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Australia Indonesia Partnership
Kemitraan Australia Indonesia



KALIMANTAN FORESTS AND CLIMATE PARTNERSHIP (KFCP) DESIGN DOCUMENT



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Cover photos: Aerial view shows degraded peatland drained by canals in the northern part of Block A. The main east-west canals are visible at the top of the image (top left, courtesy Google Earth); blocked canal (bottom left, courtesy WWF-Indonesia); main canals draining the Ex-Mega Rice Project area (top right, courtesy Ruandha, MoF); and intact peat swamp forest in Block E of the Ex-Mega Rice Project (bottom right, courtesy Ruandha, MoF).

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ACRONYMS AND GLOSSARY

ACIAR	Australian Centre for International Agricultural Research
ADB	Asian Development Bank
ANU	Australian National University
ASEAN	Association of South East Asian Nations
AusAID	Australian Agency for International Development
AWG-LCA	Ad Hoc Working Group on Long-term Cooperative Action under the Convention
BAPLAN	Ministry of Forestry Planning Body
BAPPEDA	<i>Badan Perencanaan Pembangunan Daerah</i> (Regional Planning Development Agency)
BAPPENAS	<i>Badan Perencanaan Pembangunan Nasional</i> (National Planning Development Agency)
<i>Beje</i>	Traditional fresh water fishery systems
BLU	<i>Badan Layanan Umum</i> (General Service Agency)
BOS	Borneo Orang-utan Survival
BRI	<i>Bank Rakyat Indonesia</i>
CDM	Clean Development Mechanism
CER	Certified Emission Reductions
CH ₄	Methane
CIFOR	Centre for International Forestry Research
CIMTROP	Centre for International Cooperation in Management of Tropical Peatland, University of Palangka Raya
CKPP	Central Kalimantan Peatland Project
COP	UNFCCC Conference of Parties
CO ₂	Carbon Dioxide
DAC	Development Assistance Committee at the Organization for Economic Cooperation and Development
DCC	Department of Climate Change (Australian Government)
DFID	Department for International Development (United Kingdom)
DOE	Designated Operational Entity
EA	Evaluability Assessment
EMRP	Ex-Mega Rice Project
ENSO	El Niño-Southern Oscillation Events
EU	European Union
FCPF	Forest Carbon Partnership Facility (World Bank)
FLEGT	Forest Law Enforcement, Governance and Trade (EU)
FMU	Forest Management Unit (<i>Kesatuan Pengelolaan Hutan</i>)
FOMAS	Forest Resource and Management System
FRIS	Forest Resource Information System
FWI	FireWatch Indonesia
GEF	Global Environment Facility
<i>Gemor</i>	Tree (<i>Alseodaphne sp.</i>), the bark of which is used as material for the manufacture of mosquito repellent
Gerhan	<i>Gerakan Rehabilitasi Hutan</i> (National Movement for Land Rehabilitation)
GHG	Greenhouse Gas: means those gaseous constituents of the atmosphere, both natural and anthropogenic, that absorb and re-emit infrared radiation. The Kyoto Protocol lists six types of GHG whose emissions must be regulated/reduced: carbon dioxide (CO ₂), nitrous oxide (N ₂ O), methane (CH ₄), sulphur hexafluoride (SF ₆), perfluorocarbon (PFC) and hydrofluorocarbon (HFC).
GIS	Geographic Information Systems

GoA	Government of Australia
GoI	Government of Indonesia
GTZ	<i>Deutsche Gesellschaft für technische Zusammenarbeit</i>
<i>Handil</i>	narrow, hand-dug canal in peat
IAFCP	Indonesia-Australia Forest Carbon Partnership
ICRAF	World Agroforestry Centre
IFAD	International Fund for Agricultural Development
IFCA	Indonesia Forest Climate Alliance
IFCI	International Forest Carbon Initiative
INPRES	Presidential Instruction
IP	Implementing Partner
<i>Jelutung</i>	Rubber-like material obtained from the latex of forest-grown <i>Dyera costulata</i> trees
JICA	Japan International Cooperation Agency
KDP	Kecamatan Development Program
KFCP	Kalimantan Forests and Climate Partnership
KfW	<i>Kreditanstalt für Wiederaufbau</i> (German Development Bank)
KPH	<i>Kesatuan Pengelolaan Hutan</i> (Forest Management Unit)
KPK	Corruption Eradication Commission
M&E	Monitoring and Evaluation
MC	Managing Contractor
MoE	Ministry of Environment (Indonesia Government)
MoF	Ministry of Forestry (Indonesia Government)
MRP	Mega Rice Project
<i>Musrenbang Desa</i>	Village consultative planning process
NCAS	National Carbon Accounting System (Australia)
NCAS	National Carbon Accounting System (Indonesia)
NGO	Nongovernmental Organisation
NOAA	National Oceanic and Atmospheric Administration (USA)
NP	National Park
N ₂ O	Nitrous Oxides
NTFP	Non-Timber Forest Product
PAF	Performance Assessment Framework
PALSAR	Phased Array type L-band Synthetic Aperture Radar
Peat	Soil formed from the accumulation of organic matter over a long period of time. In its natural state, peat soils are generally waterlogged or flooded year round.
Permenhut	<i>Peraturan Menteri Kehutanan</i> (Minister of Forestry Regulation)
PES	Payment for Environmental Services
PLG	<i>Pengembangan Lahan Gambut</i> (Central Kalimantan Mega Rice Project)
PNPM	<i>Program Nasional Pemberdayaan Masyarakat</i> (National Program for People's Empowerment)
PSF	Peat Swamp Forest
PO	Partnership Office
REDD	Reducing Emissions from Deforestation and Forest Degradation in Developing Countries
REL	Reference Emissions Levels
TNC	The Nature Conservancy
TOR	Terms of Reference
UN	United Nations
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change

UNPAR	University of Palangka Raya
USAID	United States Agency for International Development
WII	Wetlands International-Indonesia Program
WWF	World Wide Fund for Nature

Currency

A\$1.00 = Rupiah 7,982 = US\$0.66

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Exchange rate to be updated at time of finalization.

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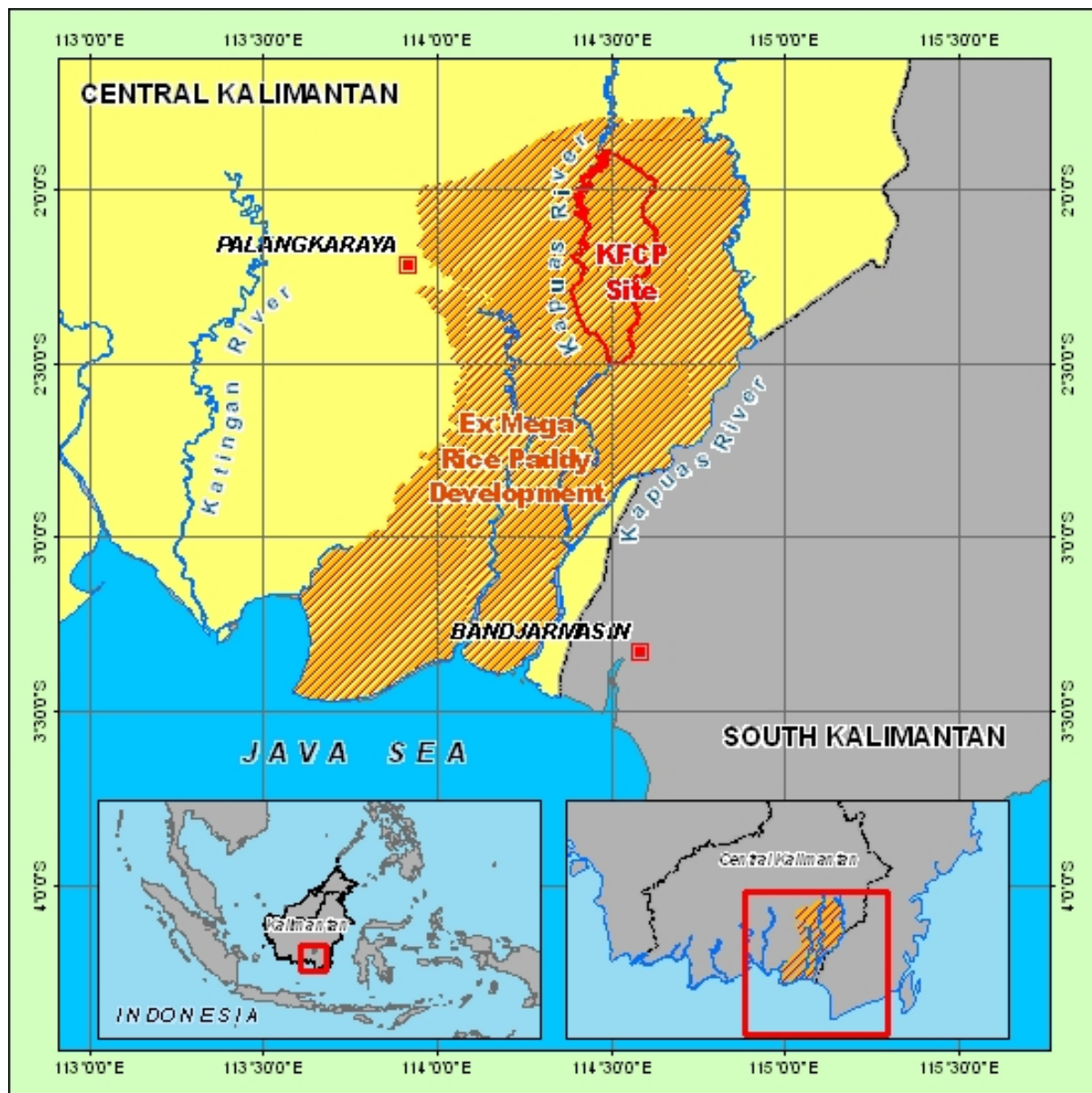
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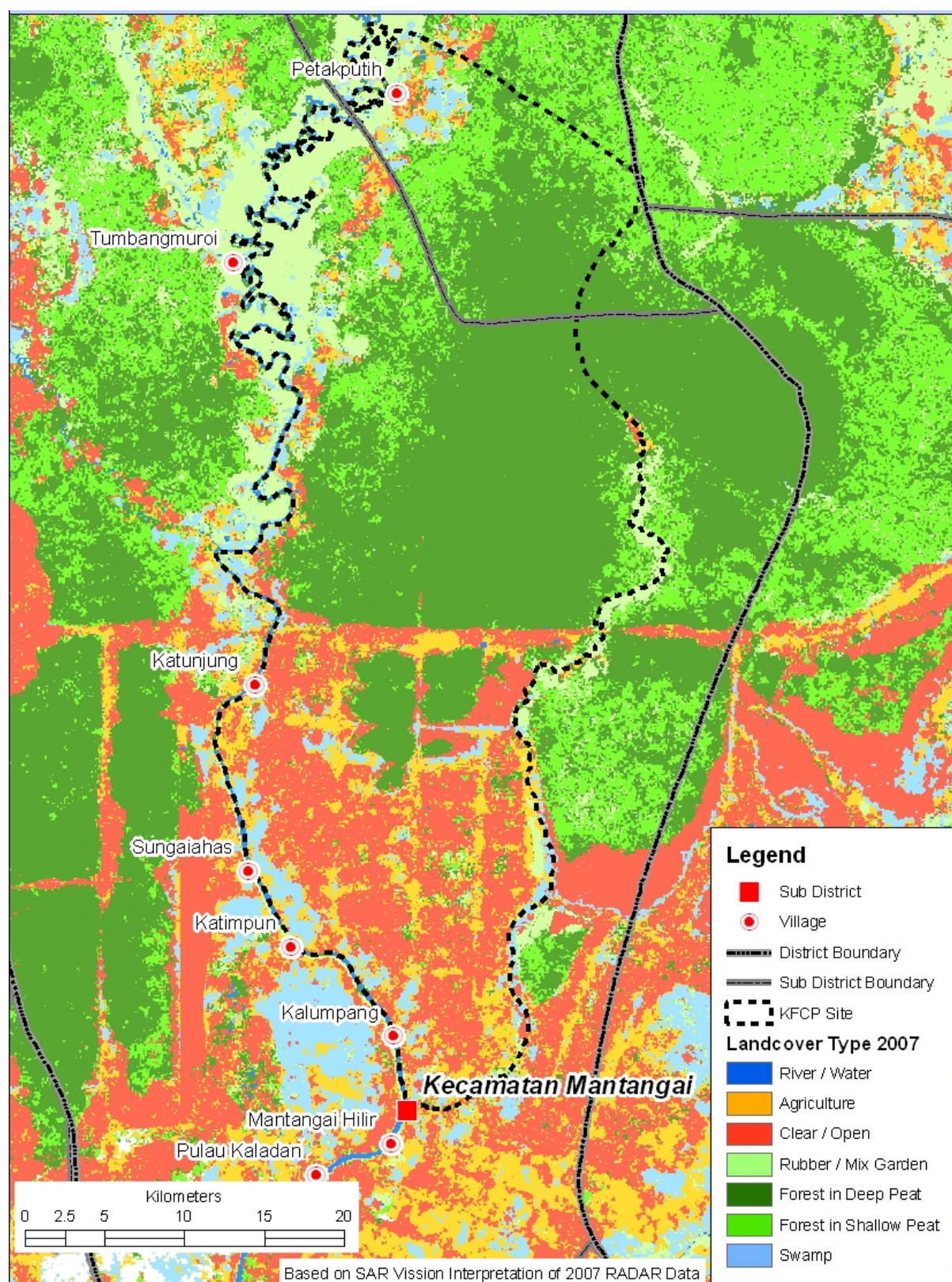
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MAP 1. LOCATION MAP



MAP 2. DETAILED MAP OF THE KFCP DEMONSTRATION SITE



1.0 EXECUTIVE SUMMARY

1.1 AUSTRALIA INDONESIA PARTNERSHIP

Indonesia has taken a leading role among developing countries in exploring how to integrate Reducing Emissions from Deforestation and Forest Degradation in Developing Countries (REDD) into the emerging international carbon market. A June 2008 agreement between the leaders of Indonesia and Australia commits both nations to partner in this endeavour. Agreement to include REDD as part of a post-2012 international climate change outcome is a crucial next step in supporting international efforts on REDD. The United Nations Framework Convention on Climate Change (UNFCCC) Conference of the Parties (COP) 15, to be held in Copenhagen in December 2009, provides an important opportunity to ratify REDD.

The International Forest Carbon Initiative (IFCI) is Australia's contribution to the global effort on REDD. The IFCI aims to demonstrate that REDD can be part of an equitable and effective global climate change outcome. A central element of work is development of practical REDD demonstration activities in Indonesia and Papua New Guinea, with the Kalimantan Forests and Climate Partnership (KFCP) being the first such demonstration in Indonesia. Planning and delivery of the IFCI involves a whole of government effort, led by the Australian Agency for International Development (AusAID) and the Australian government's Department of Climate Change (DCC). The IFCI's **Indonesia-Australia Forest Carbon Partnership** (IAFCP) focuses on bilateral cooperation between Indonesia and Australia. The delivery mechanism to support the IAFCP—the **Indonesia-Australia Forest Carbon Partnership Facility**—is the vehicle through which government-to-government activities on REDD in Indonesia will be implemented, including KFCP. Experience implementing KFCP can provide valuable evidence to inform UNFCCC deliberations on REDD.

1.2 KALIMANTAN FORESTS AND CLIMATE PARTNERSHIP OVERVIEW

KFCP Goal: to demonstrate a credible, equitable, and effective approach to reducing greenhouse gas emissions from deforestation and forest degradation, including from the degradation of peatlands, that can inform a post-2012 global climate change agreement and enable Indonesia's meaningful participation in future international carbon markets.

KFCP is a partnership between Indonesia and Australia, involving multiple agencies of each government, numerous implementing and supporting partners, scientific organizations from around the globe, people who live in the field demonstration site, and the local governments that represent them. KFCP is necessarily complex, designed to achieve community development results while learning from technical and policy interventions that demonstrate how REDD activities can be successfully implemented in a disturbed peat swamp forest (PSF) ecosystem in Indonesia. KFCP combines cutting-edge science and diplomacy with meeting basic livelihood needs, thereby informing decision making from village meeting halls to UNFCCC deliberations. KFCP aims to trial approaches and provide lessons learned from on-the-ground REDD activities in Kalimantan to inform international discussions on REDD ahead of a post-2012 climate change agreement.

The KFCP Design Document is intended to achieve the following purposes:

- ◆ **Capture information** from the design process and preparatory activities.
- ◆ **Record a common understanding among KFCP partners** about the design of the activity, providing a point of reference for design adjustments and evaluation.
- ◆ **Provide a basic roadmap for project implementers**, especially to aid the transition between preparatory activities and the implementation phase.

The KFCP aims to:

- ◆ Demonstrate how to effectively **manage and conserve tropical peat forests** based on state-of-the-art scientific knowledge, with the potential to apply these techniques throughout Indonesia's extensive peatlands.

- ◆ Demonstrate how REDD can be incorporated in a **post-2012 outcome on climate change** by trialling innovative, market-oriented approaches to REDD financing and REDD implementation measures, including creating an emission baseline and monitoring/ verification protocols and documenting the social and economic impact of the REDD demonstration on participating communities. Australia and Indonesia will introduce the lessons learned from the KFCP into the UNFCCC negotiations on REDD.
- ◆ Contribute to the development of **Indonesia's Roadmap for Access to International Carbon Markets** by testing and refining the technical, legal, institutional, and financial pre-requisites needed to participate in international carbon markets, including collaboration with developers of the FRIS/NCASI forest monitoring and national carbon accounting system.
- ◆ Produce **co-benefits** in terms of providing livelihood options and cash payments for REDD services to target villages, conserving biodiversity, reducing health impacts and economic losses from smoke, and clarifying land tenure and property rights of communities, thereby providing a basis for economic security while reducing the threat of conflict.
- ◆ Contribute to strengthening Indonesia's **REDD enabling environment** by identifying policy options, clarifying institutional responsibilities and capacity-building requirements, and outlining options for the socialization of REDD and related issues.

Site Location and Description. The KFCP field demonstration activity will be implemented within a single peat dome of approximately 130,000 hectares¹ in the northern part of the Ex Mega Rice Project (EMRP) area in Central Kalimantan (approximately 2° south and 115° east—see Map 1). The site is bordered by the Kapuas River to the west and south-west and the Mantangai River to the east and south east (see Map 1). Within the EMRP area, roughly half of the site is located in the northern part of EMRP Block A, and half to the north in Block E. The demonstration site lies completely within Kapuas District and is divided between the sub-districts of Mantangai and Timpah. The demonstration site is sparsely populated, with approximately 20,000—mostly ethnic Dayak—residents living in 12 to 15 villages strung out along the banks of the Kapuas River (see Map 2). The residents of these villages use land near their villages for food crop and rubber cultivation, while harvesting timber, non-timber forest products (NTFPs) and fish from more remote parts of the demonstration site. Villages are relatively remote, have limited public infrastructure, and the level of access to and quality of both health and education services is relatively poor (see Attachment 1). Isolation limits the range of available employment opportunities, and the deforestation of large areas of land since 1996 has greatly reduced livelihood opportunities.

The majority of the KFCP demonstration site is part of the National Forest Estate, which is under the Ministry of Forestry's authority. The area is currently designated as production forest, but is likely to be changed to protection forest or wildlife reserve status within the next year or two. Dayak communities have lived within the site for generations and claim land within five kilometres of their villages based on their customary law. Much of the demonstration area is located on a peat dome consisting of peat over three metres in depth that is very sensitive to disturbance. The hydrology of the area was dramatically altered by EMRP's canal building and much of the forest was cleared or degraded. The northern half of the dome (Block E) is covered by relatively intact peat swamp forest. The southern part of the area (Block A North) is a mixture of logged over and degraded peat swamp forest and cleared areas.

