Climate Investment Funds

FIP/SC.7/4
October 6, 2011

Meeting of the FIP Sub-Committee
Washington, D.C.
October 31, 2011

Agenda Item 4

Investment Plan of Lao People's Democratic Republic

Proposed Decision by FIP Sub-Committee

The FIP Sub-Committee, having reviewed the *Investment Plan for Lao People's Democratic Republic* (Document FIP/SC.7/4),

a) endorses the Investment Plan as a basis for the further development of the projects foreseen in the plan and takes note of the requested funding of USD 30 million in grant funding. The Sub-Committee requests the Government of the Lao People's Democratic Republic and the MDBs, in the further development of the proposed projects, to take into account comments submitted by Sub-Committee members by November 15, 2011.

b) reconfirms its decision on the allocation of resources, adopted at its meeting in November 2010, that a range of funding for the country should be used as a planning tool in the further development of project and program proposals to be submitted to the FIP Sub-Committee for FIP funding approval, recognizing that the minimum amount of the range is more likely and that the upper limit of the range will depend on availability of funding. The range of funding agreed for the People's Democratic Republic is USD 20-30 million in FIP resources. The Sub-Committee also recognizes that the quality of the proposed activities will be a significant factor in the funding to be approved by the Sub-Committee when project and program proposals are submitted for approval of FIP funding.

c) approves a total of USD1.0million in FIP funding as preparation grants for the following projects to be developed under the investment plan:

   i. USD500,000 for the project "*Protecting Forests for Sustainable Ecosystem Services (PFSES)"* (ADB); and
   ii. USD500,000 for the project "*Scaling-up Participatory Sustainable Forest Management (Scaling-up PSFM)*" (World Bank).

d) takes note of the estimated budget for project preparation and supervision services for the projects referenced above and approves a first tranche of funding for MDB preparation and supervision services as follows[1]:

   i. USD245,000 for the project "*Protecting Forests for Sustainable Ecosystem Services (PFSES)*" (ADB); and
   ii. USD245,000 for the project "*Scaling-up Participatory Sustainable Forest Management (Scaling-up PSFM)*" (World Bank).

[1] For the project "*Smallholder Forestry Project*" implemented by IFC, the MDB preparation and supervision costs will be determined at investment development stage and requested at a later point in time.

LAO PEOPLE'S DEMOCRATIC REPUBLIC
Peace Independence Democracy Unity Prosperity

FOREST INVESTMENT PROGRAM (FIP)
LAO INVESTMENT PLAN

October 2011

Acronyms

ADB	Asian Development Bank
AFOLU	Agriculture, forestry, and land use
ALOS	Advanced Land Observation Satellite
ASEAN	Association of Southeast Asian Nations
BCC(I)	Biodiversity Corridor Conservation (Initiative)
BRP	Biomass Removal Plan
CDM	Clean Development Mechanism
CIF	Climate Investment Fund
CliPAD	Climate Protection through Avoided Deforestation Project
COP	Convention of the Parties
CSOs	Civil Society Organizations
CSR	Corporate Social Responsibilities
DFD	Department of Forest Preservation
DFO	District Forestry Office
DFPO	District Forest Preservation Office
DFRC	Division of Forest Resource Conservation (under DOF)
DGM	Dedicated Grant Mechanism for Indigenous People and Local Communities
DOE	Designated Operational Entities
DOF	Department of Forestry
DOFI	Department of Forest Inspection
DPA	District Protected Area
ESIA	Environmental and Social Impact Assessment
FAO	Food and Agriculture Organization
FCPF	Forest Carbon Partnership Facility
FDD	Forest Degradation and Deforestation
FDI	Foreign direct investment
FIM	Forest Information Management Project
FIP	Forest Investment Program
FIPD	Forest Inventory and Planning Division
FIMP	Forest Information Management Project
FLEG-T	Forest law enforcement and governance and Trade
FMA	Forest management area
FMU	Forest management unit
FS2020	Forestry Strategy to 2020
FSC	Forest Stewardship Council
FSCAP	Forestry Sector Capacity Development Project
FOMACOP	Forest Management and Conservation Project
FPP	Forest Preservation Program
GEF	Global Environment Facility
GDG	Gender and Development Group
GDP	Gross Domestic Product
GIS	Geographic Information System
GMS CEP/BCI	Greater Mekong Sub-region Core Environment Programme/ Biodiversity Corridor Initiative
GOL	Government of Lao PDR

GHG	Greenhouse gas
GIZ	Gesellschaft für Internationale Zusammenarbeit
Ha	hectare
IEC	Information, education, and communication
IDA	International Development Agency
IFC	International Finance Corporation
IPCC	Inter-governmental Panel on Climate Change
ITP	Industrial tree plantation
IUCN	International Union for Conservation of Nature
JICA	Japanese International Cooperation Agency
KfW	Kreditanstalt fur Wiederaufbau
LA	Land allocation
Lao WEN	Lao Wildlife Enforcement Network
LBC	Lao Biodiversity Conservation
LCA	Long-term Cooperative Action
LEAF	Lowering Emissions in Asia's Forests (USAID)
LFNC	Lao Front for National Construction
LNCCI	Lao National Chamber of Commerce and Industry
LUFC	Land use and forest change
LULUCF	Land use, land use change, and forestry
LWU	Lao Women's Union
M	million
MAF	Ministry of Agriculture and Forestry
MEM	Ministry of Energy and Mines
MFAF	Ministry for Foreign Affairs of Finland
MIC	Ministry of Industry and Commerce
MPI	Ministry of Planning and Investment
MRV	Monitoring, reporting, and verification
MDB	Multilateral Development Bank
MoFA	Ministry of Foreign Affairs
MoJ	Ministry of Justice
MONRE	Ministry of Natural Resources and Environment
MoWA	Ministry of Women's Affairs
NEC	National Environmental Committee
NFI	National forest inventory
NGO	Non-Government Organization
NLMA	National Land Management Authority
NPA	National Protected Area
NPAs	Non-Profit Associations
NSEDP	National Socio-Economic Development Plan
NUoL	National University of Lao PDR
NTFP	Non-timber forest product
PA	Protected Area
PACSA	Public Administration and Civil Service Authority
PAREDD	Participatory Land and Forest Management Project for Reducing Deforestation and Degradation
PES	Payment for environmental services

PFA	Production Forest Area
PFO	Provincial Forestry Office
PFPO	Provincial Forest Preservation Office
PFSES	Protecting Forests for Sustainable Ecosystem Services
PHRD	Policy and Human Resource Development
PLUP	Participatory Land-use Planning
PM	Prime Minister
PMO	Prime Minister's Office
PPA	Provincial Protected Area
PPTA	Project Preparation Technical Assistance
PSFM	Participatory sustainable forest management
REDD+	Reduced Emissions from Deforestation and Degradation
REL	Reference emission level
R-PP	Readiness Preparation Proposal
SNV	Netherlands Development Organization
SFA	State Forest Area
SNRMPEP	Sustainable Natural Resources Management and Productivity Enhancement Project
SUFORD	Sustainable Forest and Rural Development (Project)
SW	Smallholder woodlot
TBD	To be determined
tCO2e	tons of carbon dioxide equivalent
TF	Task Force
UNDP	United Nations Development Program
UNFCCC	United Nations Framework Convention on Climate Change
URDP	Uplands Rural development project
USD	US Dollar
UXO	Unexploded Ordinance
VC	Village Committee
VDF	Village Development Funds
VF	Village forestry (or village forest)
VFMA	Village forest management area
VFO	Village Forestry Organization
WB	World Bank
WCS	Wildlife Conservation Society
WPFA	Watershed Protection Forest Area
WREA	Water Resources and Environment Administration
WWF	Worldwide Fund for Nature

FOREST INVESTMENT PROGRAM **Summary of Country Investment Plan**		
1. **Country/Region**:	Lao PDR	
2. **FIP Funding Request (in USDmillion):**:	*Grant:$30.0 Million*	*Loan:*
3. **National FIP Focal Point**:	***Mr. Oupakone Alounsavath*** *Head of the Planning Division* *Department of Forestry (DoF)* *Ministry of Agriculture and Forestry (MAF)* *dofadmin@gmail.com*	
4. **National Implementing Agency** (Coordination of Investment Plan)**:**	***Department of Forestry (DoF)*** *Ministry of Agriculture and Forestry* *Lao PDR*	
5. **Involved MDB**	*ADB, IFC and World Bank*	
6. **MDB FIP Focal Point and Project/Program Task Team Leader (TTL)**:	***Headquarters-FIP Focal Points:*** ***Mr. David McCauley, ADB*** *Lead Climate Change Specialist* *dmccauley@adb.org* ***Ms. Noleen Dube, IFC*** *ndube@ifc.org* ***Joyita M. Mukherjee, IFC*** *JMukherjee1@ifc.org* ***Mr. Gerhard Dieterle, WB*** *Forest Advisor* *gdieterle@worldbank.org*	***TTLs:*** ***Mr. Sanath Ranawana, ADB*** *Senior Natural Resources Specialist* *sranawana@adb.org* ***Mr. Aimilios Chatzinikolaou, IFC*** *Head of Office* *Achatzinikolaou@ifc.or* ***Dr. Peter Jipp, WB*** *Senior Natural Resources Management Specialist* *pjipp@worldbank.org*

7. **Description of Investment Plan:**

(a) **Key challenges related to REDD+ implementation** – Managing growth and development activities (agricultural expansion, urban growth, infrastructure investment, mining and hydro power concessions, etc.) to minimize and mitigate impacts on forests and livelihoods. Risks are perceived to be manageable and but will need to be addressed by working directly with villages of all ethnicities under variable local conditions, by engaging provincial decision makers and by coordinating among various Ministries with shared responsibilities for avoiding and/or addressing environmental social impacts in forest areas. There is also recognition of risks associated with carbon markets that have not yet been established or tested in Lao PDR and whose working mechanisms are still under development. A strong focus on forest law enforcement, inter-ministerial coordination, and provincial engagement on land use planning and allocation decisions will be required.

(b) **Areas of Intervention** – The program themes of the FIP Lao Investment Plan have been developed to dovetail with the FS2020 and to address the drivers of deforestation and forest degradation indentified in the Lao RPP. Three thematic components support ongoing efforts to bring all forest land and resources under participatory and sustained protection, development, and management, in a serious though ambitious attempt to leave no gaps for the various drivers of deforestation and forest degradation to operate. Identified themes include: Scaling-up Participatory Sustainable Forest Management in all state forest areas, expanding village forest in unclassified forest areas (30% of Lao PDR's forest is outside classified forests); Smallholder forestry, including link to private sector partnership; and a fourth crosscutting theme is included to ensure an enabling environment that provides the impetus for participation of villages and other stakeholders by providing benefits, e.g., through legal/regulatory reform, law enforcement, capacity building, development of PES and REDD+, MRV, and knowledge management.

(c) **Expected Outcomes from the Implementation of the Investment Plan** - The underlying idea is that grassroots forest managers operating in any and all forest areas will become more active and vigilant in protecting the forests in their areas from the various agents of deforestation and degradation, and will rehabilitate degraded lands using land management systems that will provide them with benefits, while enhancing carbon stocks. Expected outcomes are detailed in the results Framework.

(d) **Link to activities supported by FCPF and UN-REDD Program** – All REDD+ related activities will be coordinated by the REDD+ Office which will be empowered to establish a number of Technical Working Groups, including; Reference Emission Level (REL), Monitoring Reporting and Verification (MRV), Stakeholder Consultation, Land-use Planning, Carbon Registry, REDD+ Strategy, and others as required. These working groups will provide technical support and advice to the Office as needed and in particular for the preparation of Annual Work Plans to be prepared by the Office, that will be submitted to the Task Force for endorsement to NEC. The REDD+ Office will also support the establishment of a similar structure at Provincial level, in those Provinces where REDD+ activities are taking place or are planned for the Readiness Phase.

8. **Expected Key results from the Implementation of the Investment Plan (consistent with FIP Results Framework):**	
Result	**Success Indicator**
(C1) Putting all forest areas under sustainable management by capacitated grassroots-level managers and supporting them	• Hectares of different state forest area categories under PSM agreement with VFOs • Hectares of village forests registered • Hectares of smallholder woodlots established
(C2) Sustainable management of forests and forest landscapes to address the drivers of deforestation and forest degradation	• Change in ha deforested in various project areas • tCO2 sequestered/USD by various components
(C3) Empowered forest-dependent villages and households of various ethnic groups and promoting their practice of sustainable livelihoods	• Increase in area with clear and recognized tenure under sustainable livelihoods • Level and quality of ethnic group participation in decision making and monitoring involved in PLUP-LU
(C4) An institutional and legal/regulatory framework that supports sustainable management of forests and protects the rights of villages of various ethnicity	• Amendment of the Forest Law to account for a number of REDD+ related issues
(C5) New and additional resources for REDD+ implementation	• Leverage factor of FIP funding • USD financing from various sources (contributions broken down by GOL, MDBs, other multilateral and bilateral partners, CSOs, private sector)
(C6) Integration of learning by development actors active in REDD+	• Number and type of knowledge assets (e.g., publications, studies, knowledge sharing platforms, learning briefs, communities of practice, etc.) created and shared
(D1) Participatory, sustainable management of state forest areas	• Change in ha of PSFM area • Change in carbon stocks in state forest areas • Number of participating villages • Number of participating villages whose dominant population comprise ethnic groups • Number of women participating in PSFM
(D2) Village forest areas expand	• Hectares of village forests registered • Change in carbon stocks in village forests
(D3) Smallholder forestry with link to ITP developed	• Hectares of smallholder woodlots established • Change in carbon stocks in smallholder woodlots

(D4) Strengthening the legal, governance, incentives, and REDD+ framework	• Amendment of the Forest Law to account for a number of REDD+ related issues • Evidence of detection and prosecution of illegal logging • Number of staff trained, proportion of women • Number of villagers trained, proportion of women • Benefits shared by participating villages • Extent to which women and men of various ethnic groups have access to relevant information in timely manner

9. **Project and Program Concepts under the Investment Plan:**

Project/Program Concept Title	MDB	Requested FIP Amount ($ million)[2]			Public Sector/ Private sector	Expected MDB co-financing ($ m)	Preparation grant request ($ m)
		TOTAL	Grant	Loan			
Protecting Forests for Ecosystem Services	ADB	13.34	13.34	0	Public	20 (SNRMPEP) + 20 (BCC)	0.50
Smallholder Forestry Project	IFC	3.3	3.3	0	Public/ Private	10 (Private sector loan)	0.30
Scaling-up PSFM	WB	13.33	13.33	0	Public	17.1 + 8.29 GEF /WB +15 (TBC)	0.50
TOTAL		30	30	0		90.29	

10. **Timeframe** (tentative) – Approval Milestones:

	FIP Sub-Committee Approval	MDB Board Approval
Project 1: Protecting Forest for Ecosystem Services (ADB)	June 2012	July 2012
Project 2: Smallholder Forestry Project (IFC)	September 2012	October 2012
Project 3: Scaling-up PSFM (WB)	May 2012	August 2012

11. **Link with FCPF and UN-REDD Programme Activities:** See item 7 (d) above

[2] Includes preparation grant and project/program amount.

12. **Other Partners involved in design and implementation of the Investment Plan**[3]:

Government of Lao PDR (GOL): Ministry of Agriculture and Forestry (MAF), Ministry of Natural Resources and Environment (MoNRE), Ministry of Planning and Investment (MPI), Ministry of Justice (MoJ) and Ministry of Finance (MoF) at the national level. Provincial government staff in the proposed provinces of the line ministries and the provincial administration offices will also participate in the design and implementation of project activities.

Other Development Partners: JICA, GIZ through CliPAD project, Ministry of Foreign Affairs of Finland, KfW

Mass organizations (Lao Women's Union and Lao National Front for Construction and Lao Youth Union) and the relevant Civil Society Organizations will also be involved in the design and implementation of activities. DGM implementation and coordination through a national implementing organization yet to be identified.

13. **Consultations with Indigenous Peoples and Local Communities:** Consultation meetings were held with relevant civil society organizations (CSOs) and ethnic group representatives during Scoping Mission January 2011, Joint Mission June 2011, internal government meetings in August and September 2011, National Stakeholder Consultation Workshop in Vientiane Capital (September 2011), Regional Stakeholder Workshops (September 2011; Luang Prabang and Thakhek). Follow up and informal meetings were also held with the CSOs during and after the missions to inform and consult with them about the progress of the FIP Investment Plan preparation by the government and the DGM development as well as discussing with them on a number of topics including their activities related to REDD+ and FIP, what are the obstacles experienced by them in the past, how they can participate in the design and implementation of the DGM. The World Bank and ADB are mobilizing consultants to support a targeted dialogue on DGM design with potential implementation partners in country during the project design.

14. **Private Sector Involvement:** Meetings were held with potential private sector partners including small and international plantation companies, Lao National Chamber of Commerce and Industry (LNCCI) who is a member of the National REDD+ Task Force, the plantation and wood processing associations, during the Scoping Mission January 2011, Joint Mission in June 2011; government meetings in August and September 2011, National Stakeholder Consultation Workshop in Vientiane (September 2011) and Regional Stakeholder Workshops (September 2011; Luang Prabang and Thakhek)

Other relevant information:

[3] Other local, national and international partners expected to be involved in design and implementation of the plan.

Executive Summary

1. **The country and its forests.** Lao PDR is one of the least developed countries in Southeast Asia. The country has considerable natural resources in forests, water resources, and minerals and these are significant for cultural development, environment protection, and economic development. Its forests cover about 40% of the country, the highest percentage in Southeast Asia, but the total area of forest has been declining dramatically from 70% of the land area of 26.5 million ha in 1940, to 49% in 1982, and to only 40% or about 9.5 million ha in 2010. Data on changes in forest cover suggest that during the 1990s the annual loss of forest cover was around 1.4% annually, giving an average annual loss of forest cover of about 134,000 ha. In addition to the decline forest area, there has been a steady fragmentation of forests and a decline in the average growing stock within the residual forest, which have both reduced carbon values and had a negative impact on biodiversity. Annual emissions from deforestation and forest degradation were estimated at 95.3 million tCO_2e in 1982, declining to 60.6 million tCO_2e by 2010. For the period from 2012-20, the average annual emission is estimated at 51.1 million tCO_2e.

2. **REDD+.** A recent study on deforestation and forest degradation in Lao PDR revealed nine sources, namely: fire, unsustainable wood extraction, pioneering shifting cultivation, agricultural expansion, industrial tree plantation, mining, hydropower, infrastructure development, and urban expansion. Deforestation, in the sense that forest is converted to some other use so that it will not revert back to forest within the short to medium term, results from: (i) expansion of agricultural and industrial tree plantation (ITP) development, (ii) inundation by hydropower projects, and (iii) clearing of the sites of mining, infrastructure development, and urban expansion. Forest degradation, in the sense that the land remains as forest but the density and quality of the forest is decreased, is mainly the result of unsustainable wood extraction and shifting cultivation.

3. GOL recognizes its international obligation to reduce emissions from deforestation and forest degradation in Lao PDR, as well as to conserve biodiversity and other resources in its forests, sustainably manage its forests, and enhance carbon stocks, thereby contributing to global efforts to mitigate climate change. In 2007, the Prime Minister appointed the Ministry of Agriculture and Forestry (MAF) as the national member of the WB-based Forest Carbon Partnership Facility. In 2008, MAF established the REDD+ Task Force chaired by the Director General of the Department of Forestry (DOF). In 2010, this REDD+ Task Force was expanded and strengthened to 15 members by Minister's Decree No. 0006/MAF, 7th January 2011 by the Minister of Agriculture and Forestry to include representatives from other relevant sectors, including Forestry Inspection, Mines and Energy, Planning and Investment, Land Management, Finance, Justice, Lao National Front (Ethnic Groups) and the Lao Women's Union. Also in 2010 a Readiness Preparation Proposal process was undertaken and completed, with the details of the REDD+ strategy to be developed during the Readiness Phase. The different donors that are active in the Lao forestry sector have been fine-tuning their programs towards REDD+.

4. To finance its program to reduce emissions from deforestation and forest degradation, GOL will adopt a hybrid approach that will aim to attract fund-based credits in the short-term, while accessing the compliance market in due course, when international

protocols have been agreed and at the same time allow participation in the voluntary market. Thus, a wide range of stakeholders will be involved and activities will also vary in scale from small local community based activities to larger government, donor, and private sector sponsored activities. The analysis of the likely contribution of each of the drivers of deforestation and forest degradation suggests that around half the emissions from forest land-use change are mainly under the control of the forest authorities, i.e. the degradation, and the other half is highly dependent on decisions and actions by other sectors that require land for other purposes.

5. **Regulatory framework and gaps concerning REDD+.** There has been tremendous development on the regulatory framework in the Lao forestry sector since the mid-1990s that include the passage of the revised Forest Law in 2008 followed by various regulations on sustainable management of forest areas, promoting the participation of villages, and enforcement of regulations on timber harvesting and marketing, among others. By and large, the issue concerning the regulatory framework is not a lack of legislation, but more the capacity to implement the policies in a developing political system.

6. REDD+ readiness requires a regulatory framework that ensures transparent, effective, and efficient implementation of REDD+ strategic options and MAF has initiated the process for amending or revising the Forest Law accordingly, with technical support from CliPAD and other development partners. There are important new issues that require a special REDD+ Regulation issued by the government at an early date. The type and degree of the regulation will be identified during R-PP/FIP implementation. This will provide clarity related to key REDD+ issues, in particular ownership of carbon rights; the obligation to compensate government for carbon stocks that are liquidated, should this be adopted as policy; the benefit sharing system; financial management and distribution mechanism; how REDD+ activities are to be developed and sponsored; and which organizations, groups and individuals are eligible to participate in REDD+ activities funded both from national and international sources and the voluntary market.

7. **FIP investments.** FIP investments in Lao PDR will be directed toward reducing emissions from deforestation and forest degradation, while also helping the country to adapt to climate change impact, e.g. by pursuing climate resilient development as a co-benefit. Climate resilient development can result from reduction of poverty and reduction of losses in biodiversity and forest ecosystems services. FIP investments will be channeled to Lao PDR through the MDBs, which include WB, ADB, and IFC. By leveraging its investments, FIP can generate further resources from the MDBs and the bilateral organizations that are active in the Lao forestry sector, such as the MFA of Finland, JICA, and German cooperation through GIZ and KfW.

8. **Lao Investment Plan and thematic components.** The program themes of the FIP Lao Investment Plan have been developed to dovetail with the FS2020 target to attain a 70% forest cover in the country and the relevance of this target to REDD+. Four thematic components deal with putting all forest land and resources under participatory and sustained protection, development, and management, in a serious although ambitious attempt at leaving no gaps for the various drivers of deforestation and forest degradation to operate. These are:

1. Protecting Forests for Sustainable Ecosystem Services
2. Smallholder Forestry
3. Scaling-up Participatory Sustainable Forest Management
4. Creating an Enabling Environment

9. The underlying idea is that grassroots forest managers operating in any and all forest areas will be vigilant in protecting the forests in their areas from the various agents of deforestation and degradation, and will rehabilitate degraded lands using land management systems that will provide them with benefits, while enhancing carbon stocks. The fourth crosscutting theme is included to ensure an enabling environment that provides the impetus for participation of villages and other stakeholders by providing benefits, e.g., through legal/regulatory reform, law enforcement, capacity building, development of PES and REDD+, MRV, and knowledge management.

10. **FIP implementation projects.** The FIP implementation projects, whose components are the four FIP Lao Investment Plan thematic components, are as follows:

1. **Protecting Forests for Sustainable Ecosystem Service Delivery.** This initiative will build on ongoing projects supported by ADB, GIZ, JICA and KfW, which are REDD+ related and will be implemented in both WPFA and NPA areas. Incremental FIP financing administered by ADB will support the following activities:
   a) Piloting PSFM or co-management (in 2-3 WPFAs and 1-2 NPAs between which the BCC Project is creating connectivity)
   b) Piloting village and smallholder forestry (in villages involved in the BCC Project), providing alternative more productive and remunerative farming systems to reduce areas used for shifting cultivation and allow secondary to continue growing and sequester carbon and restoring forest cover on denuded land where co-benefits from biodiversity and water conservation are secured.
   c) Strengthening the legal, governance, incentives, and REDD+ framework (using bilateral grants and FIP grant coursed through ADB as the designated MDB)
   d) Identifying forest outside the designated state forest areas with High Conservation Value and developing PES to ensure their protection
   e) Implementing legal, governance, incentives, and REDD+ frameworks, using bilateral grants and FIP grant resources

2. **Smallholder Forestry Project.** These will focus on developing alternative livelihoods for communities interested in engaging in smallholder forestry and are likely to be concentrated in areas where the selected private enterprises have been licensed to operate. Smallholders will be provided opportunities to participate in agroforestry models that are linked to private enterprise production and value addition operations. Participation of private enterprises will be limited to those that can meet GOL requirements and IFC engagement criteria, and participation of interested The projects will have the following components:

a) Industrial Tree Plantation (ITP) development; in concession areas funded by private industry directly or with IFC financial support (subject to IFC review and approval procedures).
b) Smallholder woodlot development (in partner villages of selected private enterprises based on agroforestry models)
c) Strengthening collaboration of communities with the private sector and capacity building at the farmer level
d) Support for farmer land ownership through PLUP, land allocation, and titling on a pilot scale (contributing to the enabling environment theme).

3. **Scaling-up Participatory Sustainable Forest Management.** This initiative will build on the experience of SUFORD which is currently being implemented in 18 PFAs located in 9 provinces and on GEF financed activities in 2 NPAs. The FIP supported project is expected to be implemented starting in 2013 with IDA and MFAF co-finance and will expand PSFM coverage in PFAs and PAs and undertake piloting level activities in WPFAs. The project is expected to include the following components:
   a) Participatory sustainable management of classified forests including: SUFORD financed PFAs plus additional PFAs (to be identified) in 4 provinces in Northern Lao PDR and in GEF4/GEF5 financed NPAs (5)
   b) Pilot village land and forest management, covering selected village forests adjacent to PFAs and WPFAs identified under component 1.
   c) Pilot smallholder forestry and village development, covering selected villages participating in PFA/NPA management (to be implemented in unclassified forest areas)
   d) Developing and implementing legal, governance, incentives, and REDD+ frameworks across all forest types with a focus on law enforcement, inter-ministerial coordination, and engagement of provincial authorities on land use planning and allocation

11. **Implementation potential and risks.** The first two projects, each of which involves multiple categories of state production forest, village forestry, and smallholder woodlot development, will be implemented using institutional mechanisms and capacity building approaches that have been tested in production, conservation, and watershed protection forests with technical assistance provided by bilateral cooperation between Lao PDR and Finland, Germany, and Japan. The project dealing with smallholder and private enterprise partnership is based on an innovative concept that has been piloted in Lao PDR so far with success and elsewhere in the world and will be conducted in cooperation with selected private enterprise partners.

12. Risks are perceived to be manageable and are traceable to a number of sources including but not limited to the following: the need to work with villages of all ethnicities under variable local conditions to identify alternative livelihoods; the risks associated with carbon markets that have not yet been realized in Lao PDR and whose working mechanisms are still under development; and ongoing challenges associated with forest law enforcement, inter-ministerial and centre-provincial coordination, and on strong community participation in participatory land use planning and allocation decisions will be required.

12. **Financing plan.** A partial estimate of the total financing that will be made available for FIP implementation amounts to around USD 150 million. This estimate includes the USD 30 million grant financing being requested from FIP, existing budgets of several partners in the forestry sector that are aligning their programs and activities with REDD+, and new grant financing that will be under consideration by each of the MDBs and bilateral donors. It is important to acknowledge that the projected funding levels noted above represent a significant increase in support to the national REDD program. To be well utilized the bulk of these funds will be applied through existing project and program channels where financial management and procurement capacity has already been established and will continue to be strengthened during FIP implementation.

Contents

1. Lao PDR in the context of its forestry sector

1.1 Lao PDR and economic importance of its forestry sector

1. Lao PDR is one of the least developed countries in Southeast Asia. A land-locked country, it is bounded by Myanmar in the northwest, China in the north, Viet Nam in the east, Cambodia in the south, and Thailand in the west. It has a population of 6.2 million in 2010 living on 23.7 million ha of land and growing at an annual rate of 2.4%. The average population density of 26 persons per $km^2$is one of the lowest in Southeast Asia. About 80% of the population is rurally-based with about 85–90% dependent upon subsistence farming. There are more than 10,000 villages in the country, many of which are not accessible by motorized vehicle.

2. Average annual rainfall ranges from 1300 mm in the northern valleys to 3700 mm at higher elevations in the south. This corresponds to an annual rainfall of 434 billion m^3, of which less than half is estimated to be runoff. The Mekong tributaries in Lao PDR contribute some 35% of the whole lower Mekong Basin flow, and the monthly distribution of the flow of the rivers in Lao PDR closely follows the pattern of rainfall: about 80% during the rainy season (May-October) and 20% in the dry season (November-April).Water resources constitute a major source of revenue from hydropower. Recently Lao annual export of electricity to neighboring Thailand has reached about 272 million USD.

3. In addition to water resources, Lao PDR has considerable natural resources in forests and minerals, and these are significant for cultural development, environment protection, and economic development at the national and local levels. It has9.5 million ha of forests, which are the source of 74.4 million USD of export products. Forests provide some degree of assurance of food and income to people living in or adjacent to forests, especially when rice, the main crop, fails. In addition to being the source of various kinds of non-timber forest products for household consumption, forests also provide about 31.4 USD of annual cash income in fuel wood, charcoal, resin, forest foods, medicine, and other non-timber forest products to forest-dependent households, a modest but significant sum for people who are among the poorest in the country. Economic growth has reduced official poverty rates from 46% in 1992 to 26% in 2010.

1.2 Status and trends concerning forest resources

4. Although Lao PDR retains the highest proportion of forest and woodland in mainland Southeast Asia, the records of the Department of Forestry (DOF), indicate that the total area of forest declined dramatically from 70% of the land area or about 16.6 million ha in 1940 to 49% or about 11.6 million ha in 1982, and to only 40% or about 9.5 million ha in 2010 (Table 1). Between 1982and 1989, forest cover declined from 49% of total land area to 47%. In contrast, the area of potential forest (less than 20% canopy cover and areas classified as degraded forest) increased quite rapidly from about 8.5 million ha to about 11million hectares during the same period.

Table 1: Land use in Lao PDR in 2010 (Source: DOF presentation in Annual MAF Conference in January 2011)

Land use type	Area (million ha)
Current forest area	9.5 (40%)
Potential forest area (stocking <20% canopy including areas classified as degraded forests)	8.3 (35%)
Other land uses (including agriculture, urban areas, etc.)	5.9 (25%)

5. There have indeed been massive changes in forest land and resource use over the past two decades driven mainly by demand for land from neighboring countries for growing a wide range of cash crops. In addition to the resulting reductions in the area of forest, there has been a steady fragmentation of forests and a decline in the average growing stock within the residual forest, which have both reduced carbon values and had a negative impact on biodiversity through the loss of the connectivity that promotes species dispersal.

6. Data on changes in forest cover suggest that during the 1990s the annual loss of forest cover was around 1.4% annually, giving an average annual loss of forest cover of about 134,000 ha. The available data does not distinguish between forest that has been lost from the denser classes through deforestation and forest that has degraded from a dense class to a less dense one. One may assume that both processes have been taking place. There is at present no more recent data, but diverse information from various sources, including national and provincial records and reports, suggests that the rate of decline has continued at a similar rate until the present day.

1.3 Forest landscape-based sources of GHG emissions and projected trends

7. To provide a tool in developing strategies and prioritizing actions for effectively reducing emissions of CO_2 from LULUCF in Lao PDR, a model was formulated as part of Readiness Proposal Preparation for both estimating the sources and magnitudes of current emissions and for examining the likely impact of measures that could possibly be implemented to reduce emissions in the future. The model takes as its starting point the distribution of forest cover according to the four crown density classes used in the 1982-1992-2002 land cover assessments (i.e., well stocked forest [>70%], medium stocked regenerating forest [40-70%], low stocked forest [20-39%] and forest < 20% crown closure). The model makes use of data of the national forest inventory (NFI), which was implemented during the period 1993-97, more or less in the middle of the second 10-year period for the forest cover mapping. The NFI gives estimates of the mean stocking for each of the five forest types mapped (evergreen, mixed broadleaf/coniferous, mixed deciduous, dry dipterocarp, and coniferous) in forest with more than 20% crown closure, and the weighted overall mean is 91 m^3/ha. The model assumes that areas used for expansion of other land uses are taken from each of the forest density classes in the same proportion that the density classes, including potential forest, are currently found nationally. Thus about a half of the new areas of other land-uses are assumed to be very degraded or un-stocked forest as shown in Table 1 above.

8. Using the model, annual emissions were estimated for the period from 1982-2002 and were projected to 2020 based on available historical data. The results showed that emissions were at 95.3 million tCO_2e in 1982, declining to 60.6 million tCO_2e by 2010. For

the period from 2012-20, the average annual emission is estimated at 51.1 million tCO_2e (see Table 2 below). If development trends are factored in the post 2002 level, peaking in 2008-2009, and then declining as the number of confirmed projects (especially hydropower) decreases, (although there are many pipeline projects that may change this) the average increase from 2010-2020 above the historical REL is approximately 10 million tCO_2e. If REL and additional emissions from development are combined then the annual emission for 2010-20 is estimated at 65 million tCO_2e.

Table 2: Estimate of average yearly emissions of CO_2 from 2012-2020 using baseline settings

Results with default settings				
Total annual emissions		**Average annual area affected ('000 ha)**	**Average annual emissions (million tCO_2e)**	**Percent of total emissions of CO_2**
Total annual emissions from C stock change in natural forests			-46.84	100.0%
Total annual emissions by shifting cultivation		57.3	-9.95	21.25%
Total annual emissions due to land clearance		67.2	-9.28	19.82%
Of which:	Commercial concessions	34.2	-4.72	10.08%
	Smallholder cash crops	14.7	-2.02	4.32%
	Hydropower	13.1	-1.81	3.87%
	Mining	5.1	-0.70	1.50%
	Infrastructures	0.2	-0.02	0.05%
Total annual emissions due to forest degradation		9,776.7	-23.34	49.83%
Total annual emissions net of sequestration plantations		67.2	-4.26	9.10%
Total annual net emissions (adjusted for sequestration)		**-51.10**		

1.4 Key drivers of deforestation and forest degradation

9. A recent study on changes in land use and forest cover analyzed the more recent drivers of deforestation and forest degradation in Lao PDR, which was based on a review of secondary data sources, consultations with resource persons, and field investigations in three selected districts, one representing each of the Lao PDR's Northern, Central, and Southern Regions. The study identified nine sources (fire, unsustainable wood extraction, pioneering shifting cultivation, agricultural expansion, industrial tree plantation, mining, hydropower, infrastructure development, and urban expansion) and a combination of them that involve different actors, such as farmers, shifting cultivators, logging companies and contractors, local and foreign investors, unspecified individuals, construction companies, and government authorities. Their decisions to engage in deforestation and forest degradation are influenced by multiple, immediate, and interlinked underlying drivers, which are often site-specific and changing over time. The various drivers of deforestation and forest degradation are not so much a result of policy failures, but of lack of monitoring and enforcement, as well as slack implementation, due very largely to lack of trained and qualified manpower and funding due very largely to lack of trained and qualified manpower and funding. FIP investments and the project and program concepts outlined in this document are tailored to address the identified drivers explicitly – links between each investment option and related drivers are described in the respective section and will be elaborated more fully in the project preparation phase that is expected to begin following Steering Committee review and endorsement of the Investment Plan.

10. **Deforestation**, in the sense that forest is converted to some other use so that it will not revert back to forest within the short to medium term, is caused by one or more of the aforementioned sources and results from (i) expansion of agricultural and industrial tree plantation (ITP) development, including large and medium-size investments, and also small-scale investment and household-based agricultural activities; (ii) inundation by hydropower projects; and (iii) clearing of the sites of mining, infrastructure development, and urban expansion. ITP development on degraded land increases forest cover and carbon sequestration, but improper or lax procedures practiced by some local authorities in locating concession land for agriculture and ITP often result in natural forest being included as part of the awarded concession. The kind of agriculture concession and ITP development being referred to as causing deforestation therefore applies to the latter type, rather than that applied on degraded land. The assumptions on land-use change used in the model as mentioned above take account of this.

11. Expansion of agricultural and ITP development especially rubber, is the main source of LUFC in recent years. Large-scale concessions have grown fairly rapidly aggregating to more than 300,000 ha in just a few years. Concession expansion has slowed because of a moratorium announced by the PM in 2007 in reaction to criticisms and new legislation. The impact of smaller investment and household activities should not be underestimated, as these have become very dynamic and are gaining momentum as well, particularly with the growing interest in cash crops such as corn (maize). It is important to note that the 7th National Socio-Economic Development Plan (NSEDP; 2011-2015) calls for half of GDP growth in this period to be generated from Foreign Direct Investment (FDI) and much of this investment is expected to include land-based activities.

