out technical site audits/monitoring and point out any non-conformity with the implementation of environmental, health and safety requirements to the PIU, and follow-up actions for corrections;
- In coordination with the PIU at central and province level, analyze the Works Program and collaborate in the programming and implementation of the environmental, health and safety activities proposed by the Contractors.
- Ensure that the PIU at province level are undertaking the required control of safety conditions of materials and equipment arriving at the project site;
- In coordination with PIU at central and province level, ensure the supply and management of stocks of Collective Protective Equipment (CPE) and Personal Protective Equipment (PPE);
- Take corrective measures or organize their implementation in order to eliminate risks ;
- Co-ordinate the procedures to be taken in the event of a serious accident ;

Qualifications and Experience:

- Advanced degree in Natural or Social Science (minimum Master degree)
- At least 5 years of experience with environmental/social impact assessment and mitigation management
- Experience with the implementation of infrastructure (agriculture/roads/water/sanitation construction/rehabilitation) projects required.
- Familiarity with Angolan environmental laws and regulations and resettlement practices.
- Proven experience in undertaking and reviewing environmental and social impact assessments.
- Experience with overseeing resettlement activities and familiarity with implementing the World Bank Policy on Involuntary Resettlement (OP 4.12) is highly desirable.
- Ability to interact constructively with both technical and construction experts and Project Affected People is required.
- Written and verbal fluency in both Portuguese and English is required
- Responsible and flexible attitude and capable of working with minimal supervision, including ability to handle a variety of tasks and demands.
- Computer skills (MS office, internet).

All applications for this position must be submitted via postal mail or e-mail to: **(Insert contacts)**

Applications must be received no later than **(insert date)**. Preference will be given to individuals working or living in Angola. To receive consideration, applications must

include i) a CV that demonstrates the applicant's qualifications and experience, and ii) a cover letter (one page maximum) explaining what the applicant foresees as the challenges of the position and how their experience and education would allow them to meet those challenges. All applications will be treated in the strictest confidence. Only applicants selected for interviews will be contacted.