1.3 IMPLEMENTATION APPROACH

KFCP is being implemented in two distinct but integrated phases:

- ◆ **Preparatory Phase** (1 January to 30 June 2009). Activities that lay the foundation for implementation, done by implementing partners, consultants and the Peat and GHG Working Group, under the direction of the Partnership Office (PO) to socialize REDD, create a socioeconomic baseline, design a GHG measurement and monitoring system, build the

¹ About 80,000 hectares are covered in logged-over forest, while in the southern part of the dome covering 50,000, much of the forest has been cleared and the remainder is very degraded. Emissions from peatland degradation contribute significant GHG emissions globally. About 30% of global peat occurs in the tropics—about two-thirds occurs in Indonesia. Indonesia contains about 22.5 million hectares of peatland (12% of Indonesia's land area).

institutional framework for KFCP at the province and district levels, and complete the design of the overall activity.

- ◆ **Implementation Phase** (1 July 2009 to 30 June 2012). The Managing Contractor (MC) takes over implementation of KFCP under the direction of the KFCP Coordinator. These dedicated management resources permit rapid scaling up of implementation activities based on the knowledge and groundwork created during the Preparatory Phase. The *Facility Design Document* identifies an initial ‘Through COP 15 Phase’ where emphasis is on capturing knowledge relevant to REDD while continuing to aggressively pursue implementation in all components.

The KFCP implementation strategy is designed to deliver both development results and learning results with an emphasis on adaptability and flexibility. The ability to move seamlessly from preparatory activities to implementation is crucially important given the relatively short three-year life of the activity. The most immediate need is to capture information from the preparatory phase and the first few months of the implementation phase to inform international discussions and technical meetings prior to negotiations on REDD at COP 15 in December 2009.

Logic of the KFCP Intervention Strategy

All KFCP interventions in concert aim to reduce deforestation and degradation of PSF, primarily by reducing fire risk and mitigating the frequency and severity of fire. Specifically, as described in Component 1:

- ◆ **Blocking canals** to raise the water table and re-wet the peat will inhibit oxidation, including the incidence and spread of fire;
- ◆ **Re-establishing tree cover** in highly degraded areas by encouraging natural regeneration and re-planting will help raise soil moisture levels and humidity, thus further reducing fire risk especially in dry years; and
- ◆ **Providing livelihood interventions**, including incentives to adopt sustainable land-use practices, are a key part of the overall threat mitigation strategy because current farming methods depend on fire as the most economical means of land clearing and preparation.

For KFCP to succeed in restoring, to a significant degree, the hydrology and ecology of the peat swamp forest ecosystem so as to reduce GHG emissions, **a new set of incentives to encourage sustainable land use and forest protection must be developed, offered, and accepted by people** in affected communities and other forest-dependent (or deforestation-dependent) actors. While at the district level the KFCP will help build governance and institutional arrangements conducive to REDD, **the precise package of economic, social, and policy incentives will vary from one community to another** with differences in their ecological situation (from relatively intact to highly degraded forest) and the corresponding mix and sequence of technical interventions. This will require programmatic flexibility and a detailed, local-level understanding of the perceived benefits of current, unsustainable practices and barriers to adopting those that foster REDD outcomes.

Incentives to encourage sustainable practices will take three forms:

- ◆ **Input-based:** immediate remuneration or other direct benefits linked to adopting and implementing interventions, such as building dams, planting trees, supplying dam-building and tree-planting operations, or eliminating fire use on peat soils.
- ◆ **Performance-based:** annual payments for sustaining interventions so as to achieve the desired results, such as maintaining dams to keep water levels high, protecting forest from encroachment, or reducing the incidence and extent of fire.
- ◆ **Outcome-based:** payments commensurate with GHG emissions reductions, initially as a proxy for a future forest carbon market but later based on tradeable credits in a real market.

KFCP is designed within a framework of the following five components, each with a number of supporting outputs (see Figure 1).

Component 1: Deforestation and Degradation of Peat Swamp Forest Reduced

This component forms the core of the KFCP demonstration activity, providing a framework within which other activities must be integrated. It involves activities aimed at villages in the demonstration area as well as forest and peatland restoration activities. The village-level development activities are challenging in their own right and must be harmonised with REDD-related socialization, behaviour change, peat restoration activities, reforestation, GHG monitoring, and payment mechanisms.

Village Engagement: Gaining the support of all segments of communities in the demonstration site is a precondition for emissions reduction. Gaining their trust and support will take time, effort, and the ability to offer real incentives based on their labour inputs, performance, or the outcomes they achieve in terms of reduced GHG emissions. Climate change is a remote threat compared with livelihood threats that are apparent and pressing. Potential financial benefits from carbon credits seem remote, if the concept is understood at all. KFCP will work with communities to identify livelihood alternatives that are in keeping with the over-arching goal of reducing emissions. An effective and consistent REDD communications message is essential.

Restoration and Reforestation: The basic elements of peat swamp forest hydrological restoration and reforestation are:

1. **Dam canals to wet peat** near canals and halt further drop in the water table and reduce GHG emissions from the wet peat.
2. **Promote natural regeneration in degraded forest** areas by damming canals in their proximity, protecting them from burning and illegal logging.
3. **Manage fire and land use along rivers and near settlements** in accordance with annual variations in rainfall. Block the small and large canals to prevent people from reaching deep into peat where they can start fires and log illegally.
4. **Re-establish trees (natural or artificial regeneration) on areas which have been deforested.**

Component 2: Knowledge from REDD Demonstration Activities Captured and Communicated within Indonesia and Internationally

The KFCP is designed as a learning activity, producing information and capturing knowledge from that information to be communicated to a number of distinct audiences. Communicating effectively will require the development of a **Communications Strategy** to identify the KFCP audiences; what are their information needs; and what is the best media for communicating with them. A **Knowledge Capture Strategy** will also be developed to manage streams of information from multiple sources and disseminate “lessons learned” and other knowledge-based results to target audiences.

Component 3: KFCP GHG Emissions Measurement and Monitoring Program Established and Linked to NCASI

This component requires two distinct, but interrelated major tasks:

- ◆ Developing, testing, and validating a **GHG emissions baseline and monitoring system** for the KFCP demonstration area that estimates emissions changes against interventions and will be accepted as scientifically valid in climate change negotiations (i.e., methods to be between Tier 2 and Tier 3); and
- ◆ **Operationalising GHG estimating and monitoring** through remote sensing and direct ground measurement in ways that will meet the requirements of a future REDD carbon market and can be integrated into FRIS/NCASI.

There is currently no international agreement about whether, or how, to incorporate actions to reduce emissions from deforested and degraded peat swamp forest in a future climate change agreement, and whether it would be incorporated into future action on REDD. Hydrological restoration activities under the KFCP will therefore be aimed at building international knowledge, and providing lessons learned to contribute to UNFCCC discussions through 2009, in areas such as: research required to develop the methodologies required for estimating changes in GHG emissions from the interventions measurement and monitoring of peatland characteristics, GHG emissions, and in informing approaches for hydrological restoration and rehabilitation activities to reduce emissions from deforested and degraded peat swamp

forests. The Peat and GHG Working Group, a scientific advisory group for KFCP, will review and propose methods for establishing a Project (KFCP) specific emissions baseline (REL) and determine scientific methodologies and implementation guidelines suitable for providing to international negotiations for the measurement and monitoring changes in peat swamp forest hydrology; changes in peat depth and peat dome elevations; methods for collecting data and monitoring peat swamp forest GHG emissions.

Component 4: Practical and Effective REDD GHG Payment Mechanisms Demonstrated

An important element of REDD demonstration activities will be to experiment with different approaches to establishing equitable and effective payment mechanisms. To be effective, REDD incentives must target both actors whose practices are proximate causes of deforestation and degradation as well as economic and policy drivers. Leading up to COP 15, learning about payment mechanisms will be more important than testing the actual payments in order to quickly gain experience that can inform international negotiations on REDD and prepare the basis for REDD payments once emission reductions have been achieved and verified. Progress towards making actual payments will have to be demonstrated later in order to be prepared to meet eventual market demand. Designing a workable payment mechanism or mechanisms will require not only technical solutions but also a fair and transparent process of consultation with affected stakeholders.

Incentives aimed at changing land use or forest management should directly target resource users (individuals or groups). Incentives aimed at policy change should target appropriate agencies and levels of government. For example, districts could be provided with incentives for land-use and development planning that reduces deforestation and forest degradation. Incentives aimed at changing economic drivers could target government, the private-sector (such as through tax policy), or both. Initially, incentive payments will be made for achieving tangible milestones towards emissions reductions, including readiness as well as intervention strategies. Later payments will be linked more directly to actual emissions reductions.

Component 5: REDD Management/Technical Capacity and Readiness Developed at Provincial, District, Sub-district, and Village Levels.

This component is designed to integrate KFCP and REDD into governance at the province and district levels by developing management institutions, a legal framework, and technical capacity to support demonstration activities and eventually, local integration into a REDD carbon market. Political support already exists at the provincial level and will be built at the district level during the preparatory phase. Given the fact that the forest use classification of the demonstration site is currently in transition, it will be important to establish a firm legal and operational basis for implementation – a Forest Management Unit is a promising option that will be investigated during the preparatory phase. Efforts at technical capacity building will have to be closely coordinated with the staff of the EMRP Master Plan Implementation Project.

1.4 MANAGEMENT AND COORDINATION

The Ministry of Forestry (MoF) is KFCP's national-level executing agency within the Government of Indonesia (GoI). KFCP must develop a strong relationship with government at province and district levels as their political and administrative support will be essential for testing and implementing the various REDD-related interventions. Provincial government will provide policy guidance and support, while the district will provide technical coordination among government agencies. The entire demonstration site is within Kapuas District, which has legal authority over land use outside the forest estate and has an important voice in land tenure decisions. Ultimately, the sustainability of REDD interventions will rest on how well the process has been accepted and institutionalised at the province and district levels. Acceptance has legal, institutional, and political dimensions. The Partnership Office established an interim KFCP office in the provincial capital of Palangka Raya, co-located with the Provincial Planning Board. It is expected that KFCP will maintain its current office and may establish subsidiary offices in one or more of the following towns: Kuala Kapuas (the district capital), Mantangai or Timpah (the two sub-district capitals).

Management Structure and Coordinating Mechanisms. The management structure for the KFCP is depicted in Figure 4. Implementation will be the responsibility of a Managing Contractor (MC), chosen through a competitive bidding process. The MC's KFCP team is headed by a Coordinator, based in

Palangka Raya, who manages field demonstration activities with the support of a small technical staff. The Coordinator supervises the work of the Implementing Partners and insures that their activities are coordinated. KFCP Coordinating Teams at the province and district levels, comprised of government officials and other stakeholders, will ensure that field implementation is coordinated with government agencies and plans. A provincial secretariat, and possibly one at district level, will facilitate government interactions. The KFCP Coordinating Committee provides implementation guidance through the Partnership Office, which will facilitate communications with the IAFCP Steering Committee, the Ministry of Forestry, and other GoI agencies that may become actively involved as payment mechanisms and REDD monitoring protocols are developed and GoI's REDD institutions evolve.

1.5 OTHER DESIGN FACTORS

Crosscutting Issues: KFCP is designed, and will be implemented, to comply with GoA and GoI policies on: gender/social disparity; anti-corruption; environmental protection; and child protection. Guidelines for ensuring compliance are discussed in Section 5.

Sustainability and Risk Management. Achieving sustainability will require managing risk, which has technical, governance, social, REDD, climate, and management dimensions as discussed in Section 6 and the Risk Matrix in Attachment 10.

Monitoring and Evaluation. The IAFCP M&E Specialist, together with the KFCP Coordinator and the Partnership Office, will develop a comprehensive Monitoring and Evaluation Plan for KFCP within three months of inception. This Plan must be able to be operationalised – that is, be a fully elaborated plan with fully designed methods and tools for comprehensive monitoring and evaluation activities, including evaluative research, sound management of spatial and non-spatial data, and coordinated data sharing with relevant government agencies and implementing partners. At a minimum it will comprise objective and verifiable indicators of intermediate results and outputs, including measurement or estimation of the following:

- ◆ Interventions to avoid or reduce peatland degradation, such as re-wetting and re-greening;
- ◆ Fire risk reduction;
- ◆ GHG emissions levels (baseline and reductions);
- ◆ Governance indicators appropriate for payment mechanisms;
- ◆ Distribution of incentives and other benefits;
- ◆ Social, economic, and environmental impacts.

Budget. A summary budget, covering the Preparatory Phase and AusAID fiscal years 2010 through 2012 is in Attachment 7. KFCP has a total budget of AUD 30 million, of which AUD 22.5 million is available to implement KFCP activities. A total of AUD 7.5 million is assigned to the budgets of the Managing Contractor and the Partnership Office. The summary budget includes an additional AUD 1.4 million for GHG measurements and monitoring.

2.0 INTRODUCTION

2.1 PURPOSE OF THIS DOCUMENT IN THE DESIGN PROCESS

The Kalimantan Forests and Climate Partnership (KFCP) is a multidimensional partnership between Indonesia and Australia, involving multiple agencies of each government, numerous implementing and supporting partners, scientific organizations from around the globe, people who live in the demonstration site, and the local governments that represent them. KFCP is necessarily complex, designed to achieve community development results while learning from technical and policy interventions that demonstrate how Reducing Emissions from Deforestation and Forest Degradation in Developing Countries (REDD) activities can be successfully implemented in a disturbed peatland ecosystem in Indonesia. KFCP combines cutting-edge science and diplomacy with meeting basic livelihood needs, thereby informing decision making from village meeting halls to the United Nations Framework Convention on Climate Change (UNFCCC) Conferences of the Parties (COP).

The KFCP Design Document is intended to achieve the following purposes:

- ◆ **Capture information** from the design process and preparatory activities.
- ◆ **Record a common understanding among KFCP partners** about the design of the activity, providing a point of reference for design adjustments and evaluation.
- ◆ **Provide a basic roadmap for project implementers**, especially to aid the transition between preparatory activities and the implementation phase.

Design Process: the Design Document was developed over the first calendar quarter of 2009, in collaboration with the Government of Indonesia (GoI) and assistance from implementing partners (IPs). A competitive bidding process to select a Managing Contractor (MC) to implement the Indonesia-Australia Forest Carbon Partnership (IAFCP) Facility and KFCP was in progress, to be completed by June. The design presented in this document is based on:

- ◆ The Final Report of the Framework Design Mission of the Kalimantan Forests and Climate Partnership (15 September 2008). **Readers are encouraged to consult this document, which provides additional technical information relevant to KFCP;**
- ◆ The Facility Design Document of the Indonesia-Australia Forest Carbon Partnership Facility (17 December 2008);
- ◆ Presidential Decree 2/2007 and the supporting Master Plan for the Rehabilitation and Revitalisation of the Ex-Mega Rice Project Area in Central Kalimantan (October 2008);
- ◆ The KFCP Design Workshop held in Palangka Raya, Central Kalimantan 27-29 January 2009 involving GoI officials from the national, province, and district levels, Australian Agency for International Development (AusAID) representatives, the staff of the Partnership Office (PO), and implementing and supporting partners;
- ◆ Consultations with staff of AusAID/Canberra and the Australian Department of Climate Change (DCC); and
- ◆ Inputs from the PO staff and several consultants² working on technical and management aspects of the design.

The KFCP design must be very flexible, adapting activities to the results of field-based learning, research findings, and emerging issues in climate change negotiations (which may require a change of course in early 2010 based on the results of COP 15, scheduled for December 2009). An important means to ensure flexibility is to engage IPs with experience in the demonstration area, doing the same types of activities that they will be called upon to carry out in KFCP. This will facilitate moving into the implementation phase with no loss of momentum and aid rapid design adjustments.

² Consultants to be named in final draft.

2.2 INDONESIAN AND AUSTRALIAN GOVERNMENT REDD POLICIES AND PROGRAMS

Indonesia has taken a leading role among developing countries in exploring how to integrate REDD into the emerging international carbon market. A June 2008 agreement between the leaders of Indonesia and Australia commits both nations to partner in this endeavour. Agreement to include REDD as part of a post-2012 international climate change outcome is a crucial next step in supporting international efforts on REDD. The UNFCCC COP 15, to be held in Copenhagen in December 2009, provides an important opportunity to ratify REDD. Experience implementing KFCP can provide valuable evidence in those deliberations.

The International Forest Carbon Initiative (IFCI) is Australia's contribution to the global effort on REDD. The IFCI aims to demonstrate that REDD can be part of an equitable and effective global climate change outcome. A central element of work is development of practical REDD demonstration activities in Indonesia and Papua New Guinea, with the KFCP being the first such demonstration in Indonesia. Planning and delivery of the IFCI involves a whole of government effort, led by the AusAID and the Australian government's DCC.

IFCI aims to increase international forest carbon monitoring and accounting capacity. By demonstrating that forests can be monitored effectively through remote sensing, Australia will show that there can be certainty in measuring emission reductions from avoided deforestation activities. IFCI plans to undertake practical demonstration activities to show how reducing emissions from deforestation can be included in a future international climate change framework. IFCI supports international efforts to develop market-based approaches to address deforestation. Australia will play a key role in international climate change forums and in working with other countries to promote the development of market-based approaches to reducing emissions from deforestation and forest degradation. The Australian position on REDD is that:

Reducing Emissions from Deforestation and Forest Degradation in Developing Countries (REDD) is crucial to reducing global greenhouse gas emissions as this sector contributes almost twenty percent of global emissions. The post-2012 outcome should adequately address emissions from REDD in a manner that is fair, environmentally effective and economically efficient. Australia considers that REDD will be most effectively and sustainably addressed through market-based mechanisms.³

The Indonesia-Australia Forest Carbon Partnership (IAFCP) is the IFCI component that focuses on bilateral cooperation between Indonesia and Australia. As agreed between the President of the Republic of Indonesia and the Prime Minister of Australia,

The Partnership will build upon, and provide clearer goals for existing cooperation between Indonesia and Australia in three key areas:

- *Policy development and capacity building to support participation in international negotiations and future carbon markets;*
- *Technical support for Indonesia to develop its national forest carbon accounting and monitoring system; and*
- *Further development of demonstration activities, and the provision of related enabling assistance, to trial approaches to reducing emissions from deforestation and forest degradation.*

³ Australian Submission to the AWG-LCA Reducing Emissions from Deforestation and Forest Degradation in Developing Countries (REDD), Accra: 21 August 2008.