12. The main immediate drivers of expansion of agricultural and rubber development include: favorable site conditions; high profitability; high demand, good accessibility; weak enforcement of laws, regulations, and concession agreements by local authorities; absent economic incentives that could contribute to make the management and protection of forests competitive compared to other land uses; very limited awareness of resource users on rights to use land and forest resources; misinterpretation of forest categories as defined during land-use planning and land allocation; inappropriate land identification methods for concessions; advance site clearing by concessionaires (often in the absence of secure investment financing); and clearing by local people who fear they will otherwise lose forested land to outside investors.

13. Contributory factors include: weak control and monitoring of concessions by local authorities due to inappropriate capacities and available financial resources; ignorance of regulations, laws, and agreements by investors; insufficient availability of technologies, e.g. for monitoring, and information, e.g. for appropriate land selection; land tenure insecurity; inadequate extension services resulting in insufficient awareness on land-use rights; insufficient demarcation of boundaries of both village forests and state forests; inappropriate or absent implementation of land-use planning; and misuse of power, e.g. in ill-conceived granting of concessions.

14. **Forest degradation**, in the sense that the land remains as forest but the density and quality of the forest is decreased, is mainly caused by unsustainable wood extraction, which is currently the result of illegal logging activities and poorly regulated timber harvesting by

rural households for domestic consumption. Shifting cultivation contributes to degradation initially, but may eventually cause deforestation, and is generally practiced by ethnic groups who traditionally live in the uplands where most land is steeply sloping and there is a lack of flat or rolling land.

15. The important immediate drivers of illegal logging include: high profitability due to high demand and high prices, especially in fast growing neighbouring countries; weak law enforcement and control; forests having high value species and good accessibility; insufficient awareness on the importance of forests and of legislation; and anticipation of infrastructure/hydropower developments. Important underlying drivers include: weak control and monitoring (illegal logging/timber trade); growing domestic/international demand; weak governance; insufficient capacities of local authorities; inadequate budget allocation; inadequate extension services; chronic poverty among ethnic groups and vulnerable people, insufficient availability of information and appropriate technologies; and consumption pattern especially in neighboring countries and overseas together with weaknesses in regional/international rules and cooperation.

16. In contrast to unsustainable wood extraction, traditional shifting cultivation is not driven by profitability, but by necessity, to grow food by those communities that live in the uplands and support the livelihood of involved households. However, some underlying drivers also include market driven elements, especially as cash crops gained importance in recent years. Main immediate drivers include: suitable site conditions; insufficient land access; household needs especially food security requirements; no or inappropriate alternative livelihood options, also due to a lack of information due to inappropriate extension services, e.g. on alternative livelihood options; values and beliefs linked to different cultural identities; and insufficient/absent incentives to protect forests and insufficient awareness. Major contributory factors are: insecure land tenure; often insufficient demarcation of boundaries of state forests; increasing extent of concessions and cash crop cultivation such as rubber, exotic timber trees, maize and cassava; and the inadequate implementation of GOL policies.

1.5 Summary of the Lao REDD+ program

17. GOL recognizes its international obligation to reduce emissions from deforestation and forest degradation in Lao PDR, as well as to conserve biodiversity and other resources in its forests, sustainably manage its forests, and enhance carbon stocks, thereby contributing to global efforts to mitigate climate change. In November 2007, the Prime Minister appointed MAF as the national member of the WB-based Forest Carbon Partnership Facility, delegating responsibility for implementation of all activities related to the FCPF. In November 2008, MAF established the REDD+ Task Force with 12 members chaired by the DOF Director General and supported by a REDD+ focal person. This REDD+ Task Force was expanded and strengthened to 15 members by Minister's Decision No. 0006/MAF, 7th January 2011 by the Minister of Agriculture and Forestry, to include representatives from other relevant sectors including, Forest Inspection, Mines and Energy, Planning and Investment, Land Management, Finance, Justice, Lao National Front (ethnic groups) and the Lao Women's Union.

18. The current arrangements with a REDD+ Task Force and a REDD+ focal person within DOF have been adequate to undertake a Readiness Preparation Proposal process, but major changes are needed to effectively implement the Readiness Phase. High level cross-sector coordination and policy guidance is now being provided by the National Environment Committee (NEC), the members of which are at Minister or Vice-Minister-level. In order to engage all sectors involved in REDD+ and related Climate Change issues. As mentioned above membership of this REDD+ Task Force has been broadened to include other sectors not previously represented.

19. The REDD+ Office will be empowered to establish a number of Technical Working Groups, including; Reference Emission Level (REL), Monitoring Reporting and Verification (MRV), Stakeholder Consultation, Benefit Sharing, Land-use Planning, Carbon Registry, REDD+ Strategy, and others as required. These working groups will provide technical support and advice to the Office as needed and in particular for the preparation of Annual Work Plans to be prepared by the Office, that will be submitted to the Task Force for endorsement to NEC. The REDD+ Office will also support the establishment of a similar structure at Provincial level, in those Provinces where REDD+ activities are taking place or are planned for the Readiness Phase.

20. The REDD+ strategy will be developed in detail during the Readiness Phase, and will include both the instruments that will be used for implementation (institutions, regulations, information and financial) and a wide range of field actions. During the Readiness Phase, as many as possible of the potential actions will be field tested. In accordance with the recommendations from the stakeholder consultation, these field activities will be either undertaken by large donor funded projects aimed specifically at REDD+, or will be undertaken by providing additional funding to projects that are dealing with closely related issues, which could incorporate REDD+ specific activities within their overall scheme.

21. REDD+ strategy implementation will address the main drivers of deforestation and forest degradation, as well as options for regeneration and restoration of degraded forest. The drivers of deforestation and the potential solutions are largely out of the control of the forest sector alone and will therefore depend heavily on the support and cooperation of a number of other agencies and departments at national, provincial, and district level, as well as private sector and local communities, and will primarily focus on continued strengthening of land-use planning and the valuation of carbon stocks, with a possible policy measure of charging developers for any carbon stocks that are destroyed. The drivers of degradation are more directly under the control of forest authorities, and DOF and DOFI will implement a number of activities aimed at reducing illegal logging and reducing emissions from shifting cultivation through the provision of alternative livelihood systems that also tackle poverty.

22. The REDD+ implementation arrangements will develop the instruments needed to support REDD+ activities whenever a new international protocol is agreed. The performance of the institutional arrangements used for the Readiness Phase will be evaluated and refined and then rolled out gradually nationally to provinces that have not been involved in pilot activities. A REDD+ Law or Decree will be issued at an early date using results from a recent analysis of the REDD+ regulatory framework requirements by CliPAD, to provide clarity related to key REDD+ issues, in particular ownership of carbon rights; the obligation to compensate government for carbon stocks that are liquidated, should this be

adopted as policy; the benefit sharing system; financial management and distribution mechanism; how REDD+ activities are to be developed and sponsored; and which organizations, groups, and individuals are eligible to participate in REDD+ activities funded both from national and international sources and the voluntary market.

1.6 Summary of other ongoing REDD+ initiatives

23. Currently all REDD+ activities are coordinated, facilitated, and promoted by the REDD+ Task Force. The REDD+ TF is currently supported in administrative matters by a REDD+ coordinator and staff of the Cooperation and Investment Unit under the Planning Division of DOF and by an Advisory Group including 8 international expatriates of different donor initiatives (e.g. SUFORD, FSCAP, CLIPAD, URDP). A few members of this advisory group from SUFORD/FSCAP/CLIPAD form a working group to provide coordination/ organizational support to the REDD+ TF. Regular (usually once a month) and ad hoc REDD+ TF meetings are the main forum to present, discuss, and decide upon REDD+ related issues. During some of the meetings also other stakeholders, such as NGOs, other government agencies, consultants or donor initiatives are invited.

24. The donors that are active in the Lao forestry sector have been fine-tuning their programs towards REDD+. The following matrix illustrates that, by and large, various Lao forestry projects are aiming to contribute in large measure to reducing GHG emissions from deforestation and forest degradation, sustainably managing forests, and conserving or enhancing carbon stocks, while addressing enhancement of co-benefits, such as biodiversity conservation, poverty reduction, and soil conservation.

Table 3: Existing projects in the forestry sector and REDD+ links

Current or recent project	Main funding source	Funding (M USD)	Avoiding deforestation and degradation	Sustainably managing forests	Conservation and enhancing carbon stocks	Main co-benefits
SUFORD	WB-MFAF	24.0	Subsidiary theme, a result of sustainable management of forests	Central theme, Production Forest	Subsidiary theme, involving regeneration of degraded forests	Poverty reduction, biodiversity conservation, environmental services
NEPL	GEF4 GIZ	0.89	REDD+ Pilot	National Protected Areas		Tiger conservation
GMS BCC	ADB	23.0		Watershed Protection Forest		Biodiversity conservation, poverty reduction, environmental services
SNRMPEP	ADB IFAD	20.0 15.0		Watershed Protection Forest		Poverty reduction

Current or recent project	Main funding source	Funding (M USD)	Avoiding deforestation and degradation	Sustainably managing forests	Conservation and enhancing carbon stocks	Main co-benefits
GMS CEP/BCI	ADB	4.5 Lao PDR share	Support to national projects on environmental conservation			Regional coverage for transboundary issues in illegal trade, leakage, etc.
SDP	ADB	12.0				Poverty reduction by smallholder development
FSCAP	Japan	2.0	Through capacity development for REDD+	Overall goal	Through capacity dev-elopment for REDD+	Poverty reduction, capacity development for REDD+
PAREDD	Japan	4.0	Central theme involving system development, forest cover and stock monitoring	Participatory land and forest management approach	Carbon stock monitoring	Livelihood improvement, socio-economic change
FPP	Japan	10.0	Capacity building for forest preservation planning	Capacity building for forest protection management planning		
FIM	Japan	5.0	Capacity building to develop national database for REDD monitoring			
CLIPAD TC Module	GIZ	5.6 excluding DED advisers	Central theme involving 786,200 ha of NPAs	Protection of 630,000 ha of forests	Central theme	Biodiversity conservation, poverty reduction, environmental services
HNN NBCA		3.5	Central theme involving 70,000 ha of NPAs			Biodiversity conservation, poverty reduction, environmental services

Current or recent project	Main funding source	Funding (M USD)	Avoiding deforestation and degradation	Sustainably managing forests	Conservation and enhancing carbon stocks	Main co-benefits
CLIPAD FC Module	KfW	14.0	Central theme	Capacity development for park management	Investments in demonstration	Biodiversity conservation, poverty reduction, environmental services
CarBi	ICI-Germany/WWF Germany	€7.0 m+ €1.2m	Central theme with biodiversity conservation	Capacity building	Investments in demonstration	Biodiversity conservation

1.7 Forest governance arrangements

25. The major targets for the forestry sector, which must be achieved to contribute to poverty eradication, are set out in the Forestry Strategy 2020 and can be stated briefly as follows: (i) raise forest cover to 70% of the total land area, by naturally regenerating up to 6 million ha and planting trees up to 500,000 ha in un-stocked forest areas; (ii) provide a sustainable flow of forest products for domestic consumption and export; (iii) preserve the many species and unique habitats; and (iv) conserve the environment. Many important steps have been taken towards achieving these targets, such as the establishment of National Protected Areas (NPA) and Production Forest Areas (PFAs), where sustainable management and forest certification are being up-scaled. The Forest Law, Wildlife and Aquatic Law, and subsidiary Decrees on Production Forest Management have been promulgated, as well as a National Biodiversity Strategy and Action Plan. The Decree on Protection Forest (referred to in this document as Watershed Protection Forest) has been approved by the Prime Minister's Office and was signed on behalf of the National Assembly as Decree No 333/NA on 19th July 2010. A Prime Minister's Decree on Protected Areas has been under development for the past year, by DFRC and DoF, and is currently with Ministry of Justice.

26. Tenure rights over forest land are defined by the Forestry Law (2007), whereby natural forest and forestland is the property of the national community and user rights can be granted by State. Trees planted by people or organizations in designated areas shall become their property, if their labor and/or funds have been used. Rights to use natural forest, planted forest, and forestland areas can be allocated by the State to village administration authorities for long-term sustainable use according to the management plan and laws and regulations, but cannot be transferred through inheritance. Customary utilization of forests is recognized, and village forests are established to allow the use of timber and harvest of forest products for household use in accordance with a designed plan and the laws and regulations on forests. During the Participatory Land Use Planning (PLUP) process, agriculture and forest land is delineated and may be followed up with allocation as village forests according to local circumstances.

27. There is a wide range of forest resource tenure rights, including state property; communal rights that may be shared by members of the community; private rights assigned to individuals, corporate bodies, and nonprofit organizations; and open access. As a result, several different stakeholders may have rights and interests, and consequently entitlements to REDD+ benefits. The entitlement of ethnic groups and local communities to REDD+ benefits presents a particular problem because they typically do not hold registered title and enforceable rights over the land they manage. Sharing and payment of carbon benefits and other issues related to REDD+, such as on social and environmental safeguards, leakage, and MRV, are being addressed by a proposed revision of the Forest Law currently being undertaken.

28. By and large the laws and tenure rights provide an adequate regulatory framework for the management of the nation's forest resources, but problems with implementation and enforcement of the laws means that the situation on the ground is generally quite different from that intended. The Forest Law is generally clear, though there are some ambiguities and the role of communities in forest resource management still needs clarification. The recent establishment of the Department of Forest Inspection within MAF to improve law enforcement in all forest related activities including illegal logging, is also a step towards improving monitoring and governance in the sector. Progress, however, is severely hampered by inadequate allocation of funds in relation to the magnitude of the tasks and by lack of experienced staff to implement the measures, especially at Province and District level.

2. Opportunities for GHG abatement

2.1 Strategic options

29. All the major national programs for the forest sector as laid out in FS2020 will contribute to net reductions in emissions in the long-term, mainly through increasing sequestration as forest cover is gradually restored. However, in order to reduce emissions in the short-term more intensive efforts are required to address the various drivers of deforestation and degradation discussed in Section 1.4 above. The broad strategic options available for REDD+ are on the one hand, to concentrate on one or two major drivers where serious reductions could be achieved, and on the other hand to attempt to tackle all the drivers. There are various combinations between these extremes. The advantage of concentrating is that transaction costs can be minimized and human resources can be trained to deal with very specific issues. Human and financial resources that may be limited can be focused on to tasks where results can be achieved. However, it means that no experience is gained in dealing with other drivers that may be less serious but could get out of control. The advantage of spreading resources over all drivers is that some progress can be made on many fronts, but probably at a higher cost and so the total reduction in emissions for the same investment may be less than a more focused approach. Specific approaches for each driver are discussed under the strategy options.

30. In the context of Lao PDR the "transformational" approach, as anticipated under FIP, builds on and strengthens the existing legal and regulatory frameworks and strategy objectives that are already supportive of REDD+, and furthers the implementation of these

frameworks, moving beyond what has been supported by projects and programs to date. More specifically FIP financing benefits from the direct link to ongoing REDD-related inter-ministerial dialogue (undertaken as part of RPP consultations) and FIP will add momentum to REDD+ by supporting implementation at all levels (national, provincial, district) both in designated state forest areas and in forested lands outside designated forests (these amount to 30% of Lao's forests). FIP has already contributed to the REDD discussion in Lao as GOL's commitment to accelerate the transfer of rights to village forest in undesignated forest areas emerged as part of internal Government debate on potential FIP investments.

31. The government has already decided that it will adopt a hybrid approach that will aim to attract fund-based credits in the short-term, while accessing the compliance market in due course, when international protocols have been agreed and at the same time allow participation in the voluntary market. Thus, a wide range of stakeholders will be involved and activities will also vary in scale from small local community based activities to larger government, donor, and private sector sponsored activities. The analysis of the likely contribution of each of the drivers of deforestation and forest degradation discussed above suggests that around half the emissions from LULUCF in Lao PDR are mainly under the control of the forest authorities, i.e. the degradation, and the other half is highly dependent on decisions and actions by other sectors that require land for other development purposes.

32. Deforestation, as discussed in Section 1.4 above, is in large part driven by the need for land for investment in cash crops, tree plantations, minerals extraction and hydropower development, mainly by Foreign Direct Investments (FDI). It is also driven by expansion of smallholder agriculture for household and communal based land use, sometimes as a result of loss of land to FDI projects. Influencing these decisions will require a combination of better enforcement of the law and concession agreements and increasing awareness in government responsible for the respective sectors of the importance of minimizing further conversion of forest. GOL has begun to pilot Payment for Environmental Services (PES; including but not limited to carbon sequestration and watershed protection) to provide sustainable financing for forest and watershed management in and around land based investment sites.

33. A fiscal policy option for influencing land-use decisions would be the imposition of a tax or levy on forest land that reflected the value of the carbon stocks. This would make the clearance of forest much less attractive for many uses, but would compensate the government in situations where the value of the alternative is much higher, such as most mining and hydropower operations. It would have the effect of forcing a proper socio-economic and environmental assessment of land-use decisions.

2.2 Abatement through the establishment of a regulatory framework for carbon-sensitive mining and hydropower development

34. The estimated annual CO_2 emissions from these two sectors are around 2.5 million tones or about 5.3% of the total emissions from LULUCF (see Table 2 in Section 1.3 above), which if reduced by 10% would potentially bring REDD+ payments of about USD1.4 million. This would probably cover the costs of monitoring and law enforcement. However, the exploitation of the country's mineral resources and hydropower potential has high priority in the government's development policy, and therefore the main influence of REDD will be

to develop appropriate incentives and benefit sharing mechanisms to encourage local participation in forest protection and management. Additionally, REDD investments in improved law enforcement may help address the issue of illegal timber leaking from hydropower watersheds, mining concessions and infrastructure areas during project development. Some of the companies that currently have concessions are committed to international standards of Corporate Social Responsibility (CSR) and are therefore likely to respond positively to proposals to minimize emissions from any impact that their activities may have on forest carbon stocks.

35. There are two main ways in which emissions from necessary land clearance for mining and hydro-power can be tackled. The first is through the planning process where the promoters need to take note of forest carbon stocks within their concession areas and take steps to avoid unnecessary clearance of good forest. The second is by proper implementation of the obligatory Biomass Removal Plan (BMP) so that emissions from cleared biomass are minimized. The regulations relating to Concession Agreements for Hydropower projects already make provision for this, as biomass left in the inundated area not only has a negative impact on water quality, but also results in emissions of CO_2 and CH_4 (methane) which is a much more active GHG. The main thrust of the strategy for dealing with these sectors must initially be increasing awareness of their impact on CO_2 emissions through focus group discussions with the companies involved.

2.3 Tackling deforestation by directing the expansion of cash crops and tree plantations to degraded areas

36. Conversion of forest to agricultural concessions and smallholder cash crops accounts for about 14.4% of the estimated total emissions from the LULUCF sector and is therefore the major contributor to CO_2 emissions from deforestation. Expansion of tree plantations including fast growing species and rubber also makes a net contribution of about 4.3 million tones CO_2, although this will decline in the next few years as growth and sequestration offset the emissions from the land clearance. Growing population, economic development, and globalization are all driving demand for land for a wide range of purposes. With “forest land” accounting for about 70% of the land area of Lao PDR, it is inevitable that some must be converted. However, only a little over a half of that “forest land” still carries forest cover with >20% crown closure, so the strategy will focus on preventing any further loss of this remaining forest. Success in this will have a major impact on CO_2 emission reductions, if conversion can be restricted to already degraded forest with <20% crown closure, since the carbon stocks on such areas are very low. If such land is converted to rubber or commercial tree plantations, there may even be a small net increase in average carbon stocks in time.

37. Options for reducing emissions in this regard include:

a) **Improving land-use planning and incorporating carbon stocks into the assessment of land values.** GOL officials involved in land-use planning and allocation of land for concessions must be aware of the environmental and economic consequences of allowing the conversion of land to other uses. Also, they must be aware that PLUP is not a one off process that is completed when agriculture and forest land is delineated and allocated to villagers, because villages need continuous support especially if it requires transition

from traditional livelihood to more sustainable modes of livelihood. The value of the carbon stocks on a hectare of forest, based on the value of the CO_2 released by clearing the forest, ranges from over USD 3,800 for well stocked forest to around USD 360 for un-stocked forest. If the clearance of well or medium stocked forest can be avoided, the potential REDD+ payments will be substantial. If carbon value is applied, it is more likely that commercial developers would opt for land with the lowest possible carbon stock. Monitoring to ensure compliance with concession agreements will be an important element of this initiative.

b) **Reducing deforestation and promoting forest protection, regeneration, and restoration by smallholders.** In the conduct of participatory, land-use planning, land for expansion of agricultural and other activities should be allocated in degraded forest land with little capacity to regenerate naturally. As well, there should be an assessment of the scope for community-based forest protection, regeneration, and restoration in the forests that lie within the village administrative boundary that may be declared as village forest. An emission reduction plan should be developed as part of the village forest management plan and areas with high carbon stocks should be identified for protection by the village, which will trigger some REDD+ payments. Other areas of degraded forest that are not needed for agriculture should be identified and designated for rehabilitation and natural regeneration for REDD+ funding. To effectively manage both cost and risk the bias in Lao PDR will be strongly in favor of restoration approaches relying on natural regeneration.

2.4 Tackling forest degradation from forest harvesting in managed forests and from un-regulated and illegal logging

38. About 14% of the area of production forests is being managed in accordance with FSC principles for participatory, sustainable forest management (PSFM) with the support of SUFORD. The experience from the Sustainable Forestry for Rural Development (SUFORD) project is that the introduction of PSFM results in a reduction of emissions as a result of the delineation of the forest boundaries and the participation of local communities in protection of the forest. These emission reductions can be achieved by extending PSFM to all Production Forest Areas (PFA). Studies in SUFORD PFAs also show that current harvesting techniques result in substantial quantities of residues being left in the forest, which if minimized will also have a positive impact on reducing emissions. The recently issued Harvesting Codes of Practice require the application of Reduced Impact Logging and this will be applied in PFAs as an important measure for reducing emissions from legal logging operations.

39. There are three levels at which most illegal logging is conducted: (i) organized and relatively large scale, whereby harvesting contractors cut more trees than allowed by the quota; (ii) also organized and relatively large scale, whereby (mainly foreign) operators target protected areas (NPA) and watershed protection forests (WPFA); and (iii) small-scale, conducted by villagers that usually involves chain-sawing felled logs into planks for easy

transport from the forest. The Government has recently endorsed a FLEG-T study to investigate the scale of illegal logging in selected areas. It is reported that some villagers make use of their rights to cut trees that are intended for their own consumption, but sell the trees to foreign traders. The true scale of illegal logging is unknown, but an analysis of NFI data shows that the reduction in growing stock nationally appears to be around 18 million m^3 per year, of which about 10 million can be accounted for, either due to forest clearance or harvesting. The remainder, which represents the level of illegal logging, is equivalent to about 1 tree logged in every 20 ha of forest (>20% CC) every year.

40. The Forest Law provides the legal basis for tackling the issue of illegal logging from the supply side where DOF and DOFI need to improve Law enforcement and detection of illegal logging. Four approaches can be considered:

1. Enforce the provision of the Forest Law that allows harvesting only in PFAs that have a Sustainable Management Plan and tighten controls on harvesting in infrastructure development areas.

2. Enforce the Forest law requirement that all harvesting machinery and equipment be registered, and ensure that harvesting capacity in any District is in line with the approved harvesting quotas.

3. Analyze and monitor wood consumption that can be compared with the officially sanctioned harvest production under PSFM and closely monitor all special licenses for clearance for infrastructure projects. The difference is a measure of the volume being harvested illegally.

4. Conduct monitoring and surveillance of forest areas to spot illegal logging, which can be extremely difficult due to the area to be covered and the poor access conditions

2.5 Developing alternative livelihoods to reduce forest degradation from shifting cultivation

41. The traditional shifting (rotational = swidden) cultivation practiced by ethnic groups in Lao PDR is concentrated in the uplands and remoter parts of the country. Rotational farmers throughout the sub-region have evolved highly sophisticated and sustainable practices to deal with local conditions especially to address underlying soil fertility limitations. Any effort to change traditional practices will need careful and sustained support. Two essential ingredients will be (i) the consultation and awareness raising process to develop a shared understanding of the reasons for modifying traditional practices and (ii) the development of acceptable alternative and improved livelihood opportunities that will contribute to poverty reduction and local food security. Studies have shown that there are a number of agroforestry systems and intensified agricultural systems that meet these requirements and some have been readily adopted by some ethnic group communities, especially if continuous and tailored support in certain areas but it is clearly recognized that challenges remain in the development and scaling-up of such improved practices. Options for reducing emissions from shifting cultivation include (but are not limited to):

1. Improved extension to ethnic communities on agroforestry and agricultural intensification.
2. Private sector support for agroforestry, agricultural intensification and improved livelihoods and forest rehabilitation/restoration.
3. Research and development of improved livelihood systems using; e.g. livestock and NTFPs, as alternative to shifting cultivation.
4. Development of a cadre of competent translators to facilitate constructive communication and engagement with villagers in ethnic communities in PSFM, the consequences of global climate change, and improved livelihood systems that reduce greenhouse gas emissions;
5. Investigation of examples of land allocation and application of alternative livelihood systems that have been tried to identify what has worked and what has not to learn lessons and improve extension advice in the future.

2.6 Carbon sequestration through forest regeneration and reforestation

42. A major sector target set by FS2020 is to naturally regenerate up to 6 million ha and plant up to 500,000 ha in badly degraded forest areas as an integral part of rural livelihood improvement. About 40% of the 3.1 million ha of Production Forest Areas is badly degraded, but has sufficient stock, which with protection and management, will re-grow and sequester substantial quantities of carbon. Other areas of Production Forests and parts of Watershed Protection and Conservation Forest Areas are too degraded to regenerate naturally and require substantial investment for enrichment planting or re-stocking.

43. Under SUFORD there has been a significant discussion on the question of defining "degraded forest" in the context of Lao PDR and the inadequacy of rote application of crown density classification as the sole criteria for identifying degraded forest. Such a narrow approach could lead to an overestimation of lands requiring restoration/rehabilitation and, more seriously, to so-called degraded forests being converted from sustainable natural communities to unsustainable tree crop/cash crop plantations. As noted above to effectively manage both cost and risk the bias in Lao PDR will be strongly in favor of approaches relying on natural regeneration, and when alternative locations for investment are considered GOL expects to apply a more complete definition of degradation to identify eligible areas.

3. Enabling policy and regulatory environment

3.1 Regulatory and fiscal framework

44. There has been tremendous development on the regulatory framework in the Lao forestry sector since the mid-1990s. Concerning land and forest allocation, PM Decree 186/1994 on Delineation and Allocation of Land and Forest for Tree Planting and Protection provides a basic legal framework for incentives and promotion of tree planting, including exemption of land tax on tree plantations containing more than 1,100 trees/ha, ownership of planted trees (use, harvest, sale, transfer, and inheritance). As a result of the Decree and its implementing program, land and forest allocation was carried out from 1995-2004 in 6,830 villages (>50% of national total) with a total allocated area of more than 9.1 million ha

of the allocated area 8.2 million ha (90%) was allocated as village forest (1,200 ha/village; or roughly 19 ha/household). More than 60% of all agricultural households received land for agriculture, livestock-raising, and tree-planting. After 1996, several forest-related laws were approved and promulgated by the National Assembly. They included the Forestry Law in 1996, the Land Law in 1997, the Environment Protection Law in 1999 and Processing Industry Law in 1999. The Forestry Law is comprehensive and gives relatively clear directions in many aspects of forestry. Under the Forest Law, all forest land and naturally growing trees are owned by the National Community, which is represented by the State. Three categories of forest and forest area are recognized: production, conservation, and protection.

45. A MAF Regulation on Village Forest Management was issued in 2001 to consolidate existing provisions concerning village forests. PM Decree 59 on Sustainable Management of Production Forest was issued in 2002 providing for delineation of production forests, management planning, and the participation of villages in all aspects of production forest management. The Forest Law and subsequent regulations on harvesting, processing, and export of wood products provide legislative support for wider enforcement of timber harvesting and marketing. Lao PDR is a timber-exporting country, which has implications on forest degradation caused by uncontrolled logging and ultimately deforestation. It has traditionally exported raw logs and semi-finished products to neighboring countries (People's Republic of China, Viet Nam, and Thailand). A moratorium on the export of logs was issued in 2001, but this has not resulted in a complete ban due to case-by-case arrangements under legal exceptions to harvest and export of timber from infrastructure projects.

46. By and large, the issue concerning the regulatory framework is not a lack of legislation, but more the capacity to implement the policies in a developing political system. As part of recent legal reforms, a decree enacted in 2008 created the Department of Forest Inspection (DOFI) within the Ministry of Agriculture and Forestry (MAF) with specific responsibilities over issues of law enforcement and governance. The development of DOFI to establish provincial and district units has progressed along with corresponding transfer of responsibilities at different levels, but DOFI needs to build capacity to implement stronger enforcement and governance. As has been developing under SUFORD, during FIP implementation DOF will be responsible for maintaining a strong system of internal controls within the logging and forest revenue systems and DOFI is expected to exert effective external controls via audits, reviews, and inspections. DOFI also needs to develop memorandum of understanding with other GOL agencies with associated enforcement responsibilities (Customs, Police, Import/Export, etc.). DOFI has gained from participation in ASEAN regional meetings on forest law enforcement and governance and Trade (FLEG-T) and has taken steps to implement the ASEAN FLEG-T Action Plan 2008-2015, including approving a study of the scale of illegal logging in one region of the country. The Director General of DOFI has also taken on a leadership role in the Lao Wildlife Enforcement Network (Lao WEN). During FIP a continued expansion of independent certification and chain of custody verification is expected to assist in managing risks in production forests. Areas subject to salvage logging will also have to be brought under stricter internal and external controls.

47. The forestry sector has several sources of funding including government budget, private investment, international grant, and loan projects. As for the government budget funding to the sector is made through two types of budget, e.g. general budget and special budget. There is only one special budget at this moment, which is the reforestation budget paid out of the surcharge on logs from natural forest. PFA management is partly financed through the benefit sharing of the profits from log sales based on the PM Decree No. 59. It is important to note that the effectiveness of the current timber revenue benefit sharing decree has been challenged. A revised benefit sharing mechanism that allocates a fixed share of gross timber revenue to PFA management and to communities participating in PSFM in production forests has been prepared jointly by MAF, MOIC and MOF. The draft is currently circulating for final comments and endorsements and formal issuance of the revised formula is expected shortly.

48. Concerning allocation of budget between central and local levels, general activities are budgeted and financed at each level separately. This means there is no subsidy and financial support from MAF or its line departments to Provincial or District forestry sections. As for the special budget including sharing of log sales profit, Provinces with large harvest volumes generate most of the fund and there is tendency that these Provinces use most of the fund. Allocation of these special funds needs to be reviewed from the point of actual needs for tree planting, forest inventory and PFA Forest management. Another issue is that conservation activities totally rely on the scarce general budget or international assistance.

3.2 Regulatory and policy framework in the context of REDD+ and regulatory gaps

49. Policy and regulations relevant to implementation of REDD+ strategies for tackling the drivers of deforestation and forest degradation are generally in place, for example, on land and forest allocation and tenure, management and protection of different categories of forests, promotion of tree planting and ownership of planted trees, eradication of shifting cultivation, restrictions on export of raw logs, and so on. However, further rationalization of policies and regulations are needed, for example, on exploitation of minerals and hydropower, and commercialization of agriculture in relation to deforestation, and forest development through clearing and converting much forest, which even though somewhat degraded has the potential to regenerate naturally with minimal intervention other than protection.

50. Moreover, REDD+ readiness requires a regulatory framework that ensures transparent, effective, and efficient implementation of REDD+ strategic options. There are important new issues that require a special REDD+ Regulation issued by the government at an early date. MAF has initiated the process for amending or revising the Forest Law accordingly, with technical support from CliPAD and other development partners. The type and degree of the regulation will be identified during R-PP/FIP implementation. This will provide clarity related to key REDD+ issues, in particular ownership of carbon rights; the obligation to compensate government for carbon stocks that are liquidated, should this be adopted as policy; the benefit sharing system; financial management and distribution mechanism; how REDD+ activities are to be developed and sponsored and which organizations, groups and individuals are eligible to participate in REDD+ activities funded both from national and international sources and the voluntary market. This is necessary to

control the speculators and brokers who are offering to help communities to obtain REDD+ funds.

51. It will also be necessary to legalize the institutional arrangements, including roles and responsibilities among government authorities and other involved stakeholders. This will contribute to harmonizing diverging interests among involved stakeholders. It will require a sequenced approach to ensure that decisions related to key issues have sufficient time and stakeholder consultation. Based on this, more specific sectoral instructions will be formulated and enacted by relevant Ministries, most likely towards the end of the readiness phase or beyond. Beside this, a separate regulation may be required to establish a separate REDD+ fund.

4. Expected co-benefits from FIP investment

52. FIP investments will be brought to bear on the core objective of 'reduced GHG emissions from deforestation and forest degradation, which can be brought about by sustainable management of forests and conservation and enhancement of forest carbon stocks'. Attainment of the core objective has become a global concern in view of the effect of increased GHG concentration in the atmosphere on global warming and climate change. It is projected, however, that in spite of global efforts to curb and reduce GHG emissions, the world's climate is already irreversibly changed with forthcoming adverse consequences. Nevertheless, global efforts to reduce GHG emissions must continue, since vulnerable populations are already facing severe consequences from changing climate and impacts may multiply and impact social, environmental and economic systems that sustain global populations if global temperatures were to exceed 2^{o} and approach 5^{o} centigrade above pre-industrial levels.

53. Since the adverse impact of climate change can be expected, FIP investments in Lao PDR should not only be directed toward reducing GHG emissions, but also to help the country to adapt to climate change impact, e.g. by pursuing climate resilient development as a co-benefit. Climate resilient development can result from:

a) **Reducing poverty.** Climate change is expected to affect the poor more than the rich; thus, FIP investments should help to reduce poverty in local communities including all ethnicities and all vulnerable people regardless of gender. FIP investments can be applied to programs or activities that can improve local livelihoods in the process of enhancing carbon stocks, or increase household incomes in participating villages from the monetary value of the conserved or enhanced carbon stocks. Increased incomes can then be invested to bring about positive human development, such as improving health, nutrition and educational facilities and services. Reduction of poverty can be hastened in communities that are mindful of their rights, especially the right to information and to make informed decisions. There is a danger that needs to be recognised that farmers who have been allocated land then rent or lease it to commercial enterprises and finish up worse off, so that poverty is not alleviated.

b) **Reducing losses in biodiversity and forest ecosystems services.** An environment that is rich in biodiversity will have more resources to use to mitigate the impact of climate change, while intact forest ecosystems can help to provide resilience, e.g. by regulating water, whose scarcity brings drought and whose over abundance brings flood. FIP investments should therefore protect biodiversity and forest ecosystems services by conforming to a set of environmental safeguards, such as preventing the conversion of natural forests to other land uses, preventing land uses that exacerbate the soil erosion problem, and developing and implementing systems of payment to local communities for provision of environmental services.

54. Thus, based on the above, the FIP Lao Investment Plan will assign high priority to program components or projects that provide opportunities for direct management of or increased participation in forest management in all forest categories. As a corollary to these priorities, FIP investments will also give priority to program or project components that build enabling mechanisms for direct and participatory management of forests, such as those that build capacity of local communities of all ethnicities to participate in decision making, as well as in collecting information for making decisions, including monitoring, reporting and verification systems and their use in providing information or knowledge to the participants, such as in determining their entitlements to REDD+ benefits. Close coordination between FIP and the activities to be developed under the Dedicated Grant Mechanism (DGM) will help ensure adequate attention by providing direct demand driven support to Civil Society Organizations and Ethnic Groups. Because the development of the DGM mechanism is lagging the World Bank and Asian Development Bank have agreed to use FIP preparation resources to facilitate active engagement with likely DGM implementers until the DGM funding becomes available.