Text Box 2.1. The following **Gol Plans, Presidential Declarations, and Legal Instruments** are especially relevant to KFCP:

- ◆ ***A National Action Plan Addressing Climate Change*** (February 2007), which outlines the potential impact of climate change for Indonesia, and outlines specific strategies for a wide range of institutions to conduct a coordinated and integrated effort to combat climate change. For the forestry sector, this includes rehabilitating areas of degraded forest, combating illegal logging, preventing forest fires, promoting low-impact logging, and effectively planning land use.
- ◆ ***A National Strategy and Action Plan for Sustainable Management of Peatlands*** (August 2006) aims to incorporate ecological and social issues as well as economic issues in decisions affecting the use of peatlands in Indonesia.
- ◆ ***Presidential Decree on Climate Change Commission***. The President of Indonesia issued a decree on the establishment of a Climate Change Commission in July 2008 (Presidential Regulation No. 46, 2008). The commission is comprised of the Ministries of Finance, Coordinating Economy, Foreign Affairs, Environment, and Forestry, as well as the State Ministry for National Development Planning. The role of the commission is not yet determined, although a number of ministries have established their own working groups to provide input.
- ◆ ***Presidential Decree on the Rehabilitation of the Ex-Mega Rice Project Area*** (INPRES 2/2007) concerns the rehabilitation, conservation and sustainable development of the Ex-Mega Rice Project (EMRP) area, including broad land use zones (refer to Map 2). A process is underway to harmonize the EMRP Master Plan and its proposed land use categories and land use assignments with the existing provincial spatial plan (expected to be completed in April 2009).
- ◆ ***Minister of Forestry Decree establishing a Working Group on Reducing Emissions from Deforestation and Forest Degradation*** (SK 455 /Menhut –II /2008).
- ◆ ***Ministry of Forestry Regulation No. 68/2008***, establishes criteria for REDD demonstration activities, especially which types of private and government bodies may act as proponents.
- ◆ ***Minister of Forestry Decree on REDD*** (to be issued in February 2009) will elaborate business mechanisms and how to calculate carbon emissions.

The delivery mechanism to support the IAFCP is the **Indonesia-Australia Forest Carbon Partnership Facility** (IAFCP Facility—hereafter referred to as ‘the Facility’). The Facility is the vehicle through which government-to-government activities on REDD in Indonesia will be implemented. This places the Governments of Indonesia and Australia firmly as partners in directing and benefiting from the activities that the Facility will undertake. All activities delivered through the Facility aim to reach the overarching goal of IFCI, which is to demonstrate that REDD can be part of an equitable and effective post-2012 global outcome on climate change. The KFCP is a financially and technically significant part of the Facility.

Text Box 2.2. The IAFCP includes a number of activities in Indonesia relevant to the KFCP:

- ◆ **Bilateral package of support to Indonesia on forests and climate.** Australia is providing \$10 million to support Indonesia’s REDD policy development and readiness for REDD implementation by helping to develop a national Forest Resource Information System (FRIS), including an Indonesian national carbon accounting system (NCASI); and supporting the development of a national policy framework and strategies for reducing emissions from deforestation and forest degradation, including through support to the multi-donor Indonesia Forest Climate Alliance (IFCA).
- ◆ **Carbon accounting and monitoring systems.** The Ministry of Forestry (MoF) is developing a FRIS with Australian support as part of an evolving program of support and knowledge sharing based on lessons learned by Australia in developing a National Carbon Accounting System (NCAS). Joint efforts are underway to develop the NCASI, to match the information needs and standards that will be demanded by a market mechanism (see Attachment 3). KFCP provides the opportunity to test the emerging systems using real data backed up by on-the-ground monitoring.
- ◆ **Fire monitoring and prevention.** Australia is supporting efforts to build fire monitoring infrastructure and strengthen the capacity of the Indonesian government to monitor fires through the FireWatch Indonesia (FWI) project. The FWI project will help build a fire monitoring system for Indonesia (nationally and in particular in Riau and Central Kalimantan), which will provide information required to more effectively manage, prevent, and suppress fires (and therefore reduce GHG emissions caused by fire). The information generated has a number of potential applications to the KFCP, including helping to calculate emissions from peatland fires, and identifying priority areas for peatland rehabilitation.

2.3 INTERNATIONAL CONTEXT - HISTORY OF REDD UNDER THE UNFCCC

Deforestation is responsible for approximately 20% of global GHG emissions. Reducing emissions from deforestation and forest degradation in developing countries (REDD) has the potential to realise significant GHG reductions at a low cost. In the past however, REDD has been excluded from international climate change agreements, such as the Kyoto Protocol, due to concerns over the difficulties of measuring and ensuring genuine, lasting emission reductions from REDD. Among these concerns are the following:

- ◆ Uncertainty over the accuracy of emission measurements for deforestation and forest degradation;
- ◆ Difficulty in standardising the definition of forests, deforestation, and forest degradation; and
- ◆ Issues relating to *additionality*, *leakage*, and *permanence*:
 - *Additionality* – ensuring that emission reductions from REDD activities are additional to those that would have otherwise occurred;
 - *Leakage* – ensuring that emission reductions in one area are not offset by increases in another area; and
 - *Permanence* – ensuring that emission reductions are long-term or permanent.

As a result, there are currently no incentives provided under the UNFCCC to assist developing countries to reduce their rates of deforestation or forest degradation.

There has been considerable recent progress on REDD during international climate change negotiations. The Bali Action Plan determined at COP 13 in December 2007 included agreement that a future international climate change framework should incorporate action to reduce emissions from deforestation and forest degradation in developing countries.⁴ In Bali it was also agreed that countries should proceed to undertake efforts, including demonstration activities, to trial approaches to REDD, ahead of the establishment of a post 2012 arrangement.⁵

2.3.1 The KFCP as a REDD demonstration activity

The KFCP will form part of the international response to the call for action on REDD. The KFCP aims to trial approaches and provide lessons learned from on-the-ground REDD activities in Kalimantan to inform international discussions on REDD ahead of a future climate change agreement. The KFCP will be the first demonstration activity of its scale to be implemented anywhere in the world, and it is being designed at a time when the international and national frameworks for REDD are still at a formative stage of development.

This demonstration activity will show how investment in REDD can provide communities with sustainable livelihoods and deliver wider benefits for natural resource management. Additionally, it will show how to develop the necessary underpinnings for sustainable forest management, governance, enforcement, and regulatory frameworks. Lessons learned will help demonstrate how reducing emissions from deforestation and forest degradation can be part of the post-2012 framework, including the key institutional and policy decisions to be considered by national governments.

2.3.2 The REDD Supply Chain

The basic steps to be undertaken in a REDD activity, referred to in aggregate as the ‘REDD Supply Chain’ are the following:

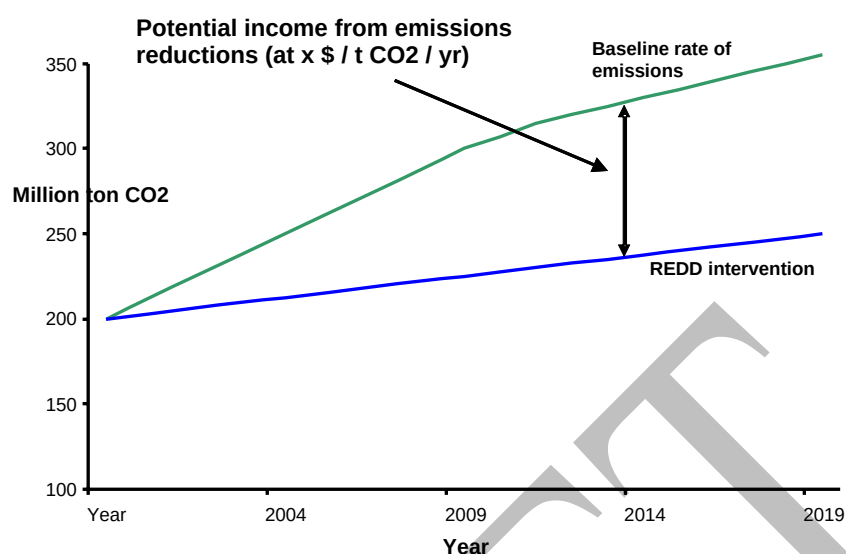
1. Assess the above- and below-ground forest carbon contained in a defined area;
2. Estimate the rate of emissions from deforestation and forest degradation for the defined area that is occurring or would have occurred in the absence of REDD interventions—the so-called “reference emissions level” (REL) or “REDD baseline” (shown as an indicative baseline in Figure 1);
3. Build enabling conditions for REDD, such as governance and institutional arrangements to support payment mechanisms;
4. Carry out interventions to reduce emissions from deforestation and forest degradation (e.g., address drivers of deforestation, manage risks posed by natural hazards etc.) and develop contractual arrangements for their implementation;
5. Monitor changes in emissions measured against the REL or REDD baseline, using agreed methodologies;
6. Certify emissions reductions as a basis for the sale of carbon credits;
7. Make payments to relevant actors based on their relative contribution to emissions reductions.

Figure 1 shows the potential income which could be generated by carbon credits for emissions reductions below an agreed baseline rate or REL.

⁴ Refer Decision 1/CP.13 – Bali Action Plan, UNFCCC, 2007.

⁵ Refer Decision 2/CP.13 - Reducing emissions from deforestation in developing countries: approaches to stimulate action, UNFCCC, 2007.

FIGURE 1. DIAGRAM ILLUSTRATING REDD BASELINE AND EMISSIONS REDUCTIONS



Source: IFCA

2.3.3 Emissions from Peatland Degradation in Indonesia

Emissions from peatland degradation⁶ contribute significant GHG emissions globally. About 30% of global peat exists in the tropics, of which about two-thirds occurs in Indonesia. Indonesia contains approximately 22.5 million hectares of peatland (12% of Indonesia's land area). The largest areas of peatland in Indonesia occur in Papua, Sumatra and Kalimantan. By 2005, 39% of Indonesia's peat forests had been cleared.⁷ Furthermore, while the rate of deforestation has reportedly decreased since the 1990s, much of the deforestation continues to be on peatland and also leads to further peatland degradation. The main cause of deforestation in Indonesia—as it is globally—is land clearing for agricultural purposes. In Indonesia, the single largest reason for land clearance is for the expansion of oil palm plantations.

It has been estimated that 85% of GHG emissions in Indonesia are from land use change,⁸ of which a high (although contested) proportion is attributed to deforestation of peatland and peat fires. Furthermore, nearly half of Indonesia's emissions result from forest fires, and another 20% from the decomposition of dry peat. Emissions from deforestation of peat forests, and subsequent burning of the peat, amount to 6 to 10 times the emissions from deforestation on mineral soils. Peat fires in Indonesia caused international concern in 1997 when smoke haze adversely affected many parts of Indonesia, along with Singapore and parts of Malaysia. In addition to negative health, and environmental and economic consequences, the inclusion of emissions from peat forest degradation and peat fires reportedly increases Indonesia's ranking in total GHG emissions from 21st to 3rd (behind only the USA and China).⁹

6 In this report, emissions from peatland degradation are taken to include emissions from both decomposition (when exposed peat dries out) and fire.

7 Hooijer, 2006.

8 World Bank, DFID and PEACE, 2007.

9 World Bank, DFID and PEACE, 2007.

2.4 OVERVIEW OF THE DEMONSTRATION ACTIVITY

KFCP Goal: to demonstrate a credible, equitable, and effective approach to reducing greenhouse gas emissions from deforestation and forest degradation, including from the degradation of peatlands, that can inform a post-2012 global climate change agreement and enable Indonesia's meaningful participation in future international carbon markets.

Figure 2 depicts the **Objective Tree for the KFCP**, indicating its goal, purpose, five components, and supporting outputs to achieve the REDD-related results and co-benefits.¹⁰ The Kalimantan Forests and Climate Partnership is one of the first large-scale REDD demonstration activities in Indonesia and the first in tropical peatland anywhere in the world. Land clearing and fires in Indonesia's peatlands are a major source of global GHG emissions because these ecosystems contain very high carbon stocks, mostly in belowground biomass. Exposed peat dries rapidly, resulting in oxidation of the organic matter, and creating a serious threat of fire in dry periods. Halting peatland drainage, along with stopping or reversing degradation/deforestation of peat swamp forest offers great potential for emission reductions.

The KFCP aims to:

- ◆ Demonstrate how to effectively **manage and conserve tropical peat forests** based on state-of-the-art scientific knowledge, with the potential to apply these techniques throughout Indonesia's extensive peatlands.
- ◆ Demonstrate how REDD can be incorporated in a **post-2012 outcome on climate change** by trialling innovative, market-oriented approaches to REDD financing and REDD implementation measures, including creating an emission baseline and monitoring/verification protocols and documenting the social and economic impact of the REDD demonstration on participating communities. Australia and Indonesia will introduce the lessons learned from the KFCP into the UNFCCC negotiations on REDD.
- ◆ Contribute to the development of **Indonesia's Roadmap for Access to International Carbon Markets** by testing and refining the technical, legal, institutional, and financial prerequisites needed to participate in international carbon markets, including collaboration with the developers of the FRIS/NCASI forest monitoring and national carbon accounting system.
- ◆ Produce **co-benefits** in terms of providing livelihood options and cash payments for REDD services to target villages, conserving biodiversity, reducing health impacts and economic losses from smoke, and clarifying land tenure and property rights of communities, thereby providing a basis for economic security while reducing the threat of conflict.
- ◆ Contribute to strengthening Indonesia's **REDD enabling environment** by identifying policy options, clarifying institutional responsibilities and capacity-building requirements, and outlining options for the socialization of REDD and related issues.

The following table provides an indicative summary of how KFCP REDD activities may contribute to international discussions:

¹⁰ The KFCP goal has been divided into a goal and purpose statement in keeping with standard practice.

TABLE 1. KFCP'S INTENDED CONTRIBUTION TO REDD ISSUES

Issue/Activity	Directly contribute	Indirectly contribute
Develop systems and demonstrate effective forest carbon accounting and monitoring for REDD, including:		
◆ Trialling methodologies for setting a baseline (or reference level), including:		
— How to design baselines to avoid perverse incentives		
— How to ensure international consistency in baselines while also taking national circumstances into account		
— Implications of national and sub-national approaches, including how these approaches can be used to address leakage		
◆ Measuring and reporting of emission reductions in demonstration activities		
◆ Trialling approaches to demonstrate that with effective monitoring, permanence can be assessed		
◆ Trialling approaches to demonstrate that with effective monitoring, leakage can be assessed		
◆ Trialling approaches to demonstrate that with effective monitoring, additionality can be assessed		
◆ Showing how national carbon accounting and monitoring systems can be internationally consistent		
◆ Showing how carbon accounting and monitoring can support policy solutions (e.g., to leakage and permanence)		
◆ Showing how carbon accounting and monitoring can assist the assessment of the effectiveness of actions		
◆ Facilitating the transfer of technology for carbon accounting and monitoring to developing countries		
Contributing to the development of approaches to underpin and provide long term support for REDD activities, including:		
◆ Trialling approaches to identify and address the drivers of deforestation and forest degradation		
◆ Trialling approaches to demonstrate how investment in avoided deforestation can provide communities with equitable, predictable and sustainable benefits		
◆ Trialling approaches to establish appropriate and effective mechanisms for making incentive payments that promote poverty reduction and support sustainable livelihoods for forest-dependent communities		
◆ Determining the appropriate governance, enforcement, regulatory and sustainable forest management frameworks necessary to support developing countries' participation in a future national REDD system		

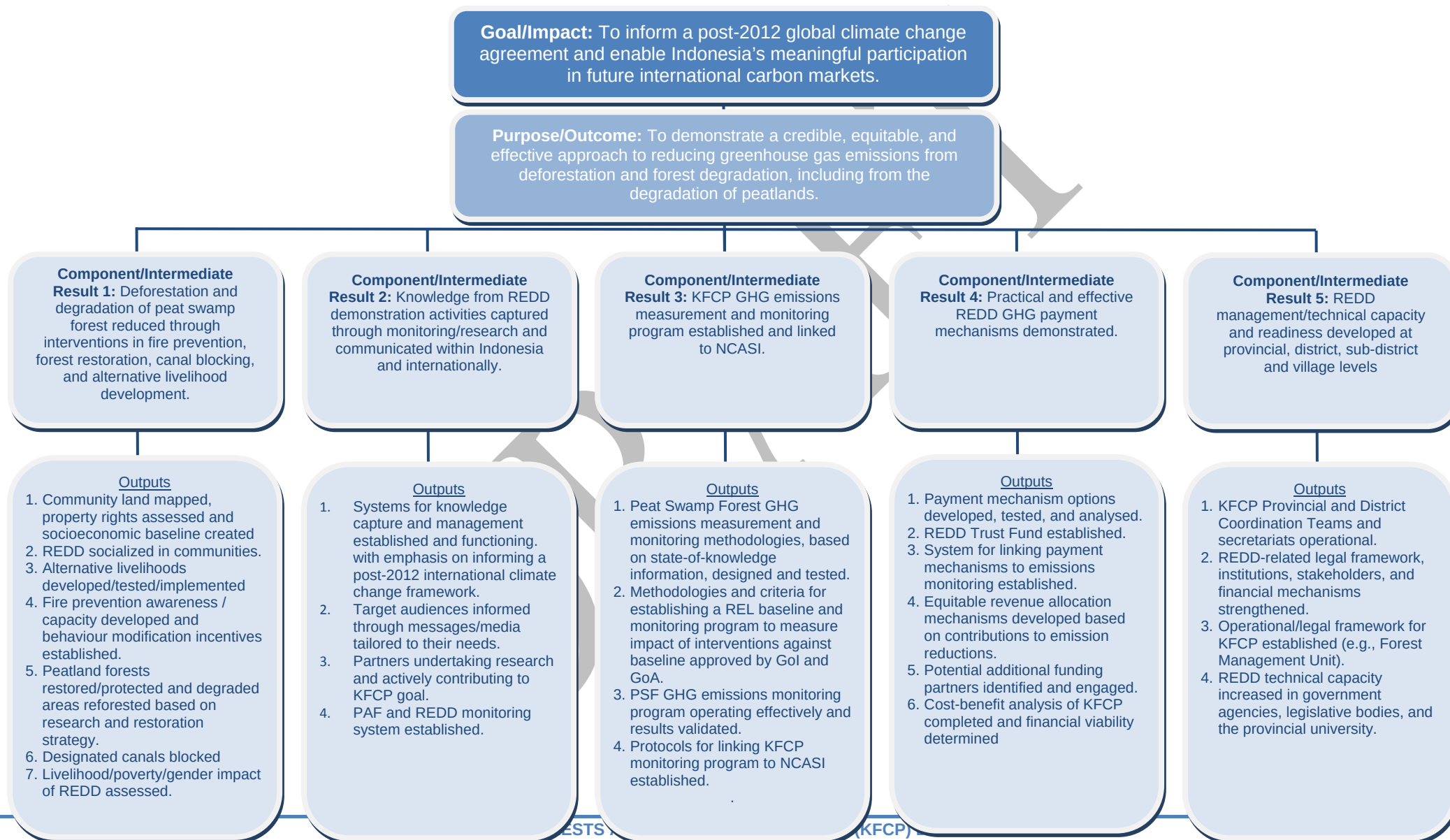
2.5 SITE LOCATION AND DESCRIPTION

2.5.1 Location

The KFCP field demonstration activity will be implemented within a single peat ecosystem, or “dome,” of approximately 130,000 hectares¹¹ in the northern part of the Ex Mega Rice Project (EMRP) area in Central Kalimantan (approximately 2° south and 115° east—see Map 1). The site is bordered by the Kapuas River to the west and south-west and the Mantangai River to the east and south east (see Map 1). Within the EMRP area, roughly half of the site is located in the northern part of EMRP Block A, and half to the north in Block E. The demonstration site lies completely within Kapuas District and is divided between the sub-districts of Mantangai and Timpah.

¹¹ About 80,000 ha are covered in logged-over peat swamp forest, while in the southern part of the dome covering 50,000, much of the forest has been cleared and the remainder is very degraded.

FIGURE 2. KALIMANTAN FORESTS AND CLIMATE PARTNERSHIP OBJECTIVE TREE



2.5.2 Socioeconomic Situation

The demonstration site is sparsely populated, with approximately 20,000—mostly Ngaju Dayak—residents living in 12 to 15 villages¹² strung out along the banks of the Kapuas River (see Map 2). The residents of these villages use land near their villages for food crop and rubber cultivation, while harvesting timber, non-timber forest products (NTFPs) and fish from more remote parts of the demonstration site. The Kapuas River is the primary transportation artery, although a road is being built from Kuala Kapuas to Mantangai up the eastern side of the Kapuas River and a coal company plans to improve a former logging road that parallels the eastern side of the river in Block E to haul coal to a riverfront loading dock from its as-yet undeveloped mine, approximately 130 kilometres to the north.

Villages are relatively remote, have limited public infrastructure, and the level of access to and quality of both health and education services is relatively poor (see Attachment 1). Isolation limits the range of available employment opportunities, and the deforestation of large areas of land since 1996 has greatly reduced livelihood opportunities. Traditional fresh water fishery systems (*beje*) and collection of forest resources have been greatly reduced by the Mega Rice Project and subsequent fires. Effective enforcement of forestry laws to curb illegal logging has forced the closure of sawmills that provided income to local men as loggers, and more significantly, as mill workers. Most families are not food self-sufficient and rely on wage labour and sale of latex and forest products to buy rice.

The National Bureau of Statistics estimates that 37.9% of the residents in Kapuas District live below the poverty level, although the level is probably higher in the villages within the demonstration area. A socioeconomic baseline study being conducted during the preparation phase will provide poverty data and other statistics by village and will identify which villages have long-standing connections with the site and should be engaged by the demonstration activity.

2.5.3 Land Tenure and Natural Resource Use Property Rights

The vast majority of the demonstration site is legally part of the National Forest Estate, which is under the MoF's authority. The area is currently designated as production forest, but is likely to be changed to protection forest or wildlife reserve status within the next year or two. Dayak communities have lived within the site for generations and claim land within five kilometres of their villages based on their customary law, which apparently was recognised by the colonial government prior to independence. During the development of the Mega Rice Project (MRP), the government recognised that villages had management rights and access tenure extending 1.5 kilometres inland from the river bank. The district government is working with local NGOs and villages to formalize land tenure and some villages are permanently assigning specific plots of land to individual families, a change in traditional practice where land was used but not owned individually. Villagers currently do not have formal rights to harvest forest resources in other parts of the site, although they obtain an important part of their livelihoods from the forest. Information about land tenure and property rights will be collected during the preparation phase. Some form of secure land tenure and resource use rights are a necessary pre-condition and incentive for long-term community participation in the KFCP demonstration activities, particularly fire prevention and peat restoration.

2.5.4 Land and Natural Resource Use

Much of the demonstration area is located on a peat dome consisting of peat over three metres in depth that is both ecologically and hydrologically sensitive to disturbance. Tropical peat swamp forests are distinctive ecosystems, with a characteristic forest type and related plant and animal species, many of which are endemic. Peat swamp forests are the preferred habitat of orang-utans and the demonstration area contains a relatively large population of this flagship species. The northern half of the dome (Block E) is covered by relatively intact peat forest which has been logged by using railways to remove the logs, thus avoiding the need for canals, which are highly degrading to the forests due to their draining and subsequent drying effects. The southern part of the area south of the Main East-West canals is a mixture of logged over and degraded peat swamp forest and cleared areas,

¹² Final number of villages to be determined in final report.

resulting from the land clearing and drainage activities of the MRP. The southern part of the area has been subjected to illegal logging and repeated burning for a decade and burn scars from past fires are common. The area is also drained by an extensive grid of larger canals, while small, locally dug *handil* canals penetrate inland from the river throughout the project area. Maintenance of and land use around the *handil* canals is managed through a customary system. Agricultural activities, including food crops and family-owned rubber plantations, are limited to the areas of community land along the Kapuas River, where mineral soils and shallow peat predominate. Fishing for a range of vertebrate species and prawns is important for both subsistence and income. Forest is similarly important for cash-earning products, including *jelutung* and *gemor*, and subsistence products used for house construction, food (both plants and animals), medicines, and handicrafts.

Illegal logging occurs across the site, although the extent and severity has decreased drastically in recent years in both Block E and Block A. Illegal logging was undertaken by people from both the local communities and others from further afield. Many of the small- to medium-scale sawmilling operations that were located downstream of the site were closed through government enforcement action, and some are believed to have moved further upstream, where timber is more abundant. Illegal gold mining is a serious problem in the stretch of the Kapuas River adjacent to Block E, where locally made hydraulic dredges are used to artificially erode the shoreline to process the soil and recover gold particles. This causes accelerated sedimentation and pollutes the river with mercury.

2.6 PHASES AND SEQUENCING

KFCP is being implemented in two distinct but integrated phases as described:

- ◆ **Preparatory Phase (1 January to 30 June 2009):** Activities that lay the foundation for implementation, done by implementing partners, consultants and the Peat and GHG Working Group, under the direction of the PO to socialize REDD, create a socioeconomic baseline, design a GHG measurement and monitoring system, build the institutional framework for KFCP at the province and district levels, and complete the design of the overall activity.
- ◆ **Implementation Phase (1 July 2009 to 30 June 2012):** The Managing Contractor takes over implementation of KFCP under the direction of the KFCP Coordinator. These dedicated management resources permit the rapid scaling up of implementation activities based on the knowledge and groundwork that was created during the Preparatory Phase. The *Facility Design Document* identifies an initial ‘Through COP 15 Phase’ where emphasis is on capturing knowledge relevant to REDD while continuing to aggressively pursue implementation in all components.

2.6.1 Preparatory Activities

Partners, groups, and consultants will work on the following preparatory phase tasks:

- ◆ **CARE:** Conduct a socioeconomic baseline survey in target villages and prepare for the village land use planning process and monitoring system.
- ◆ **Wetlands International:** Assess land cover and forest status in Block’s A and E and contribute to development of the Peatland Restoration Strategic Plan.
- ◆ **Borneo Orang-utan Survival (BOS):** Develop approaches to reforestation and assess community use of forest resources.
- ◆ **Kemitraan:** Assess governance issues related to REDD implementation at all levels and propose options for strengthening the legal framework and institutions.
- ◆ **World Agroforestry Centre (ICRAF):** Analyse land tenure and land use as it affects the implementation of KFCP activities and assess the potential for agroforestry systems as a livelihood option.
- ◆ **Peat and GHG Working Group:** Develop GHG measurement and monitoring protocols for peat swamp forest.
- ◆ **Payment Mechanism Working Group:** Develop options for payment mechanisms.
- ◆ **Socioeconomic Baseline and Livelihoods Working Group:** Guide the design of the socioeconomic baseline survey and assess procedures/criteria for selecting livelihood options.

- ◆ **Consultants:** A group of consultants will develop a Peatland Restoration Strategic Plan to guide canal blocking and reforestation, while other consultants will develop the GIS/Remote Sensing System, assess livelihood and other socioeconomic issues, and finalize the KFCP Design Document.

2.6.2 Sequencing

Activities must be carefully sequenced within each component of KFCP, and in many cases, between components. The temporal relationship among the outputs is depicted in the Implementation Schedule in Attachment 9. Some examples of important implementation sequences are:

- ◆ **Village Engagement:** The steps of the village engagement process described under Component 1 in section 3 and in Attachment 2 must be done in sequence starting with the baseline survey and socialisation. Technical interventions, such as dam building and reforestation, may commence only when the necessary social enabling conditions have been created in villages that use or claim rights to the involved land or canals. Likewise, testing of payment mechanisms must wait until the necessary REDD socialisation has occurred and land tenure status is known in detail.
- ◆ **Calculating Reference Emissions Levels (REL):** Data on the peat surface level and peat physical properties are being collected during the preparatory phase to calculate the REL of the field demonstration site. Interventions that will affect the emissions levels, such as canal blocking, will not be implemented until the REL measurements are made.
- ◆ **GHG Emissions Reduction Interventions:** The sequencing issues related to canal blocking and reforestation activities are discussed under Component 1 in Section 3.

2.7 RELEVANT GOI AND DONOR PROGRAMS IN CENTRAL KALIMANTAN

2.7.1 EMRP Master Plan

With assistance from the Government of the Netherlands, a *Master Plan for the Rehabilitation, and Revitalization of the Ex-Mega Rice Project Area in Central Kalimantan* was completed in final draft form in October 2008. The plan is designed to support Presidential Instruction (INPRES) 2/2007 and addresses conservation, rehabilitation, and sustainable development of the 1.4 million hectare EMRP area. The goal of the master plan is to lay out a comprehensive implementation plan which addresses technical, environmental, socioeconomic, cultural, and institutional issues related to, and impacting on, the long-term sustainable rehabilitation of the EMRP area. The master plan provides new understanding of the EMRP hydrology and creates integrated spatial planning products and options for water management, land use, and socioeconomic development. KFCP will plan and implement its activities within the master plan framework and will contribute to achieving the goals and objectives identified in the plan to the extent that they are consistent with REDD demonstration objectives.

2.7.2 Central Kalimantan Peatlands Project

The Government of the Netherlands supported the Central Kalimantan Peatland Project (CKPP) to address peatland rehabilitation within the EMRP area and in Sebangau National Park (and in their buffer zones). CKPP was implemented by Wetlands International, CARE International, World Wide Fund for Nature (WWF)-Indonesia, Borneo Orangutan Survival (BOS) Foundation, and the University of Palangka Raya, and focused on five key activities:

- ◆ Fire prevention;
- ◆ Restoration of the peatland hydrology;
- ◆ Reduction of poverty through small scale developments;
- ◆ Re-greening; and
- ◆ Biodiversity conservation.

CKPP ended in December 2008, but a continuation of activities are expected with further Netherlands government funding. KFCP will build on the work of CKPP and coordinate closely with any further activities.

DRAFT

3.0 IMPLEMENTATION STRATEGY AND COMPONENT DESIGN

3.1 IMPLEMENTATION STRATEGY AND PRINCIPLES

The KFCP implementation strategy is designed to deliver both tangible, environmental and development results as well as learning results with an emphasis on adaptability and flexibility. The ability to move seamlessly from preparatory activities to implementation is crucially important given the relatively short three-year life of the activity. The most immediate need is to capture information from the preparatory phase and the first few months of the implementation phase to inform international discussions and technical meetings prior to negotiations on REDD at COP 15 in December 2009, just six months after KFCP officially launches.

The KFCP is the first of two REDD demonstration activities planned under the Indonesia-Australia Forest Carbon Partnership (see Section 2.4).

The Facility Design Document states:

The facility not only needs to implement quickly, it needs to incorporate and record lessons as soon as they are learned, while at the same time building capacity for the future. This is about learning by doing...In the coming year a strong focus of activities such as the KFCP will be on providing lessons learned to inform ongoing international negotiations on REDD through the UNFCCC...Beyond COP15 we can envisage a broader and longer-term set of outcomes will emerge in the period up to 2012. The focus and approaches of the facility to meet longer-term aims will need to be reviewed after COP15.

3.1.1 Key Implementation Approaches and Principles

- ◆ **Phased Approach:** Design based on preparatory and implementation phases as described in Section 2.6.
- ◆ **Flexible/Adaptive Management:** use six-month “rolling” planning process to test interventions, generate and capture knowledge, and inform the subsequent round of planning.
- ◆ **Scientific Rigor:** deliver credible, defensible, and scientifically rigorous evidence to support negotiations on REDD.
- ◆ **Market Orientation:** design system to build confidence of potential buyers and investors through control of leakage; insurance of permanence; through a transparent and accountable structure for managing the land and transacting the carbon credits, including system for certification and transparent/equitable payment mechanisms.
- ◆ **Sequencing:** prioritize activities that are time consuming and necessary preconditions, like the village engagement process, payment mechanisms, and monitoring systems. Do reforestation on a trial basis because it is relatively expensive and can be scaled up quickly. Ensure that technical field interventions occur after necessary enabling conditions have been established in communities.
- ◆ **Communication:** understand the types of information various audiences need and how to communicate effectively (see Component 2 description).
- ◆ **Coordination:** use rolling planning system to coordinate with other IAFCP activities and develop mechanisms to harmonize KFCP plans and implementation with related GoI and donor programs.
- ◆ **Working within GoI Systems:** follow government relevant planning procedures, policies, and approval processes to ensure ownership and sustainability. Important examples are the village consultative planning process (*Musrenbang Desa*), spatial planning at district and province levels, INPRES 2/2007, and the EMRP Master Plan.
- ◆ **Do No Harm:** screen interventions and monitor to ensure that KFCP activities do not harm residents of the demonstration area in terms of livelihoods, land tenure, social/gender disparities, and corruption.
- ◆ **Scaling Up:** prepare provisional plans and budgets for different levels of additional funding.

- ◆ **Whole-of-dome approach:** plan and implement emission reduction interventions in the peat swamp forests, such as canal blocking, rehabilitation of degraded forest (promote natural regeneration and replanting), fire prevention /suppression, clarify land use and use rights and develop alternative livelihoods to aid in fire prevention, training fire suppression crews, early warning system, education within the context of the entire peat swamp forest ecosystem formed by a single dome.
- ◆ **Multiple Monitoring Tools:** design a monitoring system that provides ability to verify results by multiple means such as remote sensing, ground truthing, output/result-level monitoring, periodic supervision missions by PO staff, and input from the technical panel and supporting partners.
- ◆ **Promotion of Climate Change Policies of Indonesia and Australia:** be consistent with the IAFCP and IFCI objectives and contribute to FRIS/NCASI.
- ◆ **Incorporation of Government of Australia (GoA) policies on the environment, gender equality, and anti-corruption.**

3.1.2 Logic of the KFCP Intervention Strategy

All KFCP interventions in concert aim to reduce deforestation and degradation of peat swamp forest, primarily by reducing fire risk and mitigating the frequency and severity of fire. Specifically, as described in Component 1:

- ◆ **Blocking canals** to raise the water table and re-wet the peat will inhibit oxidation, including the incidence and spread of fire;
- ◆ **Re-establishing tree cover** in highly degraded areas by encouraging natural regeneration and re-planting will help raise soil moisture levels and humidity, thus further reducing fire risk especially in dry years; and
- ◆ **Livelihood interventions**, including incentives to adopt sustainable land-use practices, are a key part of the overall threat mitigation strategy because current farming methods depend on fire as the most economical means of land clearing and preparation.

The principal source of GHG emissions from a peat swamp forest subjected to drainage and clearing is the continuous oxidation of the exposed, dry upper layers of the peat. This is tremendously accelerated by fire in the dry season and especially in exceptionally dry years associated with the recurrence of El Niño-Southern Oscillation Events (ENSO).

Fire is used for land-clearing by small holder farmers and larger-scale plantation operators. Both the choice of commercial crops introduced to peatlands (principally oil palm and rubber) and the easy use of fire to clear land are made possible by the drainage of peatlands by canals, as occurred on a large scale in Central Kalimantan with the Mega-Rice Project in the mid-1990s. That event fundamentally altered the ecology and economy of the area, so that people whose livelihoods were adapted to a more-or-less natural peat swamp forest environment have been forced, in the last decade, to cope with the new, drier and less stable, conditions, becoming more dependent on dryland farming and the use of fire to clear land. The KFCP fire risk strategy should focus on high risk time periods (e.g., El Nino years) and high risk areas, such as along canals. If communities perform well in managing fire at priority times and places, they should receive a performance-based incentive payment.

For the KFCP to succeed in restoring, to a significant degree, the hydrology and ecology of the peat swamp forest ecosystem so as to reduce GHG emissions, **a new set of incentives to encourage sustainable land use and forest protection must be developed, offered, and accepted by people** in affected communities and other forest-dependent (or deforestation-dependent) actors. While at the district level the KFCP will help build governance and institutional arrangements conducive to REDD, **the precise package of economic, social, and policy incentives will vary from one community to another** with differences in their ecological situation (from relatively intact to highly degraded forest) and the corresponding mix and sequence of technical interventions. This will require programmatic flexibility and a detailed, local-level understanding of the perceived benefits of current, unsustainable practices and barriers to adopting those that foster REDD outcomes.

Incentives to encourage sustainable practices will take three forms:

- ◆ *Input-based*: immediate remuneration or other direct benefits linked to adopting and implementing interventions, such as building dams, planting trees, supplying dam-building and tree-planting operations, or eliminating fire use on peat soils.¹³
- ◆ *Performance-based*: annual payments for sustaining interventions so as to achieve the desired results, such as maintaining dams in order to keep water levels high, protecting forest from encroachment, or reducing the incidence and extent of fire.
- ◆ *Outcome-based*: payments commensurate with GHG emissions reductions, initially as a proxy for a future forest carbon market but later based on tradeable credits in a real market.

3.2 COMPONENT DESCRIPTIONS AND IMPLEMENTATION GUIDANCE

3.2.1 Component 1: Deforestation and Forest Degradation Reduced

TECHNICAL APPROACH

This component forms the core of the KFCP demonstration activity, providing a framework within which other activities must be integrated. It is also the costliest in terms of funds and management resources. The village-level development activities are challenging in their own right and must be harmonised with REDD-related socialization, behaviour change, peat restoration activities, reforestation, GHG monitoring, and payment mechanisms. Because of this complexity, and the fact that much new ground is being broken in terms of how to operationalise REDD, this component presents relatively high levels of social, political, and technical risk.

The technical approach to Component 1 is designed to manage risk in the following ways:

- ◆ Implement a management system, described in Section 4, that ensures coordination and communication among the KFCP field management team, government agencies, and implementing partners.
- ◆ Articulate clear roles for all groups involved in the component, directly or indirectly (see Text Box 4.2 on group roles).
- ◆ Use the PO staff to coordinate with institutions and organisations outside KFCP who can provide information and support.
- ◆ Apply state-of-knowledge information to design, planning, implementation, estimations, and monitoring based on inputs from research partners and consultants.
- ◆ Build government support by regularly consulting and coordinating closely with district- and provincial-level government.
- ◆ Follow a detailed, consistent series of steps to engage villages (see Figure 3 and Attachment 2) to ensure their needs and concerns are taken into account, including women and marginalised groups.

Peatland and Forest Threats

The following threats to peat swamp forests and the associated peat domes must be managed in order to achieve significant GHG emission reductions:

- ◆ **Use of fire** for land clearance, which is neglected if it escapes beyond cultivated areas, especially during unusually dry years (see Attachment 6); This is addressed by interventions such as reducing the causes of fire i.e., providing techniques which minimise the use of fire; improving permanent access to land for improved livelihoods as ownership confers a 'value' which is then protected; education and training;

¹³ Since canals now give access to land that is cleared with fire, canal-blocking will itself reduce such access and the associated fire risk along the canals, whence fire often spreads. Thus, current land users may be entitled to compensation for giving up that access.

- ◆ **Failure to effectively block canals** and prevent the construction of new canals threatens to lower the water table even further, thereby increasing emissions from oxidation, and fire;
- ◆ **Failure to control illegal logging**, which in Block E often uses small, hand-dug canals (*handil*) to transport logs to rivers; and
- ◆ **Introduction of plantation crops into cleared peat swamp forest areas** (e.g., rubber and oil palm) either by small holders or through concession agreements.

Village Engagement

Gaining the support of all segments of communities in the demonstration site is a precondition for emissions reduction. Gaining their trust and support will take time, effort, and the ability to offer real incentives. These communities are generally mistrustful of outside interventions after their very negative MRP experience and are somewhat jaded from subsequent experience with programs that offered assistance in forms that were not profitable or sustainable. Rates of poverty are high in these communities and local economies have suffered from the closure of local saw mills, the fall in the price of latex, and the increase in the price of rice. Climate change is a remote threat compared with livelihood threats that are apparent and pressing. Potential financial benefits from carbon credits seem remote, if the concept is understood at all. An effective and consistent REDD communications message is essential.