5. Collaboration among MDBs and with other partners

5.1 MDBs involved in FIP investments in Lao PDR

55. The MDBs that are involved in the FIP Lao Investment Plan are:

a) **Asian Development Bank. (ADB).** ADB has been involved and continues to be involved in numerous projects in Lao PDR. To provide a better operational link between ADB and GOL, private sector, and civil society stakeholders, ADB opened a Lao PDR Resident Mission in 2001. Current ADB projects that are relevant to REDD+ including the Biodiversity Conservation Corridor Initiative involving three countries: Viet Nam, Lao PDR, and Cambodia, the GMS Core Environment Programme/ Biodiversity Corridor Initiative, (GMS CEP/BCI) and Strengthening the Sustainable Natural Resource Management and Productivity Enhancement Project (SNRMPEP) The latter is a sector loan for the Agriculture and Natural Resources sector and therefore has great flexibility in the way that it can support the whole sector, and in particular it is concerned with the issues related to land-use change and livelihood improvement.

b) **International Finance Corporation. (IFC)** Compared to WB and ADB, IFC is a relative new comer in in the forestry sector in Lao PDR. IFC is a member of the World Bank Group and is the largest global development finance institution focused on the private sector in emerging markets based on the belief that the private sector drives job creation and sustainable economic growth, which is central to the alleviation of global poverty. The IFC focuses on:

I. Financing private sector investments on its own account,
II. Mobilizing capital in the international financial markets for co-investment, and
III. Providing advisory and risk mitigation services to businesses and governments with the financial support of Donors.

In line with the World Bank Group strategy, IFC's strategy in Lao PDR rests on three pillars:

I. Promote sustainable natural resource development using investment and advisory services and leveraging IFC's relationship with the World Bank Group to play a catalytic role in engaging world-class sponsors and financial institutions in developing Lao PDR's forestry, hydropower, mining, and agricultural potential and in addressing associated environmental and social issues.

II. Ensure inclusive growth to ensure that local business, including local SMEs and micro-enterprises, and the broader population has the opportunity and resources to participate in the expected rapid economic growth following the development of Lao PDR's natural resources sector.

III. Support the transition of Lao PDR's economy to a market-based economy using investment and advisory services to develop a competitive and efficient regulatory framework and institutional infrastructure as well as to invest in model transactions that support the transition to commercially-based sources of financing and good governance standards.

c) **World Bank. (WB)** WB operates an office in Vientiane to support its numerous projects in Lao PDR. In the forestry and conservation sectors, it has been involved in a number of GEF projects concerning Lao National Protected Areas (NPA) and the Sustainable Forestry and Rural Development Project (SUFORD), which is co-financed with the Ministry for Foreign Affairs of Finland. WB has also provided support through a Policy and Human Resource Development (PHRD) grant ($0.5 m) to the Department of Forest Inspection. Since 2004, SUFORD activities have focused on participatory sustainable management of PFAs, village development and forest certification. Since 2009 SUFORD has included activities towards REDD+ and its co-benefits. SUFORD is scheduled to close in December 2011 but a formal request for a 12 month extension has been received from the Lao Ministry of Finance and will be considered by Bank management. WB and MFAF are now engaged in designing a successor to SUFORD that will scale up the implementation of participatory sustainable management to cover PFAs in all provinces of Lao PDR.

Since 2009 WB, through FCPF, has been assisting GOL in REDD+ starting with the preparation of R-PP until its completion and by providing initial investments on REDD+ Readiness. World Bank was the GEF Agency for a mid-sized project for protected area conservation in Bolikhamxay, executed by WCS and the Government of Laos, in GEF 3. WB is the GEF Agency for a mid-sized project for protected area management, tiger conservation and REDD+ pilot at Nam Et Phou Louey NPA, to be executed by WCS and the Government of Laos. WCS is currently conducting REDD+ activities within Nam Et Phou Louey NPA as part of the CliPAD Project. World Bank and Government of Laos (DFRC and DoFI) are designing a new project, under GEF 5 ($7.4 m) matched with IDA funds ($12 m), for protected area management: *Strengthening Protection and Management Effectiveness for Wildlife and Protected Areas.* The project is currently in pipeline (official endorsement from the Lao GEF focal point has been received) and expected to be executed, by Government of Laos, beginning in late 2012. It will involve strengthening national institutions, on the ground activities in at least four NPAs, a REDD+ feasibility Study in 2 NPAs and implementation of REDD+ in one of these.

56. After GOL signaled its interest to participate in FIP in November 2010 and following its selection as a FIP pilot country, the MDBs were mobilized to assist GOL in preparing its Investment Plan. The MDBs conducted a Scoping Mission in January 2011, which they followed by holding the FIP First Joint Mission in May-June 2011 and a Technical Mission in September 2011. The MDBs have also been collaborating with other development partners, particularly bilateral organizations and CSOs, during the preparation of the Investment Plan, as well as in preparing for potential collaboration during implementation of the Investment Plan and associated activities under the Dedicated Grant Mechanism.

5.2 Bilateral organizations and other partners

57. Several bilateral organizations are involved in REDD+ in Lao PDR, including Finland (MFAF), Japan (JICA), and Germany (GIZ and KfW), as well as several international NGOs, including WWF, IUCN, WCS, and SNV. The support of the German Government to initiatives of GoL in the forestry sector and REDD+ includes projects financed and implemented via Technical Cooperation (GIZ) and Financial Cooperation (KfW). The incluse the Annamites Carbon Sinl and Biodiversity Project (CarBi). The US (USAID) is also preparing to engage GOL in the implementation of their *Lowering Emissions in Asia's Forests* (LEAF) program. The Ministry for Foreign Affairs of Finland started its involvement in the Lao forestry sector in 1995 by co-financing with the World Bank the *Forest Management and Conservation Project* (FOMACOP), which ran until 2001. This was followed by a small MFAF project on Piloting Forest Certification in 2002-2003, and finally SUFORD from 2003 to the present.

58. Japan's involvement in Lao PDR, through JICA, is concerned with addressing three issues on: (i) capacity development, particularly to assist GOL in formulating and implementing policies including the Forest Strategy 2020 and the climate change strategy, (ii) REDD+, particularly the need address rapid deforestation and forest degradation linked to economic growth, and (iii) forestry information, particularly the need for development of

forest information, which contributes to sustainable forest management and REDD+ implementation. To address the three issues, JICA is implementing four projects, namely:

a) *Forestry Sector Capacity Development Project* (FSCAP) is concerned with capacity development for formulation and implementation of policies in the forestry sector, including REDD+.

b) *Participatory Land and Forest Management Project for Reducing Deforestation in Lao PDR* (PAREDD) is concerned with reducing deforestation through participatory land and forest management in Lao PDR.

c) *Forest Preservation Program* (FPP) is concerned with capacity building for forest information by equipment procurement and technical assistance for forest preservation planning in the Lao forestry sector.

d) *Forest Information Management* (FIM) is concerned with capacity building for development and management of national level forest base data necessary for reducing emissions from deforestation and forest degradation.

59. Germany's cooperation with Lao PDR in the forestry sector is managed by KfW and GIZ and covers:

a) *Climate Protection through Avoided Deforestation Project* (CLiPAD) is concerned with the development of suitable framework conditions and pilot models for effective forest conservation in and around National Protected Areas on the basis of international discussion on REDD+. CliPAD consists of two modules: the Technical Cooperation Module, which is run on the German side by GIZ, and the Financial Cooperation Module, which is supported by KfW.

b) *GIZ* provides support to the Hin Nam No National Protected Area to strengthen the legal and institutional framework, build capacity of NPA management, and enhance livelihoods of communities living adjacent to the NPA.

c) KfW provides funding to WWF in Xe Sap NPA.

60. The involvement of MFAF, JICA, GIZ/KfW and USAID in REDD+ potentially provides enhancement of FIP and its concern to reduce emissions from deforestation and forest degradation. MFAF is involved in participatory, sustainable management of Production Forest Areas, similarly JICA in Watershed Protection Forest Areas, and GIZ/KfW in Conservation Forest Areas, i.e. providing targeted support for all three categories of state forest areas of Lao PDR. FIP is expected to leverage its investments through the collaboration between the MDBs and these bilateral organizations.

6. FIP Lao Investment Plan

6.1 FIP supporting the FS2020

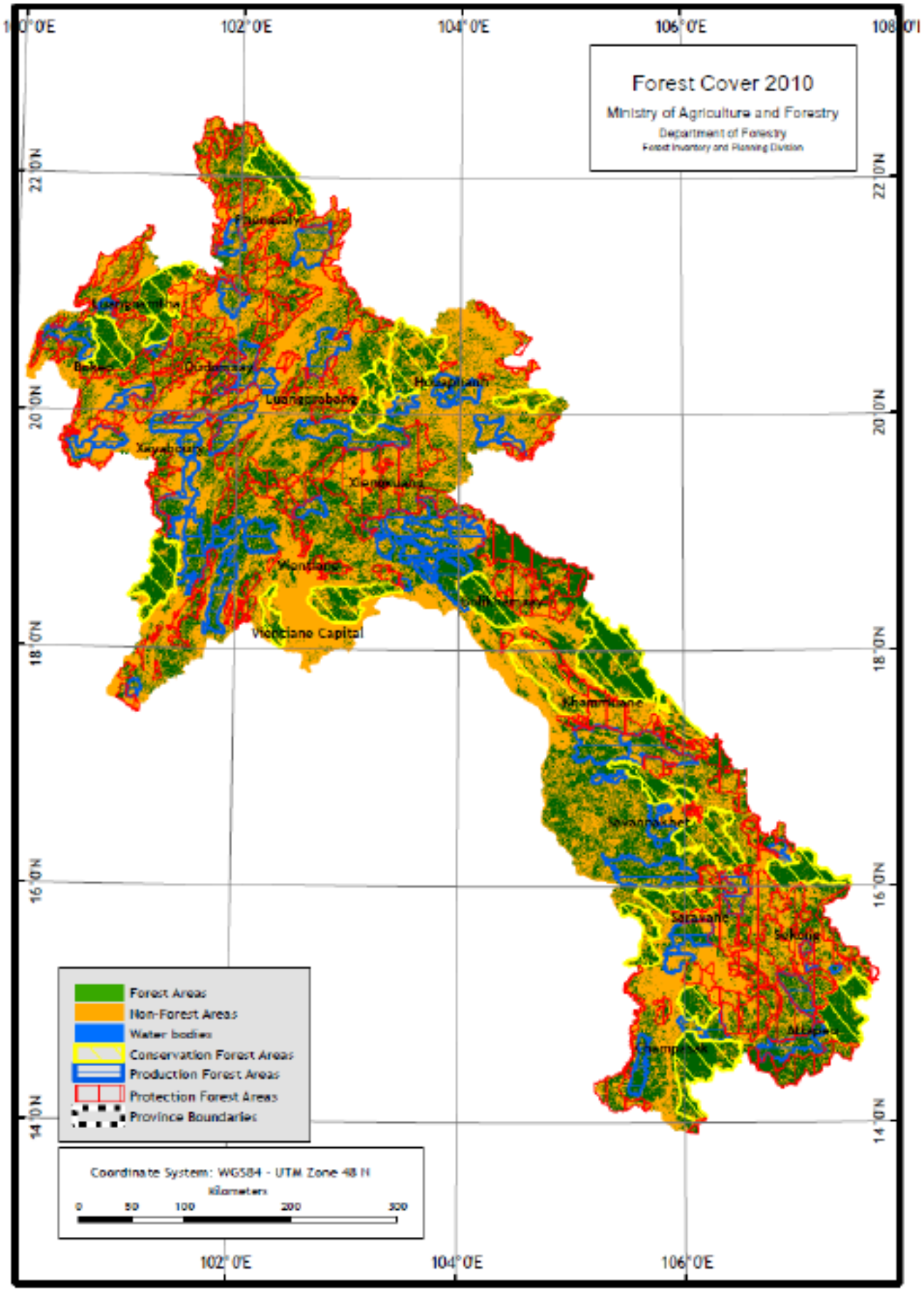
61. The program themes of the FIP Lao Investment Plan have been developed to support the FS2020 target to attain a 70% forest cover in the country and the relevance of this target to REDD+. Clearly achieving this target will be very dependent on avoiding or minimizing any further loss of natural forest, since the cost of restoring forest that has been cleared or heavily degraded is far higher than protecting existing forest, quite apart from the fact that forests established by planting, even with indigenous species cannot replace the biodiversity and NTFPs within a short period of time. The forests of Lao PDR must be protected from further deforestation and degradation, an action that can result from participatory, sustainable management of those forests, and at the same time, the country must embark on an aggressive program to regenerate or plant more forests, which enhances carbon stocks, if the FS2020 target is to be attained.

6.2 The role of current MDB projects

62. The FIP funds will be channeled through one or other of the MDBs in accordance with their standard procedures and in order to chieve cost effectiveness, ensure implementation as quickly as possible and minimize the need for diverting scarce staff with management experience from other important tasks, advantage will be taken of existing projects being funded by the MDBs. This has the additional advantage that on-going MDB projects have all the implementation arrangements, such as staff, local offices, financial management, procurement and relationships with Provincial Agencies in place and well established so that activities to be funded by FIP can be started very quickly. The additional activities that will be supported with FIP funds may be implemented in partnership with other stakeholders that can provide co-funding or technical support.

63. Management of forest areas in Lao PDR is currently carried out predominantly by the Provincial and District Forestry Offices within areas designated as **State forest areas.** These have been, or are in process of being, declared by Prime Minister's Decree into one of three categories; Production, Conservation and Protection. Management of the former has been supported by the World Bank for more than a decade, first through FOMACOP and since 2004 by SUFORD. These projects, apart from developing SFM within the state forests, have also engaged villages located inside and adjacent to those areas in participatory management and have developed benefit sharing arrangements. The ADB has been supporting the piloting of participatory forest conservation and protection in important Biodiversity Corridors within the GMS, and in particular in southern Lao PDR and adjoining areas in Vietnam. The Biodiversity Conservation Corridor Initiative (BCC) has recently been scaled up with the aim of improving forest connectivity between important National Protected Areas. Several other Donors, in particular GIZ/KfW and JICA in cooperation with several international Conservation NGOs have and are supporting SFM in different ways as indicated in Table 3 (page 7 above).

Figure 1: Map of Forest Types – Lao PDR



64. The state also allows the direct management of **forest areas outside state forest areas** by villages, private enterprises, and individuals. There are therefore six combinations of forest status and forest management arrangements. These are described briefly below together with estimates of the magnitude of the action needed to protect and further increase the forest cover of those areas.

- **State forest areas**
    - ***Production Forest Areas*** (PFAs). There are 51 PFAs with a total area of 3.1 million ha, of which 1.3 million ha (42%) are forested and 1.18 million ha (38%) can potentially be rehabilitated back to forest. To attain the FS2020 target, deforestation must be prevented and the potential forests regenerated by natural or assisted natural regeneration.

    - ***National Protected Areas*** (NPAs). There are 24 National PAs, 66 provincial PAs, and 143 district PAs all adding up to 4.7 million ha, of which 2.37 million ha (50%) are forested and 0.60 million ha (13%) can potentially be rehabilitated back to forest. To attain the FS2020 target, deforestation must be prevented and forest restoration should be undertaken on the potential forest.

    - ***Protection Forest Areas*** (WPFAs, W for watershed). Delineation of individual WPFAs is still going on, but together they could comprise some 8.2 million ha, of which 2.59 million ha (32%) are forested and 2.80 million ha (34%) can potentially be rehabilitated back to forest. To attain the FS2020 target, deforestation must be prevented and the potential forests regenerated by natural or assisted natural regeneration.

- **Forest areas outside state forest areas.** About 37% of the country's land area falls outside the designated state forest areas. These areas in aggregate comprise 7.68 million ha, of which 3.29 million ha are forested (43%), and 3.09 million ha (40%) can potentially be rehabilitated back to forest. It can be expected that some of the forests in those areas would be converted to other uses, but to attain the FS2020 target, the potential forest should be rehabilitated by natural regeneration that could result from protection of the area from fire, or by tree planting. The target of industrial tree plantations (ITP) of 500,000 ha is mentioned in FS2020. If the target were limited to this scale, the remaining 2.89 million ha of potential forest should be classified as parts of village forests or smallholder land, and then rehabilitated.

    - **Village forests (VF).** Only a few village forests have been formally established in the country, because GOL efforts have been focused on demarcating and managing the tate forest areas. DOF estimates that VFs could potentially add up to 1.560 million ha, or about 10% of the total area of the state forest areas. Implementation of PLUP-A should be accelerated to delineate and allocate land for VFs, as well as for industrial tree plantations and smallholder woodlots.

- **Industrial tree plantations (ITP).** The FS2020 target calls for the establishment of 500,000 ha of industrial tree plantations. DOF has estimated that the total area of ITPs in the country, of which more than half are rubber plantations, has reached 200-300 thousand ha, which when combined with the area of ITP applications of companies submitted to MPI would already be close to the FS2020 target for ITP. Nevertheless, exceeding the target is a good strategy considering potential shortfalls in attaining targets in the other forest sub-categories, the need to develop schemes for public-private partnerships in forest development, and the need for foreign direct investments to fuel the economy. However, ITP sites should be selected not only for desired productivity, but also to minimize GHG emissions from converting forests, e.g. by using already deforested lands, and must benefit local people by not only providing employment and training opportunities but by also giving them an option of market access and security of the land that provides their food and livelihood and not at the expense of dispossessing local people.

- **Smallholder woodlots** (SW). In implementing PLUP-LA, land can be allocated to villagers not only for agricultural production, but also for developing woodlots. Aside from industrial wood, there is an increasing market for fuelwood and charcoal, which is already applying much pressure on wood stocks in natural forests. Tree planting in smallholder woodlots combined with forest regeneration and tree planting in village forests and development of ITP should reach close to 3.39 million ha, the area of potential forests, to be of effective assistance to attaining the overall FS2020 target of 70% forest cover.

6.3 Logical elements of the FIP Lao Investment Plan

65. The FIP logic model, which was adapted as follows as the logic model of the FIP Lao Investment Plan (Figure 2) has the following elements:

- The **global final outcome** of the Climate Investment Fund to be attained in 15-20 years, which is 'improved low carbon, climate resilient development'.

- **Transformative impact** to be attained in Lao PDR in 10-15 years, as its contribution toward the global final outcome, by pursuing the following objectives:

  - **Core objective:** Reduced GHG emissions from deforestation and forest degradation, and enhanced forest carbon stocks by attaining FS2020 the 70% forest cover target. The core objective addresses the quest for low carbon development.

  - **Co-benefit objective 1:** Reduced poverty in forest-dependent villages through increased incomes from sustainable forest landscape-based livelihoods. This co-benefit objective addresses the desire for climate resilient development by increasing the capacity of forest-dependent villages to adapt to climate change.

- **Co-benefit objective 2:** Reduced losses in biodiversity and forest ecosystems services, especially concerning soil and water resources. Clearly, this co-benefit objective also addresses the desire for climate resilient development.

- **Catalytic replication outcomes** are those that can be obtained in a replicable FIP program, while at the same time catalyzing other initiatives to contribute to reduced emissions from deforestation and forest degradation and strengthening alternative livelihoods among forest dependent populations. These outcomes are to be obtained in 5-10 years by piloting and then up-scaling approaches for reducing deforestation and forest degradation, primarily by means of effective forest protection provided by building capacity among grassroots-level forest managers given appropriate financial and tenurial incentives. There are available approaches in Lao PDR that have already been initiated in the last 5-10 years or even earlier (e.g. FOMACOP). Replicating those approaches should involve:

  - Increased participatory as well as direct management of forest resources by villages and households; for example, participatory management of state forest areas and direct management by villages and households of forest areas that are outside the state forest areas. This needs to include detailed land-use planning and allocation of forest land outside the designated state forest areas to appropriate management entities.

  - Improved enabling environment for REDD+ and sustainable management of state forest areas, village forests, industrial tree plantations, and smallholder woodlots.
  - Strengthening of alternative livelihood among forest dependent population and increased in their income generation through sustainable harvest of forest resources and participation in the agroforestry and plantations.
  - Access to predictable and adequate financial resources, including results-based incentives for REDD+ and sustainable management of forests.
  - As a Lao regional contribution to FIP, the FIP Lao learning could be a model that could facilitate replication in Southeast Asia particularly of the participatory, sustainable forest management approach and REDD+ activities in non selected FIP pilot countries.

- **FIP outputs and outcomes** to be obtained in 2-7 years, involved with putting all forest areas under sustainable management by building capacity among grassroots-level managers given appropriate financial and tenurial incentives. and supporting them in their efforts, including:

  - Sustainable management of forests and forest landscapes to address the drivers of deforestation and forest degradation.
  - Empowering forest-dependent villages and households of various ethnic origins building their capacity to understand their rights and obligations and

sustainably manage forests, while promoting their practice of sustainable livelihoods.

- An institutional and legal/regulatory framework that supports sustainable management of forests and protects the rights of villages and ethnic minorities.
- In relation to the CIF program, provision of new and additional resources for REDD+ implementation, and integration of learning by development actors active in REDD+.

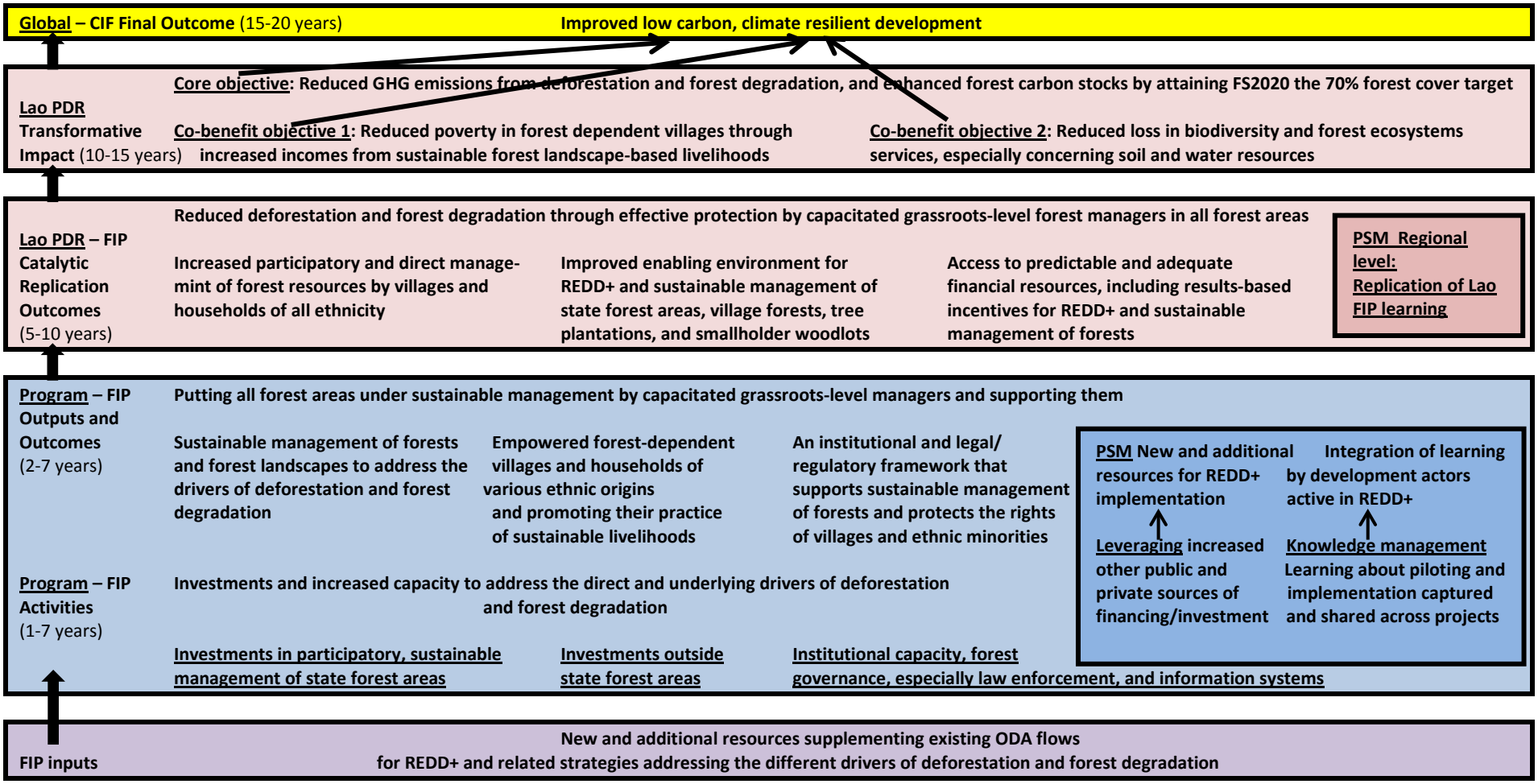
- Finally, the FIP Lao Investment Program **thematic components** to be applied in the next 1-7 years through investments and increased capacity to address the direct and underlying drivers of deforestation and forest degradation, which involve the following:

  - Investments in participatory, sustainable management of state forest areas, including PFAs, NPAs, and WPFAs, and development of their resources including timber in PFAs and NTFP and the protection of biodiversity and ecosystems services.

  - Investments in development and direct management by villagers and the private sector of forest areas outside the state forest areas, including village forests, industrial tree plantations, and smallholder woodlots following a systematic program of allocating such forest areas to appropriate local forest management entities.

  - Strengthening of institutional capacity and various elements of improved forest governance, especially law enforcement, and information systems.

Figure 2: Logic model of the FIP Lao Investment Plan



6.4 Thematic components of the FIP Lao Investment Plan

66. Thus, on the basis of the logic model, the FIP Lao Investment Plan has been designed to comprise the following thematic components:

- **Participatory, sustainable management of state forest areas**, covering the management or co-management of Production Forest Areas, Conservation Forest Areas, and Protection Forest Areas by state line agencies with active participation of villagers from all ethnic groups.
- **Village forestry**, covering the management of village forests by organized villagers from all ethnic groups.
- **Smallholder forestry, including link to ITP development**, covering the allocation of land to farmers of all ethnic groups for tree growing, in addition to land for agricultural development, and also tree growing by farmers in allocated land adjacent to ITPs with support provided by private enterprises.
- **Strengthening enabling framework** for providing an enabling environment to successfully put into practice the three forest area-based themes, such as the strengthening of the legal/regulatory framework, especially to increase the benefits shared by grassroots forest managers from both traditional (e.g. forest products) and recently innovated means (e.g. PES, REDD+); improving forest governance, especially in MAF-DOF and MONRE-DFP for sustainable forest management and DOFI for law enforcement; capacity building; and other aspects, such as MRV and knowledge management.

67. The first three thematic components will pilot, in selected parts of the country, the concept of putting all forest land and resources under participatory and sustained protection, development, and management, in a serious and ambitious attempt to leave no gaps for the various drivers of deforestation and forest degradation to operate. The underlying idea is that grassroots forest managers will be enlisted to operate in any and all forest areas and be vigilant in protecting the forests in their areas from the various agents of deforestation and degradation, and will rehabilitate degraded lands using land management systems that will provide them with benefits, while enhancing carbon stocks.

Table 4: Thematic components of the FIP Lao Investment Plan

Thematic components	Areas covered	Operational managers/ facilitators
1. Participatory, sustainable management of state forest areas	Production Forest Areas, Conservation Forest Areas, Watershed Protection Forest Areas	District Forest Offices with active participation of Village Forestry Organizations
2. Village forestry	Village forest areas	Village Forestry Organizations with active support provided by District Forest Offices
3. Smallholder forestry, including link to ITP development	Land allocated to farmers and for ITPs	Individual farmers, private ITP enterprises

4. Strengthening enabling framework	Enabling environment that provides the impetus for participation of local communities and other stakeholders by providing benefits, e.g. through legal/regulatory reform; law enforcement; capacity building; PES, REDD+, MRV; knowledge management; etc.	Policy makers and top/middle level officers in various GOL institutions, academe, NGOs, and civil society organizations

6.5 Participatory, sustainable forest management

68. Participatory, sustainable management (PSFM) is the primary theme of the FIP Lao Investment Plan. PSFM will be applied in appropriate forms to each of the combinations of forest status and forest management arrangements. PSFM in association with-PFA has been extensively piloted in 2004-2008 in 4 Southern Lao provinces involving 8 PFAs with a total area of 656,000 ha. PSFM-PFA is currently being up-scaled in 9 provinces in 3 regions of the country, so that it now covers 16 PFAs with a total area of almost 1.3 million ha. Recent monitoring has shown significant reductions in deforestation and forest degradation in managed PFAs. It is envisaged that similar reductions can be attained in NPAs and WPFAs that are similarly managed. Thus, the PSFM-PFA system will be adapted to NPAs and WPFAs and piloted in 2-4 NPAs and 2-4 WPFAs by means of FIP support, with further up-scaling after a 4-year pilot period.

69. To effectively involve villagers in protection and management activities in state forest areas, grassroots-level forest management unit (FMU) is defined to be the part of the state forest area that falls in the administrative jurisdiction of a given village cluster. FMU management involves the preparation and implementation of a forest management plan by the District Forest Office (DFO) with active participation of Village Forestry Organizations (VFO), with a VFO organized in each participating village. FMU managers, i.e. DFOs and its partner VFOs, will be provided training, as well as technical and financial support.

70. Incentives for village participation will be provided, including employment of villagers in assessing forests, high conservation values, and carbon stocks and in restoration or enhancement, management, and protection activities; share of timber revenues in the case of PFAs; exercise of customary rights, particularly in collecting NTFP and timber for household use in accordance with the management plan; and sharing of a village development fund that can support the creation of sustainable livelihoods, small-scale infrastructure and other development activities in participating villages. Other incentives schemes will be developed, especially in forest areas where timber production is not an option, such as provision for agroforestry-based sustainable livelihoods in non-critical areas and ecotourism. Newly innovated payment schemes are also being developed, including PES and carbon/REDD+ payments, which can provide further incentives to villages that are able to demonstrate performance in avoided deforestation and forest degradation, as well as enhancement of carbon stocks, over the local baselines as verified by an established MRV system. Strong participation processes and continuous monitoring will help ensuring that no negative impacts will results from the introduction of such new schemes.

6.6 Village forestry

71. As a forest management model, village forestry (VF) is a precursor of PSFM-PFA, which is more popularly known as participatory, sustainable forest management (PSFM). VF was developed and piloted extensively by FOMACOP in 1996-2001 in two state production forests, which are located in two Southern Lao provinces (Savannakhet and Khammouane). The two pilots covered 100,000 ha of natural forests and involved 45 villages clustered into 23 village forest management areas (VFMA). As indication of the success of the two pilots, the two state production forests were included in the 2000 FAO list of 'Exemplary Managed Forests in Asia' Moreover, 11 of those 23 VFMAs are the original members of two Provincial Group Certification Schemes, which obtained FSC certification in 2005 and remains certified up to now. Those VFMAs have since then been re-organized into sub-FMAs (the prescribed FMU in PSFM) based on the GOL policy of applying PSFM in all PFAs. At present village forestry is being applied at the 20,000 ha Nakai Plateau Village Forest, which was awarded by GOL to the resettlers of the Nam Theun 2 Hydropower Project.

72. PLUP-LA is being applied in rural areas in many places of the country; hence, village forests for piloting the specific tasks related to REDD+ such as developing baseline emission levels and monitoring changes in carbon stocks can be identified, delineated, and allocated to the village for management. This will then provide opportunities for applying VF, a well proven sustainable forest management system, thus removing the policy and administrative barriers that have prevented the expansion of the VF practice in the country. VF is therefore included as an important thematic component of the FIP Lao Investment Plan. It will be applied side-by-side with PSFM-SFA,i.e. in the same provinces, districts, and villages, to minimize efforts and costs, since it will involve organizing and capacitating the same DFOs and VFOs involved in both VF and PSFM-SFA. Hence, the potential sites for village forestry would be the village forests adjacent to the project sites of PSFM-SFA.

6.7 Smallholder forestry, including link to ITP development

73. In the process of applying PLUP-LA in rural areas of the country, land will be allocated to villagers for their production activities. Much of the allocated land will be used for food and other agricultural production, but substantial areas can also be used for tree growing. Firewood and charcoal have good demand for use locally and for urban areas. In particular, a product known as 'white charcoal', commands premium price in the Japanese market.

74. The use of fast-growing species like eucalyptus and acacia in smallholder woodlots was introduced as a DOF program in the 1990s covering Southern and Central Lao provinces with funding provided by ADB. Several farmers obtained loan for planting fast-growing species in their own land. In Louang Phrabang in Northern Lao, farmers grow teak on their own land, the aggregate of which is estimated to have reached around 26,000 ha. FSC has also awarded a Group Certificate to cover initially some 85 ha owned and managed by a small growers' group, which is supported by the Louang Phrabang Teak Program, operated through the Provincial Forestry Office. Another prominent model of smallholder forestry is being practiced in Houaphan Province, where some 7,000 ha of benzoin have been planted by small farmers. Furthermore, there are private sector companies that want to include

communities in the development of their plantations and through the use of agro forestry models.

75. There are opportunities for private enterprises engaged in ITP to support farmers in adjacent or nearby areas to plant trees in their own land by providing seedlings, technical assistance, and market for harvested wood. There is an expectation that in certain areas ITP will be introduced as an agroforestry scheme that may also improve agricultural income and nutrition at the household level. The cost of the seedlings provided by the private enterprise could be charged later to the proceeds from farmers' harvested wood. Private enterprises and participating communities could benefit from MDB support, through investment and/or advisory services, for developing their ITPs, linking communities to the private sector, training farmers for improved land use and cultivation, enable land security for the participating communities in areas adjacent to private sector concessions. To qualify for IFC support, the private enterprise must conform to strict environmental and social standards and demonstrate good practices and safeguards like barring the conversion of natural forests to ITP, and ensuring participation of local communities in their development plans. MDB interventions in the form of investments in ITP of private enterprises, although outside of the FIP envelop, could from a part of leverage financing generated through FIP.

76. Thus, the FIP Lao Investment Plan is proposed to include an important thematic component on 'agroforestry, including link to ITP development' with two sub-themes:

- **Smallholder forestry PSFM-SFA** , whereby the given PSFM-SFA project will provide extension services, technical, and financial support for the establishment of smallholder woodlots of farmers in villages adjacent to PSFM-SFA project sites. By selecting the smallholder forestry sites to be in the same villages that are adjacent to the PSFM-SFA project sites, the outlay of financial and other resources will be minimized.

- **Smallholder forestry linked to ITP development**, whereby private enterprises that are provided concession land for ITP, especially those that avail of investments in ITP from MDB and other financing sources, will be encouraged to include a smallholder woodlot component as described in the immediately preceding paragraph, above.

6.8 Strengthening the legal, governance, incentives, and REDD+ framework

77. REDD+ is first and foremost a global partnership in reducing GHG emissions from deforestation and forest degradation that recognizes sustainable management of forests and conservation and enhancement of carbon stocks by different stakeholders, especially local and indigenous peoples, as important means for attaining emission reductions. In the Lao context, attaining REDD+ as a national contribution to the global partnership is about mobilizing the Lao people, especially villagers of all gender and ethnicity, to participate in forest management or to directly manage forests, with forest protection and carbon enhancement being crucial concerns of that management. The three thematic components described above suggest where and how national mobilization could take place at a given pace over time. In practice, such national mobilization is possible only within an enabling legal, governance, incentives, and REDD+ framework.

78. The fourth thematic component is very crucial as it works to ensure that grassroots forest managers are provided with such an enabling framework, so that they can sustainably manage and protect the forest land and resources entrusted to them. Strengthening the forest policy and legal framework and improving forest governance are important elements of that enabling framework. Updating of the Forest Law has already been initiated. The updated Forest Law will include provisions for Payments for Environmental Services (PES) and REDD+, for providing an equitable share of benefits for villagers from carbon based on REDD+ performance and from products coming from state forest areas that they help to protect, provisions for secure tenure and rights over land and trees in village forests and smallholder woodlots, and incentives for developing ITP and smallholder woodlots in degraded areas. Other aspects to be studied and developed will include carbon stock assessment and registration, MRV, and knowledge management systems.

79. Information, education, and communication (IEC) and capacity building are important concerns in each of the three forest area-based thematic components. Awareness of new policies, laws, and regulations, especially concerning REDD+ and how villagers can benefit, will be developed as these are not yet known or properly understood. Local communities will be enjoined not only to respect the Forest Law, but to help in its enforcement. The forest police of the Department of Forest Inspection will be capacitated to effectively provide support to local communities in detecting and preventing forest crimes, especially illegal logging, and in catching and prosecuting the perpetrators in cases where they occur. The forest police themselves will need protection from harassment and other threats from those that they prosecute, and this must be provided. The capacity of MAF-DOF and MONRE-DFP will need strengthening especially since weaknesses are being created in the process of partitioning DOF into two departments in MAF and MONRE, as well as in partitioning the PFOs and DFOs into separate provincial and district forestry offices of MAF and MONRE.

6.9 FIP implementation projects

80. The Lao R-PP suggests that the FIP investment should include components on: (i) capacity building; (ii) investments addressing the different drivers of deforestation and forest degradation;(iii) various studies such as on illegal logging, agroforestry systems, and REDD+ aspects related to establishing credible REL and determining various parameters and conversion factors required to measure carbon stocks and emissions; and (iv) institutional development, particularly of the REDD office. These components have been considered by imbedding them in differently structured sets of components of FIP implementation projects.

81. Lack of effective management of both designated state conservation and protection forests and the large areas of undesignated forest is a major contributory factor to the drivers of deforestation and forest degradation being able to operate. All the development partners currently operating in Lao PDR are supporting the government in one way or another to address this issue. ADB is pioneering the management of protection forest areas, where deforestation and forest degradation is a serious problem, but sound management will bring multiple benefits in the form of improved soil, water and biodiversity conservation as well as contributing to poverty reduction in remote rural communities. Certain private sector companies are pioneering agroforestry approaches to commercial tree plantation

development that also provides viable alternative livelihoods for ethnic communities that currently practice swidden agriculture and there is good potential to extend the concept to associated smallholder plantations with support from IFC. The WB has been supporting the sustainable management of Production forests for many years and has pioneered the development of community based PSFM in undesignated forests areas around PFAs. The FIP implementation projects will take advantage of each MDB's strengths and experience in supporting PSFM, with FIP investment through WB emphasizing management of PFAs and un-designated forest in surrounding areas, through ADB emphasizing PSFM and co-management of forest by local communities in conservation and protection forest and adjoining un-designated forest, and IFC supporting the private sector. The investments will give prominence to increasing village participation. In addition to providing the framework of legal, governance, land-use planning and incentive mechanisms, those forest areas will be protected from the different drivers of deforestation and forest degradation. Capacity building, which is proposed in the R-PP to be the first component of FIP, is crucial to village participation and will be a major undertaking cutting across each of the FIP implementation projects. Various studies on REDD+ related subjects and institutional development will be important parts of a common component of FIP implementation projects on 'strengthening the legal, governance, incentives, and REDD+ framework'.

82. There will therefore be three FIP implementation projects that will address the drivers of deforestation and degradation in different regions of the country and with different stakeholder partners and with different emphasis on the primary objective of forest management.

6.9.1 Project 1: Protecting Forests for Sustainable Ecosystem Services

83. This will be based on the ADB funded Biodiversity Conservation Corridor (BCC) project and complemented by the GMS Core Environment program and Biodiversity Conservation Initiative and will work closely with other donors undertaking similar activities in other regions of the country, especially Japan, GIZ, and KfW and the new USAID-LEAF project as well as the international NGOs WCS, WWF. The SNRMPEP is being implemented in the same Provinces and is engaged in land-use planning and has a component on Sustainable Natural Resource Management:

a. Piloting PSFM (in 2-3 WPFAs and 1-2 NPAs between which the the BCC Project is creating connectivity)
b. Piloting village and smallholder forestry (in villages involved in the BCC Project), providing alternative more productive and remunerative farming systems to reduce areas used for shifting cultivation and allow secondary to continue growing and sequester carbon and restoring forest cover on denuded land where co-benefits from biodiversity and water conservation are secured.
c. Strengthening the legal, governance, incentives, and REDD+ framework (using bilateral grants and FIP grant coursed through ADB as the designated MDB)
d. Identifying forest outside the designated state forest areas with High Conservation Value and developing PES to ensure their protection.
e. Implementing legal, governance, incentives, and REDD+ frameworks using bilateral grants and FIP grant resources

84. The estimates of emission reductions are based on studies conducted during the BCC Project PPTA and assume that there will be significant investment in supporting alternative livelihoods such as rattan cultivation, agroforestry and home gardens with fruit and vegetables, that will result in local communities, that are mainly from "ethnic groups" gradually reducing the area used for shifting cultivation within the corridor area. This will bring emission reductions from the area cleared and burnt annually as well as sequestration in the secondary forest from regrowth for a prolonged period without further cutting. In addition about 10% of the existing areas of forest within the corridor will be protected to reduce emissions from avoided encroachment and illegal logging and there will also be some sequestration by growth in the protected forest. About 1,700 ha of degraded forest will be restored and will sequester increasing amounts of CO_2 in the coming years. The restoration will be focused on areas within the corridor that improve connectivity between residual good forest patches as well as on steep slopes where soil and water conservation co-benefits will accrue. As with Project 3 below, the areas protected and restored are based on the feasible amount with about 60% of the FIP funds allocated to the project. It is assumed that the balance of the FIP funds will be used for capacity building and for monitoring. The estimated cost per ton of CO_2 emission reduction is about US$3.1, which is significantly less than the current market price, suggesting that the investment is very cost effective.

Table 5: Changes in CO_2 emissions as a result of a combination of forest protection and alternative livelihoods for ethnic communities practicing shifting cultivation

Year	Shifting cultivation		Natural forest				Total (tCO_2)
	Emissions		Emissions avoided		CO_2 sequestered		
	Avoided	Sequestered	Deforestation	Degradation	Growth	Restoration plantations	
Base year	83,076		31,703	275,322			390,101
2012	8,308	2,342	34,873	15,971	58,709	313	120,516
2013	16,615	3,712	38,044	17,423	58,709	1,428	135,931
2014	24,923	4,684	41,214	18,874	58,709	3,896	152,300
2015	33,230	5,438	44,384	20,326	58,709	8,279	170,367
2016	41,538	6,054	47,555	21,778	58,709	18,072	193,706
2017	49,845	6,575	50,725	23,230	58,709	34,908	223,992
2018	58,153	7,026	53,895	24,682	58,709	70,660	273,125
2019	66,460	7,424	57,066	26,134	58,709	147,480	363,273
2020	74,768	5,760	60,236	27,586	58,709	291,101	518,160

6.9.2 Project 2: Smallholder Forestry Project.

85. These will include private enterprises that can meet the GOL requirements and MDB engagement criteria, local communities that are interested to participate, and in villages where the selected private enterprises are licensed to operate. The projects will have the following components:

a. ITP development
b. Smallholder woodlot development (in partner villages of selected private enterprises)
c. Strengthening the legal, governance, incentives, and REDD+ framework (using FIP grant to the REDD+ Office of GOL coursed through the designated MDB)

86. A substantial and sustained set of investment will be required to support REDD+ related capacity building in Lao PDR. Experience under SUFORD has demonstrated that these investments will be crucial to enabling village participation (especially among ethnic groups and to ensure active participation by women). Capacity will also need to be built among government partners (both administrators and implementers at local, provincial and national levels). Provincial authorities have a great degree of autonomy in decisions related to land allocation and small infrastructure development. To avoid unnecessary loss of forest cover during salvage logging operations local government officials would benefit from training in evaluation of opportunity costs associated with REDD+ implementation. Analytical work on institutional development, benefit sharing, payment for environmental services and forest law enforcement and governance are anticipated. A system for dissemination of results from all analytical work will be developed and implemented during FIP implementation.

6.9.3 Project 3: Up-scaling Participatory Sustainable Forest Management

87. This will build on the work of SUFORD, which is currently being implemented in 18 PFAs located in 9 provinces and will run to 2012, and its successor project to be implemented starting 2013, which will cover all PFAs and will have the following components:

a. PSFM-PFA (covering managed PFAs plus all remaining PFAs for inclusion)
b. Village land and forest management (villages in some selected PFAs)
c. Smallholder forestry and village development (in villages in some selected PFAs)
d. Strengthening the legal, governance, incentives, and REDD+ framework (using MFAF grant and FIP grant coursed through WB as the designated MDB)

88. Using the 2010 study on baselines and RELs for Dong Sithouane PFA carried out by SUFORD a simple model has been constructed to estimate the reductions in emissions of CO_2 for the PFA and the surrounding area of 470,000 ha covered by the study. It is assumed that PSFM of the PFA will fully protect the existing forest and that carbon sequestration will take place due to growth (net of harvest) at a rate of 0.5% of the carbon stock. In addition it is assumed that about 10% of areas of good forest outside the PFA will be delineated with PLUP and established as village or community managed forest and will therefore reduce the emissions from the forest outside the PFA *pro rata* to the proportion of the area protected at the baseline emission level estimated by the study. In addition about 3,150 ha of degraded forest will be restored by planting over the coming 8 years and these will sequester carbon at a rate estimated from a yield model for slow growing hardwood species. The areas protected and restored are based on the feasible amount with about 60% of the FIP funds allocated to the project. It is assumed that the balance of the FIP funds will be used for capacity building and for monitoring. The estimated changes in carbon dioxide emissions and sequestration resulting from the project are given in Table 6 below. The estimated cost per ton of CO_2 emission reduction is about US$3.1, which is significantly less than the current market price, suggesting that the investment is very cost effective.

Table 6. Changes in CO_2 emissions as a result of a combination of forest protection, restoration and up-scaling PSFM in forest outside the designated state PFAs

Changes in CO_2 emissions from forest protection & restoration				
	Outside PFA		PFA	Total net change in emissions
	Emissions avoided	Sequestration	Restoration plantations	
Base year	(tCO_2)	(tCO_2)	(tCO_2)	(tCO_2)
2012	121,553	215,596	349	337,497
2013	121,553	217,743	932	340,228
2014	121,553	219,891	1,801	343,244
2015	121,553	222,038	2,116	345,707
2016	121,553	224,186	3,299	349,038
2017	121,553	226,333	2,287	350,173
2018	121,553	228,480	2,930	352,963
2019	121,553	230,628	7,678	359,859
2020	121,553	232,775	4,914	359,242
	1,093,974	2,017,670	26,307	3,137,951

6.10 Summary of project features

89. Table 7 below provides a summary of various salient features of the three FIP implementation projects, illustrating over an 8-year implementation period: (i) the projected scale in hectares of avoided deforestation and forest degradation, (ii) projected scale of rehabilitation of degraded areas including further scalability potential, (iii) emissions savings, (iv) equivalent REDD+ payment, (v) co-benefits, and (vi) proposed results indicators that are observable after the given timeline.

Table 7: Salient features of the three FIP projects

Features	PFSES	Smallholder Forestry	PSFM
Avoided deforestation and degradation, ha	15,000 ha of dense forest protected from encroachment and illegal logging	Around 10,000 ha (to be reviewed based on how many ha would be allocated to a participating household.	140,000 ha of PFA plus 36,000 ha, increasing to 80,000 ha of un-designated forest outside PFA protected
Rehabilitation of degraded areas, ha	1,700 ha of forest restored to maximize biodiversity and water conservation co-benefits	32,000 ha of degraded land, to be reviewed	3,150 ha of degraded forest restored

Replication potential, or for further up-scaling, ha	Up to 144,000 ha dense forest and 120,000 ha restoration within the single corridor	178,000 ha in just 5 districts in Southern Lao, to be reviewed	A further 100,000 ha within Districts adjacent to PFA could be brought under PSFM and plenty more in other Districts and Provinces
Emissions savings, $MtCO_2e$	120,000 tCO_2 in first year increasing to >500,000 tCO_2 after 8 years	3.6, regeneration 4.7, reforestation	340,000 t CO_2 in first year increasing to 370,000 after 8 years
carbon price, USD/tCO_2e	Assumed US$5 per tCO_2	5, regeneration 6, reforestation	Assumed US$5 per tCO_2
Anticipated investment in direct emission reduction measures, excluding capacity building and MRV	US$ 6.1 M The investment shows an IRR of 26%, subject to a number of assumptions. The balance of the FIP funds will be allocated to capacity Building and will therefore reduce overall IRR in the short-term		US$ 8.6M. The investment shows a positive cash flow after year 1; The balance of the FIP funds will be allocated to capacity Building and will therefore reduce overall IRR in the short-term
Co-benefits	Biodiversity conservation; enhancement of forest ecosystems services; poverty reduction through increased incomes in forest land-scape-based livelihoods, especially for “ethnic groups”; average HH income of participating HH increased to >$3,500 after 8 years	Poverty reduction through increased incomes in forest landscape-based livelihoods; enhancement of forest ecosystems services	Poverty reduction through increased incomes in forest landscape-based livelihoods; bio-diversity conserva-tion; enhancement of forest ecosystems services
Proposed results indicators	PSFM area in ha; carbon stocks in tCO_2e; household income	Smallholder woodlot in ha; carbon stocks in tCO_2e; household income	Program indicators PSFM-PFA/NPA/WPFA are detailed in the results framework section 9

7. Implementation potential and risk assessment

7.1 Implementation potential of the FIP projects

7.1.1 Protecting Forest for Sustainable Ecosystem Services

90. This project will be implemented by two divisions of DOF (Division of Forest Resource Conservation and Division of Protection Forest) that have recently been attached as a new department, the Department of Forest Preservation (DFP) within the newly organized Ministry of Natural Resources and Environment (MONRE). DFP under MONRE will have to establish its line of agencies at provincial and district levels drawing from the staff of WREA, which has also been merged with MONRE, and the forest officers responsible for National Protected Area (NPA) and Watershed Protection Forest management from PAFOs and DAFOs. Thus, the same officers that have been involved in managing the country's system of PAs and WPFAs at national, provincial, and district levels will continue to exercise their function under the direction of the new ministry. Considering the new institutional arrangements and the need for the new institutions to settle down with new structures, the implementation of PSFM-NPA and PSFM-WPFA will be limited to piloting in 2-4 NPAs and 2-4 WPFAs during the first 4 years with a view to up-scaling implementation in succeeding 4-year periods. The NPAs are already established, but the WPFAs still have to be demarcated and officially established. The ADB funded BCC Project is designed to support the government in the demarcation and management of what are currently four Provincial Watershed Protection Forest Areas, that will probably become two National WPFAs. The existing Project has components for forest demarcation and management and limited forest restoration, forest protection and livelihood improvement and capacity building based on previous piloting experience, and FIP funds will enable the additional activities associated with REDD+ including establishing baseline emissions and carbon stocks, carbon stock monitoring and awareness raising on REDD+.

91. As a new department, DFR will have to build its own GIS unit since FIPD, the GIS unit of DOF, stays at DOF. The new GIS unit will be formed from the GIS related human and other resources of MoNRE and immediately be involved in delineating the country's system of WPFAs and working for their official establishment by the National Assembly. In the meantime, piloting of PSFM-WPFA will be in 2-4 selected Provincial Watershed Protection Forest management areas whose boundaries are already known.

92. The projects that will be implementing the two projects in the field will be involved with office and staff restructuring at provincial and district levels, organizing of village involvement, and conduct of PLUP-LA in village clusters starting with those village clusters that will be immediately participating in the projects. It is anticipated that the focus of the first year would be on office and staff restructuring at provincial and district levels. Priority should be given to completing this activity in pilot provinces and districts ahead of other provinces and districts.

93. GIZ and KfW have been providing technical and financial assistance, respectively, to GOL, as well as ADB, and World Bank, in REDD+ in conservation forests, including watershed protection forests that are included in the BCC Project in Southern Lao, and at Nam Et Phou

Louey NPA in northern Laos (though GEF4 via WB) while JICA has been providing technical and financial assistance in REDD+ in watershed protection forests.

94. A risk to implementing REDD+ in conservation forest is potential issuance of concessions for mining and logging in National Protected Areas, as has been reported recently in Nam Et Phou Louey NPA, Dong Amphan NPA and Xe Sap NPA.

7.1.2 Smallholder Forestry Project

95. Project implementation will involve mainly MAF-DOF, NLMA, and the Ministries of Planning and Investment, and Commerce and Industry on the GOL side; MDB and its local partner on the financing side; selected private enterprises from the ITP investment side; and the farmers from the smallholder forestry side. The core process of project implementation will revolve around the private enterprise providing extension services, seedlings, fertilizer and other inputs, and market guarantee to the farmers, and the farmers using their land, labor, and other inputs received to establish the woodlots. The process finds little precedence in Lao PDR, but it has good potential given the availability of private enterprises that are willing to undertake the process. Interested private enterprises must, however, meet the strict environmental and social standards and good practices that MDB requires.

7.1.3 Program to Scale-up PSFM

96. This Program is expected to include support for PSFM-PFA will be implemented by DOF at national level, PFO at provincial level, and DFO in partnership with VFOs at FMU level. All of the 51 PFAs have been officially declared by the National Assembly. The DOF-PFO-DFO line agencies have been involved in PSFM-PFA in 18 PFAs located in 9 provinces during the last 3-8 years. Up-scaling of PSFM-PFA to cover the rest of the country's PFAs will require strengthening of the capacity of PFO in 8 more provinces and their participating districts and village clusters. Up-scaling will be done using tested training methodologies based on a modular, experiential learning approach and tested planning and technical systems. Some adjustments will be needed for more efficient drawdown and downward flows of financing, as well as procurement of vehicles, equipment, and materials to ensure that financial and logistical support will be available when needed at field level training and implementation.

97. Implementation of village and smallholder forestry will be conducted mainly in areas villages adjacent to the PFAs. As a rule, land for these components still has to be allocated following the Participatory Land Use Planning – Land Allocation (PLUP–LA) process. The relevant land management offices of participant districts will have to be capacitated, equipped with the necessary tools, and supported logistically. Considering the new institutional arrangements and the need for the restructured management to settle down with new structures, the implementation of PSFM-NPA and PSFM-WPFA will be limited to piloting in the initial period of FIP financing with a view to up-scaling implementation in later periods. The NPAs are already established and will be receiving significant support from IDA and GEF 5, but the WPFAs still have to be demarcated and officially established. NPA and WPFA areas selected for inclusion in this project will not overlap with ADB financed areas described in the next section but capacity building and monitoring will be standardized and experience will be shared both formally and informally.

98. MFA of Finland is providing the required technical services for PSFM-PFAs in SUFORD. The contracted consulting firm is expected to have the expertise to be able to conduct the various REDD+ related studies and assist GOL in matters related to strengthening the legal, governance, and incentives mechanisms, as well as in REDD+ related studies, particularly concerning carbon stock assessment, establishing REL, MRV, and related information systems.

99. Coordination and monitoring of the FIP investment, which form part of the overall national effort for REDD+ will be undertaken by the, soon to be established, REDD+ Office (see Annex 4). The REDD+ Office will be responsible for maintaining a register of all projects as well as developing a carbon registry, and will coordinate monitoring of the project outcomes in cooperation with Forest Inventory and Planning Division (FIPD).

7.2 Risk assessment of the FIP projects

7.2.1 Protecting Forests for Sustainable Ecosystem Services

100. The risks associated with the village and smallholder forestry as components of the projects on REDD+ in Conservation Forests and Watershed Protection Forests will be similar to those of corresponding components of the project on REDD+ in Production Forests. The main difference lies in the nature of the state forest areas and their management objective. PFAs also contain high conservation value forests associated with biodiversity and forest ecosystem services, but not in the same order of magnitude as the core zones of PAs and WPFAs. The area available for supporting landscape-based livelihoods would be relatively smaller in PAs and WPFAs. This could have implication on obtaining village participation in forest management. In addition, there would be further risks from the use of different technology, since different forest management objectives would require different technologies, if not in form then at least in scope.

101. There could also be differences in policy and governance that could result from the differences in implementing institutions, i.e. the MAF-DOF-PFO-DFO line of forestry institutions in the case of PFAs as opposed to the MONRE-DFP-provincial-district line of forestry institutions in the case of PAs and WPFAs. It is anticipated that capacity building would demand more resources for the latter than the former line, since the latter line of institutions has just recently been formed.

7.2.2 Smallholder Forestry Project

102. The technical risks to the Smallholder Forestry Project have been assessed as small. Land for the project comprises degraded lands, which will be allocated to the farmers following the PLUP-LA process that will be facilitated by district authorities. Acacia and eucalyptus species proposed grow well in the target districts. Enterprises to be selected will be those that are already experienced and efficient managers of commercial plantations and with expressed commitment to effective relationships with local communities. Substantial markets for plantation-grown wood exist in neighboring Vietnam and China.

103. The environmental and social risks are also assessed to be small. The private enterprises will be selected on the basis of meeting high FSC environmental and social standards and good practices. Implementation must, however, ensure through extension

and training that participating villagers limit their woodlots to current swidden and other degraded lands and do not convert natural forests to woodlots.

104. The main risk to the project, which also applies to the other FIP implementation projects, is the willingness of the global carbon markets to pay for the carbon sequestered. The fundamental message in the REDD+ dialogues and the FIP discussions in Lao PDR so far has been that carbon, either conserved or sequestered, has a value and that there is a ready global market for this commodity. These expectations are growing as the GOL has appointed its national high-level REDD+ Task Force and the broader forestry community in Lao PDR has been preparing for projects and tasks relating to carbon, carbon sequestration and, ultimately, the carbon markets.

7.2.3 Up-scaling PSFM

105. The proposed REDD+ in Production Forest Projects have been applied in a large scale through SUFORD, so overall the risks have been assessed to be small, including risk from technology, policy, institutions, and governance, as well as from social and environmental risks. However, the application of PSFM-PFA has been started in Southern Lao, where PFAs have relatively rich forests over relatively good terrain, and the technical systems have been so designed to account for this set of favorable conditions. Also, continuous and tailored support has to be provided to villagers to ensure sustainability of PSFM-PFA if it requires introduction of new modes of livelihood.

106. As the application PSFM-PFA proceeds to include PFAs in Northern Lao, implementation will find less than favorable conditions. It would be more difficult to motivate villagers into participating using share of timber benefit as incentive, if the PFAs have relatively low forest cover, forests to be managed are degraded, and terrain is difficult. To overcome the less favorable conditions obtaining in PFAs where PSFM-PFA is set to expand, different technical systems have to be found and based more on agroforestry systems that would allow villagers to continue growing agricultural crops, at least for some time, between rows of tree crops. A similar agroforestry system has been successfully applied in swidden farms in Southern Lao, which provides optimism that appropriate agroforestry systems could also be found for the conditions that prevail in Northern Lao.

107. Raising the forest cover to the target percentage will also be difficult in PFAs and village forests in the North. The process would have to start from a lower percentage of forest cover, so reforestation targets would be relatively high. Local people would have to be convinced to adjust their farming practices to accommodate tree crops, which would ultimately replace the agricultural crops. Nevertheless, smallholder woodlot models like the teak plantings in Louang Phrabang and the cinnamon plantings in Houaphan are available for adaptation in other places.

8. Financing plan

108. A partial estimate of the total financing that will be made available for FIP implementation amounts to around USD 150 million. This estimate includes the USD 30 million grant financing being requested from FIP, existing budgets of several partners in the forestry sector that are aligning their programs and activities with REDD+, new grant

financing being considered by the Ministry of Foreign Affairs of Finland, GOL contribution, and the still to-be-determined amounts that WB, ADB, and bilateral donors may grant after the preparation of projects in the proposed pipeline. The investments that will be put up by private enterprises for their existing/proposed industrial tree plantation projects are not yet included in the estimate.

109. The FIP leverage ratio based on currently available financing, including those being earmarked by MFAF, exceeds 1 : >3, i.e. more than 3 USD of financing leveraged for every 1 USD of FIP financing. The ratio is expected to improve further as the expected financing mentioned above, some of which are not yet included, are realized. Table 8 below separates the estimated earmarked financing from those that will be known after project preparation activities are initiated and completed in the coming year.

Table 8: Estimate of expected financing of the FIP Lao Investment Plan (million USD)

Project and component	MDB/ Source	FIP Grant	Leverage Funding	
			Amount	Type
1. Protecting Forests for Sustainable Ecosystem Services	ADB	13.34[4]	40.0[5]	Grant
	GIZ		2.8[1]+ TBD	Grant
> Piloting PSFM-NPA	KfW		12.0[1]+ TBD	Grant
> Piloting village and smallholder forestry	GOL		0.9	In kind
>Strengthening the legal,governance, incentives, and REDD+ framework				
2. Smallholders Forestry Project	MDB	3.33[4]	TBD	Grant/Loan
> ITP development	Private		9.6	Private
> Smallholder woodlot	enterprises			investment
>Strengthening the legal,	GOL		0.4	In kind
governance, incentives, and REDD+ framework	Villagers		TBD	In kind (labor)
3. Scaling up PSFM –PFA/WPFA	WB-IDA	13.33****	5.1[1] + 15	Grant
> PSFM-PFA, managed PFAs + up-scaling	MFAF		(TBD)	Grant
	WB-IDA/GEF		4.0[1] + 6.3[2]	Grant
> PSFM-NPA	MFAF		12 + 7.4[6]	Grant
> Village land and forestmanagement	MFAF		4.2[2]	Grant
> Smallholder forestry and village development	MFAF		4.2[2] 3.5[2]	Grant
> Strengthening the legal, governance, incentives, and REDD+ framework	GOL		0.9	In kind
Total		**30.0**	**128.41 +TBD**	

[1] Amounts reflected for existing projects representing the remaining budget re-oriented towards REDD+ relevant activities for implementation in 2012 until the end of the project, conversion rate used in MFAF, GIZ, and KfW figures: 1 Euro = 1.4 USD; [2] MFAF Identification Mission estimate; [3] FIM, FPP, PAREDD, FSCAP; [4] including project preparation grant; TBD = to be determined; [5]20.0M USD Lao share of GMC BCC Initiatives funding and $20.0M from the SNRM supporting villages along the corridor that are adjacent/inside watershed protection forests, adjacent to conservation forests and in villages with village forest; [6] 12M IDA and 7.4 M GEF financing for Biodiversity Conservation

9. FIP Lao Investment Plan Results Framework				
Scope and time frame	**Results**	**Performance indicators**	**Performance targets**	**Means of verification**
Lao PDR – FIP Transformative impact (10-15 years)	**Core objective:** A1. Reduced GHG emissions from deforestation and forest degradation, and enhanced forest carbon stocks by attaining FS2020 the 70% forest cover target	>Million tons of CO_2 emissions from deforestation and forest degradation > Million tons of CO_2 sequestered through natural regeneration and tree planting	> Reductions from Lao REL > Increases from forest reference level	> NFI at 5-year interval, use of estimation model > NFI
	Co-benefit objective 1: A2. Reduced poverty in forest dependent villages through increased incomes from forest landscape-based livelihoods	> % of ethnic groups with legally recognized tenure and access to economic benefits > Changes in income over time > % of enrollment of children of ethnic groups	>Clear upward trend > Clear upward trend > Clear upward trend	>Socio-economic monitoring
	Co-benefit objective 2: A3. Reduced loss in biodiversity and forest ecosystems services, especially concerning soil and water resources	> % change in forest fragmentation > Loss of intact forest areas important for ecosystem functions	> Clear downward trend > Clear downward trend	> Forest cover monitoring
Lao PDR – FIP Catalytic Replication Outcomes (5-10 years)	B1. Reduced deforestation and forest degradation through effective protection by capacitated grassroots-level forest managers in all forest areas	> Change in hectares of natural forest cover in state and outside state forest areas	> Positive change or clear reduction of downward change	> Forest cover monitoring
	B2. Increased participatory and direct management of forest resources by villages and households of various ethnic groups in the different forest area categories	> Change in hectares of forest areas under participatory or direct management by ethnic minority groups	> Clear upward trend	> National forest information system monitoring

Scope and time frame	Results	Performance indicators	Performance targets	Means of verification
	B3. Improved enabling environment for REDD+ and sustainable management of state forest areas, village forests, tree plantations, and smallholder woodlots	> Hectares of different state forest area categories under PSFM agreement with VFOs > Hectares of village forests registered > Hectares of smallholder woodlots established > Evidence of detection and prosecution of illegal logging > Extent to which women and men of various ethnic groups have access to relevant information in timely manner	> Clear upward trend > Clear upward trend > Clear upward trend > Clear upward trend > Clear upward trend	> National forest information system monitoring
	B4. Access to predictable and adequate financial resources, including results-based incentives for REDD+ and sustainable management of forests	> Leverage funds offered by bilateral partners under each of the four components > Funds availed from FCPF	> At least 1:3 ratio of FIP to leverage funds > Increasing	> National forest information system monitoring
	(Regional level)B5. Replication of FIP Lao learning in Southeast Asia	> Number of non-FIP countries in the region replicating FIP program approaches	> Increasing	> MDB cross-country review
Program – FIP Outputs and outcomes (2-7 years)	C1. Putting all forest areas under sustainable management by capacitated grassroots-level managers and supporting them	> Hectares of different state forest area categories under PSFM agreement with VFOs > Hectares of village forests registered > Hectares of smallholder woodlots established	> Clear upward trend > Clear upward trend > Clear upward trend	> National forest information system monitoring
	C2. Sustainable management of forests and forest landscapes to address the drivers of deforestation and forest degradation	> Change in ha deforested in various project areas > Change in ha deforested in various project areas > tCO2 sequestered/USD by various components	> Clear downward trend > Clear downward trend > Clear upward trend	> NFI > National forest information system monitoring

Scope and time frame	Results	Performance indicators	Performance targets	Means of verification
	C3. Empowered forest-dependent villages and households of various ethnic groups and promoting their practice of sustainable livelihoods	>Increase in area with clear and recognized tenure under sustainable livelihoods > Level and quality of ethnic group participation in decision making and monitoring involved in PLUP-LU	>Clear upward trend >Increase coverage of PLUP-LU in remote areas of various ethnicity	>National forest information system monitoring >PLUP-LU monitoring reports
	C4. An institutional and legal/regulatory framework that supports sustainable management of forests and protects the rights of villages of various ethnicity	>Amendment of the Forest Law to account for a number of REDD+ related issues	>Bill incorporating the deadline set by the National Assembly, which is June 2012	>>National forest information system monitoring
	(CIF program) C5. New and additional resources for REDD+ implementation	>Leverage factor of FIP funding > USD financing from various sources (contributions broken down by GOL, MDBs, other multilateral and bilateral partners, CSOs, private sector)	>At least 1:3 FIP-non-FIP ratio	>Compilation of project preparation reports and financing agreements
	(CIF program) C6. Integration of learning by development actors active in REDD+	>Number and type of knowledge assets (e.g., publications, studies, knowledge sharing platforms, learning briefs, communities of practice, etc.) created and shared	>Increasing number with quality assessment by MDBs	>MDB monitoring
Program – FIP activities (1-7 years)	D1. Participatory, sustainable management of state forest areas	>Change in ha of PSFM area > Change in carbon stocks in state forest areas > Number of participating villages, number whose dominant population comprise ethnic minority > Number of women participating in PSFM	>Clear upward trend > Clear upward trend > Clear upward trend > Clear upward trend	>National forest information system monitoring > NFI > Project monitoring

Scope and time frame	Results	Performance indicators	Performance targets	Means of verification
	D2. Village forestry	>Hectares of village forests registered > Change in carbon stocks in village forests	> Clear upward trend > Clear upward trend	>Project monitoring
	D3. Smallholder forestry	>Hectares of smallholder woodlots established > Change in carbon stocks in smallholder woodlots	> Clear upward trend > Clear upward trend	>Project monitoring
	D4. Strengthening the legal, governance, incentives, and REDD+ framework	> Amendment of the Forest Law to account for a number of REDD+ related issues > Evidence of detection and prosecution of illegal logging > Number of staff trained, proportion of women > Number of villagers trained, proportion of women > Benefits shared by participating villages > Extent to which women and men of various ethnic groups have access to relevant information in timely manner	> Bill incorporating the deadline set by National Assembly >Clear upward trend > Clear upward trend > Clear upward trend > Clear upward trend > Clear upward trend	>National forest information system monitoring > Project monitoring

Annex 1: Proposed program pipeline

Summary of proposed program pipeline			
Project and component	**Proposed FIP Financing (M USD)**	**Allocated and proposed leverage financing (M USD)**	**Potential carbon emission reductions**
1. Protecting Forests for sustainable Ecosystem Services	13.34	40.7 (TBD)	120,000 tCO_2 in first year; 2.5M tCO_2 after 8 years
2. Smallholder Forestry	3.33	10.0 (TBD)	TBD
3. Scaling-up PSFM	13.33	43.2 (TBD)	340,000 tCO_2 in first year; 2.8 M tCO_2 after 8 years
Total	**30.0**	**93.9 (TBD)**	**5.3 $MtCO_2e$ +TBD**

A1.1 Project 1: Protecting Forests for Sustainable Ecosystem Services

A1.1.1 MDBs, government agencies, and direct stakeholders

MDB, government agencies, and direct stakeholders		Primary role
MDB and co-financier	ADB as MDB ADB GIZ KfW	FIP grant financing Co-financing Technical assistance grant Financial assistance grant
Government agencies	MONRE DFP PFPO	Policy and steering National level execution Provincial level execution
Direct stakeholders	DFPO VFOs Villagers	NPA-FMU manager, technical assistance to VFOs NPA-FMU management partner of DFPO, VF manager Smallholder woodlot operators, participants in others

A1.2.2 Problem statement

1. There are 22 National protected Areas, 66 provincial PAs, and 143 district PAs all adding up to 4.7 million ha, of which 2.37 million ha (50%) are forested and 0.60 million ha (13%) can potentially be rehabilitated back to forest.

2. Management plans have not yet been formulated for most of the 24 NPAs, but therefore effective management has thus far been wanting. Deforestation has been plaguing the conservation forest areas, going on at the rate of >1% per annum, and has caused, along with forest degradation, the reduction of forest cover to less than 50% of those areas at present. Without resolute intervention, forests from those areas will continue to be degraded and to disappear with concomitant loss in wildlife habitat and biodiversity.

3. Under the Forest Law, timber harvesting is not allowed in PAs. However, as one of their customary rights, villagers can harvest up to 5 m^3 for house construction. This customary right is often abused resulting in more rapid forest degradation. Other drivers of deforestation and forest degradation, such as shifting cultivation and illegal logging, are also at work in PAs as well as in forests outside the PAs that act as wildlife corridor connecting PAs and other state forests. Participatory land-use planning must be undertaken in those areas to identify village forests as the first step to put them under sustainable management.
A1.2.3 Proposed transformational impact and co-benefits

4. Lao PDR has recently identified a total of 8.2 million ha that will be designated as Watershed Protection Forests. Some of this area has already been designated by provinces, but this does not provide as much security as National status. Lao PDR is a mountainous country and its water resources are a crucial component of future economic development to meet growing demand for potable water, irrigation and hydro-power generation. The National Assembly issued Decree No. 333/NA on 19th July 2010 on Protection Forest, which defines the Criteria for Protection Forest and establishes the procedures for demarcation and management. DOF signed about 5.9 million ha as Watershed Protection Forest Areas (WPFA). However, the process of delineating and officially declaring individual WPFAs is has hardly begun, and will require substantial resources. Deforestation has been plaguing the WPFAs, with the result that more than 50% of the total area designated is degraded or deforested and in need of restoration. Without resolute intervention, forests from those areas will continue to be degraded and to disappear with concomitant loss in forest ecosystems services and biodiversity.

5. Decree on Protection Forest, areas designated, as Protection Forest will be divided into a *Total Protection* Zone and a *Controlled Use* Zone, where local people are allowed to harvest wood and other forest products in accordance with a management plan. Under the Forest Law, local communities have customary rights to harvest up to 5 m^3 for house construction, subject to approval by the Village Head and DFO. This customary right is often abused resulting in more rapid forest degradation. Other drivers of deforestation and forest degradation, such as shifting cultivation and illegal logging, are also at work in WPFAs., especially along the international borders where many of the WPFAs are located Participatory land-use planning must be undertaken in those areas to identify village forests as the first step to put them under sustainable management.

6. Most of the NPAs and WPFAs are located in more remote and mountainous areas and the local population is predominantly from one or more of the 43 ethnic groups recognized in Lao PDR. Most of these groups have traditionally practiced “swidden” or shifting cultivation, which has transformed large tracts of forest to secondary growth. Some of the current shifting cultivation involves clearing primary forest (thought to be around 10%), with the balance being clearing the secondary forest, but the practice involves burning the woody biomass and releasing large amounts of CO_2, as well as promoting soil erosion on steep slopes. The government has had a policy for some years to try to encourage these farmers to adopt sedentary farming practices. In order to encourage this it is necessary to support alternative sources of livelihood as well as increasing the productivity of the staple hill rice food crop. Hill rice productivity is extremely low, resulting in serious seasonal food shortages in most of these communities. Income from perennial

crops such as fruits and nuts (e.g. cashew), bamboo and rattan which could be grown on former swidden areas could be used to purchase rice from areas with more suitable growing conditions. However perennial crops need time before an income stream is generated and the provision of paid employment for forest surveying, inventory and protection and forest restoration could bridge the gap and encourage farmers to reduce the amount of land cleared annually for crop production. Nutrition and income can also be improved with the development of permanent home gardens for vegetables and fruit growing around settlements. In addition to the livelihood investments, small-scale rural infrastructure such as piped water supplies and limited improved road access will also encourage and support a transition to a lifestyle that does not involve regular burning of forest

7. The project is aimed at piloting participatory, sustainable management (PSFM) in NPAs and WPFAs. PSFM involves defining village cluster-based conservation and protection forest units (CFU) and organizing VFOs in each village in the cluster to assist DFPO in managing the CFU. Management activities include surveying and inventorying the forest for preparing long-term management plan that is consistent with the NPA/WPFA management plan and conducting annual operations based on the CFU management plan, including strict protection in core zones; forest restoration in degraded areas; ecotourism, agroforestry, and sustainable harvesting of NTFP in management zones; and forest protection from the various drivers of deforestation and forest degradation.