A threshold requirement for KFCP success with local people is the ability to replace lost income from limitations on use of forest resources, coupled with some form of tenure over village lands. In providing incentives, care must be taken not to create an economic pull effect by the appearance of a windfall—there is evidence of out-migration from the area and it would be counterproductive to reverse that trend. Care will be required to direct benefits to the people who deserve and need them most, while avoiding capture of benefits by village elites, a common problem in rural development.

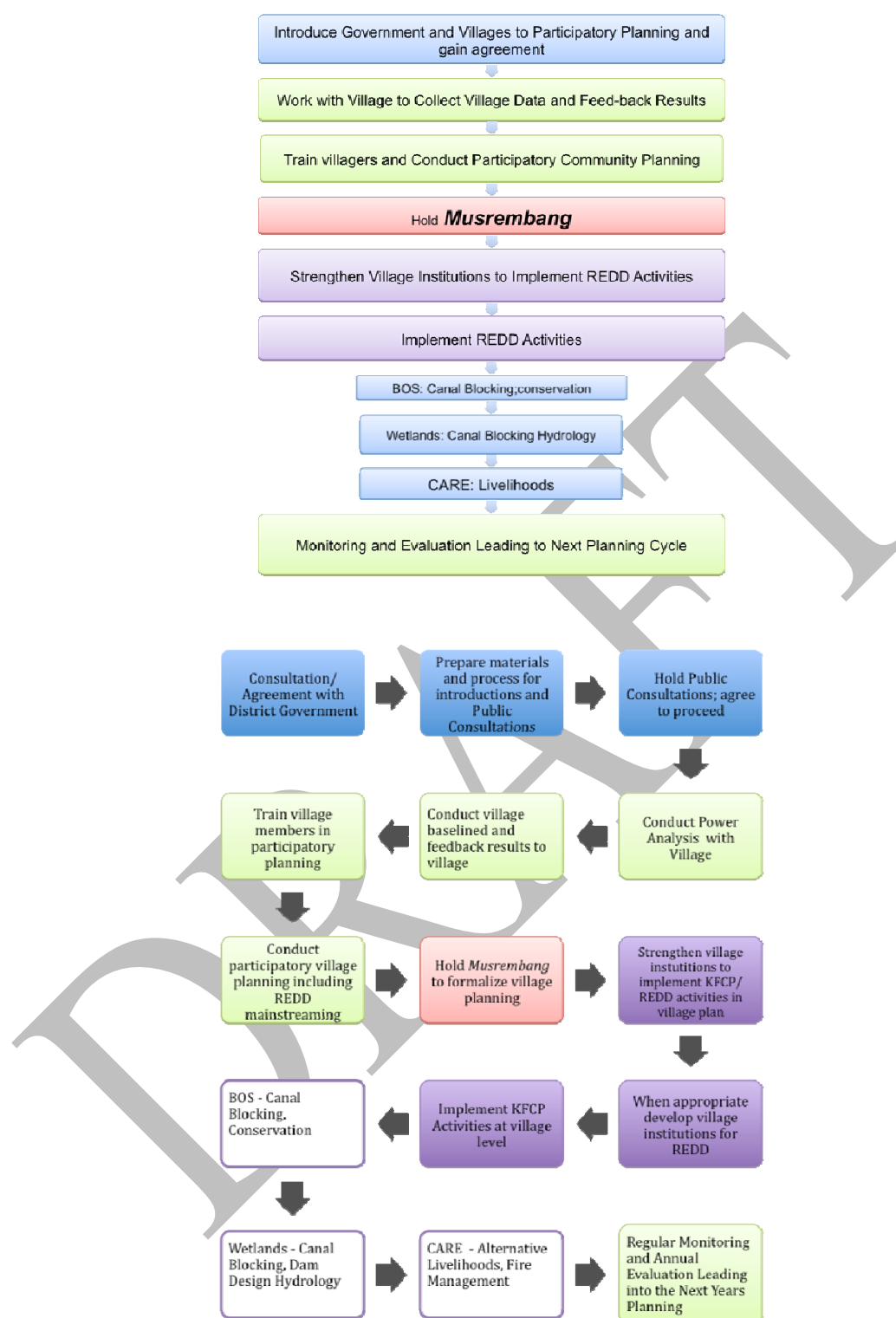
The village engagement process must observe the following principles:

- ◆ Be **participatory** to ensure local ownership;
- ◆ Provide the opportunity for **informed consent**;
- ◆ Be **flexible and adaptive**;
- ◆ **Follow sound development principles**, such as ensuring that livelihood alternatives are financially and socially feasible and sustainable (see livelihood standards in Attachment 1);
- ◆ Ensure that alternative **livelihoods are compatible with REDD** objectives;
- ◆ **Target groups most responsible for emissions-increasing practices** (i.e., younger men) for behaviour change and offer real income alternatives;
- ◆ Ensure that interventions **do not make people worse off** if REDD is not accepted internationally;
- ◆ **Do not exacerbate gender and socially based disparities**; and
- ◆ Ensure village planning is done within the GoI mandated **village-level planning process (*Musrenbang Desa*)**. These plans provide a means to integrate village plans into higher levels of spatial planning, make land use compatible with REDD, and provide a basis for validating land tenure claims.

Reducing Peat Swamp Forest Deforestation and Degradation - Rehabilitation and Hydrologic Restoration

In order to reduce deforestation and further degradation of the peat swamp forests, it is important to adopt the whole-of-dome approach as the protection strategy as the condition of the forests on the dome are influenced by what happens downstream of the particular patch of forest. An intact patch of forest will be severely impacted in both the short and long term and become degraded and eventually destroyed if water levels are not maintained by blocking any canals located downstream and rehabilitating the degraded forest areas. The dams themselves will not raise levels sufficiently in the short term, but are essential to stop further drying of peat in their vicinity, and therefore GHG emissions. Dams also reduce access to areas by people which reduces risk of fire and by increasing moisture levels of the peat close to the canals.

FIGURE 3. FLOW CHART OF STEPS TO ENGAGE VILLAGES



Text Box 3.1. Standards for Peatland Livelihood Interventions

Key principles for identifying and selecting livelihood interventions on peatlands

1. Should meet sustainable livelihood indicators (economic, ecological/environmental, human security), and as such, promote sustainable land use of forest and tropical peat lands;
2. Be socially inclusive and involve groups that are marginalised or have limited access to community decision-making processes;
3. Be gender sensitive; and
4. Should support efforts to ensure equitable and fair access to land tenure.

Connections among fire, livelihoods, and GHG emissions in Attachment 9.

Livelihood standards for peatlands are as follows:

Standard 1: Mainstream fire management. Given the overarching risk of fire and its devastating impact as well its strong link with livelihood development, fire management has to be mainstreamed in peatland development activities.

Standard 2: Analyse drivers of deforestation. Any intervention should start with an analysis of deforestation and forest and peatland degradation. REDD interventions will need to have a clear link with efforts to address drivers of deforestation and forest degradation.

Standard 3: Ensure inclusiveness. Community-based planning should be disaggregated according to how different groups within a community relate to forest/peatland. Interventions must be designed based on livelihood strategies of these social groups.

Standard 4: Screen agricultural activities. Agriculture interventions have to be assessed carefully as agriculture development may increase greenhouse gas emissions on peatlands. Furthermore, if the intervention results in unstable incomes over time, pressure on natural resources will increase.

Standard 5: Assess hydrological impact. A REDD-related livelihood intervention in peatlands should always be considered for its hydrological impact. Drainage is a key cause of emissions and leads to fire.

Standard 6: REDD should generate new employment. Reduced access to resources will lead to reduced employment opportunities if no additional steps are taken. Alternative sources of income have to be developed which ensure that communities/households are not exposed to declines in purchasing power. These should prepare communities for a post REDD period in which credits are not available but resources have to be managed in a sustainable manner.

Standard 7: Ensure community ownership. All livelihood interventions should be initiated through participatory technology development/community development processes and must be financially and socially feasible.

Rehabilitation of degraded peat swamp forests downstream from intact forests either by promoting natural regeneration or replanting with appropriate species will ‘kick-start’ the ecological processes essential for keeping the peat surface moist and reducing water runoff from the upper sections of the dome. Hence the interventions are all designed to reduce further degradation of the peat swamp forests, which if not undertaken will lead to deforestation and a huge increase in GHGs. For example, reforestation (natural or artificial) in this context is not carried out for the sake of establishing more trees in the traditional sense, but is essential for controlling water flows and starting the ecological process essential for protecting the remaining forests upstream. The same rationale exists for improving livelihoods of local communities; it is part of the fire prevention strategy. Fire is one of the main causes of deforestation, so preventing fires from starting in degraded forests which have been logged and partially drained by small canals as is the case in Block E, has a major influence on determining the integrity of the remaining peat swamp forest.

Although there are many activities to be undertaken to avoid further loss and degradation of the peat swamp forest, they are all part of the REDD process in the context of peat swamp forests. From a project implementation and management perspective, the various activities and interventions can all be undertaken and planned in a way that their costs and impacts can be evaluated.

The basic elements of peat swamp forest hydrological restoration and reforestation will be guided by the work of previous research and development, consultants tasked with developing a strategy tailored to KFCP needs, and technical collaboration with scientists working to implement the EMRP Master Plan. Details of where and when the interventions will be made, including dams, recommended vertical intervals of dams on the different canal types, dam types and associated activities, species and area to be reforested by both natural regeneration and replanting and the locality and village will be determined in a strategic Plan for Block A currently being developed as part of the Preparatory Phase. A plan for Block E will be developed once the village survey work has been completed as part of the Preparatory Phase. **The basic elements of the interventions are:**

1. **Dam canals to wet peat** near canals and halt further drop in the water table and reduce GHG emissions from the wet peat. Scientists working independently and on the EMRP Master Plan have determined that it is not feasible to raise water tables to former levels in the short term because the canals are now significantly lower than the upper surface of the peat dome due to increased oxidation in the proximity of the canals. This applies to both Blocks E and A, with Block A having significantly less peat swamp forest in proximity to the canals than Block E.
2. **Promote natural generation in degraded forest** areas by damming canals in their proximity, protecting them from burning and illegal logging.
3. **Manage fire and land use along rivers and near settlements** in accordance with annual variations in rainfall. Block the small and large canals to prevent people from reaching deep into peat where they can start fires and log illegally.
4. **Re-establish trees (natural or artificial regeneration) on areas which have been deforested**, as this provides a means of assisting the reduction of overland flow of water on the peat (reducing run-off) and to keep the surface of the peat moist when litter layers develop. Replanting is part of the rehabilitation process and is essential for the sustainable restoration of the peat and to protect forested peat from further degradation.

Approach to Rehabilitating the Degraded Peat Swamp Forest. Initially, planting will be done on a demonstration basis, to test a new range of tree species^[1] to be scaled up to a size which allows techniques and procedures for measuring and monitoring the impacts to be credible. If additional funds become available^[2] a larger area could be replanted in Block A and is one option available for additional financial support. Initial efforts in 2009/2010 of rehabilitation will demonstrate various approaches (e.g., full planting, partial planting, natural regeneration) for reforesting near the central part

^[1] Work is being undertaken on Peat Swamp Forest Ecology and Silviculture in the Preparatory Phase whose results will be used in the demonstration area.

^[2] It is envisaged that reforesting the deforested area in Block A will cost in the order of AUD 25 million, far in excess of what is currently available in KFCP.

of the dome, in the northern part of Block A, in areas where land tenure is not in dispute. Orang-utan food species and those appropriate for forest protection and conservation will be planted and promoted near the dome centre and species with non-timber values to be utilised by the communities towards the edge. Community groups or individuals will be encouraged to develop nurseries with technical assistance, and sell seedlings for the rehabilitation activity. This would provide an opportunity for women to benefit financially and enhance skills in the early stages. Local people could be hired to plant trees, either directly, or by arrangement with implementing partners or private contractors. Trees must be planted in remote areas before dams are constructed, to enable access for planting material. A Rehabilitation and Restoration Strategy is being developed in the Preparatory Phase to facilitate the planning process for the rehabilitation. The rehabilitation process in Block E will primarily focus on facilitating natural regeneration as there are fewer and smaller areas in Block E which are fully deforested, thus not requiring the additional level of effort.

Canal Blocking. Construction of appropriate dams on the canals could reduce emissions quickly by blocking access and reducing water draining from the site and stabilizing the water table. The basic approach is to start at the centre of the dome and work outwards, spacing dams relatively closely to avoid putting too much hydraulic pressure on each dam (this has caused dam failure in the past). Options for developing dams at different vertical intervals and cost implications are being prepared as part of the Rehabilitation and Restoration Strategy being prepared for Block A. Larger dams are generally required in Block A and smaller ones in Block E. Methods for constructing more cost-efficient dams will be explored including ways of achieving economies of scale through bulk purchase and transport of materials and use of contractors in agreed areas. Much of this information will be contained in the Rehabilitation and Restoration Strategy.

Sequencing. The sequencing of the various interventions will be important. One of the management considerations is to recognise that the activities in Block E can be implemented without much operational reference to Block A as one is not dependent on the other. The main reasons are that the access to the site is different, the villagers are all distinct and independent apart from the villages immediately either side of the main east–west canal which divides Block E from Block A and the nature of the interventions will be different; i.e., the dams in the Block E will be small as the canals are only 1-1.5 metres wide and have been dug using a chainsaw, unlike those in Block A which are up to 10 metres wide and dug with excavators.

A number of the intervention activities can commence simultaneously in both areas, and these include village discussions on areas to reforest; canal locations; payment details for work to undertake the activities and for on-going maintenance (incentives); nursery development (contract discussions, training, access to seed sources, collection and storage) to take 6-9 months as tropical tree species take time to develop in the nursery; canal design and development of new canal types and construction methods; sourcing large quantities of dam construction material and bring to the site in the wet season when water levels are high (particularly in Block A). As indicated previously, planting needs to be done just prior to the canal blocking in the agreed area to facilitate access. Maintenance of canals and planted trees will commence just after the trees are planted and dams constructed and continued for 3 years. Fire prevention activities including improved livelihood studies and subsequent training and resourcing, fire suppression activities can commence immediately, as these are independent of the dam construction and planting activities. One of the main risks identified in the implementation of KFCP is capacity. KFCP will need to be cognisant of this in the detail planning with communities and NGO partners to ensure there are sufficient resources to undertake the work. KFCP may need to outsource some activities with the consent of local communities and the district authorities if progress is hampered by lack of manpower and local expertise.

Measurement and Monitoring. In order to effectively monitor the impact of the interventions on GHG emissions and changes to the area of peat swamp forests and their degradation, initial measurements will be undertaken on a number of parameters prior to any interventions in order to ensure a good basis for the monitoring and evaluation. These measurements will be used to also determine the various baselines and current emission levels and for determining the RELs. It is important to recognise what parameters need to be measured prior to the commencement of the interventions and what can be done during the project. For example, social and village baselines and GHGs emissions for determining

RELs from the current area of the peat swamp forests in the KFCP area are well underway and need to be carried out before interventions are implemented. This is part of the Preparatory Phase. In terms of developing a REL, KFCP will need to determine the carbon content of the above and below ground component and the methodologies by which the changes in avoided emissions and changes in forest quality and area will be estimated^[1]. This work can be done following commencement of the interventions. In terms of GHGs, the KFCP will undertake a LIDAR study prior to the interventions to determine the elevation of the peat in the peat swamp forests, but will subsequently need to undertake research into carbon content of the below (peat) and above ground forest biomass (no data at present), carbon content of peat at different depths and position in the dome (determined by the forest type when peat was developed), bulk density which varies with depth and position in the dome and areal extent of the project area and peat depth.

EXPECTED OUTPUTS

TABLE 2. COMPONENT 1 OUTPUTS

Output	Prep Phase Activities	Status June 09	Implementation Guidance
1.1 Community land use mapped, property rights assessed & socioeconomic baseline created.	CARE leading creation of SE baseline during prep phase with input from ICRAF & Kemitraan	Socioeconomic baseline will be completed in most villages	See Attachment 2 for steps in this process. Initial steps already completed in some villages under CKPP, requiring a tailored strategy to engage each village. The quality and consistency of baseline critical for REDD monitoring – technical panel working group to provide guidance.
1.2 REDD socialised in communities	CARE to develop and test REDD message during prep phase	Standard message crafted and all KFCP partners informed.	The content and delivery of the message to communities and local government is critical to their support for REDD interventions. Care is needed not to raise expectations while still generating support.
1.3 Alternative livelihoods developed, tested, and implemented	Initial screening standards developed and current livelihood status identified.	Livelihood standards accepted and some alternatives identified	See list of livelihood standards in Attachment 2, which is expected to lead to creation of a menu of interventions. REDD/gender/ environmental impact screening critical.
1.4 Fire prevention awareness/capacity developed & behaviour modification incentives established.	Past experience with fire management reviewed in context of GoI policy.	Initial approach to fire risk management developed.	KFCP interventions should be in line with GoI policy and institutions and harmonised with the Master Plan approach. Fire risk should be managed based on climatic conditions.
1.5 Peatland forests restored/protected & degraded areas reforested based on research & restoration strategy	Restoration Strategy and input from Peat Group.	Restoration Strategy completed	Design approach based on Restoration Strategy.
1.6 Designated canals blocked.	Restoration strategy and input from Peat Group.	Restoration strategy completed	Follow approach described above.
1.7 Livelihood/poverty/gender impact of REDD assessed.	none	Socioeconomic baseline established.	This will be undertaken in Year 3 when impacts are clear.

^[1] Much of this information and methodologies is being provided by the Peat and GHG Group who will have a review of the current knowledge and gaps and what research is to be done along with agreed GHG methodologies by June 09.

3.2.2 Component 2: Knowledge from REDD Demonstration Activities Captured and Communicated within Indonesia and Internationally

TECHNICAL APPROACH

The KFCP is designed as a learning activity, producing information and capturing knowledge from that information to be communicated to a number of distinct audiences, some of whom will be engaged in an on-going dialogue with the KFCP staff. Communicating effectively will require the development of both a **Communications Strategy** and a **Knowledge Capture Strategy**.

Communications Strategy

The strategy will define: **Who are the KFCP audiences; what are their information needs; and what is the best method/media for communicating with them?** Some audiences, such as the Department of Climate Change and working groups of the Technical Panel will require specific types of technical information, often according to a prescribed schedule. Other groups, such as people in target villages, local government officials, and the general public in Central Kalimantan, will need information related to their role in REDD, which will evolve over the life of KFCP. Messages will have a variety of purposes including socializing REDD, changing behaviours related to land use and fire, informing science and policy, and building government and community support for REDD. A Knowledge, Attitudes and Practices (KAP) Survey of target villages at the beginning of implementation will provide a baseline against which to measure the effectiveness of behaviour change communication. It is envisioned that some form of web-based communication system will be set up for internal communication while external communication to some audiences may be facilitated by either a dedicated web site or using a site that may be established to support ICFI.

A consultant will be engaged in the preparatory phase to develop the Communications Strategy that will address public outreach, a proactive media approach, and a branding strategy. The strategy will include Guidelines for Internal and External KFCP Communications that complies with AusAID policy and addresses who can communicate to the various audiences on specific topics, including communications with the news media and civil society.

Knowledge Capture Strategy

KFCP is designed to gather information from multiple sources including remote sensing, field and household surveys, scientific studies, performance and results monitoring, and informal field observation. Protocols will be developed during the preparation phase for managing these streams of information and storing it appropriately in the GIS and associated database. As a demonstration activity, KFCP requires a robust approach to M&E (see Section 8). The Facility M&E Specialist will supervise the acquisition, processing, and delivery of this information, while members of the Technical Panel will evaluate results of scientific studies and technical monitoring such as of GHG emissions. The PO will manage the overall process of selecting, assessing, and disseminating “lessons learned” and other knowledge-based results to relevant target groups.