8. The project will also have village forestry and smallholder forestry components. PLUP-LA will be implemented to identify village forests and land outside state forest areas that can be used for establishing smallholder woodlots and other multi-purpose perennial tree crops. Management of village forests will be entrusted to the same VFOs that participate in PSFM-SFA. As well, the establishment and management of woodlots will be undertaken by the same villagers who are VFO members. Forestry work, except tree planting, takes place in the dry season, so that villagers can tend to their agricultural crops in the rainy season. In this manner, villagers will be gainfully employed throughout the year.

9. All 24 NFAs have already been delineated, and 2 NPAs together with 2 WPFAs that provide connectivity between them will be selected for piloting of PSFM-NPA/WPFA. ADB is implementing the BCC Project in Southern Lao, and 1-2 NPAs along the Vietnam-Lao PDR-Cambodia border will be selected for piloting. PLUP-LA has been conducted in some of the villages along the corridor. This will facilitate the inclusion of village forestry and smallholder forestry as new activities to be piloted in adjacent areas outside NPA/WPFAs and then replicated to other areas. The project will also include REDD+ related activities, such as REDD+ awareness raising, carbon stock assessment, sub-national REL establishment, and MRV involving both forest officers and villagers.

A1.2.3 Proposed transformational impact and co-benefits

10. The project is aimed at piloting participatory, sustainable management (PSFM) in WPFAs. FIP funded component of the BCC strengthening the project to incorporate REDD+ pilot activities within the overall project framework. The BCC project is supporting ,what are currently, 3 Provincial Watershed Protection Forest Areas covering a total of 268,000ha that connect three NPAs, and together cover over 300,000 ha in three Provinces The boundaries of these WPFAs will be surveyed and demarcated on the ground and it is expected that the

areas will be upgraded to National WPFAs in accordance with the Decree on Protection Forest. These WPFAs connect three NPAs (Xe Sap, Dong Ampham and Xe Pian), and the 69 villages that are the focus of the project are located within and on the margin of the WPFA and the NPAs. In addition to the biodiversity benefits from improving connectivity within the corridor, there are additional benefits for hydropower generation with a total of 900MW generating capacity under construction or planned, which will inundate around 97,000 ha of which much is forest. This also provides a potential opportunity to pilot biomass disposal to minimize emissions from both the removal process and also from future decomposition of any residual submerged biomass.

11. PSFM-WPFA involves defining village cluster-based protection forest units (PFU) and organizing VFOs in each village in the cluster to assist DFPO in managing the PFU. Management activities include preparing long-term PMU management plan that is consistent with the WPFA management plan and conducting annual operations based on the PFU management plan, including strict protection in core zones; forest restoration in degraded areas; ecotourism, agroforestry, and sustainable harvesting of NTFP in management zones; and forest protection from the various drivers of deforestation and forest degradation. In order to comply with REDD+ requirements additional training and capacity building will be funded by FIP at provincial, District and Village level to raise awareness and understanding of the drivers of FDD and the measures needed to reduce emissions. Additional funds will also be used to support the development of Reference emission levels for the WPFAs as a basis for measuring the outcome of measures designed to reduce emissions and increase carbon sequestration. This will include piloting community monitoring of carbon stocks and field-testing methods being developed nationally.

12. Much of the area within the WPFAs that form the corridor is subject to swidden agriculture, despite government efforts to phase it out as an agriculture practice, and this is contributing significantly to emissions of CO_2 and general degradation of the forest and declining water quality. The BCC project has a component on livelihood improvement, which will also support the development of alternative livelihoods and cropping systems, especially agroforestry, for farmers. One aim of the project is restoration of degraded forests within the corridor with a priority on areas that connect residual areas of natural forest with the PAs and at the same time improve soil and water conservation. The funds available for this activity in the BCC project are limited and will only cover restoration of 2,400 ha, compared with the area in need of restoration, which is estimated to be around 125,000 and so additional FIP funds will enable a larger area to be so restored. This work will be done with indigenous (often slow growing species) within the *Total Protection Zone* so that they will never be harvested and will sequester carbon for a prolonged period, but there will be major co-benefits in terms of biodiversity, soil and water conservation.

13. The project has village forestry and smallholder forestry components that include management of small areas of natural forest allocated for community/village management, as well as provision for the establishment of livelihood plantations and village woodlots for fuel and timber for local use PLUP-LA will be implemented to identify the village forests and land outside state forest areas that can be used for establishing smallholder woodlots. Management of village forests will be entrusted to the same VFUs that participate in PSFM-SFA. As well, the establishment and management of woodlots will be undertaken by the

same villagers who are VFO members. Forestry work, except tree planting, takes place in the dry season, so that villagers can tend to their agricultural crops in the rainy season. In this manner, villagers will be gainfully employed throughout the year.

14. Through the project, avoided deforestation and avoided forest degradation of pilot WPFAs will result in reduction of emissions by about 0.8Mt CO_2e over an 8-year period. In addition forest regeneration as secondary forest in former shifting cultivation re-grows and restoration plantings become established, after 4 years will result in net annual increase in carbon stocks that will result in net annual sequestration of about 0.8MT of CO_2 over the same period. Since emission reductions will continue beyond the 8 year period with no further investment the cost per tCO_2 depends on the accounting period used . Co-benefits include conservation of biodiversity and other ecosystem services; improvement of local livelihoods, poverty reduction, and human development of forest dependent communities of all ethnic origins; and promotion of gender equality and social sustainability.

15. As noted earlier, there has been tremendous development on the regulatory framework in the Lao forestry sector since the mid-1990s and to a large extent the regulatory framework is hindered by capacity issues however there are additional areas for legal and regulatory strengthening and all three FIP projects are expected to make contributions in this regard; IFC in developing the enabling environment for private sector partnerships with smallholders; ADB in relation to Payment for Environmental Services and alternative livelihoods in the context of PLUP and agricultural productivity enhancement; and WB in removing remaining obstacles to scaling up PSFM to the national level.

A1.2.4 Implementation readiness

16. Delineation of individual WPFAs is still going on. However, the boundaries of some WPFAs are already known, and from among those WPFAs, 2-4 WPFAs will be selected for piloting of PSFM-WPFA. ADB is implementing the BCC Project in Southern Lao, which includes watershed protection forests in the corridors. Watershed Protection Forests in those corridors could be selected for piloting PSFM-WPFA. PLUP-LA has been conducted in some of the villages along the corridor. This will facilitate the inclusion of village forestry and smallholder forestry as new activities to be piloted in adjacent areas outside state forest areas and then replicated to other areas. The project will also include REDD+ related activities, such as REDD+ awareness raising, carbon stock assessment, sub-national REL establishment, and MRV involving both forest officers and villagers.

17. The GMS Core Environment Programme, which covers Lao PDR as well as Thailand, Cambodia, Vietnam and Yunnan Province of China, has been in operation for five years and is about to commence a second phase. It will be able to provide substantial technical support to the project, especially with regard to climate change and valuation of ecosystem services and PES

A1.2.5 Potential national and international partners

18. Program implementation will involve DFP and PFPO officers as trainer of trainers and DFPO staff as trainers of villagers that are organized into VFOs. Training will cover not only

PSFM-SFA, but also village forestry and establishment of smallholder woodlots. The same existing ADB and KfW/GIZ financing arrangement will continue. In addition, FIP financing will be made available through ADB as the MDB to provide additional financing for piloting PSFM-NPA, village forestry and smallholder forestry in areas outside NPA/WPFAs, and for conducting REDD+ related activities, including restoration of forest where multiple benefits are maximized through improving connectivity between residual dense forest patches and protecting step slopes from erosion.. This latter could leverage additional PES in the future.

Support arranged with international partners, million USD				
International partners	**PSFM-NPA**	**Village forestry**	**Smallholder forestry**	**Law enforcement, governance, etc.**
ADB	20.0 BCCI budget) + 13.3.0 (FIP) + TBD			
GIZ	2.8 (existing budget) + TBD			
KfW	12.0 (existing budget) + TBD			
Total	**48.1 + TBD (to be determined during project preparation)**			

A1.1.6 Rationale for FIP funding

FIP Criterion	Justification
Climate change mitigation potential	PSFM-NPA/WPFA, village forestry (VF), and smallholder forestry (SHF) in pilot sites will result in avoided deforestation and degradation, in turn resulting in reduced net annual GHG emissions rising from about 120,000 tCO_2e initially to over 500,000 t CO2e after 8 years, of which carbon stock enhancement represents about 50% initially, rising to almost 70% after 8 years directly due to the additional FIP funds. There will be additional reductions from the funds already committed to the BCC project, estimated in the project PPTA to be around 100,000 t CO_{2e} initially rising to over 200,000 t CO_{2e} after 8 years.
Potential for large scale-up	PSFM-NPA/WPFA will use similar institutional framework and participatory management systems as PSFM-PFA, which has demonstrated good potential in large scaling-up of pilot operations; VF and SHF in areas outside NPA/WPFAs will be piloted at a scale to be determined during project preparation, with potential for large scale-up covering more than half a million ha possible by 2020
Cost effectiveness	FIP budget in pilot PAs, VFs, SHFs : USD 2.84/t CO_2e Leverage budget in pilot PAs, VFs, SHFs: USD 5.5/t CO_2e (this is higher than the FIP financed activities because it includes investment in forest delineation and other overhead costs that will not need to be covered by the additional FIP investment)
FIP Criterion	**Justification**
Implementation potential	PSFM-SFA, VF, and SHF support the Lao REDD+ efforts; included as a major strategy in FS2020 to help attain the 70% forest cover target; has demonstrated institutional and implementation arrangements patterned after the SUFORD Project; has demonstrated sustainability as shown in the SUFORD Project; involves villagers

	organized into VFOs as main participants in grassroots-level management and decision-making in PSFM-SFA, VF, and SHF, as well as in village development aspects.
Integration of sustainable development (co-benefits)	PSFM-NPA/WPFA, VF, and SHF are geared towards biodiversity conservation and sustaining ecosystem services; climate-proofed management plans to be developed and plan implementation will enhance the adaptive capacity of forest ecosystems and forest dependent communities to the impacts of climate change; contribute to livelihood development
Safeguards	PSFM-NPA/WPFA and VF utilize natural regeneration rather than planting of exotics; PSFM-NPA/WPFA, VF, and SHF do not support conversion of forests to tree plantations and other agricultural uses; rights of local people are respected, women and ethnic minorities well represented in decision making and social and economic opportunities

A1.1.7 Safeguard measures

19. The general environmental and social risks and potential impacts associated with REDD+ in Conservation and Protection forests, and the mitigation measured against them, have already been identified developed, under the BCCI. A separate Environmental and Social Impact Assessment (ESIA) will be conducted during the preparation of specific investments, using the experience of BCCI implementation, and relevant safeguard instruments will be developed in line with: (i) laws and regulation of the country; (ii) policies and procedures of financing agencies; (iii) requirements of the UN system in particular the guidelines of UN- REDD Program and the guidelines of the UNDG on Indigenous Peoples (iv) REDD+ safeguards under the UNFCCC as agreed in Cancun (COP 16, LCA Decision, Annex 1, Paragraph 2). Throughout the preparation and implementation process, community participation and consultation will be emphasized to avoid any negative impacts on the livelihood of the local population.

20. Mechanisms for conflict resolution, grievance and appeals will be established and disseminated to all relevant stakeholders, including indigenous peoples who may be affected by the project. To the extent possible, existing mechanisms on customary use of forests and for conflict resolution, etc, will be utilized. Relevant Indigenous Peoples and Local Communities will be encouraged and empowered to participate in the design and implementation of specific investments, with view to minimizing negative impacts and ensuring sustainability.

A1.1.8 Financing plan

Project component	FIP budget (M USD)	Ex-FIP budget (M USD)	Total budget (M USD)	% FIP	Emission* reduction (Mt CO_2e)	Carbon* price, FIP (USD/tCO_2e)	Carbon* price, total (USD/tCO_2e)
NPA, VF, SHF	13.3	20	33.3	40	2.5	2.84	5

*Excluding budget that are to be estimated during project preparation

A1.1.9 Program preparation timetable

Stage	Steps	Indicative dates, for PSFM of PFAs
Preparation	Preparatory mission Project appraisal document (PAD) preparation	Jan/Feb/2012 Feb-May/ 2012
Evaluation	Multilateral review of project documents Refinement of project documents	June/2012 June/2012
Approval by FIP SC	Submit the pre-appraisal document to the FIP SC for approval	June/ 2012
Approval	Submission to the MBD Board Signing of agreement between GOL and bilateral partners	July/2012 Oct/2012

A1.1.10 Request for project -preparation grant

21. A FIP grant is requested covering all project preparation activities as shown in the Table below.

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FOREST INVESTMENT PROGRAM **Project/Program Preparation Grant Request**			
1. **Country/Region**:	*Lao PDR*	2. **CIF Project ID#**:	(Trustee will assign ID)
3. **Project Name:**	*Protecting Forests for Sustainable Ecosystem Services (PFSES)*		
4. **Tentative FIP Funding Request (in USD million total) for Project[4] at the time of Investment Plan submission (concept stage):**:	*Loan:*	*Grant: $13.33 million*	
5. **Preparation Grant Request (in USD):**	*0.5 million*	*MDB: ADB (Asian Development Bank)*	
6. **National Project Focal Point**:	***Mr. Oupakone Alounsavath*** *Head of Planning Division* *Department of Forestry, Ministry of Agriculture and Forestry (MAF)* *Email: dofadmin@gmail.com*		

[4] Including the preparation grant request

7. **National Implementing Agency (project/program):**	***Department of Forestry*** *Ministry of Agriculture and Forestry (MAF)*	
8. **MDB FIP Focal Point and Project/Program Task Team Leader (TTL)**:	*Headquarters-FIP Focal Point:* ***David McCauley*** *Lead Climate Change Specialist* *Email: dmccauley@adb.org*	*TTL:* ***Sanath Ranawana*** *Senior Natural Resources Specialist* *Email: sranawana@adb.org*

9. **Description of activities covered by the preparation grant:**

- Detailed scoping and further assessments of the activities listed under the captioned project to address key drivers of DFD, the FIP outcomes and themes of the IP;
- Review scope and implementing arrangements of ongoing ADB projects' to determine the best fit for incorporating the activities proposed above;
- Assess institutional capacity, human resources development needs and monitoring mechanisms for the proposed interventions.
- Undertake due diligence assessments (technical, economic, social, environmental, risk, etc.) for project financing proposal and any necessary surveys, consultation and refinement

The project preparation grant will be used to cover the costs associated with preparing the above captioned project including hiring of national and international consultants, field visits, stakeholder consultation workshops and dissemination of the concept note at the central level and in relevant provinces.

10. **Outputs:**

Deliverable	**Timeline**
(a) Project Concept Note	February 2012
(b) Consultation workshops at the central and relevant provinces	February -May 2012
(c) Project Appraisal Document	April 2012

11. **Budget (indicative):**

Expenditures[5]	**Amount (USD) -** estimates
Consultants	280,000
Equipment (computers, gps, projector, other)	30,000
Workshops/seminars	80,000
Travel/transportation	30,000
Others (admin costs/operational costs)	35,000
Contingencies (max. 10%)	45,000
Total Cost	**500,000**
Other contributions:	
• Government (in kind)	50,000 (staff inputs, logistics support)

[5] These expenditure categories may be adjusted during project preparation according to emerging needs.

• MDB	tbd
• Private Sector	
• Others (please specify)	

12. **Timeframe** (tentative)

Submission of pre-appraisal document for FIP Sub-Committee Approval: **June 2012**
Expected Board/MDB Management[6] approval date: **July 2012**

13. **Other Partners involved in project design and implementation**[7]:

Government of Lao PDR: Ministry of Agriculture and Forestry (MAF), Ministry of Natural Resources and Environment (MONRE), Ministry of Planning and Investment (MPI), Ministry of Justice (MoJ) and Ministry of Finance (MoF) at the national level. Provincial government staff in the proposed provinces of the line ministries and the provincial administration offices will also participate in the design and implementation of project activities.

Other Development Partners: JICA, GIZ through CliPAD project, KfW

Mass organizations (Lao Women's Union and Lao National Front for Construction and Lao Youth Union) and the relevant Civil Society Organizations will also be involved in the design and implementation of activities. DGM implementation and coordination through a national implementing organization yet to be identified.

14. **If applicable, explanation for why the grant is MDB executed:** Execution by ADB will ensure an early implementation of PPG and facilitate the processing and approval of change in scope paper by the Government and ADB. Execution by ADB is also in conformity with ADB TA procedures.

15. **Implementation Arrangements** (incl. procurement of goods and services)**:**

ADB will administer procurement of consulting services and goods from the Headquarters in Manila with support from the Lao Resident Mission, and the Asian Development Bank's Procurement and Financial Management Guidelines will be applied.

[6] In some cases activities will not require MDB Board approval
[7] Other local, national and international partners expected to be involved in design and implementation of the project.

A1.2 Project 2: Smallholder Forestry

A1.2.1 MDBs, government agencies, and other stakeholders

MDBs, government agencies, and direct stakeholders		Role
MDB and co-financier	IFC	FIP and co-financing
Government agencies	MAF, DOF/PFO/DFO, MONRE, MPI, MIC	Policy and steering National/provincial/district level execution
Direct stakeholders	Private enterprise Individual households	ITP development and support to smallholder woodlot development Smallholder woodlot management

A1.2.2 Problem statement

22. There are 8.076 million ha of land outside the three categories of state forestry areas, of which about 34.1% or 2.598 million ha still contain forests. FS2020 calls for increasing the forest cover of Lao PDR to 16.576 M ha or 70% of the total Lao land area. Assuming that the three categories of state forestry areas would be able to attain 85% forest cover by 2020, the rest of the country's land area should attain a 41% forest cover, so that the country could attain the goal of 70% forest cover. This would require that the national target for industrial tree plantations (ITP) of 500,000 ha by 2020 is met, and that another 515,000 ha of tree plantations and naturally regenerated forests are established through reforestation efforts outside the state forest areas by local communities in village forests and by individual households in small landholdings.

23 Private enterprises that have not yet grasped and practiced the concept of 'corporate social responsibility' often have low environmental and social standards. In pursuit of high profit, in many cases they undertook ITP development that converted natural forests, which is contrary to policy, and deprived local people of land that they were using for collecting various products or could use for farming.

A1.2.3 Proposed transformational impact and co-benefits

24. The project has been designed to address the problem by involving private ITP enterprises, which have been selected for their capability and high environmental and social standards, in assisting farmers to develop woodlots on their own land. The concept seeks carbon-positive outcomes by transforming significant areas of degraded and underutilized lands into productive assets through smallholder forestry with potential partnerships with ITPs. Application of the concept will be piloted in some of the poorest districts of Lao PDR where lands have been degraded, annual household cash incomes are less than USD50, and literacy rates are less than 20%. These communities face substantial constraints to livelihood improvement through lack of secure land tenure, poverty, nutrition, health, infrastructure, and financial and technical support. Most areas, despite being used by local communities for swidden agriculture, are contaminated by unexploded ordinance (UXO) remaining from the American War, the clearance of which limits return to productive land use.

25. Project activities will involve participatory land-use planning and allocation of land (PLUP-LA) to farmers; documentation of ownership of allocated land; extension services; technical assistance on sustainable agroforestry systems; provision of support for initial establishment of woodlots, market development; and related REDD+ activities. Smallholder woodlot development on degraded lands will increase carbon stocks and at the same time dramatically increase local livelihoods and incomes. Plantings will reduce fire risk, which will also reduce loss of remaining forests. Avoidance of deforestation and degradation will result since farmers will have viable options to shifting cultivation.

26. As noted earlier, there has been tremendous development on the regulatory framework in the Lao forestry sector since the mid-1990s and to a large extent the regulatory framework is hindered by capacity issues however there are additional areas for legal and regulatory strengthening and all three FIP projects are expected to make contributions in this regard; IFC in developing the enabling environment for private sector partnerships with smallholders; ADB in relation to Payment for Environmental Services and alternative livelihoods in the context of PLUP and agricultural productivity enhancement; and WB in removing remaining obstacles to scaling up PSFM to the national level.

A1.2.4 Implementation readiness

27. Participatory land-use planning and land allocation methodology has been implemented for more than a decade and is already a standard practice in many districts. Training on PLUP-LA will be conducted, if necessary in some districts. MAF-DOF will coordinate with PFO, DFO, and district land management authorities in extension work and conduct of PLUP-LA, as well coordinate with UN and bilateral agencies that are engaged in UXO removal to give priority to project sites. UXO removal will be coordinated to arrive at a common standard for both ITP and smallholder sites. The selected private enterprise will provide seedlings and other inputs to the farmers, who will pay for them from the harvests of their woodlots.

A1.2.5 Potential national and international partners

28. Program implementation will involve DOF, PFO, and DFO in extension and training activities, and district units of Land Management in conducting PLUP-LA. The selected private enterprises will be the day-today partners of participating households. FIP, through MDB as MDB, will provide a USD 4 million grant to GOL; in addition MDB will provide capital to the selected private enterprises.

A1.2.6 Rationale for FIP funding

FIP Criterion	Justification
Climate change mitigation potential	Establishment of smallholder woodlots by participating households on 32,000 ha of degraded land will result in reduced emissions estimated at XX Mt (TBD) CO_2e during the xx-year (TBD) period; avoidance of deforestation since farmers will have a viable option to shifting cultivation will add another XX Mt CO_2e (TBD) during the same period
Potential for large scale-up	Potential for replication and expansion of up as much as 178,000 ha in the Southern Lao districts covered by pilot and more in other

	places
Cost effectiveness	FIP budget: USD X/t CO_2e Leverage budget: USD X/t CO_2e
Implementation potential	Smallholder forestry supports the Lao objective to attain 70% forest cover and REDD+ efforts; will utilize tested institutional and implementation arrangements in PLUP-LA; involves villagers as main participant in land management and decision-making
Integration of sustainable development (co-benefits)	Conservation of biodiversity and sustaining ecosystem services in forests that would otherwise be cleared for agriculture; avoided deforestation enhances the adaptive capacity of forest ecosystems and forest dependent communities to the impacts of climate change; contributes to livelihood development and to human development in indigenous and local communities that are among the poorest in the country
Safeguards	Smallholder development will be on lands that have already been deforested and are difficult to reforest by natural means; prevents further conversion of forests to agriculture; immediate replanting in harvested woodlots

A1.2.7 Safeguard measures

29. The general environmental and social risks and potential impacts associated with REDD+ in Production Forests, and the mitigation measured against them, have already been identified developed, under the **Stora Enso project**. The Stora ESIAs conducted under SNRMPEP and BCCI identified the following environmental and social risks associated with REDD+ in Production Forests: (a); (b); (c). A separate Environmental and Social Impact Assessment (ESIA) will be conducted during the preparation of specific investments, using the experience of implementation under the Stora Enso project, and relevant safeguard instruments will be developed in line with: (i) laws and regulation of the country; (ii) policies and procedures of financing agencies; (iii) requirements of the UN system in particular the guidelines of UN- REDD Program and the guidelines of the UNDG on Indigenous Peoples (iv) REDD+ safeguards under the UNFCCC as agreed in Cancun (COP 16, LCA Decision, Annex 1, Paragraph 2). Throughout the preparation and implementation process, community participation and consultation will be emphasized to avoid any negative impacts on the livelihood of local population.

30. Mechanisms for conflict resolution, grievance and appeals will be established and disseminated to all relevant stakeholders, including indigenous peoples who may be affected by the project. To the extent possible, existing mechanisms on customary use of forests and for conflict resolution, etc, will be utilized. Relevant Indigenous Peoples and Local Communities will be encouraged and empowered to participate in the design and implementation of specific investments, with view to minimizing negative impacts and ensuring sustainability.

A1.2.8 Financing plan

Funding source	FIP budget (M USD)	Non-FIP budget (M USD)	Total budget (M USD)	% FIP	Emission reduction (Mt CO_2e)	Carbon price, FIP (USD/tCO_2e)	Carbon price, total (USD/tCO_2e)
IFC	4.0	33.0	37.0	11%	TBD	TBD	5
Private enterprise		9.0	9.0	0%	TBD	TBD	5
Total	**4.0**	**42.0**	**46.0**	**9%**			

A1.2.9 Program preparation timetable

Stage	Steps	Indicative dates
Preparation	Scoping study mission Project document preparation	July-Aug 2012
Approval by the FIP-SC	Submit Request for Project Approval to the FIP SC	September 2012
Approval by IFC Management	IFC Board approval	TBD

A1.2.10 Request for project -preparation grant

31. A FIP Project Preparation Grant for this project will be requested later in November 2011.

A1.3 Program 3: Scaling-up Participatory Sustainable Forest Management

A1.3.1 MDBs, government agencies, and direct stakeholders

Stakeholders/Implementers		Primary role
MDB and co-financier	WB IDA MFA of Finland GEF/GIZ	FIP grant financing Co-financing (across themes) Technical assistance grant Biodiversity Conservation
Government agencies	MAF MONRE DOF (MAF) DFR (MONRE) PFO	Policy and steering in PFA and Village Forest Policy and steering in NPA and WPFA National level execution in PFA and Village Forest National level execution in NPA and WPFA Provincial level execution
Direct stakeholders	DFO VFOs Villagers	PFA/NPA/WPFA manager, technical assistance to VFOs PFA/NPA/WPFA management partner of DFO, VF, NPA Smallholder woodlot operators, active participants

A1.3.2 Problem statement

32. As the Lao RPP has clearly indicated there are multiple drivers of deforestation operating simultaneously in Lao PDR and an integrated, coordinated approach will be required to address the diversity of threats in any given area. This program will build on the experience of SUFORD which is currently being implemented in 18 PFAs located in 9 provinces and on GEF financed activities in 5 NPAs. The FIP support is expected to be implemented starting in 2013 with IDA, GEF, GIZ, and MFAF cofinance and will expand PSFM coverage in PFAs and PAs and undertake piloting level activities in adjoining WPFAs. The project is expected to contribute to developing and implementing legal, governance, incentives, and REDD+ frameworks across all forest types with a focus on law enforcement, inter-ministerial coordination, and engagement of provincial authorities on land use planning and allocation

33. PFAs covered under SUFORD are concentrated in Southern and Central provinces, while provincial governments in the North are left without much assistance to similarly put their PFAs under participatory, sustainable management. Under the Forest Law, timber harvesting in a PFA cannot be undertaken without an approved forest management plan. Timber harvesting in WPFAs and PAs is prohibited. However, as one of their customary rights, villagers can harvest up to 5 m^3 for house construction from within PFAs. Quotas for salvage logging associated with infrastructure, mining and hydro development are often issued and implemented without adequate planning or oversight. Other drivers of deforestation and forest degradation, such as shifting cultivation, are also at work in unmanaged or underfunded PFAs, PAs and WPAs, as well as in forests outside the

boundaries of state forests. Participatory land-use planning must be undertaken in those areas to identify village forests as the first step to put them under sustainable management

A1.3.3 Proposed transformational impact and co-benefits

34. The program is aimed at further up-scaling participatory, sustainable forest management (PSFM) to as many of the remaining 33 PFAs as possible, most of which are in Northern Lao provinces. PSFM-PFA involves defining village cluster-based forest management units and organizing VFOs in each village in the cluster to assist DFO in managing the FMU. Management activities include preparing long-term FMU management plan and conducting annual operations based on the plan, including the maintenance of high conservation value forests, restoration of degraded areas, sustainable harvesting of NTFP and timber based on reduced impact logging techniques, natural regeneration of harvested stands, and forest protection from the various drivers of deforestation and forest degradation.

35. Because PFAs, PAs and WPFAs often share boundaries the coordination of land-use planning and allocation, monitoring, reporting, capacity building and law enforcement efforts at the landscape scale is an essential part of the proposed program. Providing incentives to villagers and especially ethnic groups to engage in state forest management and protection is essential to achieving GOL's overarching goal of securing and increasing forest cover. The program is also expected to provide support for village forestry and smallholder forestry components. PLUP-LA will be implemented to identify village forests and land outside state forest areas that can be used for establishing smallholder woodlots. Secure tenure to land and usufruct and access to PES benefit streams may provide the necessary incentives for sustained support from the local level. Detailed institutional arrangements will be defined during the next phase of preparation but it is expected that management of village forests will be entrusted to the same VFOs that participate in PSFM-PFA. As well, the establishment and management of woodlots will be undertaken by the same villagers who are VFO members. Forestry work, except tree planting, takes place in the dry season, so that villagers can tend to their agricultural crops in the rainy season. In this manner, villagers will be gainfully employed throughout the year.

36. Through the project, avoided deforestation and avoided forest degradation of the 51 PFAs/PAs/WPFAs can only be roughly estimated at this stage but are expected to result in reduction of emissions by about 1.0 Mt CO_2e over an 8-year period. In addition, forest regeneration will result in enhanced carbon stocks resulting in sequestered carbon equivalent to 1.8 Mt CO_2e. Co-benefits include conservation of biodiversity and other ecosystem services; improvement of local livelihoods, poverty reduction, and human development of forest dependent communities of all ethnic origins; and promotion of gender equality and social sustainability.

37. As noted earlier, there has been tremendous development on the regulatory framework in the Lao forestry sector since the mid-1990s and to a large extent the regulatory framework is hindered by capacity issues however there are additional areas for legal and regulatory strengthening and all three FIP projects are expected to make contributions in this regard; IFC in developing the enabling environment for private sector partnerships with smallholders; ADB in relation to Payment for Environmental Services and

alternative livelihoods in the context of PLUP and agricultural productivity enhancement; and WB in removing remaining obstacles to scaling up PSFM to the national level

A1.3.4 Implementation readiness

38. All 51 PFAs have already been delineated, however overlapping development activity (proposed mining, hydro or other infrastructure) has not yet been assessed) The Forest Law has provided for participatory, sustainable management of these areas. Official PSFM guidelines have been prepared for PFAs, and training of trainers based on the PSFM guidelines have been undertaken. WB and MFAF, which have been providing financial and technical support to GOL in implementing SUFORD, are committed to continue their support in up-scaling PSFM-PFA to cover all PFAs. Preparation of the PSFM program, as a natural extension of SUFORD and prior GEF support for NPA management, is in process and as noted before will include village forestry and smallholder forestry as new activities covering adjacent areas outside state forests by piloting them in a number of sites and then replicating them to other areas. The project will also include REDD+ related activities, such as REDD+ awareness raising, carbon stock assessment, sub-national REL establishment, and MRV involving both forest officers and villagers.

A1.3.5 Potential national and international partners

39. Program implementation will involve DOF and PFO officers as trainer of trainers and DFO staff as trainers of villagers that are organized into VFOs. Training will cover not only PSFM-PFA, but also village forestry and establishment of smallholder woodlots. The same WB/IDA-MFAF co-financing arrangement is expected to continue with WB/IDA providing financial support for investments and incremental operational expenditures and MFAF providing technical assistance. WB will also act as MDB to channel FIP financing that is intended for new activities, i.e. village forestry, smallholder forestry, and related REDD+ activities.

Support arranged with international partners, million USD					
International partners	**PSFM-PFA/WPFA**	**Village forestry**	**Smallholder forestry**	**Law enforcement, governance, etc.**	**PSFM-NPA**
WB/IDA, FIP/WB	5.1 (SUFORD) + 13.33 (FIP) + 0.89 (GEF4)+ 12+7.4 (IDA/GEF5)+15 PSFM Scale up (TBD)				
MFA of Finland	4.0 (SUFORD) + 6.3	4.2	4.2	3.5	TBD
Total	**75.9**	**+ TBD (to be determined during project preparation)**			

A1.3.6 Rationale for FIP funding

FIP Criterion	**Justification**
Climate change mitigation potential	PSFM-PFA/WPFA/NPA, village forestry (VF), and smallholder forestry (SHF) will result in avoided deforestation and degradation resulting in reduced GHG emissions of about 1.0 Mt CO_2e and carbon stock enhancement estimated at 1.8 Mt CO_2e

Potential for large scale-up	PSFM has already begun scaling-up from in 2 PFAs in 1996-2001 to 9 PFAs in 2003-2008 to 18 PFAs in 2008-2011 with GOL committed to covering all 51 PFAs in the next 7-10 years if resources are available. VF and SHF will be piloted at a scale to be determined during project preparation, with potential for large scale-up covering more than half a million ha possible by 2020
Cost effectiveness	FIP budget :Leveraged budget in PAs/WFPAs/PFAs – 1:5
Implementation potential	PSFM, VF, and SHF support the Lao REDD+ efforts; included as a major strategy in FS2020 to help attain the 70% forest cover target; has demonstrated institutional and implementation arrangements patterned after the SUFORD Project; has demonstrated sustainability and scalability; involves villagers organized into VFOs as main participants in grassroots-level management and decision-making in PSFM, VF, and SHF, as well as in village development aspects.
Integration of sustainable development (co-benefits)	PSFM, VF, and SHF are geared towards biodiversity conservation and sustaining ecosystem services; climate-proofed management plans and plan implementation enhance the adaptive capacity of forest ecosystems and forest dependent communities to the impacts of climate change; contribute to livelihood development; village development activities contribute to human development in indigenous and local communities, e.g. by villagers investing in education, health, and village infrastructure
Safeguards	PSFM and VF utilize natural regeneration rather than planting of exotics; PSFM, VF, and SHF do not support conversion of forests to tree plantations and other agricultural uses; low intensity, low impact harvesting is used by communities resulting in long-term enhancement rather than degradation of carbon stocks; provides for maintenance of high conservation value forests in management plans and annual operations; rights of local people are respected, women and ethnic minorities well represented in decision making and social and economic opportunities

A1.3.7 Safeguard measures

40. The general environmental and social risks and potential impacts associated with REDD+ in Production Forests, and the mitigation measured against them, have already been identified developed, under the SUFORD. SUFORD ESIA identified a number of environmental and social risks associated with REDD+ in Production Forests including: (a) controlling the harvest of timber and NTFPs; (b) equitable benefit sharing of timber royalties; (c) importance of participation and need for training to achieve effective participation with ethnic group, (d) enhancing women's participation, among others. A separate Environmental and Social Impact Assessment (ESIA) will be conducted during the preparation of specific investments, using the experience of SUFORD implementation, and relevant safeguard instruments will be developed in line with: (i) laws and regulation of the country; (ii) policies and procedures of financing agencies; (iii) requirements of the UN

system in particular the guidelines of UN- REDD Program and the guidelines of the UNDG on Indigenous Peoples (iv) REDD+ safeguards under the UNFCCC as agreed in Cancum (COP 16, LCA Decision, Annex 1, Paragraph 2). Throughout the preparation and implementation process, community participation and consultation will be emphasized to avoid any negative impacts on the livelihood of the local population.

41. Mechanisms for conflict resolution, grievance and appeals will be established and disseminated to all relevant stakeholders, including indigenous peoples who may be affected by the project. To the extent possible, existing mechanisms on customary use of forests and for conflict resolution, etc., will be utilized. Relevant Indigenous Peoples and Local Communities will be encouraged and empowered to participate in the design and implementation of specific investments, with view to minimizing negative impacts and ensuring sustainability.

A1.3.8 Financing plan

Project component	**FIP budget (M USD)**	**Ex-FIP budget (M USD)**	**Total budget (M USD)**	**% FIP**	**Emission reduction (Mt CO_2e)**	**Carbon price, FIP (USD/tCO_2e)**	**Carbon price, total (USD/tCO_2e)**
PSFM (scale up)	8	52.6	60.6	13%	2.57	\$3.0/ tCO_2e	\$5.0/ tCO_2e
VF (pilot)	3.3	3.5	6.8	49%	0.18	\$3.0/ tCO_2e	\$5.0/ tCO_2e
SHF(pilot)	1	1	2	50%	0.05	\$3.0/ tCO_2e	\$5.0/ tCO_2e
Enabling Frameworks	1	5.5	6.5	15%			
Total	**13.3**	**62.6**	**75.9**	**18%**			

A1.3.9 Program preparation timetable

Stage	**Steps**	**Indicative dates, for PSFM of**		
		PFAs	**WPFAs**	**PAs**
Preparation	Preparatory mission Project appraisal document (PAD) preparation	Jan/2012 Jan-Mar/ 2012	Jan/2012 Jan-Mar/ 2012	Jan/2012 Jan-Mar/ 2012
Evaluation	Multilateral review of project appraisal documents Refinement of project documents	Apr/2012 Apr/2012	Apr/2012 Apr/2012	Apr/2012 Apr/2012
Approval by FIP SC	Submit Request for draft PAD to the FIP SC for approval	May/2012	May/2012	May/2012
Appraisal	Appraisal by MDB	May/2012	May/2012	May/2012
Negotiation	Negotiation with MDB	June/2012	June/2012	June/2012
MDB Board Approval	Board approval of the project	Aug/2012	Aug/2012	Aug/2012

A1.3.10 Request for project -preparation grant

42. A FIP Project Preparation Grant is requested to cover all project preparation activities as followed:

<table>
<tr><th colspan="4">FOREST INVESTMENT PROGRAM
Project/Program Preparation Grant Request</th></tr>
<tr><td>1. Country/Region:</td><td>Lao PDR</td><td>2. CIF Project ID#:</td><td>(Trustee will assign ID)</td></tr>
<tr><td>3. Project Name:</td><td colspan="3">Scaling up Participatory Sustainable Forest Management (PSFM)</td></tr>
<tr><td>4. Tentative FIP Funding Request (in USD million total) for Project[8] at the time of Investment Plan submission (concept stage)::</td><td colspan="2">Loan:</td><td>Grant: $13.33 million</td></tr>
<tr><td>5. Preparation Grant Request (in USD):</td><td colspan="2">0.5 million</td><td>MDB: IBRD (World Bank)</td></tr>
<tr><td>6. National Project Focal Point:</td><td colspan="3">Mr. Oupakone Alounsavath
Head of Planning Division
Department of Forestry, Ministry of Agriculture and Forestry (MAF)
dofadmin@gmail.com</td></tr>
<tr><td>7. National Implementing Agency (project/program):</td><td colspan="3">Department of Forestry
Ministry of Agriculture and Forestry (MAF)</td></tr>
<tr><td>8. MDB FIP Focal Point and Project/Program Task Team Leader (TTL):</td><td colspan="2">Headquarters-FIP Focal Point:
Gerhard Dieterle
Forest Advisor
gdieterle@worldbank.org</td><td>TTL: Dr. Peter Jipp
Senior Natural Resources Management Specialist
pjipp@worldbank.org</td></tr>
<tr><td colspan="4">9. Description of activities covered by the preparation grant:

The project preparation grant will be used to cover the costs associated with preparing the above captioned project including hiring of national and international consultants, field visits, stakeholder consultation workshops and dissemination of the concept note at the central level and in relevant provinces. Incremental operating costs and small equipment purchases to facilitate the operations of the National REDD Office are also included.</td></tr>
</table>

[8] Including the preparation grant request.

10. **Outputs:**	
Deliverable	**Timeline**
(d) Project Concept Note	February 2012
(e) Consultation workshops at the central and relevant provinces	February -May 2012
(f) Project Appraisal Document	April 2012
11. **Budget (indicative):**	
Expenditures[9]	**Amount (USD) -** estimates
Consultants	280,000
Equipment (computers, gps, projector, other)	10,000
Workshops/seminars	65,000
Travel/transportation	100,000
Others (admin costs/operational costs)	15,000
Contingencies (max. 10%)	30,000
Total Cost	**500,000**
Other contributions:	
• Government (in kind)	45,000
• MDB	200,000
• Private Sector	
• Others (please specify)	250,000 (Ministry of Foreign Affairs of Finland)
12. **Timeframe** (tentative) Submission of pre-appraisal document for FIP Sub-Committee Approval: **May 2012** Expected Board/MDB Management[10] approval date: **August 2012**	

[9] These expenditure categories may be adjusted during project preparation according to emerging needs.
[10] In some cases activities will not require MDB Board approval

13. **Other Partners involved in project design and implementation**[11]:

Government of Lao PDR: Ministry of Agriculture and Forestry (MAF), Ministry of Natural Resources and Environment (MoNRE), Ministry of Planning and Investment (MPI), Ministry of Justice (MoJ) and Ministry of Finance (MoF) at the national level. Provincial government staff in the proposed provinces of the line ministries and the provincial administration offices will also participate in the design and implementation of project activities.

Other Development Partners: JICA, GIZ through CliPAD project, Ministry of Foreign Affairs of Finland, KfW

Mass organizations (Lao Women's Union and Lao National Front for Construction and Lao Youth Union) and the relevant Civil Society Organizations will also be involved in the design and implementation of activities. DGM implementation and coordination through a national implementing organization yet to be identified.

14. **If applicable, explanation for why the grant is MDB executed:**

15. **Implementation Arrangements** (incl. procurement of goods and services)**:**

The grant will be executed by the Government of Lao PDR and the implementing agency will be the Department of Forestry (which has been implementing the SUFORD project, FCPF project for preparing the R-PP and FIP Investment Plan Preparation Grant). During implementation the World Bank's Procurement and Financial Management Guidelines will be applied.

[11] Other local, national and international partners expected to be involved in design and implementation of the project.

Annex 2: Stakeholder involvement plan

2.1 Background

1. Lao PDR has an area of 268,000 square kilometers divided into 17 provinces, 144 districts, and more than 10,000 villages scattered across the country. Some of the villages contain only a few hundred households and impassable by motorized vehicles in the rainy season. The Consultation Process for FIP is built upon the consultation process used for the preparation of the Lao PDR REDD+ Readiness Preparation Proposal (R-PP). It was decided by the REDD Task Force at its meeting in February 2011 that the targeted groups for stakeholder consultations and participation will focus primarily on the national stakeholders and selected provinces where FIP resources can be used to potentially scale up or pilot the new initiatives to address the deforestation and degradation. This is aimed at ensuring a constant flow of information and not creating expectations in provinces where there are no planned FIP investments. The targeted provinces initially identified for implementing FIP investment in August 2011 include: i) Luangphabang, Bokeo, Xayaboury and Huaphan provinces for the north; ii) Bolikhamxay and Khammouane provinces for the central and; iii) Attapeu and Saravan provinces for the south.

2. The development of the Lao PDR FIP Investment Plan is a result of an extensive consultation process that continues and is built upon the process currently implemented by the government since Lao PDR was selected by the Forest Carbon Partnership Facility (FCPF) to develop the Readiness Plan Proposal (R-PP) in October 2008. Stakeholder involved in the consultation and preparation of the Lao FIP Investment Plan do not include only those working in the forestry sector under the Ministry of Agriculture and Forestry (MAF) but other sectors that directly and indirectly cause impacts on the forest degradation and deforestation at the central and provincial levels such as line government ministries, academia (National University of Lao PDR), private sector, Civil Society Organizations,[12] mass organizations, ethnic group representatives from the National Assembly and Lao Front for National Construction and, development partners who work and/or support REDD+ in Lao PDR as described below.

2.2 Groups of Stakeholder Involved in the Consultation and Development of the Lao PDR FIP Investment Plan

2.2.1 Government agencies

3. In depth technical discussions on the review of the Forestry Strategy 2020, approved R-PP and proposed FIP Investment Plan activities were carried out with the 15 members of the REDD+ Task Force at the central level who are senior government staff from the Ministry of Agriculture and Forestry (MAF), former National Land Management Authority (NLMA), former Water Resources and Administration (WREA),[13] Ministry of Energy and Mines (MEM), Ministry of Justice (MoJ), Ministry of Finance (MoF), Ministry of Planning and Investment (MPI), and non-government staff from the Lao Women's Union, Lao Front for

[12] Which includes the International Non-Government Organisations (INGOs) and local Non Profit Associations (NPAs)

[13] The former National Land Management Authority (NLMA) and the former Water Resources and Environment Administration (WREA) have been promulgated into a new Ministry called the Ministry of Natural Resources and Environment (MONRE) since June 2011

National Construction (LFNC), National University of Lao PDR (NUoL) and, Lao National Chamber of Commerce and Industry (LNCCI). The members of the REDD+ Task Force were also presented to discuss a number of topics related to FIP with MDBs at the Scoping, Joint Mission and Joint Technical Mission. Formed in January 2011 in accordance with the Decision of a former Minister's of MAF, the members of the REDD+ Task Force, have the responsibilities, *inter alia*, to oversee and provide technical input to the implementation and development of the REDD+ activities in Lao PDR, including FIP. Other line government agencies, especially the Ministry of Industry and Commerce (MIC), Ministry of Foreign Affairs (MoFA), Public Administration and Civil Service Authority (PACSA) under the Prime Minister's Office who manage the local Non-Profit Associations and charities, National Assembly (responsible for ethnic group affairs) also participated in a number of consultation workshops organized during the FIP Scoping, First and Technical Missions. The mission team members also met with Ministers and Vice-Ministers of many key ministries namely MoF, MPI, former WREA, former NLMA and MAF to brief them about the FIP activities and seeking their guidance on government priorities to be included in the FIP Investment Plan. Importantly, the Deputy Director General (DDG) of DoF and staff presented the progress of the REDD+ and FIP activities to the National Environmental Committee (NEC) which is the highest government body in Lao PDR chaired by the Deputy Prime Minister in June 2011. At this meeting, the members of the NEC agreed on the establishment of the National REDD+ Office to coordinate and implement the REDD+ activities as well as the government willingness to access the FIP resources for sustainable forest management and livelihood improvement in Lao PDR.

2.2.2 Civil Society Organizations (CSOs).

4. Other key stakeholder participated in the consultation and development of the FIP Investment Plan including Civil Society Organisations (CSOs) which, under the Lao circumstance, include the International Non-Governmental Organisations (INGOs) and local Non-Profit Associations (NPAs). Currently, more than 180 CSOs are known to exist and operate in Lao PDR at the central and selected provincial levels. Relevant CSOs that are known to work on the forestry, REDD+, environment and livelihood development activities in Lao PDR at the central and provincial levels were invited to participate in the national workshops and a number of group discussions at the World Bank and NPA's Learning House. They include Wildlife Conservation Society (WCS), WWF, IUCN, SNV, Lao Biodiversity Associations (LBA), Gender Development Group (GDG), and others. Topics discussed with them not only include the proposed FIP Investment Plan but in depth discussions on the DGM development, how they can support the local communities to strengthen their capacities on REDD+ and FIP implementation using the grants to be provided under DGM, their challenges operating and implementing activities relevant to REDD+ and livelihood development in the past, how can the grant from DGM assist them in overcoming the barriers, proposed DGM implementing structure for Lao PDR and other topics.

2.2.3 Private Sector

5. The government realizes the importance of the private sector in the sustainable forest management and has engaged them since they started to develop the R-PP. This is demonstrated as a representative of the Lao National Chamber of Commerce and Industry (LNCCI) is also a member of the REDD+ Task Force. Established in 1989, LNCCI is an

independent body which represents the business community in Lao PDR. It is the nexus between state and private enterprises and represents employers, groups and joint ventures across all agencies that have been established under the laws of Lao PDR. It currently has more than 1000 members represented through Chambers of Commerce in 13 provinces and business associations and groups. That makes LNCCI the largest and most representative business community in Lao PDR. In addition, some other progressive wood processing associations and plantation companies who have some experience and are new to carbon finance (CDM) and REDD+ have been actively engaged throughout the consultation process of FIP. They view REDD+ in general and FIP Investments specifically, as an opportunity for receiving incentives for adopting more sustainable management practices and, engaging and strengthening tenure rights for small holders who work closely with them. Those consulted at the workshops and meetings held in Vientiane Capital and provinces included but not limited to Lao Furniture Association, White Charcoal Company, Oji Plantation, Birla Lao Company and Stora Enso.

2.2.4 Development Partners

6. A number of international organizations and bilateral donors engaged in the forestry sector and REDD+ activities in Lao PDR were participated in the FIP discussions during the missions and consultation workshops which include GIZ, JICA, Kfw, USAID and SNV (Netherland Development Organizations), UNDP and FAO.

7. The following table summarizes the consultation process that has been undertaken since the Lao PDR Ministry of Finance (MoF) submitted a Letter of Acceptance to the CIF administration Unit in June 21, 2010 confirming the Lao PDR's interest in participating in the FIP.

Time	Event	Location	Representatives	Purpose
Jan. 2011	Scoping Mission	Vientiane, Lao PDR	MAF, MDBs, Government agencies, development partners, private sector, CSOs, INGOs, IPs, PACSA	Inform, dialogue and jointly plan the Investment Strategy with multi-stakeholders
Jan. 2011	Regional Consultation Workshop on the design of the DGM	Vientiane, Lao PDR	Asian Regional Pilot REDD+ countries; IP, and LCs, facilitated by IUCN	Discuss the design of the DGM and prepare a set of Asian regional "Design Recommendations for the DGM"
June 2011	National Environment Committee Meeting	Vientiane, Lao PDR	Deputy Prime Minister, Ministers from key line Ministries, NEC Secretariat (former WREA of MONRE at present) and DoF staff	DoF senior staff presented the progress of the REDD+ activities in Lao PDR to the NEC Committee Members and Chair, including the funding made available to Lao PDR under the FIP and the progress of the activities.
June	First Joint	Vientiane, Lao	MAF, members of the	Review progress of the

Time	Event	Location	Representatives	Purpose
2011	Mission	PDR	REDD Task Force from key line ministries and organisations, MDBs,, development partners, private sector, CSOs, PACSA (Public Administration and Civil Society Authority) within the Prime Minister's Office	REDD+ activities; review relevant regulatory frameworks; Discuss with the key line ministries; consult with key stakeholders; consult with the relevant CSOs working on REDD+
Aug 2011	2 Multi-Stakeholder government meetings on FIP	DoF, Vientiane	Task Force members, several GoL agencies, REDD+ projects, donors, FIP Consultants, WB, Research Institutes, NUOL, and Mass Organisations (40 persons)	Task Force Briefing on FIP progress, FIP components and potential locations, and preparation of the FIP Investment Plan
Sept 2011	Informal meeting with the Non-Profit Associations (NPAs)	Learning House, Vientiane	MDBs, DoF and representatives from from the NPAs	Briefing on the FIP, providing an update on the development of the Dedicated Grant Mechanism (DGM) and discuss with the representatives on their experiences, issues, potential roles in participating in FIP
Sept 2011	Second National Consultation Workshop on the draft FIP Investment Plan 2 Provincial Consultation Workshops on the draft FIP Investment Plan	Vientiane, Lao PDR Luangphabang and Khammouane Provinces, Lao PDR	DoF, relevant government ministries at the central and provincial levels, private sector and CSO representatives, mass organizations and	To discuss the Forest Strategy 2020 and REDD+ activities in Lao PDR, to consult and discuss the proposed concepts and activities outlined in the FIP Investment Plan including Participatory Sustainable Forest Management in 3 types of forests managed by the government and outside government managed areas (village forest, small holders and industrial plantations), forest law and enforcement and the DGM for local communities

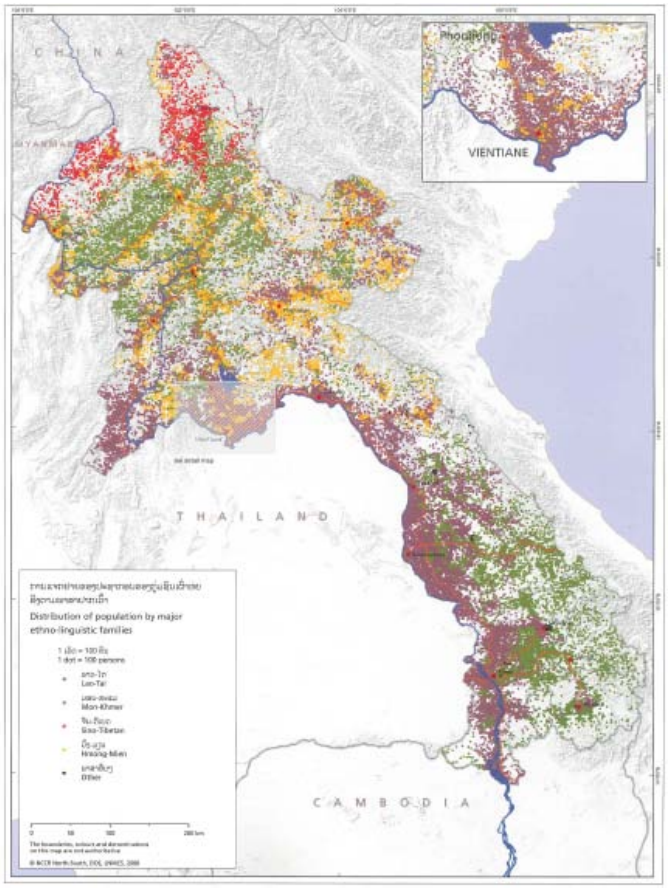
8. Once the Investment Plan is approved by the FIP Sub-Committee, it is anticipated that these groups will continue to be engaged during the next steps of individual FIP project development as much as possible. As project being developed, other stakeholders may be identified and will be included in the consultation and discussions as much as possible. Where relevant, those stakeholders will be coordinated and involved in the implementation of the FIP projects. Consultations at the province and down to districts, villages and communities will be undertaken during the project designs and implementation when the specific areas for FIP investments are known.

Annex 3: Information on how funding from the Dedicated Grant Mechanisms for Indigenous Peoples and Local Communities will be part of the Investment Plan

3.1 Background

1. Lao PDR has a multi ethnic population of 5.6 million people (2005 Population and Housing Census) living scattered in more than 10,000 villages across the country. There are 49 diverse ethnic groups which are classified into four ethno-linguistic families namely: Lao-Tai (Tai-Kadai); Mon-Khmer (Austro-Asiatic); Hmong-Mien (Hmong-Yao); and Sino-Tibetan (Tibeto-Burman). Lao-Tai is considered to be predominant group of Laotians mostly living in the cities and secondary towns located along the Mekong river plain and its tributaries. The other ethnic groups are mainly concentrated in rural upland and remote areas especially in the north and along eastern part of the country, in which forest coverage is relatively larger. To various extend, the villages belonging to the 3 ethnic groups rely on forest product and NTFPs. The Lao Front for National Construction (LFNC) is the government-mass organization mandated to implement the Party and Government policy on advocacy and harmonization of multi-ethnic groups in Lao PDR.

Figure 1: Distribution of Ethnic Groups in Lao



Source: NCCR North-South, DOS, LNMCS, 2008

2. The LFNC also differentiates the Lao population into 49 ethnic groups and some 160 seng or sub-categories. Classifications by ethno-linguistic family technically indicates that the categorization of a group is based on self-identification as a distinct group, with language as the main characteristic of identification and replaces the earlier observation referring ethnic groups in Lao PDR as Lao Loum (Lowland Lao), Lao Theung (Upland Lao) and Lao Sung (Highland Lao) which was applied prior to the passage of the Constitution in 1991. These former categories responded roughly to Lao-Tai, Mon-Khmer and Hmong-Mien/Sino- Tibetan respectively. Therefore unlike many other countries, the term "ethnic groups" have been officially used to refer to all 49 ethnic groups represented in Lao PDR. Another institution responsible for ethnic groups' policies is the Department of Ethnic Group Affairs within the National Assembly.

3. Another institution responsible for making and promulgating ethnic policies is the Department of Ethnic Group Affairs within the National Assembly. These two government organizations represent the interest and voices of all ethnic groups in Laos.

4. Regarding women's affairs, the Lao Women's Union (LWU) has been assigned under the Constitution to be responsible for advocating for women's rights and development. LWU is also responsible for developing policies and relevant regulations that promote women's participation in development and ensure their benefits and rights.

5. The LFNC and LWU are recognized as strong mass-organizations that have representatives from the central down to the village level and contribute to many aspects of the country's development.

6. As of now, more than 180 Civil Society Organizations (CSOs) operate in Lao PDR. The CSOs generally refer to the international Non-Governmental Organization (INGOs), local Non-Profit Associations (NPAs) and foundations. Following the issuance of the PM Decree on Civil Society 2009, all CSOs operating in Lao PDR are required to formally register with the Public Administration and Civil Service Authority (PACSA) within the new Ministry of Home Affaires to be eligible for receiving financial support. CSOs may be registered either at the national or at the provincial level. The process of registering national CSOs is moving slowly due to lack of budget and strict requirements with regard to size, capacity and structure. Thus, most of the CSOs at the national level are not yet formally registered under the Decree and discussions have begun on whether it would be possible and appropriate to use DGM resources to support CSO registration efforts. Nevertheless, it is understood that the organization of the INGOs are more systematic given their experiences working internationally whilst the structure and organization of the local NPAs are yet clear and operate on a fragmented basis. Despite their active participation and engagement with the local people in implementing various development activities to improve the environment and their livelihoods, they have experienced many challenges that will require support to overcome.

3.2 Ethnic Group/ CSO Participation, and Gender/ Intergenerational Issues in the Development and Implementation of the FIP Investment Plan and DGM, and Comments from key Governmental and Nongovernmental stakeholders

7. The Government of Lao PDR, represented by DoF, realized the importance of engaging the LFNC, Lao Women's Union and CSOs in the consultation, development and implementation of the forestry and REDD+ activities in Lao PDR. This is shown by the fact that these organizations' representatives are included as the members of the REDD+ Task Force and the Forestry Sub-Working Group Members. However, the engagement of the CSOs in the program needs to be consulted and designed with the above and concerned stakeholders in a strategic and sensitive manner. Although not sitting as part of the REDD+ Task Force as members, some of the relevant CSOs, especially WCS, SNV, WWF, IUCN and Lao Biodiversity Association, participated actively in FIP preparation discussions, attend REDD Task Force meetings on an ad-hoc basis and are kept informed of significant

developments in the forest sector in general and REDD+, FIP and DGM processes in particular. As part of the meetings conducted, relevant CSOs were informed of the Dedicated Grant Mechanism for Indigenous People and Local Communities (DGM) including the potential allocation of DGM resources to Lao PDR, criteria for using the fund and the possibilities of utilizing the DGM fund for ethnic and local people in Lao PDR.

8. Given the evolving nature of the DGM it is not yet possible to confirm how the DGN will be implemented in Lao PDR. All stakeholders including representatives of ethnic groups and local communities will continue to be consulted for the development of the DGM implementation modality including fund flow mechanisms, fiduciary responsibilities, identification and approval of sub grants, and so on. Overall, it has been agreed among all consulted stakeholders that DGM should complement FIP investments to help achieve the overall objectives under REDD+ by helping channel funds directly to meet the actual needs of the local people in the potential FIP investment areas. The need to establish a National Steering Committee to oversee the program and review and approve sub-grant proposals, and solicit participation of CSOs in the Committee, have also been objectives of the FIP activities in Lao PDR. and will be discussed after approval of the FIP SC during the project preparation period.

9. Details on the discussions carried out with CSOs can be found in the Missions' Aide Memoires that can be downloaded from the Climate Investment Fund's website at www.climateinvestmentfunds.org. Summaries of the feedbacks and comments received from the consultations are summarized in the following section.

3.3 Summaries of Comments received from the Consultation with the Representatives from LFNC, LWU and CSOs

10. As part of the FIP Investment Plan consultations, the MDBs also took the opportunity to inform stakeholders on the progress of the DGM development including the potential allocation of DGM resources to Lao PDR, criteria for using the fund and discussed.
Various questions were raised by interested CSOs during the consultation with CSOs held at the World Bank during the Scoping Mission in January, Joint Mission in June and ahead of the Technical Mission in September 2011[14]. The following are some of the questions that were raised:

- What types of activities they are doing with the local communities that can be linked to forestry, REDD+ and FIP investment programs?
- What they see as potential areas where they can support the local communities under Lao FIP Investment Program and REDD+;
- What are some of the obstacles experienced by CSOs in implementing their activities in the past?
- How can some of the grant from DGM be used to assist them in overcoming the barriers so that they can support the local communities in implementing FIP?

[14] Details on the discussions carried out with CSOs can be found in the Missions' Aide Memoires that can be downloaded from the Climate Investment Fund's website at www.climateinvestmentfunds.org. Summaries of the feedbacks and comments received from the consultations are summarized in the following section.

All stakeholders who participated in the consultation meetings welcomed the FIP program and the DGM. They see DGM as an opportunity to channel additional funds to strengthen the capacity and improve the livelihoods of the local people in the proposed investment areas. Also, there are strong interests and good suggestions from the local government authorities, women and LFNC representatives and the CSOs on how the funds can be utilized.

11. Generally, both governmental and nongovernmental stakeholders suggested that the fund shall be used to benefit the local people, especially the vulnerable ethnic groups and women, as much as possible and in a sustainable manner. In achieving these, the process in transferring and approving the funds to the final beneficiaries should be short and simple. Since the country is very much decentralized, the potential to engage different stakeholders such as the local governments at the provincial and district levels will be explored during in-country consultations on the DGM.. The relevant government counterparts should be kept informed on the progress of the DGM activities. Some CSOs have suggested that this may be possible if a government counterpart becomes a member of the national steering committee (perhaps a non-voting member). It is recognized that this suggestion would not be appropriate in other countries but in the context of Lao PDR it may be both appropriate and necessary for the functioning of the DGM. The use of local language for the fund application and communication is crucial to ensure that all can understand the basic information on the DGM. Translations of the REDD+ concepts, FIP and DGM into Lao and preparing the visual aids using main ethnic languages will be very helpful.

12. Also, due to low capacity of the local people in the remote areas, the CSOs see themselves playing a key role in facilitating community participation, service delivery and providing training to strengthen the capacity of local people. Many activities that they are doing may be relevant to REDD+ or FIP including the support to local communities to grow trees and set up a learning garden at schools in the village; communal forest management and piloting the REDD+ in Sangthong District of Vientiane Capital in partnership with SNV; livelihood developments through integrated agriculture production and extension, raising awareness of the local people on climate change and environment, and promotion of gender participation in development, among others. CSOs also recommended that trainings on the REDD+ concept and the preparation of proposals should be provided. And that the grant implementation period should be long enough as working with people and growing trees can take a few years to realize impacts.

13. Governmental and nongovernmental stakeholders also suggested that the DGM fund be provided directly to local people through the Village Development Fund (VDF) so that regarding the implementation of the DGM, it is suggested that there is a need for establishment of a National Steering Committee to oversee and approve the sub-grant proposals. The Committee shall have at least three representatives selected from the CSOs, government (possibly LFNC, PACSA, or DOF) and MDBs. Many of the local CSOs felt that the World Bank Small Sub-Grant Program is too difficult to access given their capacities in preparing the proposals and understanding the World Bank's guidelines and procedures on fiduciary. Thus, the UNDP managed Small Sub-Grant Program of the Global Environmental Facility (GEF) may be a good example that can be learnt and adopted. Furthermore, it is recommended that trainings on the REDD+ concept and preparing the proposals will be

needed. The period for implementing the grant shall be long enough as working with people and growing trees can take a few years to realize impacts.

14. Another option suggested for disbursement of the fund to the local people and achieving sustainability is through the Village Development Fund (VDF) where the local communities can manage the fund by themselves in accordance with the eligibility criteria through a Village Committee. It was noted that further training and mentoring support for them is needed to ensure that local people use the fund effectively as required by the donors and according to the agreed plan. The capacity of ethnic minorities and local population should be carefully assessed and support be provided to ensure they have sufficient capacity to implement the grant before they receive the fund.

15. In relation to the challenges and obstacles experienced by the CSOs, the local NPAs informed that they tend to face more challenges in operating their activities in Lao PDR than the INGOs. Currently, about 75 associations are known to exist but only 8 of them are formally registered with the government (PACSA) under the new decree on CSOs. The remaining is therefore not recognized as legal entities. Therefore, it will be helpful to revisit the decree and assess the capacities of the CSOs in fulfilling the requirement stated in the decree. In order to create en enabling environment for CSOs to grow and for the government to regulate and facilitate the CSOs development, strengthening the capacities of PACSA and CSOs in the implementation of the NPAs' Decree will be crucial. A coherent leadership structure for these organizations has not yet emerged, and the establishment of a self-selected working group of CSOs with common goals could be helpful for institutional strengthening to jointly identify and implement appropriate activities for DGM funding given the current weak capacity of the local CSOs. The DoF representative mentioned that this is crucial to ensure a collective voice and constant flow of information which will maximize their benefits. They recognize that further efforts will be made to establish a systematic reporting mechanism among the group members and self-selection of the group leaders will be explored.

3.4 Potential Use of DGM fund to Support the Implementation of the FIP Investments

16. Given the lack of clarity on the details of implementation modality and fund flow to the FIP pilot countries at present, ongoing consultation and engagement of the key stakeholders in the development of the DGM guideline at the country level will be necessary. Through this consultative process, the overall implementation arrangements including fund flow and fund execution modality, fiduciary responsibilities will be discussed during the project preparation stage. However, initial discussions have already started between the World Bank, government, CSOs and UN systems about the possible implementation modality based on the comments received from the CSOs. Possible areas for DGM supports will be in line with the guidelines on DGM which will be approved by the FIP Sub-Committee in its October meeting. The feedback received from the key stakeholder from the completed and the ongoing consultations on the FIP Investment Plan and DGM will also be taken into consideration.

17. Identification of particular subgrants under the DGM will be closely coordinated with the FIP investment preparation process through the National Committee to be established with participation of relevant stakeholder such as a representative from CSOs, MDBs, government. The Committee will assign a secretariat who will support the identification of the DGM subgrants, implementation guideline with eligible and selection criteria, training on proposal preparation and communication with the stakeholders, among other tasks.

Annex 4: Summary of the Lao Readiness Preparation Proposal Submitted to the Forest Carbon Partnership Facility

A4.1 Institutions involved in REDD+

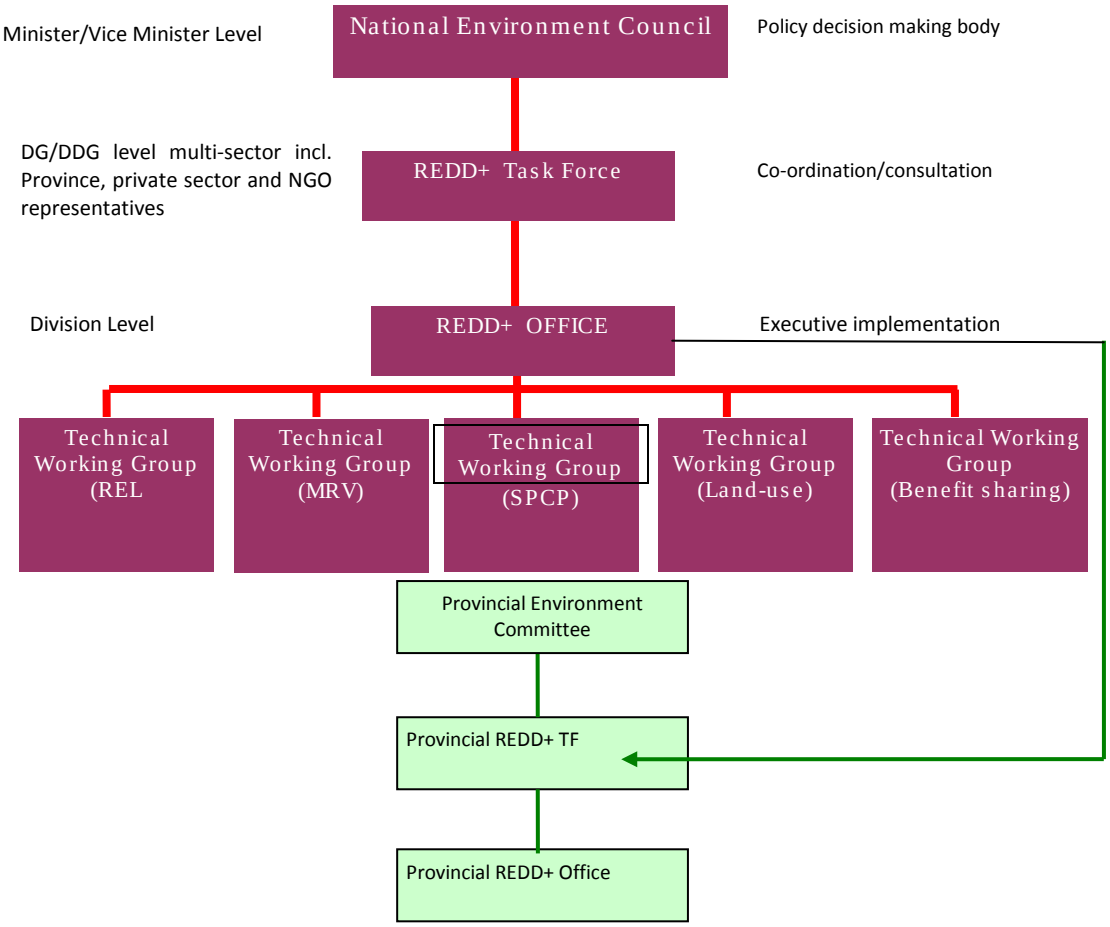
1. GOL recognizes its international obligation to reduce emissions from deforestation and forest degradation in Lao PDR and to conserve biodiversity and other resources in its forests, sustainably manage its forests, and enhance carbon stocks, thereby contributing to global efforts to mitigate climate change. In November 2007, the Prime Minister appointed MAF as the national member of the WB-based Forest Carbon Partnership Facility, delegating responsibility for implementation of all activities related to the FCPF. In November 2008, MAF established the REDD+ Task Force with 12 members chaired by the FD Director General and supported by a REDD+ focal person.

2. The current arrangements with a REDD+ Task Force and a REDD+ focal person within DOF have been adequate to bring the Readiness Preparation Proposal process to the current position, but major changes are needed to effectively implement the Readiness Phase. High level cross-sector coordination and policy guidance will be provided by the National Environment Committee (NEC), the members of which are at Minister or Vice-Minister-level. In order to engage all sectors involved in REDD+ and related Climate Change issues, membership of this Committee will be broadened to include other sectors not currently represented, especially the National Land Management Authority.

3. The REDD+ TF will be strengthened by additional members from other key ministries, including Finance, Planning and Investment, Mines and Energy, and from the Department of Forest Inspection in MAF. The TF will be supported by a new REDD+ Office with full-time staff. This Office will have several tasks; including (i) implementation of the Readiness activities funded by the Forest Carbon Partnership Facility (FCPF); (ii) coordinating and monitoring other REDD+ related activities by maintaining a register of all projects, whether funded by donors or by credits from the voluntary market; (iii) monitoring international negotiations and providing material support for Lao PDR delegates attending international meetings; (iv) organizing stakeholder coordination and implementing the Stakeholder Participation and Consultation Plan(SPCP); (v) preparing a draft decree for submission to the TF and NEC on REDD+ , that will lay down, among other things, who can promote REDD+ activities; any conditions that will apply to participation by stakeholder groups; and the principles to be adopted for benefit sharing; (vi) preparing detailed proposals for how different forms of REDD+ related funding will be managed and distributed; and (vii) developing a carbon registry.

4. The REDD+ Office will be empowered to establish a number of Technical Working Groups, including; Reference Emission Level (REL), Monitoring Reporting and Verification (MRV), Stakeholder Consultation, Land-use Planning, Carbon Registry, REDD+ Strategy, and others as required. These working groups will provide technical support and advice to the Office as needed and in particular for the preparation of Annual Work Plans to be prepared by the Office, that will be submitted to the Task Force for endorsement to NEC. The REDD+ Office will also support the establishment of a similar structure at Provincial level, in those Provinces where REDD+ activities are taking place or are planned for the Readiness Phase.

Figure 1: REDD+ Institutional Arrangement in Lao PDR



A4.2 Stakeholders consultation

5. Two stakeholder consultation workshops have been held during the preparation of the R-PP and a number of important recommendations were made, in particular that: (i) REDD+ should be considered as a mechanism for promoting multiple benefits; (ii) pilot activities should be incorporated into government programmes/donor projects and should not be "stand-alone"; (iii) awareness raising is essential, and later training local communities in monitoring carbon stocks and other indicators necessary for REDD+ + will help to improve awareness and understanding; and (iv) capacity building is necessary among all stakeholder groups and should not be restricted to government only, while ways need to be found to strengthen cross sector coordination.

6. The stakeholder participation and consultation plan takes account of the relatively unique circumstances that prevail in Lao PDR, where about 70% of the people live one hour or more travel time from their District town. There are more than 10,000 villages across the country, most quite small, and many of which are not accessible by motorized vehicle. The Lao government uses the term Ethnic groups, and the Lao Front for National Construction (LFNC) is the organization charged with implementing the Party and Government's ethnic policy, which recognizes 49 ethnic groups from four ethno-linguistic families, many of which do not have written language. During the Readiness Phase, consultation at community and village level will only be feasible for villages where field activities are being piloted.

7. Each of the four major stakeholder groups, which cover government, civil society, the private sector, and donor partners, has a very large number of sub-groups with specific interests, and these will be brought into the process through the use of focus groups. An example is mining companies that clear forest, but may need a lot of convincing to take account of the impact of their activities on CO_2 emissions. The Goal of the SPCP is to achieve collective ownership of the process to develop strategies that reduce emissions through deforestation and degradation (REDD+) and to support conservation, sustainable forest management, and the enhancement of forest carbon stocks (the + in REDD+ plus). The Purpose is to develop a system of consultation to ensure that all stakeholder groups have a better understanding of REDD+, how it relates to Lao PDR, what roles, responsibilities and opportunities they have within Lao PDR's efforts and encourage a sense of ownership of the REDD+ measures to be adopted.