Implementation Process

Preparatory Phase

- ◆ Develop data management systems and protocols for spatial and non-spatial data. Set up GIS and other databases to support baseline data acquisition and management.
- ◆ Engage a communications expert to design the behaviour change communications (BCC) strategy, to meet international standards, in collaboration with PO and partners.
- ◆ Prepare an action plan for delivering lessons learned and other results to inform GoI and GoA engagement with UNFCCC leading up to COP 15 in December 2009.
- ◆ Agree research plans with partners and set up coordination arrangements in the PO.

Implementation Phase

- ◆ Develop the PAF and M&E systems with the Facility M&E Specialist.

- ◆ Establish links between research partners and the Technical Panel to share data and ideas, manage the flow of scientific information, and evaluate results prior to further dissemination.
- ◆ Set up a communications unit in the PO to manage all external communications.
- ◆ Supervise implementation of the BCC strategy through the community engagement process under Component 1, with the communications expert giving technical support as needed.
- ◆ Evaluate the REDD monitoring system, with close support from the Technical Panel and FRIS/NCAS, and agree on a monitoring plan.
- ◆ Deliver lessons learned and other results to GoI and GoA (ongoing).

EXPECTED OUTPUTS

TABLE 3. COMPONENT 2 OUTPUTS

Outputs	Prep Phase Activities	Status June 09	Implementation Guidance
2.1 Information management & knowledge capture systems established & functioning with emphasis on informing a post-2012 international climate change framework.	GIS and remote sensing policies and systems being developed. Coordination with DCC to meet their needs for COP 15.	GIS and guidelines for information management established.	Knowledge Capture Strategy must be operationalised in the preparation phase and later harmonised with the Communications Strategy and M&E system. This is a priority task for the M&E Specialist.
2.2 Target audiences informed through messages/media tailored to their needs.	Communications Strategy under development	Draft Communications Strategy.	Communications Strategy must be finalised and operationalised rapidly in the implementation phase.
2.3 Partners undertaking research and actively contributing to KFCP goal.	Consultation with partners on mechanisms for research coordination and communication.	Initial results for UNFCCC communicated.	Facilitating communications with partners will require active involvement by KFCP staff and the PO.
2.4 PAF and REDD monitoring system established.	REDD monitoring system under development.	REDD monitoring system tested & refined.	PAF should be developed rapidly by M&E Specialist in line with guidance in Section 7 and Attachment 8.

3.2.3 Component 3: KFCP GHG Emissions Measurement and Monitoring Program Established and Linked to NCASI

TECHNICAL APPROACH

This component requires two distinct, but interrelated major tasks:

- ◆ Developing, testing, and validating a **GHG emissions baseline and monitoring system** for the KFCP demonstration area that estimates emissions changes against interventions and will be accepted as scientifically valid in climate change negotiations (i.e., methods to be between Tier 2 and Tier 3); and
- ◆ **Operationalising GHG estimating and monitoring** through remote sensing and direct ground measurement in ways that will meet the requirements of a future REDD carbon market and can be integrated into FRIS/NCASI.

A Peat and GHG Working Group of the IAFCP Technical Panel began work in February 2009 to identify what is required to be estimated and effective methods by which estimates will be made to detect changes in GHG emissions (CO₂ CH₄ and N₂O) in the KFCP area. A GIS/remote sensing specialist began to construct a monitoring and database system that can support the KFCP monitoring protocol, with a view towards integrating it in FRIS/NCASI in the future. A detailed discussion of the issues related to establishing a REDD baseline and monitoring system for the KFCP is in Attachment 8.

GHG Emissions Estimation and Monitoring

The KFCP interventions will involve canal blocking, forest rehabilitation, identifying and testing improved livelihoods, fire prevention and suppression. Peat swamp forest baseline emissions will need

to be modelled with some degree of confidence and then monitoring and modelling applied to estimate reductions as a result of these restoration and incentive-based activities aimed at reducing GHGs. Under the KFCP, emissions of both CO₂ and non-CO₂ GHGs from peat soils will also be taken into account as part of the accounting and monitoring of forest carbon stocks for REDD activities if the research underway supports monitoring these gases in peat swamp forests. Peat emissions will be measured in a way that allows for it to be aggregated with or disaggregated from total emissions from forest trees and vegetation. This approach will help contribute to further international knowledge for REDD accounting and monitoring and the sustainable management of peat forests.

In undertaking hydrological restoration activities as part of the KFCP, it is important to note that there is currently no international agreement about whether, or how, to incorporate actions to reduce emissions from deforested and degraded peat swamp forest in a future climate change agreement, and whether it would be incorporated into future action on REDD. Hydrological restoration activities under the KFCP will therefore be aimed at building international knowledge, and providing lessons learned to contribute to UNFCCC discussions through 2009, in areas such as: research required to develop the methodologies required for estimating changes in GHG emissions from the interventions measurement and monitoring of peatland characteristics, GHG emissions, and in informing approaches for hydrological restoration and rehabilitation activities to reduce emissions from deforested and degraded peat swamp forests.

The Peat & GHG Group will meet frequently during the initial phases of its operation – it convened for the first time in February 2009 and will meet again in April to identify the key GHG based scientific needs that relate to KFCP and finalise a review of the state of knowledge on peat swamp forest characteristics: peatland hydrology; GHG emissions from peat, above ground biomass; impact on peat swamp forests of past management and current interventions; methodologies for collecting data and monitoring peat swamp forests and their emissions. The Group will review and propose methods for establishing a Project (KFCP) specific emissions baseline (REL) and determine scientific methodologies and implementation guidelines suitable for providing to international negotiations for the measurement and monitoring changes in peat swamp forest hydrology; changes in peat depth and peat dome elevations; methods for collecting data and monitoring peat swamp forest GHG emissions. The KFCP baseline will be the basis for determining a broader baseline for example at the management Unit level or at the INPRES level - EMRP

Nested Approach to Baselines, Leakage, and Additionality

As a demonstration activity, KFCP can and should test more than one approach to REDD baselines. Baselines will be developed at three scales:

- ◆ A **site-specific baseline** will be developed based on pre-intervention measurements of peat depth, forest cover, and socio-economic conditions and practices. Historical data will further inform this analysis, with the caveat that the Mega Rice Project fundamentally altered the area, making historical averages of questionable relevance for determining a reference emissions level. Baseline measurements will be retrospectively evaluated and interpreted as methodologies are tested and refined.
- ◆ A **regional baseline** will be developed for the EMRP area as a whole using data and analysis from the Master Plan.
- ◆ Once a methodology for a **national REDD baseline** has been developed by FRIS and NCASI, the KFCP site-specific and regional baselines can be embedded with appropriate methodological adjustments.

KFCP will attempt to control leakage for site-specific interventions that might displace emissions to immediately adjacent areas. Thus, village-level interventions to reduce fire risk and forest-clearing will encompass the whole area of village lands, including those portions that extend outside of the KFCP location (that is, on the west side of the Kapuas River). On a larger scale, leakage within the EMRP area will be addressed by the INPRES through the Master Plan. The “business as usual” (BAU) reference emissions level for the KFCP is taken to be what might have occurred in the absence of the INPRES. In other words, the INPRES is seen as a policy measure, with the explicit aim (among others)

of reducing GHG emissions, which enables the KFCP as well as other activities. Indeed, the Master Plan elucidates a BAU scenario for the whole EMRP area.

GIS and Remote Sensing

A KFCP based GIS and database will be established to ensure all of the estimations and measurements required for monitoring and evaluation are accurately captured and stored and readily available. Remote sensing requirements will be determined with those required for estimating changes to the forests and GHG emissions drafted by the Peat and GHG Group. It is anticipated that the Facility M&E Specialist will work with the KFCP GIS and Remote Sensing Specialist and the Peat & GHG Working Group, as well as the PO, to finalize the systems required early in Year 1. Selection of the type of remote sensing products to use will be critical from the standpoints of accuracy, cost, and sustainability of the satellite platform and availability. It is anticipated that medium resolution images will be needed (approximately 2.5 metre resolution) in order to track land cover change while LIDAR (radar imaging) will be used to estimate changes in peat depth. The technical level of the system must be high enough to demonstrate the viability of the GHG emissions monitoring while eventually being able to integrate into FRIS/NCASI. This may mean testing both high and low resolution products and compare to the national system. KFCP results and findings are expected to inform the development of the national system. Related activities are the potential development of a differential correction GPS base station to allow accurate measurement of peat subsidence in the demonstration area, use of remote sensing images as a basis for village mapping, and airborne laser as a basis for establishing permanent base line surface level measurement.

Preparatory Phase

- ◆ Form the peat & GHG Group and convene the first meeting which will plan a review of the information required for estimating peat swamp forest GHG emissions, develop a work plan for the group's activities for 2009 and integrate this with 'lessons learned' for input into the 3 UNFCCC meetings in 2009;
- ◆ Develop a KFCP GIS and database and input data from groups working in Central Kalimantan and the EMRP;
- ◆ Prepare for LIDAR radar imaging information for KFCP area covering at least 150,000 ha (includes a reference area)
- ◆ 2nd meeting of the Peat and GHG Group in the peat swamp forests in KFCP area (BOS Release camp)
- ◆ Finalise the review of information required for estimating GHG from peat swamp forests

Implementation Phase

- ◆ Develop methodologies for the estimation of carbon content of peat swamp forests and peat characteristics and GHG emissions;
- ◆ Develop scoping documents for additional research required for estimating GHG from peat swamp forests (above and below ground)
- ◆ Implement methodologies for estimating and monitoring GHG from peat swamp forests
- ◆ Monitor impact of interventions on peat swamp forests and GHG emissions

TABLE 4. COMPONENT 3 OUTPUTS

Output	Prep Phase Activities	Status June 09	Implementation Guidance
3.1 Peat Swamp Forest GHG emissions measurement and monitoring methodologies, based on state-of-knowledge information, designed and tested.	PSF GHG Group formed, gathering information, and working on baseline and monitoring.	State-of-knowledge review complete. Initial concept for baseline and monitoring complete.	Work of the PSF GHG Group and GIS/remote sensing/M&E must be rapidly integrated during 2009 and reported to GoA and GoI representatives at UNFCCC meetings leading to COP 15.
3.2 Methodologies and criteria for establishing a REL baseline and monitoring program to measure impact of interventions against baseline approved by GoI and GoA.	Coordinate with ERMP Master Plan Team and FRIS nested approach to REL. Identify research needs.	Nested baseline approach accepted.	Reach agreement on methodologies for GHG measurement and monitoring for meetings prior to COP 15. Reach agreement on measurement and monitoring program.
3.3 PSF GHG emissions monitoring program operating effectively and results validated.	Review and assess methodologies	Pilot monitoring program established.	Begin operation as soon as possible, initially on a trial basis.
3.4 Protocols for linking KFCP monitoring program to NCASI established.	Information exchange and consultations	Agreement on remote sensing testing protocols	Work closely with FRIS/NCASI group. KFCP will be key reference site for Peat Swamp Forest.

3.2.4 Component 4: Practical and Effective REDD GHG Payment Mechanisms Demonstrated

TECHNICAL APPROACH

An important element of REDD demonstration activities will be to experiment with different approaches to establishing equitable and effective payment mechanisms, guided by national and international experience with incentives and payment mechanisms in other areas, including payment for environmental services. To be effective, REDD incentives must target both actors whose practices are proximate causes of deforestation and degradation as well as economic and policy drivers. Incentives should send clear signals to targeted actors and decision-makers and be linked to tangible, visible outcomes (a principle called “line of sight”). To be equitable, payment mechanisms should not disenfranchise legitimate forest resource users nor provide disproportionate benefits to privileged groups. Perverse incentives should be anticipated and avoided insofar as possible. Good governance is important not only for the sake of equity and accountability but also to make sure the mechanism works as intended to reduce GHG emissions.

Leading up to COP 15, learning about development of payment mechanisms will be more important than testing the actual payments in order to quickly gain experience that can inform international negotiations on REDD and prepare the basis for REDD payments once emission reductions have been achieved and verified. Progress towards making actual payments will have to be demonstrated later in order to be prepared to meet eventual market demand and to satisfy heightened expectations in the KFCP demonstration area. A phased approach to the basis of payment may be appropriate as capacity to implement and monitor REDD activities develops. Designing a workable payment mechanism or mechanisms will require not only technical solutions but also a fair and transparent process of consultation with affected stakeholders. Though it may be lengthy, consultation and negotiation is necessary in order to ensure acceptance, suitability to local conditions, and social sustainability of payment mechanisms.

Initially, incentive payments will be made for achieving tangible milestones towards reducing deforestation and forest degradation, including readiness as well as intervention strategies. Later payments will be linked more directly to measurable emissions reductions. Payment trials will therefore benefit from having an overarching facility to pay for emission reduction incentives. This facility could

take the form of a trust fund, which could later also support other IAFCP demonstration activities, or be pooled with other donors' funds to form a joint trust fund. Payment mechanisms and associated institutional arrangements are complex, with many moving parts to consider at different levels of governance. The design process is simplified by breaking the overall mechanism into components, each of which can be developed in parallel with the others and treated independently for purposes of designing a workable mechanism, provided it can eventually be connected to the other components. In the KFCP, components will be developed at village, district, and provincial levels. Work at each level will be guided by emerging policy at higher government levels, up to and including national policy

Design can be made easier by using, where possible, “off-the-shelf” parts; that is, by building or modelling REDD payment mechanisms on existing institutions and systems, including traditional as well as more formal institutions.

- ◆ **At village and sub-district levels**, the National Program for People's Empowerment (PNPM) offers a mechanism to distribute funds for locally driven initiatives, which could be linked to REDD interventions. Customary institutions of land and forest tenure may offer a way to allocate some benefits.
- ◆ **At district level**, a public service agency (BLU) may provide an institution for governing REDD payments to lower levels. Licenses for managing environmental services are within the purview of district government and could form a basis for REDD payments.
- ◆ **Forest management units (KPH)** and the current framework of forest utilization rights and licenses provide a basis for apportioning forest use rights and payments linked to REDD. Current law recognizes community-based rights including concessions and customary forest.

Payments will have to be closely linked to monitoring of GHG emissions and socioeconomic impact in order to verify and certify reductions, create a system that is credible, and inform the development of NCASI. Payments may be distributed through more than one channel or differently at different levels of governance. An option for KFCP is for a district-level institution, such as a public service agency, to act as REDD proponent in terms of the national regulation, while local resource users such as community groups or other license-holders would act as proponents to the district. The local proponents would thus be “bundled” together under a single entity at district level, possibly with management coordination from a forest management unit, so as to reduce transaction costs and improve monitoring and supervision. REDD payments might be made from the trust fund to the district proponent and thence distributed to the local proponents; or (some) payments might be made directly to local proponents. KFCP will model and test various approaches before scaling up.

Incentives aimed at changing land use or forest management should directly target resource users (individuals or groups). The bulk of incentives under KFCP are anticipated to be targeted in this way. Incentives to encourage sustainable land use and forest management will take three forms:

- ◆ *Input-based*: immediate remuneration or other direct benefits linked to adopting and implementing interventions, such as building dams, planting trees, supplying dam-building and tree-planting operations, or eliminating fire use on peat soils.¹⁴
- ◆ *Performance-based*: annual payments for sustaining interventions so as to achieve the desired results, such as maintaining dams in order to keep water levels high, protecting forest from encroachment, or reducing the incidence and extent of fire.
- ◆ *Outcome-based*: payments commensurate with GHG emissions reductions, initially as a proxy for a future forest carbon market but later based on tradeable credits in a real market.

Incentives aimed at policy change should target appropriate agencies and levels of government. For example, districts could be provided with incentives for land-use and development planning that reduces deforestation and forest degradation (an approach being taken by the KfW REDD program in West and East Kalimantan). Incentives aimed at changing economic drivers could target government, the private-sector (such as through tax policy), or both. An example in the context of KFCP is

¹⁴ Since canals now give access to land that is cleared with fire, canal-blocking will itself reduce such access and the associated fire risk along the canals, whence fire often spreads. Thus, current land users may be entitled to compensation for giving up that access.

investment in sustainable agriculture within the Ex-Mega Rice Project area to stabilize land use and draw pressure away from forests on deep peat, as proposed in the EMRP Master Plan.

The development and testing of payment mechanisms will be based on the principles below and follow the described process. A detailed discussion of payment mechanism issues and options is presented in Attachment 3.

Principles

- ◆ Payment mechanisms must provide sufficient incentive for forest users, managers, and policy-makers to reduce emissions and to maintain emission reductions in the longer term.
- ◆ Payments must be equitably and transparently distributed to those who have contributed to emissions reductions. Affected communities must be directly engaged in the design and testing of the mechanisms, ensuring that the needs of women and vulnerable groups are adequately addressed.
- ◆ KFCP should anticipate and as far as possible avoid creating perverse incentives.
- ◆ Collective payments should be tested in addition to individual payments.
- ◆ REDD interventions should “do no harm” insofar as members of affected communities must not be made worse off by incentives and, if possible, should benefit from them. The link between REDD and poverty reduction must be demonstrated, and the social impact of REDD demonstration activity must be quantified (see Component 1).
- ◆ Emission estimates linked to payments will be results-based, transparent, verifiable and able to be estimated consistently over time. Payments should be linked to tangible, visible outcomes (“line of sight”).
- ◆ Mechanisms must conform to the GoI legal framework and administrative procedures, including REDD regulations as they evolve.
- ◆ Mechanisms must be designed to meet the verification needs of carbon markets.
- ◆ Mechanisms must be as simple as possible (but not simpler) to reduce transaction costs and to facilitate supervision. Their development can be simplified by building up complex mechanisms from constituent components, where possible using existing institutions and systems (“off-the-shelf parts”).
- ◆ The role of verifying contributions to emissions reductions and quantifying payments to specific groups and individuals must be separated from the role of making payments in order to assure accountability and guard against corruption.

Implementation Process

Preparatory Phase

- ◆ Develop a Payment Mechanisms and Governance Working Group within the Technical Panel to advise on best practices and evaluate the further design and testing of REDD incentives.
- ◆ Consult with government and non-government stakeholders about how payment mechanisms could work and how they should be governed, and integrate the results into the design of payment mechanisms for KFCP. Key issues include:
 - identifying a KFCP project proponent or proponents, as set out in Permenhut 68/2008 on REDD Demonstration Activities, and determining what their role should be in relation to the payment mechanism; and
 - ensuring KFCP’s payment mechanism is consistent with emerging policy and regulations.
- ◆ Establish an interim trust fund in FY 2009 that could later be formalised as a REDD facility to provide initial capitalization for KFCP readiness and emissions reductions and could also support other IAFCP demonstration activities.

Implementation Phase

- ◆ Finalize the design of payment mechanisms to be tested in consultation with experts, communities, local government, and relevant GoI agencies.
- ◆ Advise and assist local government to develop appropriate institutional and governance arrangements to support REDD payments.

- ◆ Develop and implement program for testing and assessing payment mechanisms, beginning with incentives for achieving milestones and progressing to emissions reductions payments.
- ◆ Continuously document results, communicating what has been learned to the UNFCCC.
- ◆ Select and refine most promising payment mechanisms based on REDD decision taken at COP 15.
- ◆ Integrate selected mechanism(s) into evolving national systems.