8. The major issues that are foreseen as requiring substantial consultation are; carbon ownership in relation to land-tenure, benefit sharing arrangements, law enforcement and related governance issues especially concerned with awarding of licenses and concessions, and the establishment of credible baselines and RELs. The SPCP links the awareness raising and consultation processes closely to the pilot activities which will provide opportunities to discuss issues in specific circumstances rather than in very general terms.

A4.3 Land use, forest policy, and governance: quick assessment

9. Recent trends in land-use point out that there have been massive inflows of foreign direct investments (FDI) in the past few years, which have led to high demand for land for cash crops and plantations. The national and provincial governments do not have the capacity to undertake comprehensive social, economic, and environmental appraisals of proposals, so that concessions have often been awarded in forest areas, which is in contradiction of the law that bans conversion of forest except in special circumstances of national importance.

10. There is a wide range of forest resource tenure rights, including state property; communal rights; private rights assigned to individuals, corporate bodies, and non-profit organizations; and open access. As a result, several different stakeholders may have rights and interests, and consequently entitlements to REDD+ benefits. The entitlement of ethnic groups and local communities to REDD+ benefits presents a particular problem because they typically do not hold registered title and enforceable rights over the land they manage.

11. The Forest and the Wildlife and Aquatic Resources Laws have recently been revised and promulgated and provide a good regulatory framework, but many officials at lower levels in Provinces and Districts are not familiar with the provisions, so that enforcement is generally weak. Illegal logging is a serious problem despite many provisions in the Law that could be used to control it. The government has created a new Department of Forest Inspection charged with dealing with this problem, but the officers are still under training and it suffers from severe budget limitations. The Forest Department is being supported by several donors to implement sustainable management of production and conservation

forests and 6 Production Forest Management Units have achieved full FSC certification standards.

A4.4 Underlying causes of deforestation and forest degradation

12. The main drivers of deforestation have been identified as conversion to agricultural land and plantation crops (including timber trees and rubber), by commercial companies and smallholders, and for mining and infrastructure development. There has also been and will continue to be expansion in hydro-power generating capacity, which has resulted in the inundation of substantial areas of forest. The drivers of degradation are primarily illegal logging and shifting cultivation. The latter is considered as degradation so long as it is done on a rotation basis and there is a fallow period with secondary forest, so that forest stock is reduced, but not forest area. The total annual emission from deforestation and degradation is estimated to be around 51 million tones CO2 annually, split almost equally between deforestation and degradation.

A4.5 REDD+ Strategy Implementation Framework

13. The REDD+ strategy will be developed in detail during the Readiness Phase, and will include both the instruments that will be used for implementation (institutions, regulations, information and financial) and a wide range of field actions. During the Readiness Phase as many as possible of the potential actions will be field tested. In accordance with the recommendations from the stakeholder consultation, these field activities will be either undertaken by large donor funded projects aimed specifically at REDD+ or will be undertaken by providing additional funding to projects that are dealing with closely related issues, which could incorporate REDD+ specific activities within their overall scheme. (An example is a project that is supporting land-use planning, where some additional funding could enable it to assess carbon stocks and incorporate emissions reduction measures into the land-use zoning and planning to avoid the kind of problem referred to above of misallocation of forest for concessions).

14. The options for REDD+ field activities are discussed for the main drivers of deforestation and for degradation, as well as options for regeneration and restoration of degraded forest. The drivers of deforestation and the potential solutions are largely out of the control of the forest sector alone and will therefore depend heavily on the support and cooperation of a number of other agencies and departments at national, provincial, and district level, as well as private sector and local communities, and will primarily focus on land-use planning and the valuation of carbon stocks, with a possible policy measure of charging developers for any carbon stocks that are destroyed. Mining and Hydro-power utilities are bound by Concession Agreements that include environmental safeguards, but these are not enforced at present, and an important option is to establish the degree to which forest loss and emissions can be reduced through the introduction and enforcement of safeguards. The drivers of degradation are more directly under the control of the forest authorities and DOF and DOFI will implement a number of activities aimed at reducing illegal logging and reducing emissions from shifting cultivation through the provision of alternative livelihood systems that also tackle poverty.

15. The REDD+ Implementation arrangements will develop the instruments needed to support REDD+ activities whenever a new international protocol is agreed. The performance of the institutional arrangements used for the Readiness Phase will be evaluated and refined and then rolled out gradually nationally to provinces that have not been involved in pilot activities. A REDD+ Decree will be issued by PM at an early date to provide clarity related to key REDD+ issues, in particular ownership of carbon rights; the obligation to compensate government for carbon stocks that are liquidated, should this be adopted as policy; the benefit sharing system; financial management and distribution mechanism; how REDD+ activities are to be developed and sponsored; and which organizations, groups, and individuals are eligible to participate in REDD+ activities funded both from national and international sources and the voluntary market. There are a number of options for management of future REDD+ funds, and these will be evaluated to determine the most suitable long-term arrangements bearing in mind the multiple sources of funds, the need for beneficiaries at all levels down to villages to receive their due in a timely manner. The possibility of establishing a new and special REDD+ fund will be examined in detail at an early stage during implementation through discussions with the Ministry of Finance and other stakeholders. Carbon tenure and benefit sharing are closely related issues and although certain principles have been discussed and generally agreed, the practicality of benefit sharing under different circumstances will need to be thoroughly tested during the pilot activities. The establishment and management of a carbon registry are closely linked to the requirements for MRV. Capacity building is essential and will be undertaken across the full spectrum of stakeholders.

A4.6 Social and Environmental Impacts

16. The social and environmental impacts are difficult to enumerate at this stage as no decisions have been taken on what activities will be conducted where, and who will be involved. As the design of specific pilot activities is developed an SEIA will be undertaken and an ESMF developed for each to ensure that any adverse impacts are avoided or adequately mitigated. As a first step a comprehensive stakeholder analysis will be undertaken.

A4.7 Developing a Reference Scenario

17. A reference emission level has been developed using a development model to assess the likely changes in emissions from 2011 to 2015. This shows a slow decline in emissions from an estimate of around 51 million tones CO_2 in 2010 to around 42 million tones in 2015, but it is not a linear decrease as a substantial expansion in the area cleared for hydro-power is expected in the next few years. The model estimates are very dependent on the many assumptions that are made, which have been necessary due to lack of good and complete data. A sensitivity analysis suggests that the estimate of total emissions is most sensitive to the assumed value of the average growing stock at the start of the period (2002), with a 10% change in the assumed value changing the estimated emissions by between 2% for poorly stocked forest and 8% for medium density forest.

A4.8 Monitoring, Reporting and Validation

18. The Government of Lao PDR (GOL) has opted for REDD+ which increases the complexity of the required MRV system since the monitoring system will have to be designed to monitor reduced emissions from deforestation and forest degradation, as well as from conservation, sustainable management of forests and enhancement of forest carbon stocks in Lao PDR. Of the five carbon pools only above-ground biomass is measured and accounted for in Lao PDR at present. GOL has already submitted a forest definition to UNFCCC (minimum 20% forest cover, minimum area 0.5 ha, minimum tree height 5 m, and palm trees and bamboo considered as non-forest). There is an immediate need to provide training on GHG accounting and reporting for Land Use, Land Use Change and Forestry (LULUCF) which will also inform the development of the 2nd Communication. As a matter of priority, a study for developing Lao specific emission and removal factors (Tier 2) for the various emission-related activities in regard to LULUCF and Agriculture Forestry and Land Use (AFOLU) will be conducted. The forest definition has implications for National GHG monitoring and the MRV system because areas under rotational shifting cultivation change their status from forest to non-forest, making forest cover assessments challenging, and a study will be conducted to assess the implications of the forest definition and recommend the most appropriate definition for Lao PDR national circumstances.

19. The JICA-supported Program for Forest Information Management (FIMP) will address the problem of inconsistency between forest cover assessments at various times by preparing a nation-wide forest base-map 2010 using ALOS, SPOT-5, and Rapid-eye imagery and carrying out a nation-wide field survey in 2010 collecting basic information on species, diameter, height and density, and will use SPOT4 imagery to prepare a nation-wide forest cover map for 2005. A National Forest Inventory was carried out between 1991 and 1999 and it is proposed that a new inventory will be conducted as soon as possible. PSPs established during the NFI will where possible be re-measured. Changes in forest biomass and carbon are key issues for REDD+ monitoring and reporting. According to IPCC guidance, carbon stock change assessment shall be done using activity data and emission factors. In Lao PDR, the information base is much better for production forests than for other forest categories. Previous experience in Lao PDR suggests that a combination of ground-based inventories and analyses of remotely sensed data (satellite images, aerial photographs) using multi-phase or multi-stage sampling approaches has to be used to monitor carbon emissions and removals. While already a large amount of relevant data and information for REDD+ has been collected in Lao PDR, a major shortcoming is the proper storage, retrieval, and reporting of the very information. Instead of preparing a separate reporting system for forest carbon and REDD+, it will be incorporated into the proposed integrated Forest Information System.

20. The nested approach also requires more diversified verification arrangement. For the voluntary market, various carbon standards are under development for REDD+ projects, but most of them require verification by an independent certifier. In the CDM compliance market, which may be regarded as a model for future REDD+ compliance market, Designated Operational Entities (DOE) are required.

21. Broad agreement has been reached at an international conference on a draft framework of three core governance parameters for REDD+ and key considerations (i.e. 'what to monitor'). The framework is comprehensive and can be adapted for Lao PDR taking into account particular national circumstances and governance situations. Among others, it will monitor policy implementation; law enforcement; compliance with environmental laws (e.g. hydropower, mining); illegal logging; land use and carbon rights; equity of benefit-sharing arrangements; corruption; institutional performance; and conflict resolution mechanisms. The REDD+ office shall develop country-specific indicators for the governance parameters and principles based on broad consultations with major stakeholders, to be used for measurement, reporting and verification. Right after the start of the R-PP implementation, a baseline survey of pertinent governance factors will be conducted (or commissioned) by the REDD+ office.

A4.9 Schedule and budget

22. The R-PP sets out a comprehensive program to prepare Lao PDR for implementation of REDD activities from 2014 onwards. Some of the activities identified in the R-PP are expected to be funded by several donor projects that have been agreed with the government. These either deal with REDD issues exclusively or intend to incorporate REDD activities within a broader program of support to the forestry sector. Projects, that had already been agreed and approved prior to the development of the R-PP were taken into account during the preparation of the R-PP and the funds that will be provided through these projects have been incorporated into the overall budget estimates. Other donor funded projects that are not specifically aimed at REDD such as those dealing with land-use planning, are considered appropriate for being provided with additional funds to enable them to contribute towards the overall REDD strategy. In addition the government is funding Participatory Land-Use Planning (PLUP) through the National Land Management Agency, and these activities will be strengthened in selected Districts to incorporate an emission reduction plan into the local land-use plan. On these bases, the total budget for REDD+ Readiness in 2011-2013 has been estimated 23.3 million USD.

Annex 5: DRAFT Technical Review of the Lao PDR FIP Investment Plan and Team Response

INDEPENDENT TECHNICAL REVIEW
FOREST INVESTMENT PROGRAM OF LAOS PDR

Reviewer 1: John Dick
Submitted to the CIF Administrative Unit, Government of Laos,
and the FIP Team leader of the World Bank and Asia Development Bank
DRAFT - October 3, 2011

INTRODUCTION

The present paper contains a review of the concept draft version of the FIP Investment Plan of Laos dated September 19, 2011. This review has been prepared in accordance with the guidance provided by the CIF Unit of the World Bank.

Laos has the highest natural forest cover – estimated at about 40% in 2010 - of any country in South and Southeast Asia. The wide range of latitudes, elevations, regional climates and soil types results in a very diverse natural forest estate comprising the following major forest zones: six lowland forest formations – Evergreen (EF), Semi-evergreen (SEF), Mixed deciduous (MDF), Dry Dipterocarp (DDF) and Pek Savannas; four upland forest formations - Montane hardwood (MH), Montane conifer (MC), Mixed Montane Hardwood/Conifer (MMHC); and one northern sub-tropical formation - Evergreen Hardwood (SEH).

The proposed FIP is well documented and contains a broadly-based and (perhaps overly-) ambitious management proposal consisting of three projects: Project 1- Protecting Forests for Sustainable Environmental Service Delivery (supported by ADB, GIZ, JICA and KfW); Project 2 - Small-holder and Private Enterprise Partnerships (supported by IFC); and Project 3 - Scaling-up Participatory Sustainable Forest Management (supported by World Bank, Government of Finland and International Development Agency). The FIP generally acknowledges the national situation in natural resource and land management and past experiences, but there are numerous problems with emphasis, omissions and evident biases that constrain objective analysis. Perhaps the major criticism, however, is that the plan generally lacks a practical and disciplined focus. Not everything can be done simultaneously and there

should be much greater attention to the three foundations of FIP - emission reduction, poverty alleviation, and forest ecosystem recovery - and a realistic prioritization and sequencing of the activities that can be undertaken over the proposed management period with some expectation of success.

The proposal can be strengthened in three fundamental ways:

- better definition of what constitutes deforestation and degradation in different natural forest formations, since this definition is critical to the development of ecologically-appropriate forest management responses and interventions - natural management, rehabilitation (rest), restoration (enrichment plantings) and conversion (plantations).
- prioritization of the main elements of deforestation/degradation that should be addressed in the short- to medium-term for emission reductions, which I would suggest are: 1) unregulated agricultural/tree-crop expansion; 2) uncontrolled clearing for infrastructure and large-scale industrial development; 3) pioneering shifting cultivation (always to be differentiated from rotational swidden); and 4) illegal exploitation and international trade in forest/biodiversity products – all of which suggest that the single most important FIP strategy should be the support and further refinement of comprehensive and effective programs of compliance monitoring and enforcement of the natural resource and land management laws and regulations of GOL (note that this reviewer believes that most fire in dry forest communities and swidden cultivation do not contribute to deforestation and are at least low carbon emitters and may even have net carbon sequestration; and
- down-sizing, rationalization and technical improvement to the Lao timber processing industry, which would have the effect of reducing pressure on the natural forest, increasing the profitability of individual mills (and therefore the price they can pay for logs under PSFD), undercut the profitability of illegal timber harvest, and increase the quality (value-added) of products (furniture and fine hardwoods) which would significantly improve long-term sequestration of the carbon they contain.

These suggestions are discussed in more detail in Part III, below.

PART I: GENERAL CRITERIA

The following table summarizes how the draft investment plan complies with the general criteria for FIB investment plans and programs.

Criteria	Score	Comments
Complies with the principles, objectives and criteria of the FIP as specified in the design documents and programming modalities	P	P, O & C of the FIP are taken into account but priority activities are not well thought out and thus some investment project priorities are questionable.
Takes into account the country capacity to implement the plan	N	Overly-ambitious and unfocussed given national capacity and competing development programs. Needs rigorous refocus and prioritization.
Developed on the basis of sound technical assessments	P	Project 3 is well conceived and documented, based on 12 years of past PSFM experience. Projects 1 and 2 are much more speculative and less convincing in their technical assessment and design.
Demonstrates how it will initiate transformative impact	P	Project 3 continues to be one of the most innovative and transformative projects in Asia (despite continuing problems associated with revenue-sharing and ethnic community engagement). Project 1 is innovative and potentially transformative but is totally untested. Project 2 is not innovative or transformative and could benefit from the experiences (positive and negative) of similar GOV/WB/KfW projects in Vietnam.
Provides for prioritization of investments, stakeholder consultation and engagement, adequate capturing and dissemination of lessons learned, and monitoring and evaluation and links to the	P	Prioritization of investments is constrained by the previously-mentioned lack of "focus and prioritization" in FIP concept. Consultation/engagement, dissemination of lessons learned, and monitoring/evaluation have been

results framework		chronic weaknesses in Laos and will require a renewed focus in FIP
Adequately addresses social and environmental issues, including gender	P	The 3 project statements pay the usual attention to social, environmental and gender issues. Specifics are vague and, as usual, the proof will be in final design and implementation
Supports new investments or funding that is additional to on-going/planned MDB investments	P	FIP is a new investment and as such is complementary to various MDB and bilateral program investments. Further bilateral and private sector possibilities are not identified specifically and this may not be possible except during final FIP preparation.
Takes into account institutional arrangements and coordination	P	Adequate at the higher level of REDD+ and FIP administration, but it still remains to be seen if the GOL can provide the required levels of institutional cooperation and coordination (national/provincial/ district) to develop and implement integrated planning at the national and local levels.
Promotes poverty reduction	P/N	While poverty reduction is always an objective of most GOL programs, many policies (i.e. land allocation and its relationship to swidden cultivators) actually exacerbate ethnic poverty. The "jury is out" on the potential effect of Project 2 on poverty alleviation because aspects of similarly proposed small-holder programs in Vietnam actually increased householder indebtedness and resulted in behaviour that increased C emissions and ecosystem degradation.
Considers cost effectiveness of investments	N	If, by this, it is meant whether there is consideration of cost-effectiveness in reducing C emissions (let alone in poverty alleviation and ecosystem

		recovery) there is simply not sufficient information to judge. One wouldn't expect this at this stage of FIB design but there should at least be some reference to the monitoring and evaluation mechanisms that might demonstrate eventual "cost-effectiveness in the final FIP.

**F: Fully complies; L: Largely complies; P: Partially complies; N: Does not comply*

In summary, the current document is useful step in the process of preparing a final FIP. What is necessary in subsequent iterations is a more disciplined problem analysis to identify the most critical deforestation/degradation issues, and a far more focused approach to the development of pertinent programs to address those issues

PART II: COMPLIANCE WITH THE INVESTMENT CRITERIA OF THE FIP

A general assessment whether the investment plan complies with the specific criteria for FIP is as follows:

Criteria	**Score**	**Comments**
Climate change mitigation potential	P	Rough estimates are given for potential emission reductions due to Projects 1 and 3 "for year 1 and after year 8". Estimates for Project 2 are to be determined. The methodology for establishing baselines and estimating potential reductions is not apparent. Estimates in Sec. 1.3 showing average annual emissions/ha from 2012 to 2020 for swidden cultivation being 25% higher than that for commercial tree crop concessions seem hardly credible.
Demonstration potential at scale		Cannot be determined, since in this reviewer's opinion the current program proposals do not address the primary issues of emission reduction.
Cost-effectiveness	P	Cannot be determined with the information available (see above). Current financial leverage appears to

		come from traditional partners and donors. No significant private sector contributions are apparent as yet.
Implementation potential	P	Project 3 is an extension of the current experience in PSFM through SUFORD and other projects. Project 1 is very speculative and there is doubt whether the strong emphasis on swidden reduction is possible or desirable. Project 3 involves plantation and woodlot establishment in which there is not a body of experience in Laos, however, much can be learned from the successes and failures of the extensive plantation regimes in Vietnam.
Integrating sustainable development (co-benefits)	P	Project 3 is aimed primarily at ecologically-based participatory forest management and thus at least in intent supports sustainable development. Project 1 is aimed at protecting ecosystem services but a seeming preoccupation with eliminating swidden cultivation could have serious implications for the welfare and food security of ethnic minority peoples. Project 2 focuses on the development of smallholder and private plantations and woodlots, however, both the environmental and social benefits will depend on the adoption of sustainable plantation models (details not yet specified).
Safeguards -natural forest conservation	F	The FIP is clear that no forest lands will be converted to other purposes except those on which natural forest cover has been substantially reduced (<20%)

**F: Fully complies; L: Largely complies; P: Partially complies; N: Does not comply*

PART III. RECOMMENDATIONS

1. BETTER DEFINITION OF DEFORESTATION/DEGRADATION

The FIP report states that a model for developing strategies and prioritizing actions for reducing carbon emissions takes as its starting point the distribution of forest cover according to four crown density classes: - well-stocked forest (>70%); medium-stocked regenerating forest (40-70%); low-stocked forest (20-39%); and un-stocked forest (<20%) – which seems to be a proxy for estimating degrees of forest degradation. This crown density classification is not ecologically defensible when applied across all Lao forest formations. It may be appropriate for Semi-evergreen Forest (SEF) and moister Mixed Deciduous Forest (MDF) communities, but it is not applicable to drier MDF, Dry Dipterocarp (DD) or Pek Savanna communities. For example, while a 25% crown closure may imply serious degradation of a SEF forest, the same crown closure may be well within the range of natural variation (RONV) for a Dry Dipterocarp (DDF) forest. Laos has five main lowland forest formations - Semi-evergreen (SEF), Mixed deciduous (MDF), Dry Dipterocarp (DDF) and Pek Savannas; four upland forest formations - Montane hardwood (MH), Montane conifer (MC), Mixed Montane Hardwood/Conifer (MMHC); and one sub-tropical formation - Evergreen Hardwood (SEH). A crown density classification must be developed for each of these major forest formations to give proper guidance to FIP.

Rote application of the current crown density classification will result in overestimation of carbon emissions, lands requiring restoration/rehabilitation and, more seriously, of "degraded" forests that warrant conversion from natural communities to tree crop/cash crop plantations.

2. A MORE CONSTRUCTIVE APPROACH TO SWIDDEN CULTIVATION

Throughout this FIP document there is a recurring theme of discrimination and bias against rotational swidden agriculture as practised by ethnic minorities outside the Mekong lowlands. This bias is illustrated by the use of phrases in the main report (though not, interestingly, in the executive summary) such as the pejorative "slash and burn" (which does not distinguish between pioneer and rotational cultivations systems), a distinction between "farmers and shifting cultivators", and the "eradication of shifting cultivation". Perhaps one of the most evident indications of this bias is contained in Table 2, page 3, in which it is contended that annual CO_2 emissions per ha over the period 2012-2020 from "shifting cultivators" are estimated to be 25% higher than those from

commercial concessions and smallholder cash crops. This seems hardly credible given that swidden is cultivated on small, incompletely-cleared plots by household hand-labour with no significant petroleum-based inputs, while commercial cash crop production involves total vegetation removal (including stumps) by heavy equipment, mechanical cultivation, clean weeding, significant fertilizer and pesticide inputs, mechanical harvesting, and crop processing, marketing and transportation.

A stated goal of the GOL is to increase forest cover to 70%, and in order to achieve this it is “undertaking efforts to rationalize agriculture in the upland and mountainous regions”. These efforts also aim to improve food (rice) security and to reduce acute poverty in upland communities. At the same time, these programmes are also expected to contribute to national objectives of environmental protection and conservation of biological diversity. In order to effect these improvements, Government has initiated a land and forest allocation programme, involving the allocation of land to individuals, villages and commercial organizations.

The allocation programme is undertaken with the aim of achieving a number of national goals, such as: reducing deforestation; restoring land productivity; improving land use efficiency; enhancing rural livelihoods; diversifying agricultural production; and “reducing or eliminating shifting cultivation". Land allocation programs were originally conceived as a way of curtailing illegal activities by giving local villages control of forest resources through a process of participatory management. Somewhere along the way this original laudable vision has become subservient to an indiscriminate preoccupation with eliminating “shifting cultivation” and promoting the "focal site" approach to rural development, which involves bringing villages to services (through village relocation and consolidation) rather than bringing services to villages.

The end result of the land allocation process is that in many upland areas, households have been allocated only three parcels for cultivation in which they can rotate. Thus, the fallow period is now reduced to 3-4 years, which is simply not adequate to restore fertility. Also, in many instances, the total amount of land given is less that is necessary to meet household needs regardless of the number of "rotational parcels". Sometimes this is due to the land allocation procedures of local authorities but in other cases villagers themselves fail to ask for the land they require because they are taxed for all land allocated as though it is in continuous full production. The inevitable result of the land allocation program on poorer soils will be soil degradation and a significant loss of agricultural livelihood and food security.

These land allocation programs are predicated on the lowland belief that only permanent agriculture, consisting of paddy, gardens, orchards and plantations, is appropriate and acceptable. This agricultural paradigm has become the dogma of dominant ethnic groups all over Southeast Asia who farm highly-productive soils either in alluvial floodplains or those derived from base-rich volcanic or calcarious geological formations. These people (whether Javan, Thai, Lao, Khymer, lowland Vietnamese, Han Chinese or Bumiputra Malaysians) consider those who farm poorer soils by rotational methods as "backward and primitive". In fact, just the opposite is true and peasant rotational farmers have evolved highly sophisticated and sustainable practices to deal with the reality of their environments, referred to by a prominent tropical agricultural specialist as "the single largest knowledge resource not yet mobilized in the global agricultural development enterprise".

The imposition of more sedentary agricultural practices on upland swidden farmers is being pursued without much attention to where it might be possible and desirable, especially in relation to soil productivity. Laos appears to contain a considerable array of soil types including: acidic and infertile podzols and deep sandy soils; rich and fertile volcanic soils; brown forest soils of moderate fertility in drier, northern upland areas; fertile alluvial soils; heavy clays; thin, fertile but droughty and erodible limestone soils; and even peat soils. These soils have vastly different inherent agricultural capability and capacity to respond to cultural inputs. Some are amenable to static agriculture while others are not. In particular, the dominant soils of the tropics, such as those derived from ancient, neutral to acidic sedimentary/ metamorphic rocks are not capable of supporting static agriculture, and when sedentary agriculture is imposed, serious, long-term site degradation and loss of village food security are common consequences.

Such soils have been farmed sustainably for centuries by traditional rotational agricultural systems involving a cultural period of 1 to 3 years and a fallow period of 5 to 15 years. These systems are both ecologically sound and technically sophisticated, involving a considerable traditional knowledge of inherent soil fertility and a great diversity of crop species (up to 20 -25). Clearings are small and irregular with high retention of useful trees, stumps and roots, which minimises soil erosion and promotes rapid re-growth when the site is returned to fallow. Cropping is characterized by complexity and diversity; often involving as many as 20-25 varieties of exotic and native plants. The focus on such soils should be less on eradicating rotational cultivation and more on optimizing the length of the fallow recovery periods by improved practice, and on low-intensity perennial cropping for food, fodder, NTFPs and cash crops on land under fallow. It must be kept in mind, however, that these are very

vulnerable human communities living constantly "on the edge", who do not have the luxury of aggressive "experimentation" in their livelihoods.

3. EVALUATING THE ECOLOGICAL ROLE OF FIRE IN LAO FORESTS

Like similar dry ecosystems in western North America and Australia, the composition and structure of monsoonal ecosystems (Dry Deciduous, Dry Dipterocarp and Savanna Forests) in Laos have been determined historically by regular, largely-anthropogenic fire. An important consideration in the influence of fire on ecosystem function is the relationship between fire frequency and fire intensity. Though many species in these ecosystems are fire-dependent, too-frequent fires will affect seedling survival and the spread of weed species, while longer fire intervals may lead to fuel accumulations that result in unnatural, catastrophic, high-severity fires. There is now a considerable body of information originating from Western North America and Australia that regular, low-intensity ground fires (3 to 20 year return periods) in dry ecosystems greatly enhance carbon accumulation and storage (particularly in the soil) when compared with periodic high-severity fires (40 to 70+ year return periods) resulting from fire exclusion and fuel accumulation. It is possible that ethnic communities in Laos use fire too frequently and without clear objectives, but fire is a pervasive ecological influence in much of the country and it wont go away and it can't be ignored; we must learn to use it wisely. FIP should consider joint silvicultural and fire ecology studies to determine possible approaches to holistic ecosystem management and measures to improve the resiliency and adaptation to climate change in dry forest formations. The intent of these studies would be to develop, in consultation with local communities, a "prescribed fire" code of practice to guide fire use.

4. IMPROVING CONSULTATION AND ENGAGEMENT WITH ETHNIC MINORITY PEOPLES

The Social Impact Assessment prepared for SUFORD-AF concluded that in the 6-year SUFORD project, while Lao speakers in the Mekong lowland had a reasonable understanding of, and engagement in, the project, the few ethic minority communities on the periphery of the lowlands had no such understanding and engagement. It attributed this to "a considerable communications gap (that) exists" between MAFF staff and ethnic villagers and "a poor appreciation and understanding of the implications of ethnic diversity on the part of PAFOs and DAFOs". Furthermore it concluded that ethnographic studies carried out under the project had "not been sufficiently incorporated into project manuals and guidelines or into the implementation strategy of the project generally".

Clearly, the ethnic minority communities in Laos have a significant role to play in both FIP and REDD+ design and implementation. There is a real opportunity in the FIP and REDD+ programs to build on the experiences gained in SUFORD and other donor projects to:

- acquire a cadre of competent translators to facilitate constructive communication and engagement with villagers in ethic communities in participatory forest management, the consequences of global climate change, and practical measures to reduce greenhouse gas emissions;
- compile short ethnographies on ethnic minorities (traditional livelihoods, cultural practices, relationships to their environment) to be used in a training program for government staff on ethic group issues; and
- capture and incorporate traditional ecological knowledge (TEK) into management programs and identify measures to improve TEK practices to limit greenhouse gas emissions.

It is not clear from the current FIP Investment Program that anything like the required consultation and engagement program is contemplated.

5. IMPLEMENTING AND MONITORING COMPLIANCE AND ENFORCEMENT WITH LAO'S ENVIRONMENTAL AND NAUTRAL RESOURCE LAWS AND REGULATIONS

A recurring theme throughout this report is that management problems are not due to a lack of "legislation/regulations" but "more to the capacity to implement and enforce the policies in a developing political system". Unfortunately, little progress has been made, so far, in developing an effective external monitoring/enforcement system. The creation of a Forest Inspection Department with a clear enforcement function provides a new opportunity for system development that could be supported by FIP.

Enforcement is a complex and highly-technical function involving a number of elements that are critical to its effectiveness:

- a regulatory regime that provides clear legal definitions of non-compliance;
- enabling legislation supporting search of property and seizure of assets in cases of suspected illegal acts;
- a senior level, "standing committee" to coordinate the activities of those involved in compliance and enforcement – DFI, DOF, police, army, state prosecutors and courts – through the establishment of formal, enforceable protocols and memoranda of understanding;
- enforcement staff trained in techniques of legal investigation and rules of evidence;

- a close and constructive relationship between enforcement investigators and legal prosecutors;
- a law-based set of flexible enforcement actions spanning a range consistent with the severity of the offense (i.e. administrative sanctions, stop-work and remediation orders, monetary penalties (by "ticketing"), and court prosecution resulting in fines and/or imprisonment); and
- a fair and transparent court system.

These elements clearly represent an "ideal" that can be achieved only incrementally, however, there must at least be the intent to introduce them if the enforcement function is to have a chance at effectiveness and comprehensive compliance monitoring is to be considered. Around the world, the single biggest constraint to the effectiveness of compliance monitoring and enforcement systems, and the moral and dedication of the staff who run them, is the political will to enforce the law and its regulations. In the absence of that political will, such systems quickly become unsustainable.

GOL regulations appear to suggest that the political will for law enforcement exists. If so, a well-conceived compliance monitoring and enforcement system should lead to improved enforcement of regulatory compliance, better forest practices and enhanced revenue collection. Standardized reporting, recording and analysis will allow law enforcement authorities to track the status of investigations of unauthorized or illegal activities, and thus to conduct better structured, more systematic, and more efficient enforcement actions. Enhanced recording systems will enable timely and meaningful compilation of reports on compliance and enforcement for political decision-makers and the public. This, in turn, may result in greater transparency and awareness of compliance with forest law and, ultimately, in stronger political and public support for forest law enforcement

A competent compliance program will also support continued FSC certification, with associated "chain-of-custody" and independent performance auditing requirements. Certification should lead to achievement of internationally-accepted standards of sustainable forest management and to substantially higher prices and market shares for logs and wood products. Since certification will be based on regulatory compliance and on independent auditing (paid out of management funds and higher product prices) it should result in a decreased regulatory and administrative burden to government.

6. ECOLOGICALLY-BASED FOREST RESTORATION AND SUSTAINABLE PLANTATIONS

Natural forest restoration

Artificial regeneration on any significant scale is a very expensive proposition involving significant plant propagation facilities, invariably employs limited genetic stock, is seldom very successful, and is always inferior in results to natural regeneration from well-conceived silvicultural prescriptions. So-called "enrichment plantings" have also resulted in some jurisdictions, such as Malaysia, in significant distortions of natural stand composition and loss of biodiversity. Any attempts at artificial regeneration activities must:

- have clearly established objectives;
- be limited to areas of significantly degraded forest where natural regeneration is unlikely, as determined by well-designed regeneration surveys; and
- utilize the widest possible range of species and genetic materials native to the particular area.

Natural regeneration should be confirmed as the preferred method of achieving adequate stocking on PFAs. Artificial regeneration should be employed **only** where it can be demonstrated that natural regeneration is not possible and where it can be justified both economically and ecologically.

Industrial and Small-holder Commercial Tree Crop Plantations

Commercial tree crop plantations are not forests and their establishment should not be considered reforestation or forest restoration. They are much more like agricultural systems and have many of the same risks, vulnerabilities, uncertainties and carbon consequences. Plantations can be made more like natural systems to improve the ecological stability and resilience that limits the risk of plantation failure and reduces the necessity for artificial inputs to these simplified ecosystems by:

- incorporating diversity (of genetic materials, species, age classes, rotation lengths, and spatial structure at the landscape-level); and
- aggressive protection of organic matter in all cultural operations from establishment to harvesting.

Vietnam, because of serious past deforestation (now <20 % forest cover) resulting from the American War, has embarked on an extensive government, industry and small-holder wood plantation program. Initial plantation programs focused on intensive short-rotation plantations – 6-8 year Eucalyptus/Acacia pulpwood - with little or no control over plantation practices. There are now

serious doubts whether these plantations are sustainable even in the medium-term. Most of the areas presently under consideration for inclusion in the Vietnamese program contain very poor degraded soils (like Laos) - (Ultisols (grey, yellow and red podzols). Chemical properties are very poor and include: low pH; aluminum toxicity; and significant nutrient deficiencies (nitrogen, phosphorus, potassium, calcium, magnesium, sulphur, zinc and many micro-nutrients). Most of these site nutrients would have been lost during initial forest clearing, and the sites have probably been subsequently degraded during a period of unregulated agricultural exploitation. Cation exchange capacity (the ability of the soil to hold nutrients) is very low for most nutrients and thus the benefits of fertilization are often very transitory. Conversely, the high acidity and presence of iron and aluminum tends to immobilize phosphorus, which often becomes the major limiting macro-nutrient on such soils. Phosphate fertilization is not usually effective unless accompanied by heavy liming, which adds substantially to management costs.

A general principle of soil science is that in temperate ecosystems the main reservoir of nutrients is the soil, whereas, in tropical ecosystems the main reservoir of nutrients is above and below ground, living and dead vegetation. Because of their extreme age and the high degree of leaching under the prevailing climate, the upland soils of Southeast Asia would have been unproductive even under the original natural forest cover, and the majority of site nutrients would have been continually recycled within the vegetation and humus layer – tropical moist forests are amongst the world's most efficient recyclers. Once nutrients are lost they can be replaced only at great expense, if at all.

In the Vietnam program, production for current plantations was expected to be 100-120 m^3/ha on a 7-year rotation, or 14 to 17 m^3/ha/annum. Such yields may be achievable on better sites in the first rotation but on poorer sites and in subsequent rotations, the removal of such a large biomass, and attendant site disturbance every 7 years, will most probably lead to nutrient depletion, with serious consequences for long-term site quality and yield in subsequent rotations, and increasing carbon emissions. There is little question that trees can be grown on these sites, however, there are real doubts that current growth expectations can be sustained for very long. Present plantation establishment is far in advance of the scientific information necessary to demonstrate sustainability and financial viability (a lesson for Laos).

One way in which plantation risks (economic and ecological) can be estimated and mitigated is through simple simulation models of nutrient status/nutrient flow for selected plantation sites and silvicultural models. Simulation models can be used to develop plantation guidelines and prescriptions (species mixes,

rotation ages, site selection criteria, site preparation techniques, practical fertilization regimes, thinning regimes, weeding, and harvesting prescriptions) that are sustainable over the long-term. The ecosystem simulation group in the Faculty of Forestry at the University of British Columbia (UBC), Vancouver, Canada has developed a simulation model (FORCAST) that has already been calibrated and applied to similar plantation situations in Thailand and tropical and sub-tropical China. The appendix below provides details of a proposed program to apply this model to plantation management in Vietnam. This program would aim to train government staff in the application and operation of the FORCAST model (which is in the Canadian public domain and thus UBC charges no patent fees as the developer) for ongoing use in assessing the site and species suitability of different plantation models.

APPENDIX

Application of the FORECAST model to evaluate sustainable production in *Acacia mangium* plantations in Vietnam

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MODEL OVERVIEW

The stand-level, ecosystem-based, forest growth model FORECAST (Kimmins et al. 1999) was developed to evaluate the long-term implications of alternative forest management strategies on a variety of biophysical indicators of sustainable forest management. It has been applied in a number of studies to examine the impact of short rotation management on long-term site productivity (e.g. Morris et al. 1997, Bi et al., 2007, Seely et al, in review). The model employs a mass balance approach to evaluate the effects of management on site nutrient capital and availability, which is directly linked to stand productivity. Growth in FORECAST is presently limited to consideration of nutrient and light availability, however a new version with climate change capabilities is under development.