EXPECTED OUTPUTS

TABLE 5. COMPONENT 4 OUTPUT

Output	Prep Phase Activities	Status June 09	Implementation Guidance
4.1 Payment mechanism options developed, tested, and assessed.	Mechanism options design and consultations	Mechanism options selected for field testing	Begin testing when experts, local government, and communities concur
4.2 REDD Trust Fund established	Trust Fund design and preparations	Interim Fund Established	Consultation needed to establish final form and governance of fund
4.3 System for linking payment mechanisms to emissions monitoring established	Develop methods for linking GHG emissions measurement and monitoring system with payment mechanisms.	System development in progress	Link payment mechanisms to KFCP monitoring and to NCASI
4.4 Equitable revenue allocation mechanisms developed	Community and local government consultations	Stakeholder positions understood	Refine mechanisms based on socioeconomic survey and consultations in villages. Evaluate governance and corruption issues. Link to emission reductions or milestones.
4.5 Potential additional funding partners identified and engaged	Ongoing effort (see Attachment 3)	Shortlist of potential funding partners identified.	Continue effort to find funding partners or other mechanisms for paying for carbon credits.
4.6 Cost-benefit analysis of KFCP completed and financial viability determined	None	Not started	Begin late in Year 2. Should enable comparison with costs and benefits of voluntary market REDD activities.

3.2.5 Component 5: REDD Management/Technical Capacity and Readiness Developed at Provincial, District, Sub-district, and Village Levels.

TECHNICAL APPROACH

This component is designed to integrate KFCP and REDD into governance at the province and district levels by developing management institutions, a legal framework, and technical capacity to support demonstration activities and eventually, local integration into a REDD carbon market. Political support already exists at the provincial level and will be built at the district level during the preparatory phase. Given the fact that the forest use classification of the demonstration site is currently in transition, it will be important to establish a firm legal and operational basis for implementation – a Forest Management Unit is a promising option that will be investigated during the preparatory phase. Efforts at technical capacity building will have to be closely coordinated with the staff of the EMRP Master Plan Implementation Project because they will also be working on capacity development for peat management. KFCP should focus primarily on REDD-related aspects.

TABLE 6. COMPONENT 5 OUTPUT

Outputs	Prep Phase Activities	Status June 09	Implementation Guidance
5.1 KFCP Provincial and District Coordination Teams and secretariats operational	Provincial team/secretariat established in Nov 08 and District team requested.	Teams established and operating at both levels	KFCP Coordinator must engage with these teams as a regular part of management and external communications.
5.2 REDD-related legal framework, institutions, stakeholders , & financial mechanisms strengthened	Preliminary assessment by PO and Kemitraan to assess needs and establish priorities	Preliminary assessment and action plan developed.	This activity may require input from a law and institutions consultant to refine priorities and action plan. Could be done in cooperation with donor partners.
5.3 Operational/legal framework for KFCP established (e.g., ,Forest Management Unit)	PO and GoI partners assessing options	Framework selected and process of establishment begun	Will depend on framework and assignment of final forest classification status.
5.4 REDD technical capacity increased in government agencies, legislative bodies, and the provincial university	No Activities	None	May require capacity building consultant to develop plan in consultation with government and donor partners. KFCP should focus on REDD.

4.0 KFCP MANAGEMENT AND PARTNERSHIP COORDINATION

The KFCP presents a management challenge because of its multi-dimensional partnerships and the fact that it combines elements of a rural development project with REDD-related science and learning, socialization, policy development, and multiple-audience communications. Meeting this challenge will require that reporting relationships and internal/external communications procedures are developed early in the activity (see Component 2 and Section 4.2). It will also be important for the Managing Contractor to field a team that can effectively perform a wide range of roles and functions (see Text Box 4.1).

The Ministry of Forestry (MoF) is KFCP's national-level executing agency for the GoI. The Ministry is currently evaluating the most appropriate status of forest in the demonstration site and adjacent areas covered by the INPRES. This is expected to entail a change in status, from production forest to either conservation or protection forest. The final decision will affect the institutional and legal arrangements for managing the area within the Ministry and will determine the role of local government. The potential establishment of a Forest Management Unit (KPH or FMU—see Text Box 4.1) would further alter how KFCP relates to the GoI.

KFCP must develop a strong relationship with government at province and district levels as their political and administrative support will be essential for testing and implementing the various REDD-related interventions (see Component 5). Provincial government will provide policy guidance and support, while the district will provide technical coordination among government agencies, which is best done at the level closest to the field. The entire demonstration site is within Kapuas District, which has legal authority over some forest functions and licenses as well as land use outside the forest estate and has an important voice in land tenure decisions. Ultimately, the sustainability of REDD interventions will rest on how well the process has been accepted and institutionalised at the province and district levels. Acceptance has legal, institutional, and political dimensions.

The IAFCP PO established an interim KFCP office in the provincial capital of Palangka Raya, co-located with the provincial Planning Board. This office, established in late 2008, is managed by a Project Coordinator supported by an Administrative Officer. It is expected that KFCP will maintain an office in the Provincial Planning Board and may establish subsidiary offices in one or more of the following towns: Kuala Kapuas (the district capital), Mantangai or Timpah (the two sub-district capitals). It is likely that office space in these towns would be shared with implementing partners who already have offices there.

4.1 MANAGEMENT STRUCTURE AND COORDINATING MECHANISMS

The management structure for the KFCP is depicted in Figure 4 and the roles of the groups in the structure are explained in Text Box 4.2. The KFCP Coordinator, who reports to the Facility Manager, manages field demonstration activities with the support of a small technical staff (the Field Management Team), the composition of which will be determined by the Managing Contractor. This team must be able to perform the tasks and functions listed in Text Box 4.1. The Coordinator supervises the work of the Implementing Partners and insures that their activities are coordinated. KFCP Coordinating Teams at the province and district levels will ensure that field implementation is coordinated with government agencies and plans. A provincial secretariat, and perhaps one at district level, will facilitate government interactions and support specific aspects of implementation. The KFCP Coordinating Committee provides guidance through the Partnership Office. The management structure should be elaborated by the KFCP Coordinator to provide details of reporting relationships and communications procedures. Planning and coordination procedures, such as the indicative list below, must be developed and elaborated through a consultative process with Implementing Partners.

Text Box 4.1. Functions and Tasks of the Field Management Team

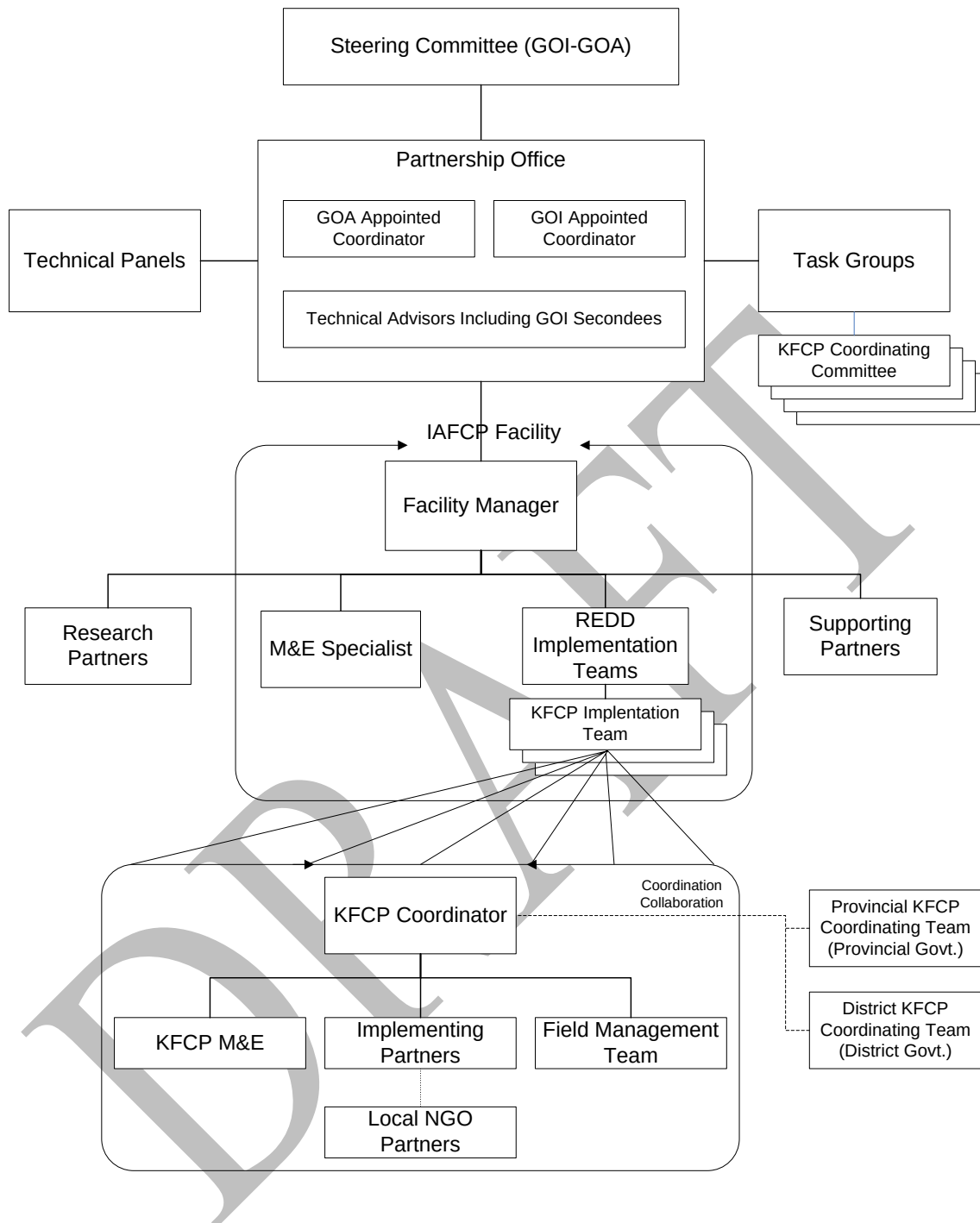
1. Supervise and coordinate activities of Implementing Partners, Supporting Partners, and other sub-contractors.
2. Design and Implement Performance Assessment Framework.
3. Manage KFCP finances and administration.
4. Liaise with government agencies at provincial and district levels through KFCP Coordinating Teams and supporting Secretariats
5. Maintain and improve KFCP GIS and remote sensing program initiated in the preparatory phase. Coordinate with FRIS/NCASI.
6. Work with the PO to monitor GHG emissions against established baseline.
7. Develop and implement system for capturing and communicating knowledge.
8. Maintain dialogue with Research Partners.
9. Contract and supervise short term consultants.
10. Develop and implement REDD communications strategy.
11. Build REDD capacity of government partners.
12. Coordinate with related donor activities such as EMRP Master Plan Implementation and CKPP 2.
13. Scale up KFCP activities if/when additional funding becomes available.

Coordination of Implementing Partner (IP) activities will be critically important to successful implementation of field activities because IP activities must be carefully sequenced and mutually supporting at the village/field level (see Figure 3 and Attachment 2 for the steps in this process). The partners—CARE, Wetlands International-Indonesia (WII), and BOS—have distinct tasks, but must work in close temporal, spatial, and technical coordination to complete the interventions needed to reduce GHG emissions from peatlands and forests. The following steps and ground rules provide a starting place for the KFCP Coordinator to build such coordination:

- ◆ Hold a team building exercise at beginning of implementation phase;
- ◆ Develop clear, mutually agreed TOR for implementing partners;
- ◆ Ensure that the management role of the KFCP Coordinator and his/her staff is understood and accepted by all;
- ◆ All partners make commitment to coordination and agree on sanctions for failing to follow coordination procedures;
- ◆ Negotiate ground rules for the village engagement process, including timing of interventions, especially those related to the *musrenbang* village planning process;
- ◆ Develop a guidebook for field workers describing the village engagement process and related coordination among implementing partners;
- ◆ Hold regularly scheduled meetings among the Coordinator and implementing partners;
- ◆ Hold semi-annual planning workshops to develop integrated, six month rolling plans;
- ◆ Agree on how to share use of office space, guest houses, and field camps;
- ◆ Develop and observe communications protocols among field teams; and
- ◆ Develop project intranet to expedite communication, scheduling, and information sharing. A satellite connection may be needed for Mantangai.

Internal Communication among the KFCP field management team (i.e., MC staff) and the implementing partners will be key to successful implementation on the ground. The Coordinator should design this system to encourage free and open telephone and e-mail communication among the partners supported by face-to-face meetings at key events, such as planning workshops, coordination meetings, and government presentations. Maintaining good communication also has a technical dimension in this remote area, requiring protocols for telephone and e-mail communication to ensure that everyone can communicate important information. There is mobile telephone reception over parts of the area. The Coordinator may wish to set up an intranet as a means to share work schedules, reports, and news from the field. A satellite link may be required in Mantangai and/or Timpah to allow regular e-mail and voice communication.

FIGURE 4. IAFCP STRUCTURE



Text Box 4.2. Roles of Groups within the Indonesia-Australia Forest Carbon Partnership (IAFCP) and the KFCP

IAFCP Groups

- ◆ The IAFCP **Steering Committee (SC)** reports to and represents the two partner governments. It sets the agenda for all work in the IAFCP, including KFCP, reviews results, and provides policy advice.
- ◆ The **Partnership Office (PO)**, led by **two Coordinators appointed by the two Governments**, is directed by and reports to the Steering Committee. The Partnership Office advises the Steering Committee on all aspects of IAFCP operation and leads/directs all work under the IAFCP.
- ◆ Activity **Task Groups (TG)**, comprising individuals with a direct interest in managing activities under the IAFCP, including KFCP (see discussion below of KFCP Coordinating Committee).
- ◆ A **Technical Panel (TP)** provides technical guidance to the Steering Committee and appraisal of work designs and activity results. Working Groups will be formed and dissolved on an as-needed basis to address specific issues such as design of the peat GHG monitoring system, design of payment mechanisms, and design of the KFCP socioeconomic baseline survey and related monitoring protocols.
- ◆ The **IAFCP Facility** supports IAFCP implementation and is supervised by the **AusAID Coordinator of the Partnership Office**. A **Managing Contractor (MC)** will be selected through competitive bidding to implement the Facility, including the KFCP and other demonstration activities.
- ◆ **FRIS and NCASI** are being developed through the joint efforts of the Partnership Office and the Ministry of Forestry. The KFCP remote sensing and Geographic Information System (GIS) GHG emissions monitoring process must be linked to FRIS/NCASI conceptually and eventually technically.

KFCP Groups

- ◆ **KFCP Coordinating Committee (CC)** will prepare terms of reference for and appraise the results of work undertaken during the demonstration activity. The group will advise the Steering Committee and the Partnership Office. The KFCP CC will be co-chaired by a representative of the provincial government and a member of the PO. Other members of the CC are the KFCP Coordinator, a MoF representative, a Ministry of Environment representative, a National Planning Board representative, a Kapuas District representative, and the three implementing partners.
- ◆ The **KFCP Field Management Team (FMT)**, led by the **KFCP Coordinator**, reports to the managing contractor's **Facility Manager** in Jakarta. An **M&E Specialist** in Jakarta supports KFCP and other IAFCP activities. The MC's KFCP Field Management Team should be staffed and resourced to perform the functions and tasks described in Text Box??.
- ◆ The two **Forest and Climate Specialists** in the Partnership Office provide technical oversight and supervision of the KFCP field team, including facilitation of communication with the technical panel and research partners. The PO staff guide implementation by issuing directives through the Facility Manager to the KFCP Coordinator.
- ◆ **Government Partners** include the Provincial Governor, the Kapuas District Head and the Planning Boards (Bappeda) and sectoral agencies at province and district levels, organised within **Coordinating Teams** and supported by **Secretariats**. These bodies have been established at the province level but not yet at in Kapuas District. The project should also engage members of the provincial and district parliaments.
- ◆ **Implementing Partners** will be sub-contracted by the MC. This group includes CARE, Wetlands International Indonesia (WII), and Borneo Orangutan Survival (BOS) during the preparatory phase. These partners are expected to serve during the implementation phase. **CARE** is responsible for the village engagement process, including socialization, the baseline survey, alternative livelihoods, and socioeconomic monitoring. **WII** will design and construct dams, train communities in dam construction, and monitor hydrology. **BOS** will lead reforestation efforts, monitor key GHG emissions variables on the ground, dam small canals, and organize community monitoring of illegal logging and burning.
- ◆ **Supporting Partners** will be contracted to perform specific functions, such as **Kemitraan** to analyze governance aspects of REDD including corruption, conflict, and the design of payment mechanisms. Kemitraan will also facilitate government liaison and provide feedback from non-government stakeholder groups.
- ◆ **Research Partners** have been or will be contracted under ICFI or the Facility to both support and learn from KFCP demonstration activities as members of the **Research Partners Network** described in Component 2. These include the International Center for Forestry Research (**CIFOR**), Australia National University (**ANU**), World Agroforestry Centre (**ICRAF**) the **Directorate General for Forestry Research** in the MoF, Palangka Raya University (**UNPAR**), the Indonesian Institute of Sciences (**LIPI**), and **Gadja Mada University**. Others may be added over the course of KFCP.
- ◆ **Local NGO Partners** who work with the KFCP communities or have an interest in some aspect of REDD, such as land rights. These groups will be managed by the implementing partners or will be given grants.
- ◆ **Donor Partners** who are implementing related activities in Central Kalimantan. The Government of the Netherlands is currently the primary partner though their support of the EMRP Master Planning process and possibly CKPP2. Other donors could add financial support to KFCP or may directly implement related projects.

4.2 EXTERNAL RELATIONSHIPS AND COMMUNICATION

The KFCP must develop and maintain strong working relationships with the following groups and develop communication mechanisms that are both effective and efficient. This will be an important part of the Communications Strategy described in Component 2. See Figure 5, which depicts communications flows.

4.2.1 Central Kalimantan Provincial Government and Kapuas District

On 8 April 2008, the Provincial Secretary issued an instruction establishing a KFCP Coordinating Team and supporting Secretariat to coordinate KFCP activities with relevant provincial agencies, district government and the University of Palangka Raya. Representatives from the provincial REDD task force are expected to be included in the provincial-level secretariat. This will be the official point of coordination for KFCP Coordinator, although direct coordination with key agencies, such as the Planning Board and the Forestry Department, will be required on a regular basis. The Coordinator, or one of his staff, will have to meet regularly with the Governor and the District Leader to keep them informed of progress and seek their guidance on important policy, coordination, or capacity building issues. KFCP will have to coordinate its work with the government programs and initiatives described below.

The Governor of Central Kalimantan has provided strong support for REDD to be included in a post-2012 international framework to address GHG emissions, and is similarly a strong supporter for the rehabilitation and sustainable use of peatlands within the EMRP area. The Governor is responsible for the implementation of INPRES 2/2007, GoI's program for rehabilitating the EMRP area.

The Provincial Government is currently developing a framework on sustainable peatland based on the existing **National Strategy and Action Plan for Sustainable Management of Peatlands** and the 'Green Government Policy' that is currently being developed by a special task force.

The Provincial Government is also preparing a **Special Task Force for REDD** at the provincial level that will undertake the tasks listed below. KFCP will have to coordinate closely with this REDD Task Force, especially in terms of building REDD capacity and developing a communications strategy.

- (i) establish institutional arrangements for REDD activities in Central Kalimantan;
- (ii) develop a strategic plan for REDD activities in the province;
- (iii) coordinate with the National Working Group on REDD;
- (iv) identify and propose possible sites for REDD demonstration activities;
- (v) develop capacity building and awareness programs on REDD; and
- (vi) facilitate development of REDD methodology and monitoring in cooperation with other institutions.

Because of the importance of the Kapuas District government and its technical agencies to the technical and political success of KFCP, the Partnership Office proposes that the District Leader (*Bupati*) establish a district-level KFCP coordination team and Secretariat.