EXPERIENCE IN CHINA

The University of British Columbia research team has recently begun a joint research project with Dr. Hong Jiang and others at Zhejiang Forestry University in Hang Zhou. The objective of this project, jointly funded by the Canadian and Chinese governments, is to bring modeling technology developed in Canada to

China to help support evaluations of sustainability in a variety of forest plantation ecosystems. Specifically, the FORECAST model is being calibrated to examine the sustainability of management alternatives in Chinese fir (*Cunninghamia lanceolata*), bamboo (various species) and Mason pine (*Pinus massoniana*) plantations in southeastern China. An initial training and planning workshop was held at Zhejiang Forestry University in September of 2008. Follow-up training and model development will occur at both the University of British Columbia and locations in China in the future.

POTENTIAL FOR APPLICATION TO VIETNAM PLANTATION SYSTEMS

The design of FORECAST allows for its application to many different forest stand types and conditions, and the model is well suited for an analysis of the long-term implications of alternative short-rotation plantation management systems.

This paper describes the basic data needed to calibrate and operate the model for Vietnamese coastal ecosystems, and provides an estimation of resource requirements for initial data collection and to train staff of the Vietnam Forest Science Institute in model application.

Data Requirements

The modular structure of FORECAST allows it to be run at different levels of complexity. Data requirements will increase with higher levels of ecosystem diversity and complexity. For example, a more detailed calibration data set is required to run the model for natural forest communities with multiple species / vegetation types than for fibre plantations where the number of species is usually small and stands are simple in structure. The basic data requirements for vegetation and soils to be represented in the model are presented in Tables 1 and 2, respectively. For the highest level of model accuracy, data should be based on site-specific measurements, however, estimates from published values from representative sites will suffice for general evaluations. As indicated in Table 1, growth data are required for each plant or tree species to be represented in the model. In addition, to represent site quality change, data must be provided for a minimum to two nutritional site qualities.

Table 1. Primary vegetation data requirements to calibrate FORECAST. These data will be required for each tree species to be included in the analysis.

Category	**Description**	**Potential sources**
Stem biomass	For an age sequence on at least two site qualities	Derived from growth and yield data
Branch biomass	For an age sequence on at least two site qualities	Derived from allometric relationships
Foliage biomass	For an age sequence on at least two site qualities	From published values and allometric relationships
Coarse root biomass	For an age sequence on at least two site qualities	From published values and allometric relationships
Fine root biomass	For an age sequence on at least two site qualities	From published values and allometric relationships
Live tissue nutrient conc.	For each biomass type listed above. Range for site qualities (%N, %P)	Sampling, published values
Dead tissue nutrient conc.	For each biomass type listed above. Range for site qualities (%N, %P)	Sampling, published values
Litterfall rates	Annual estimates (% of live)	Sampling, published values
Top Height	Height /age curves on at least two site qualities	Published values
Stem density	Stem density pattern for an age sequence in un-thinned stands	Published values
Litter decay rates	Mass loss (%) for each biomass type listed above.	Published values, climate based estimates
Canopy shading	For an age sequence on at least two site qualities	Sampling, published values

Table 2. Soil data requirements to calibrate FORECAST. These data will be required for each general soil type/condition to be represented as a starting point in the model.

Soil Characteristic	**Description**	**Potential sources**
General soil type	For selecting soil calibration data base	Regional soil maps or site sampling
Soil depth	Rooting zone	Regional soil maps or site sampling
pH	Either by layer or avg. for rooting zone	Sampling, published values
%N	Either by layer or avg. for rooting zone	Sampling, published values
% org C	Either by layer or avg. for rooting zone	Sampling, published values
% P	Total P by layer or avg. for rooting zone	Sampling, published values
Textural description	% clay content and description of clay types	Sampling, published values
Bulk density	g cm^3	Sampling, published values
Coarse fragment content	% for rooting zone	Sampling, published values
Exchangeable cations: (c mol kg^{-1} soil)	Including K, Ca, Mg	Sampling, published values
SOM decomp. rate	Mass loss (%) per year for humus (range)	Published values, climate based estimates

The program proposed for Vietnam could occur in two phases, depending on the needs of the FSDP:

Phase 1

- Calibrate FORECAST for short-rotation *Acacia mangium* plantations (models 1/2) and variable-rotation mixed plantations (model 4) of *Acacia mangium* and selected native species (e.g. *Hopea, Homalium, Dipterocarpus, Cinnamomum, Erythrophleum*).
- Include 2-3 site qualities depending on data availability
- Assemble preliminary soil data for 2-3 representative soil types

- Conduct initial scenario analysis of rotation lengths on long term-site productivity with focus on biomass production, site nutrient capital and soil indicators
- Organize introductory training workshop in Vietnam (Vietnam Forest Science Institute)
- Evaluate Models 1/2 and 4
- Preparation of final report
- Provide model and calibration data to partners at the Forest Science Institute of Vietnam.
- Continued support for model application via email
- Additional workshop/s as needed

Project length: 24 months
Resource requirements: $65,000 – $80,000 (CDN) depending on choices

Phase 2 (if required)

- Calibrate FORECAST for additional selected exotic plantation species in Model 1/2 (e.g. Acacia auriculiformis, A. mangium x auriculiformis, A. crassicarpa and Eucalyptus urophylla)
- Improve soil data from regional sampling depending on availability
- Add calibration data for key minor vegetation species
- Conduct more detailed analyses of mixtures with underplanting and or shelterwood systems in Model 4.
- Preparation of final report
- Provide model and calibration data to partners at the Forest Science Institute of Vietnam.
- Continued support for model application via email
- Additional workshop/s as needed
- Development of a spreadsheet-based decision-support tool to allow users explore output from a range of previously modeled management scenarios in FORECAST

Project length: 18-24 months
Resource requirements: $60,000 – $80,000 (CDN) depending on choices

Independent Technical Reviews

Forest Investment Program of Lao PDR

1. **Title of the investment plan: Forest Investment Program-Lao Investment Plan**
2. **Name of the reviewers: Mr. Khamphet Sengchanh Oudom and John Howard Dick**
3. **Date of submission: 04/10/2011**

Part I: General criteria.

The investment plan fully complies with the principles, objectives and criteria of the relevant program and takes into account the country capacity, experiences to implement the plan.

The IP has been developed on the basis of sound technical assessments and comprehensively demonstrates how it will initiate transformative impact.

The IP has provided, prioritization of investments, stakeholder consultation and engagement, and adequate capturing and dissemination of lessons learned and has adequately addressed social and environmental issues, including gender

Comments:

1. IP has already provided a result framework, but the implementing agencies and frequency of results monitoring needed to be defined.
2. The institutional Arrangement for implementation of IP needs to be defined.

Part II: Compliance with the investment criteria or business model of the relevant program.

In principle, the investment plan has fully complied with the criteria specific for the relevant program

- **Climate change mitigation potential:**

The IP has already provided details for this criteria .

  - IP will help the country to adapt to climate change impact, e.g. by pursuing climate resilient development as a co-benefit
  - GOL recognizes its international obligation to reduce emissions from deforestation and forest degradation in Lao PDR, as well as to conserve biodiversity and other resources in its forests, sustainably manage its forests, and enhance carbon stocks, thereby contributing to global efforts to mitigate climate change
  - Proposed projects-PSM-CFA, village forestry (VF), and smallholder forestry (SHF) in pilot sites will result in avoided deforestation and degradation, in turn resulting in reduced GHG emissions of CO_2e and carbon stock enhancement CO_2e

- **Demonstration potential at scale:**

The IP has projected a possibilities for this criteria

- PSM-PFA has demonstrated scaling up to 18 PFAs in 2008-2011 from 9 PFAs in 2003-2008 of pilot application in 2 PFAs in 1996-2001 showing further scaling to cover all 51 PFAs in the next 7 years is possible. VF and SHF will be piloted at a scale to be determined during project preparation, with potential for large scale-up covering more than half a million ha possible by 2020
- A wide range of stakeholders will be involved and activities will also vary in scale from small local community based activities to larger government, donor, and private sector sponsored activities
- No comment

- **Cost-effectiveness:**

The IP has already provided details for this criteria .

IP estimated Cost effectiveness by

- FIP budget in WPFAs and CFAs: USD X/t CO_2e
- Leveraged budget in PFAs: USD X/t CO_2e
- FIP budget in pilot WPFAs, VFs, SHFs: USD X/t CO_2e
- Leveraged budget in pilot WPFAs, VFs, SHFs: USD X/t CO_2e

Comments: cost-effectiveness should be determined.

- **Co-benefits:**

The IP has already provided details for this criteria .

- IP Will enhancement of co-benefits, such as biodiversity conservation, poverty reduction, and soil conservation
- IP will be brought to bear on the core objective of 'reduced GHG emissions from deforestation and forest degradation, which can be brought about by sustainable management of forests and conservation and enhancement of forest carbon stocks'
- IP in Lao PDR is combination of reducing GHG emissions, but also to help the country to adapt to climate change impact, e.g. by pursuing climate resilient development as a co-benefit
- Other co-benefits from IP
  - **REDD+ in PFAs:** Poverty reduction through increased incomes in forest landscape-based livelihoods; biodiversity conservation; enhancement of forest ecosystems services
  - **REDD+ in CFAs:** Biodiversity conservation; enhancement of forest ecosystems services; poverty reduction through increased incomes in forest landscape-based livelihoods
  - **REDD+ in WPFAs:** Enhancement of forest ecosystems services; poverty reduction through increased incomes in forest landscape-based livelihoods; biodiversity conservation
  - **Smallholder and Private Enterprise Partnership:** Poverty reduction through increased incomes in forest landscape-based livelihoods; enhancement of forest ecosystems services

- **Implementation potential:**

The IP has already provided details for this criteria .

IP will be implemented in combination with the existing projects implemented by DOF at national level, PFO at provincial level, and DFO in partnership with VFOs at FMU level*:*

1. REDD+ in Production Forest Projects
2. REDD+ in Conservation Forest Projects
3. REDD+ in Protection Forest Projects
4. Smallholder and Private Enterprise Partnership Project

Risks are perceived to be manageable and are brought about by the need to work with villages of all ethnicities under variable local conditions, as well as the risk associated with carbon markets that have not yet been realized in Lao PDR and whose working mechanisms are still under development

Comment: Institutional Arrangements, key implement agencies for implementation of IP Need to be defined.

- **Natural forests:**

The IP has already provided details for this criteria .

  - Lao PDR has considerable natural resources in forests and this is significant for cultural development, environment protection, and economic development at the national and local levels
  - IP Projects will reduce pressures in Natural Forest
  - Result of IP will Change in hectares of natural forest cover in state and outside state forest areas

Part III: Recommendations.

Some recommendations that could enhance the quality of the investment plan.

Comment:

- Figure 2: Logic model of the FIP Lao Investment Plan need to be outlined
- Map of targeted areas/projects location need to be provided
- Table of contents need editing.

Independent Review Comments			Team Response
Introduction			
The proposal can be strengthened in three fundamental ways: • better definition of what constitutes deforestation and degradation in different natural forest formations • prioritization of the main elements of deforestation / degradation that should be addressed in the short- to medium-term for emission reductions: 1) unregulated agricultural/tree-crop expansion; 2) uncontrolled clearing for infrastructure and large-scale industrial development; 3) pioneering shifting cultivation (always to be differentiated from rotational swidden); and 4) illegal exploitation and international trade in forest/biodiversity products; and • down-sizing, rationalization and technical improvement to the Lao timber processing industry			During project preparation the suggested priorities will be considered for support from FIP. There are significant overlaps between the priorities listed by the Reviewer and the program of support SUFORD is currently implementing. For example under SUFORD MOIC has received technical assistance to identify opportunities to scale-back timber processing capacity at provincial level to match sustainable timber supply. Other priorities listed by the reviewer are referenced in the following sections.
Part I: General Criteria			
Criteria	**Score**[15]	**Comments**[16]	**Team Response**
Complies with the principles, objectives and criteria (P,O & C) of the FIP specified in the design documents and programming modalities	P F	**Reviewer 1**. P, O & C of the FIP are taken into account but priority activities are not well thought out and thus some investment project priorities are questionable. **Reviewer 2.** The IP fully complies with the P, O & C of the relevant program.	It is stated in Section 6.2 that FIP investment will be channeled through existing and planned MDB projects "in order to achieve cost effectiveness, ensure rapid implementation and minimize the need for diverting scarce staff with management experience from other important tasks." These considerations helped shape the investment priorities. Questions that Reviewer 1 has raised with regard to decreasing areas under swidden agriculture and increasing areas under plantations are addressed below.
Takes into account the country capacity to	N	**Reviewer 1.** Overly-ambitious and unfocussed given national	In recognition of the limited country capacity to implement an ambitious program of activities the proposed projects are building on

[15] Fully meets criteria (F); Largely (L); Partially (P); criteria Not met (N)

[16] Reviewer's comments refer to "Project "1 - Protecting Forests for Sustainable Ecosystem Services to be supported by ADB; "Project 2" - Smallholder Plantations to be supported by IFC and "Project 3" - Up-scaling of PSFM to be supported by WB.

implement the plan	F	capacity and competing development programs. Needs rigorous refocus and prioritization. **Reviewer 2.** The IP takes into account the country capacity and experience to implement the plan	ongoing MDB projects and programs. This will help address the reviewers concerns and minimize transaction costs. Activities that are not yet ready for full-scale implementation are to be piloted during the initial period of FIP implementation. The scale of FIP financed pilots (in participatory land use planning, village forest allocation and titling, smallholder private sector partnerships, and others) will be defined during the project preparation phase.
Developed on the basis of sound technical assessments	P	**Reviewer 1.** Projects 1 and 2 are much more speculative and less convincing in their technical assessment and design. Project 3 is well conceived and documented, based on 12 years of past PSFM experience. **Reviewer 2.** The IP has been developed on the basis of sound technical assessments.	In view of the responses above and the experience already gained in Lao PDR the proposed projects are considered to be based on sound technical, social, environmental and economic assessments and will be undertaken on appropriate scales given the current state of knowledge. The suggestion to incorporate experience from Vietnam in Project 2 will be considered during the project preparation phase.
Demonstrates how it will initiate transformative impact	P	**Reviewer 1.** Project 1 is innovative and potentially transformative but is totally untested. Project 2 is not innovative or transformative and could benefit from the experiences (positive and negative) of similar GOV/WB/KfW projects in Vietnam. Project 3 continues to be one of the most innovative and transformative projects in Asia (despite continuing problems	Regarding project 1 the approach has been successfully piloted for the past three years, and it is the first project to give attention to Protection Forest with the multiple benefits that can be secured through improved management of this type of forest. Regarding the comments on Project 2, clearly the reviewer is not aware of the highly innovative nature and success of candidate partners for the proposed project. The proposed project has not been described in detail in the IP, pending a decision as to which private sector partner should be selected. The various options for partnering this project are proposing to use a different approach from that adopted in Vietnam.

		associated with revenue-sharing and ethnic community engagement). **Reviewer 2.** The IP comprehensively demonstrates how it will initiate transformative impact.	
Provides for prioritization of investments, stakeholder consultation and engagement, adequate capturing and dissemination of lessons learned, and monitoring and evaluation and links to the results framework	P	**Reviewer 1.** Prioritization of investments is constrained by the previously-mentioned lack of "focus and prioritization" in FIP concept. Consultation / engagement, dissemination of lessons learned, and monitoring / evaluation have been chronic weaknesses in Laos and will require a renewed focus in FIP. **Reviewer 2.** The IP has provided prioritization of investments	The question of priorities has been responded to above. Regarding the consultation process, it is well recognized in Lao PDR that this is difficult because of the widespread distribution of the population and the existence of many ethnic groups who often do not have Lao language as mother tongue. Steps have been taken to address this by bringing the Lao National Front (responsible for ethnic group affairs) and the Lao Women's Union into the REDD+ Task Force, and the R-PP has set out a detailed plan for stakeholder participation and consultation, that will apply to FIP investments.
Adequately addresses social and environmental issues, including gender	P	**Reviewer 1.** The 3 project statements pay the usual attention to social, environmental and gender issues. Specifics are vague and, as usual, the proof will be in final design and implementation. **Reviewer 2.** The IP has provided stakeholder consultation and engagement	The three MDBs will follow their respective safeguard policies and will be responsible for ensuring compliance.

		and adequate capturing and dissemination of lessons learnt and has adequately addressed social and environmental issues, including gender.	
Supports new investments or funding that is additional to on-going/planned MDB investments	P	FIP is a new investment and as such is complementary to various MDB and bilateral program investments. Further bilateral and private sector possibilities are not identified specifically and this may not be possible except during final FIP preparation.	In the IP reference is made to the proposed projects being additional or complementary to on-going MDB investments enabling the government to address Climate Change and REDD+ related issues in a complementary and incremental manner. Reference is also made to cooperation and coordination with other donors working on various aspects of REDD+ implementation.
Takes into account institutional arrangements and coordination	P	**Reviewer 1.** Adequate at the higher level of REDD+ and FIP administration, but it still remains to be seen if the GOL can provide the required levels of institutional cooperation and coordination (national/provincial/ district) to develop and implement integrated planning at the national and local levels. **Reviewer 2.** The IP has already provided a result framework but the implementing agencies and frequency of results monitoring need to be defined	It is acknowledged that REDD+ institutional arrangements are still weak at sub-national level, and each of the projects will include substantial capacity building. The existing and new projects that will receive incremental FIP investments have established institutional linkages in the Provinces where they are operating and these linkages will facilitate the development of appropriate capacity at sub-national level.

Promotes poverty reduction	P/N	**Reviewer 1.** While poverty reduction is always an objective of most GOL programs, many policies (i.e. land allocation and its relationship to swidden cultivators) actually exacerbate ethnic poverty. The "jury is out" on the potential effect of Project 2 on poverty alleviation because aspects of similarly proposed small-holder programs in Vietnam actually increased householder indebtedness and resulted in behaviour that increased C emissions and ecosystem degradation.	While it is recognized that land allocation efforts in Lao PDR have not always had the intended consequences, the Government has recently published a new and very comprehensive Participatory Land-use Planning (PLUP) Manual prepared jointly by MAF and the National Land Management Authority, which gives clear guidelines on how the process should be conducted. The projects supported by FIP investments will follow the new PLUP Manual. One of the candidate private sector partners for Project 2 has been implementing guidelines very similar to those in the PLUP Manual for 3 years with small ethnic group communities and has built strong support for the process because of the tangible reduction in poverty that has been achieved.
Considers cost effectiveness of investments	N	**Reviewer 1.** If, by this, it is meant whether there is consideration of cost-effectiveness in reducing C emissions (let alone in poverty alleviation and ecosystem recovery) there is simply not sufficient information to judge. One wouldn't expect this at this stage of FIP design but there should at least be some reference to the monitoring and evaluation mechanisms that might demonstrate eventual "cost-	The IP has been revised to include additional information for Projects 1 and 3, for which more information is available, indicating that the cost per ton of net CO_2 emission reductions is substantially below the current market price, assumed to be around US$ 5 per ton. This is does not take account of the transaction costs nor the cost and long-term benefits of capacity building, which will need to be examined in more detail during project preparation. It is anticipated that the cost effectiveness of the projects will be developed in more detail during project design.

		effectiveness in the final FIP.	
Part II: compliance with the investment criteria of the FIP			
Criteria	**Score**	**Comments**	**Team Response**
Climate change mitigation potential	P	**Reviewer 1.** Rough estimates are given for potential emission reductions due to Projects 1 and 3 "for year 1 and after year 8. Estimate for Project 2 is to be determined. The methodology for establishing baselines and estimating potential reductions is not apparent. Estimates in Sec. 1.3 showing average annual emissions/ha from 2012 to 2020 for swidden cultivation being 25% higher that for commercial tree crop concessions seem hardly credible.	The details of the overall national estimates of current emissions are given in the R-PP. The methodology is explained in some detail there, and it is pointed out that it is based on many assumptions. One of the most critical assumptions is the proportion of forest of different crown density classes that is converted. In the case of swidden cultivation there is some data on the proportion of primary forest that is converted and there is also data on the area cleared annually, and there is a carbon sequestration model for regrowth of secondary forest following swidden cultivation developed by the Japanese Forest Research Institute, so that the estimates for emissions from swidden cultivation are likely to be the more accurate. The data for concessions assumes that the land used for concessions contains forest and potential forest in the same proportions as occurs nationally; thus most of the land converted to concessions is assumed to be on low density or degrade forest and hence the lower emissions. The estimates will be revised when more detailed data is available on the forest that is being converted.
Demonstration potential at scale		**Reviewer 1.** Cannot be determined, since in this reviewer's opinion the current program proposals do not address the primary issues of emission reduction.	Each of the projects has been developed to deal with one or more of the drivers of deforestation and degradation and the latest version of the IP gives estimates of the emission reductions which the reviewer mentions above.
Cost-effectiveness	P	**Reviewer 1.** Cannot be determined with the information available (see above). Current financial leverage appears to come from traditional partners and	See response to cost effectiveness above

		donors. No significant private sector contributions are apparent as yet.	
Co-benefits		**Reviewer 1.** Project 3 is aimed primarily at ecologically-based participatory forest management and thus at least in intent supports sustainable development. Project 1 is aimed at protecting ecosystem services but a seeming preoccupation with eliminating swidden cultivation could have serious implications for the welfare and food security of ethnic minority peoples. Project 2 focuses on the development of smallholder and private plantations and woodlots, however both the environmental and social benefits will depend on the adoption of sustainable plantation models (details not yet specified).	All three projects focus on participation of local communities in various aspects of forest management, and Projects 1 and 3 both support village development funds that ensure that benefits from forest management are available to villagers for a wide range of small-scale investments. Project 1 focuses on mountainous terrain, which has been designated as protection forest because of the importance of the rivers for potable water, irrigation and hydro-power and the high risk of floods. This type of terrain is also where the ethnic groups dwell and the primary form of agriculture is swidden cultivation; hence the project's focus on working with the communities concerned to protect all the remaining forest, restore forest cover wherever possible and provide incentives to try and adopt alternative livelihood systems that include agroforestry. Apart from poverty reduction and increased incomes there are benefits to water, soil and biodiversity conservation that were evaluated during the preparation of the BCC project through which FIP funds will be channeled. Project 2 has examined a number of options for partners and has focused on those that have demonstrated viable and sustainable approaches that bring measurable improvements in incomes and livelihoods for participating households.
Implementation potential	P	**Reviewer 1.** Project 3 is an extension of the current experience in PSFM through SUFORD and other projects. Project 1 is very speculative	Please see responses to country capacity, technical assessments, transformative impact, institutional arrangements and coordination above.

		and there is doubt whether the strong emphasis on swidden reduction is possible or desirable. Project 2 involves plantation and woodlot establishment in which there is not a body of experience in Laos, however, much can be learned from the successes and failures of the extensive plantation regimes in Vietnam.	
Natural forests	F	**Reviewer 1.** The FIP is clear that no forest lands will be converted to other purposes except those on which natural forest cover has been substantially reduced (<20%)	
Part III: Reviewer Recommendations			**Team Response**
Reviewer 1. The FIP report states that a model for developing strategies and prioritizing actions for reducing carbon emissions takes as its starting point the distribution of forest cover according to four crown density classes: - well-stocked forest (>70%); medium-stocked regenerating forest (40-70%); low-stocked forest (20-39%); and un-stocked forest (<20%) – which seems to be a proxy for estimating degrees of forest degradation. This crown density classification is not ecologically defensible when applied across all Lao forest formations. It may be appropriate for Semi-evergreen Forest (SEF) and moister Mixed Deciduous Forest (MDF) communities, but it is not applicable to drier MDF, Dry Dipterocarp (DD) or Pek Savanna communities. For example, while a 25% crown closure may imply serious degradation of a SEF forest, the same crown closure may be well within the range of natural variation (RONV) for a Dry Dipterocarp (DDF) forest. Laos has			While the discourse on the ecology of Lao forests is appreciated, the reality is that the only available inventory data is based on crown density classes. The SUFORD project has a very large number of TSPs (around 45,000) that cover the main forest types and give very good data on the range of growing stock volumes and the proportions of the plots with different stocking densities. This data has been used in conjunction with a number of national forest inventories and PSP data to estimate the total national carbon stock and the apparent change in carbon stock over time. As mentioned above the distribution of these changes in carbon stock between the different drivers of DD is subject to the assumptions made, but the total is considered to be a reasonably good estimate, although the variety and quality of data used do not allow a standard error to be calculated.

five main lowland forest formations - Semi-evergreen (SEF), Mixed deciduous (MDF), Dry Dipterocarp (DDF) and Pek Savannas; four upland forest formations - Montane hardwood (MH), Montane conifer (MC), Mixed Montane Hardwood/Conifer (MMHC); and one sub-tropical formation - Evergreen Hardwood (SEH). A crown density classification must be developed for each of these major forest formations to give proper guidance to FIP. **Reviewer 1.** Rote application of the current crown density classification will result in overestimation of carbon emissions, lands requiring restoration/rehabilitation and, more seriously, of "degraded" forests that warrant conversion from natural communities to tree crop/cash crop plantations.	
Reviewer 1. Throughout this FIP document there is a recurring theme of discrimination and bias against rotational swidden agriculture as practised by ethnic minorities outside the Mekong lowlands. This bias is illustrated by the use of phrases in the main report (though not, interestingly, in the executive summary) such as the pejorative "slash and burn" (which does not distinguish between pioneer and rotational cultivations systems), a distinction between "farmers and shifting cultivators", and the "eradication of shifting cultivation". Perhaps one of the most evident indications of this bias is contained in Table 2, page 3, in which it is contended that annual CO_2 emissions per ha over the period 2012-2020 from "shifting cultivators" are estimated to be 25% higher than those from commercial concessions and smallholder cash crops. This seems hardly credible given that swidden is cultivated on small, incompletely-cleared plots by household hand-labour with no significant petroleum-based inputs, while commercial cash crop production involves total vegetation removal (including stumps) by heavy equipment, mechanical cultivation, clean weeding, significant fertilizer and pesticide inputs, mechanical harvesting, and crop processing, marketing and transportation.	While Reviewer 1 is clearly is in favor of swidden cultivation one must acknowledge the fact that swidden results in degradation of the forest and substantial emissions of CO_2. In some parts of Lao PDR "outsiders" are persuading ethnic communities to grow cash crops on a permanent basis and this is resulting in increasing soil erosion, and many areas of former swidden cultivation have degraded to grassland. One of the private sector companies that is a candidate for Project 2 has demonstrated that one form of agroforestry is extremely effective in raising yields of hill rice and it is being adopted by an increasing number of ethnic group communities. There have been a number of other very successful agroforestry schemes supported by private sector and NGOs using such crops as red tea, benzoin (*Styrax* sp) rattan and bamboo, that can provide more profitable and sustainable livelihoods and FIP investment provide a good opportunity to pilot this approach in parts of the country that have not yet benefited from them.

Reviewer 1. The end result of the land allocation process is that in many upland areas, households have been allocated only three parcels for cultivation in which they can rotate. Thus, the fallow period is now reduced to 3-4 years, which is simply not adequate to restore fertility. Also, in many instances, the total amount of land given is less that is necessary to meet household needs regardless of the number of "rotational parcels". Sometimes this is due to the land allocation procedures of local authorities but in other cases villagers themselves fail to ask for the land they require because they are taxed for all land allocated as though it is in continuous full production. The inevitable result of the land allocation program on poorer soils will be soil degradation and a significant loss of agricultural livelihood and food security.	See response in relation to poverty reduction above.
Reviewer 1. Like similar dry ecosystems in western North America and Australia, the composition and structure of monsoonal ecosystems (Dry Deciduous, Dry Dipterocarp and Savanna Forests) in Laos have been determined historically by regular, largely-anthropogenic fire. An important consideration in the influence of fire on ecosystem function is the relationship between fire frequency and fire intensity. Though many species in these ecosystems are fire-dependent, too-frequent fires will affect seedling survival and the spread of weed species, while longer fire intervals may lead to fuel accumulations that result in unnatural, catastrophic, high-severity fires. There is now a considerable body of information originating from Western North America and Australia that regular, low-intensity ground fires (3 to 20 year return periods) in dry ecosystems greatly enhance carbon accumulation and storage (particularly in the soil) when compared with periodic high-severity fires (40 to 70+ year return periods) resulting from fire exclusion and fuel accumulation. It is possible that ethnic communities in Laos use fire too frequently and without clear objectives, but fire is a pervasive ecological influence in much of the	The Dry Dipterocarp forests in Lao PDR are associated with soils with a hard pan that results in seasonal extremes in moisture in the upper horizon of the soil. Fires at present are not a major factor in the parts of Lao PDR where these forests occur. This issue raised by the reviewer and implications of future climate change on forest fire frequency in Lao PDR will be reviewed as part of project preparation.

country and it won't go away and it can't be ignored; we must learn to use it wisely. FIP should consider joint silvicultural and fire ecology studies to determine possible management approaches to holistic ecosystem management and measures to improve the resiliency and adaptation to climate change in dry forest formations.	
Reviewer 1. The Social Impact Assessment prepared for SUFORD-AF concluded that in the 6-year SUFORD project, while Lao speakers in the Mekong lowland had a reasonable understanding of, and engagement in, the project, the few ethic minority communities on the periphery of the lowlands had no such understanding and engagement. It attributed this to "a considerable communications gap (that) exists" between MAFF staff and ethnic villagers and "a poor appreciation and understanding of the implications of ethnic diversity on the part of PAFOs and DAFOs". Furthermore it concluded that ethnographic studies carried out under the project had "not been sufficiently incorporated into project manuals and guidelines or into the implementation strategy of the project generally". Clearly, the ethnic minority communities in Laos have a significant role to play in both FIP and REDD+ design and implementation. There is a real opportunity in the FIP and REDD+ programs to build on the experiences gained in SUFORD and other donor projects… It is not clear from the current FIP Investment Program that anything like the required consultation and engagement program is contemplated.	These are valid points and have been addressed explicitly in the R-PP stakeholder participation and consultation plan. Some edits have been introduced to the latest draft of the IP to provide more detail and reflect particularly the importance of developing a cadre of individuals to facilitate communication with villagers in ethnic communities. Agreed. The Team would direct attention to the R-PP stakeholder participation and consultation plan mentioned above and to the annex on the Dedicated Grant Mechanism.
Reviewer 1. A recurring theme throughout this report is that management problems are not due to a lack of "legislation / regulations" but "more to the capacity to implement and enforce the policies in a developing political system". Unfortunately, little progress has been made, so far, in developing an effective external	The team acknowledges in the main text of the IP that since its formation DOFI has been hampered by inadequate allocation of funds in relation to the magnitude of tasks and by lack of experienced staff to implement the measures, especially at Province and District level. The team directs attention to the Department of Forestry Inspection (DOFI)

monitoring/enforcement system.	of Lao PDR Strategic Plan to 2020 which lays out a comprehensive program for capacity development. See also section 3.1 (para 46) 6.8 (para 79) in the IP main text.
Reviewer 1. GOL regulations appear to suggest that the political will for law enforcement exists. If so, a well-conceived compliance monitoring and enforcement system should lead to improved enforcement of regulatory compliance, better forest practices and enhanced revenue collection. Standardized reporting, recording and analysis will allow law enforcement authorities to track the status of investigations of unauthorized or illegal activities, and thus to conduct better structured, more systematic, and more efficient enforcement actions. Enhanced recording systems will enable timely and meaningful compilation of reports on compliance and enforcement for political decision-makers and the public. This, in turn, may result in greater transparency and awareness of compliance with forest law and, ultimately, in stronger political and public support for forest law enforcement.	Agreed.
Reviewer 1. A competent compliance program will also support continued FSC certification, with associated "chain-of-custody" and independent performance auditing requirements. Certification should lead to achievement of internationally-accepted standards of sustainable forest management and to substantially higher prices and market shares for logs and wood products. Since certification will be based on regulatory compliance and on independent auditing (paid out of management funds and higher product prices) it should result in a decreased regulatory and administrative burden to government.	The SUFORD project has already achieved certification for around 80,000 of natural production forest. Work is ongoing to pilot chain-of-custody in Lao PDR and there is scope for expanding both certification and chain of custody in Lao PDR with FIP support. The text reflects this potential.

Reviewer 1. **<u>Natural forest restoration</u>** Artificial regeneration on any significant scale is a very expensive proposition involving significant plant propagation facilities, invariably employs limited genetic stock, is seldom very successful, and is always inferior in results to natural regeneration from well-conceived silvicultural prescriptions. So-called "enrichment plantings" have also resulted in some jurisdictions, such as Malaysia, in significant distortions of natural stand composition and loss of biodiversity. Natural regeneration should be confirmed as the preferred method of achieving adequate stocking on PFAs. Artificial regeneration should be employed **only** where it can be demonstrated that natural regeneration is not possible and where it can be justified both economically and ecologically. **<u>Industrial and Small-holder Commercial Tree Crop Plantations</u>** Commercial tree crop plantations are not forests and their establishment should not be considered reforestation or forest restoration. They are much more like agricultural systems and have many of the same risks, vulnerabilities, uncertainties and carbon consequences. Plantations can be made more like natural systems to improve the ecological stability and resilience that limits the risk of plantation failure and reduces the necessity for artificial inputs… One way in which plantation risks (economic and ecological) can be estimated and mitigated is through simple simulation models of nutrient status/nutrient flow for selected plantation sites and silvicultural models. Simulation models can be used to develop plantation guidelines and prescriptions (species mixes, rotation ages, site selection criteria, site preparation techniques, practical fertilization regimes, thinning regimes, weeding, and harvesting prescriptions) that are sustainable over the long-term.	Agreed. Agreed, but while commercial plantations maybe should not be considered as forest cover, they still contribute to carbon sequestration dependent on the species used the end-use of the wood, the growing rotation etc. Agreed.

Reviewer 2. Recommended that	
Institutional Arrangements, key implement agencies for implementation of IP need to be defined.	The team has added specific references in the text. See especially section A4.5 on REDD+ Strategy Implementation Framework beginning on page 85
Figure 2: Logic model of the FIP Lao Investment Plan should be outlined;	This has been included see section 6.3 para 65 onwards.
Map of targeted areas/projects location need to be provided; and	Target areas will be selected as part of project preparation.
Table of contents needed editing.	Table of contents has been edited and order of projects presented has been made consistent throughout the document.

Lao People's Democratic Republic
Peace Independence Democracy Unity Prosperity

Ministry of Agriculture and Forestry
Department of Forestry

2180
Ref. No. /DOF 2011
Vientiane Capital, 03 OCT 2011

Ms. Patricia Bliss-Guest
Administrative Unit
Climate Investment Funds
Washington D.C., USA

Dear Patricia,

RE: Submission of the Lao PDR FIP Investment Plan

On behalf of the Government of Lao PDR, I am pleased to submit the Lao PDR FIP Investment Plan for consideration by the FIP Sub-Committee members at the upcoming meeting in October 31, 2010, in Washington D.C.

The Investment Plan is a result of collective efforts put together by the government with technical support provided by the Multi-Development Banks (ADB, IFC and World Bank) and active participation of various stakeholders that took place in the past one and a half years since Lao PDR accepted to participate in the program.

We are looking forward to presenting the Investment Plan. Thank you very much for your kind support and cooperation.

Sincerely yours,

Mr. Khamphay Manivong
Deputy Director of the Department of Forestry
Standing member of the National REDD+ Task Force

CC:

- H.E. Mr. Vilayvanh Phomke, Minister of the Ministry of Agriculture and Forestry (MAF)
- H.E. Mr. Noulin Sinbandith, Minister of the Ministry of Natural Resources and Environment (MoNRE)
- H.E. Dr. Phouphet Khamphounvong, Minister of the Ministry of Finance (MoF)
- H.E. Mr. Somdy Duangdy, Minister of the Ministry of Planning and Investment (MPI)
- Dr. Silavanh Sawathvong, Director General, Department of Forestry, MAF
- Mme. Viengsavanh Douangsavanh, Director General, Department of Environment, MoNRE, secretariat to the National Environmental Committee (NEC)
- Mme. Thipphakone Chanthavongsa, Director General, Department of External Finance, MoF
- Mr. Somchit Inthamith, Director General, Department of International Cooperation, MPI
- Dr. Chong Chi Nai, Country Director, ADB Lao PDR Resident Mission
- Mr. Aimilios Chatzinikolaou, Head of Office, International Finance Corporation (IFC)
- Ms. Annette Dixon, Country Director, the World Bank
- Ms. Keiko Miwa, Country Manager, the World Bank, Lao PDR