4.2.2 IAFCP and National Government

The IAFCP PO, the Facility Manager, and the KFCP Coordinator will have to work together to develop protocols for communications between the field and the Steering Committee, KFCP Coordinating Committee, the Ministry of Forestry, and other GoI agencies that may become actively involved as payment mechanisms and REDD monitoring protocols are developed and GoI's REDD institutions evolve. In most cases, the PO staff will serve as the gate keeper for this dialogue. The Facility Manager may not need to be involved in technical communication on a regular basis but the Facility M&E Specialist should be.

4.2.3 Australian Government

The PO will be responsible for managing information flow between KFCP, AusAID/Canberra, and the Department of Climate Change (DCC). AusAID and DCC should be able to communicate its information needs rapidly to the KFCP Coordinator and receive a timely response.

4.2.4 Research Partners

KFCP has two categories of research partners: 1) members of Technical Panel Working Groups who are engaged in developing solutions to specific scientific questions related to REDD; and 2) members of the wider network of cooperating research organisations. The amount of scientific and technical information requested from KFCP or provided by the research partners could quickly overwhelm the Coordinator and his/her small staff. The PO and the Facility M&E Specialist will have to develop a mechanism to screen requests and in-coming information, providing the Coordinator with a synopsis of messages and identifying what actions are required from the field. This process should be relatively straightforward for the Working Groups, but could be more challenging for the wider research network. The PO may have to establish communications ground rules, which could include a web portal where information requests and documents, such as plans and scientific papers, can be posted (see Figure 5 for indicative information flows).

4.2.5 FRIS and NCASI

The KFCP GIS/Remote Sensing Specialist and Facility M&E Specialist must develop a good working relationship with the FRIS/NCASI development team at national level. The FRIS/NCASI Specialist in the PO will serve as the primary point of contact and gate keeper for this dialogue.

4.2.6 Donor Partners

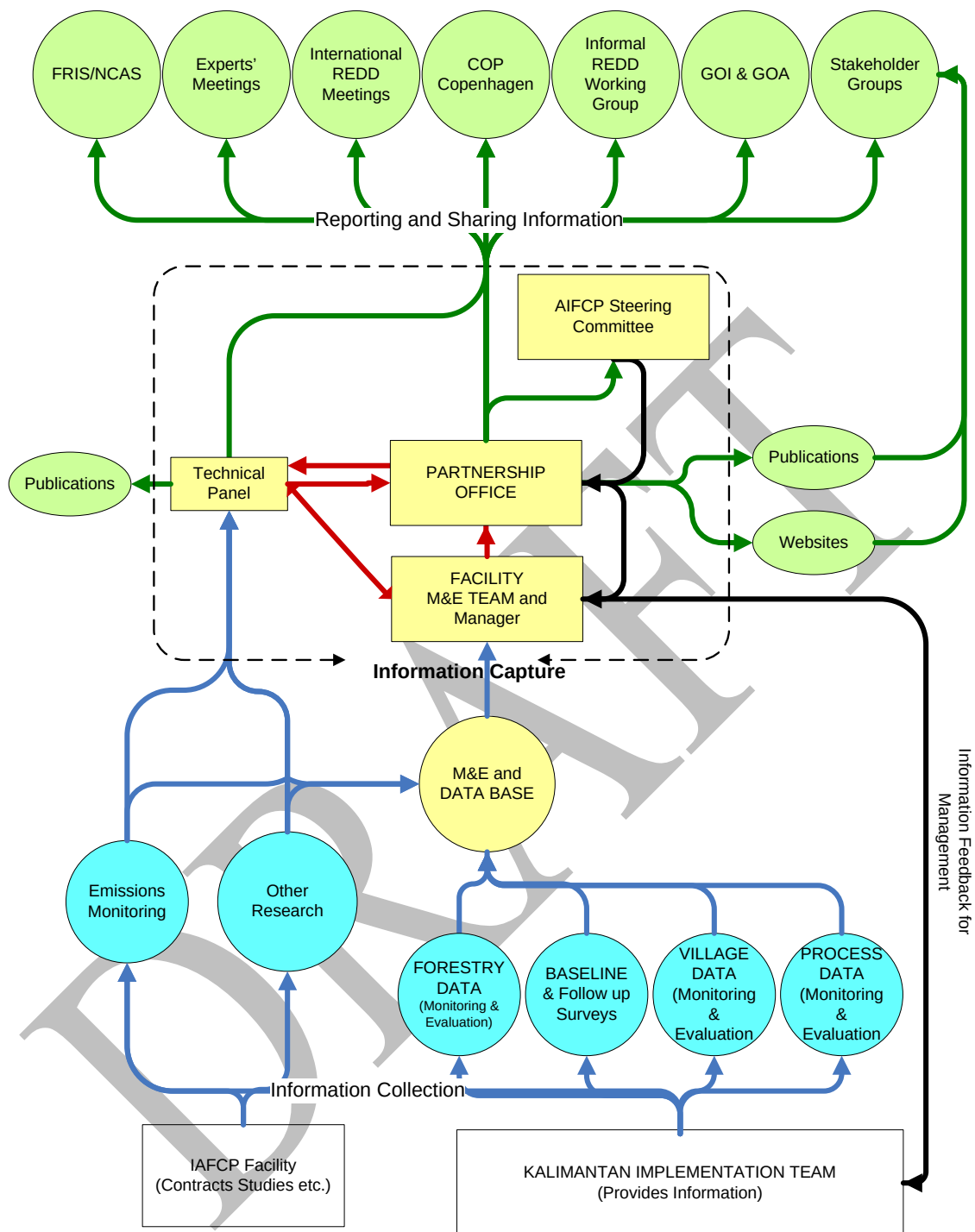
Assuming that the Netherlands government funds implementation of proposed activities under the EMRP Master Plan and also funds a second phase of Central Kalimantan Peatlands Project (CKPP 2), close coordination will be required between KFCP and these two projects to ensure that field activities, policy, and capacity building are complimentary and not duplicative. The Coordinator will have to work closely with counterparts on the teams implementing the Dutch-funded projects, which may include joint planning exercises.

Figure 5 is a diagram of communications flows within KFCP and with outside partners. The top row is immediate users or consumers of the information— KFCP's clients. These would be primarily technical staff within the agencies represented on the Steering Committee, who in turn disseminate information upwards and outwards within their agencies as well as to various target audiences such as those in the UNFCCC.

Some information will go through the Technical Panel (TP) to: (1) evaluate and possibly revise information before it goes to the client agencies; and (2) disseminate information through other channels such as scholarly publications and technical meetings (including UNFCCC meetings). The TP also serves an evaluative function, to guide design and implementation; assess results; and provide advice to the PO based on those assessments. The diagram indicates a feedback loop linking the TP, PO, and M&E, which will be a critical mechanism for learning and knowledge capture.

Some information will flow through the data base and then up through the Facility and the PO before reaching the TP and other users, although members of the TP will be directly engaged in emissions monitoring and will get results directly. Similarly, social experts will be involved in and get results from village-based interventions. The database should focus on indicators for management and certain well-defined REDD outcomes. It must be recognised that the database cannot capture all the information that must be communicated about KFCP and REDD.

FIGURE 5. COMMUNICATION FLOW WITHIN KFCP AND OUTSIDE PARTNERS



5.0 COMPLIANCE WITH POLICIES ON CROSS-CUTTING ISSUES

5.1 GENDER AND SOCIAL EQUITY

In rural areas of Central Kalimantan it is expected that traditional gender roles are maintained, with women responsible for household tasks, child rearing, harvesting crops and natural foods, and fishing. Men earn cash by harvesting forest products and latex from their rubber gardens. Men enjoy greater social and economic mobility, which can result in a disproportionate number of female-headed households, particularly in more remote villages. Women tend to have less say than men in the public affairs of their communities and play less of a public role in decision making. Females marry young—often around the age of 14. Ngaju Dayak society in particular is traditionally stratified, with an underclass that has limited access to land.

Guidelines for achieving gender and social equity within KFCP

- ◆ Disaggregate baseline and monitoring data by sex and social class.
- ◆ Conduct sociological analysis to determine relative power of men and women as well as social groups.
- ◆ Engage a gender specialist to assist with survey design as well as design of livelihood alternatives and payment mechanisms.
- ◆ Design livelihood alternatives to meet the needs of women and socially marginalised groups. Time availability is an issue for women and limited land access is an issue for the socially marginalised.
- ◆ Ensure equal opportunity hiring practices within KFCP.
- ◆ Provide gender training to field management and implementing partner staff.
- ◆ Ensure that village facilitators live in their assigned village full time to understand nuances of gender roles and social status.
- ◆ Hold village meetings when everyone can attend and hold separate meetings for men and women.
- ◆ Screen KFCP interventions and payment mechanism options to ensure that they do not exacerbate sex and class-based disparities through male/elite capture of benefits.
- ◆ Follow AusAID gender guidelines and examples of successful gender programming in Indonesia, such as the World Bank-funded Kecamatan Development Program (KDP).

5.2 ANTI-CORRUPTION

Indonesia has made significant progress in reducing corruption in public life but misuse of authority remains a serious problem according to a recent survey by the Corruption Eradication Commission (KPK), a trusted national-level institution appointed by Parliament. The Governor of Central Kalimantan has agreed to institute a provincial-level corruption prevention body, but it may not yet be fully functional. The province also has an ombudsman, but it is unclear if this institution is functional. KFCP supporting partner Kemitraan recently signed a Memorandum of Understanding with the governor to work on improving governance, which will include issues related to REDD.

REDD payment mechanisms must be designed to minimize the risk of outright corruption as well as the rent seeking or elite capture of REDD benefits. For instance, there is a danger that government officials not directly contributing to REDD could use their authority to hamper implementation as a bargaining ploy to obtain a share of the benefits stream. Village elites could also divert REDD payments if payment mechanisms are not designed to safeguard against this.

Guidelines for Minimizing Corruption Potential

- ◆ Design payment mechanisms to ensure that payments are made to those who have lost livelihood assets and those who have contributed to emission reductions either through direct action or necessary supporting functions (i.e., specific government agencies).

- ◆ Ensure transparency and equal access to information regarding payment mechanisms.
- ◆ Use government anti-corruption institutions to provide oversight of REDD payments.
- ◆ Ensure that dispute resolution mechanisms are available and fair.
- ◆ Encourage civil society oversight and community consultation.
- ◆ Eliminate potential conflicts of interest by separating responsibility for calculating and assigning carbon credits from authority for making payments.
- ◆ Develop a system of third party audits wherever funds change hands.
- ◆ Consider using *Bank Rakyat Indonesia* (BRI) for distributing payments to community groups and individuals. BRI is a government-owned bank that has branches in every sub-district and also has experience making small payments to large numbers of people. Privately run credit unions are also a possible conduit for payments.

5.3 ENVIRONMENTAL PROTECTION

The explicit purpose of KFCP is to protect the global climate by reducing GHG emissions with a co-benefit of restoring and conserving a fragile ecosystem that also provides hydrological, and biodiversity services, while providing livelihood resources for local communities.

To comply with AusAID's policy on environmental management, the KFCP needs to consider potential environmental impacts when designing and implementing its development activities. In order to meet the policy and legal obligations under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), all activities likely to have social and physical environmental impacts need to be properly assessed and managed. These safeguards impose standards through a case by case technical examination of likely environmental effects, based on boundaries defined by Australia's comprehensive set of laws, regulations and standards. In the case of the KFCP, and based on the 'environmental markers' as described by AusAID, environmental expertise was included on both the KFCP Framework Design and the KFCP Design Team. Based on the Framework Design document, the KFCP was evaluated as having a positive impact on the social and physical environment as the environmental co-benefits included improved biodiversity, and improved watershed management as a direct result of the interventions such as canal blocking and the positive impact on improving livelihood options with both men and women involved in the project activities and the development of clear and fair payment mechanisms. As part of the Preparatory Phase of KFCP, social impacts are being assessed to ensure interventions (canal blocking, fire management and tree planting) are designed to have a positive impacts on the immediate environment (reduced GHG emissions, increased biodiversity and improved livelihoods) and that the interventions comply with Indonesian laws and regulations.

Guidelines for Environmental Management

The following outlines the broad guidelines for protecting both the social and physical environment resulting from KFCP interventions and activities;

- ◆ Screen livelihood alternatives prior to adoption to ensure that they will not adversely affect the natural environment, for example introducing a cropping system that requires the application of high levels of pesticides or introducing a non-native fish species that could escape into local waters;
- ◆ Livelihoods should be assessed for long term sustainability, so as not to disadvantage the communities once start up funds are exhausted;
- ◆ Peat Swamp Forests are not exploited to support dam construction, nursery development and production;
- ◆ Materials introduced into the site for dam construction are procured through the Indonesian legal processes and with minimal impact on the social and physical environment from which they are obtained;
- ◆ Follow AusAID procedures for environmental protection as outlined in AusAID Environmental Management Guidelines
- ◆ Compliance with all Indonesian environmental laws and regulations

5.4 CHILD PROTECTION

Managing contractor and implementing partner staff will not be in direct contact with children other than village facilitators who will live in villages for extended periods. There will also be the possibility that children will be involved by their parents in tree planting and dam construction that is funded by KFCP. Finally, livelihood alternatives introduced by implementing partners could inadvertently harm the welfare of children.

Guidelines for Child Protection

- ◆ The KFCP Coordinator and implementing partners will develop guidelines for interaction with children, particularly applicable to field workers who spend extended periods living in villages;
- ◆ Guidelines will also be developed for the use of children in project interventions;
- ◆ Livelihood alternatives will be screened to insure that they do not adversely affect children, such as causing women to be over-worked, distracting them from child care; and
- ◆ Design payment mechanisms so that children also benefit, perhaps by using some of the funds to improve education and health care.

6.0 RISK MANAGEMENT AND SUSTAINABILITY

The KFCP is designed as a demonstration activity to develop sustainable approaches to reducing GHG emissions from peat swamp forests that will be widely adopted and scaled up in Indonesia. Achieving sustainability will require managing risk, which has technical, governance, social, REDD, climate, and management dimensions as listed below (see Risk Matrix in Attachment 10). Development benefits and co-benefits must be sustainable and REDD-related learning must be institutionalised in order to be sustained. Adoption of REDD as part of a post-2012 agreement on climate change make the sustainability of KFCP activities much more likely.

KFCP Risk Categories and Risks

Technical

- ◆ Canal blocking fails to permanently stabilize the water table
- ◆ GHG monitoring protocols are not scientifically accepted or are too expensive to sustain into the future
- ◆ Reforestation is too expensive and spontaneous regeneration is too slow

Governance

- ◆ REDD legal and institutional framework is ineffective and/or inefficient, eroding the confidence of the carbon market.
- ◆ Payment mechanisms and allocations not accepted by all actors, leading to disputes that cannot be resolved.
- ◆ Corruption related to REDD payments becomes a serious problem that cannot be controlled.

Social

- ◆ Communities reject incentives to change behaviour or these prove ineffective with sub-groups
- ◆ REDD interventions have negative social and livelihood consequences that cannot be mitigated.
- ◆ Payment mechanisms at village level cannot be made equitable.

REDD

- ◆ REDD is not accepted in post-2012 agreement
- ◆ Peat not accepted as part of REDD
- ◆ Transaction costs for monitoring or payments are too high
- ◆ Carbon prices too low to maintain incentives or carbon prices become too high, causing a land grab in peatlands.

Climate

- ◆ Climate becomes drier and/or increasingly variable, making fire risk management more difficult.

Management

- ◆ Human and financial resources at the field level prove to be insufficient to implement KFCP as designed, particularly in terms of coordinating the activities of implementing, research, and supporting partners.
- ◆ KFCP's diverse activities cannot be comprehensively integrated, leading to failures in communication, knowledge capture, and achievement of some intended results.

7.0 MONITORING AND EVALUATION

7.1 MONITORING AND EVALUATION STANDARDS AND CRITERIA FOR KFCP¹⁵

The IAFCP Managing Contractor is expected to meet international standards of monitoring and evaluation¹⁶ and provide an M&E Specialist under the Facility with suitable expertise to reflect these standards, including demonstrated practical experience in M&E theory and practice and post-graduate training in research or evaluation methodology.

The M&E Specialist together with the KFCP Coordinator and the Partnership Office (PO) will develop a comprehensive Monitoring and Evaluation Plan for KFCP within three months of inception. This Plan must be able to be operationalised – that is, be a fully elaborated plan with fully designed methods and tools for comprehensive monitoring and evaluation activities, including evaluative research, sound management of spatial and non-spatial data, and coordinated data sharing with relevant government agencies and implementing partners. The M&E Plan should only focus on important aspects of the initiative implementation and achievements, rather than a complex system that measures all aspects in detail. What constitutes important can be negotiated with the PO, but it will, at a minimum, comprise objective and verifiable indicators of intermediate results and outputs, including measurement or estimation of the following:

- ◆ Interventions to avoid or reduce peatland degradation, such as re-wetting and re-greening;
- ◆ Fire risk reduction;
- ◆ GHG emissions levels (baseline and reductions);
- ◆ Governance indicators appropriate for payment mechanisms;
- ◆ Distribution of incentives and other benefits;
- ◆ Social, economic, and environmental impacts.

The Managing Contractor is given a degree of flexibility for the content and format of the Plan but should consider the following key aspects at a minimum:

1. **An Evaluability Assessment (EA)** of the initiative conducted with full stakeholder participation, including relevant government agencies, implementing and supporting partners, and members of affected communities. An EA includes, at a minimum
 - a. Consultation with stakeholders to confirm a shared interpretation of the expected long-term and **end of initiative** outcomes – the M&E system will focus strongly on measuring performance against outcomes that are expected to be achieved by the end of the initiative, and progress toward outcomes that are expected to be sustained beyond the life of the initiative;
 - b. A review of the program logic and description of the extent to which it can be evaluated, including clarity of expression of end-of-initiative outcomes in the documentation. For significant project logic problems solutions should be identified;
 - c. A comprehensive examination of proposed/potential data sources (including partner systems) to ensure that data is of sufficient quality; is collected and analysed as expected; and will be available within the required reporting cycles;
 - d. An assessment of the capacity of the implementation team and partners to participate in the design and/or conduct of M&E activities;
 - e. A review of the budget/resources available for M&E activities;
 - f. Identification of reporting requirements for key partners. This includes progress reporting, Quality at Implementation Reporting, and Annual Program Performance Reporting. There

15 Adapted from, “Suggested Design/RFT/Contract Monitoring and Evaluation Section,” courtesy of Susan Dawson, AusAID M&E Help Desk.

16 For example, the Joint Committee Standards (international professional practice standards), the DAC Quality standards for evaluation.

- should be a clear recognition of how the M&E plan is expected to provide evidence for reporting against the IAFCP Performance Assessment Framework.
- g. Identify key evaluation questions of interest to all key stakeholders;
 - h. A review of crosscutting policy areas that will need to be included in the M&E plan such as gender equality, partnerships and anti-corruption;
 - i. Clear identification of issues and/or constraints that will affect the design of the M&E Plan.
2. **Clearly stated outcomes** at the whole-of-initiative and component levels with suitable outcome indicators (this may include additional intermediate outcomes not previously articulated in the design document). For higher-level outcomes, ensure that the Facility Program Performance Framework needs are met, and information delivered in time for Quality at Implementation reporting.
 3. Inclusion of relevant outcomes from AusAID **Cross-cutting themes** should be considered:
 - a. Gender: At a minimum all relevant data should be sex disaggregated. Where partner systems do not allow reporting in this way, and where feasible, identify approaches to enable partners to report using sex disaggregated data. This data should be used to analyse and report on program results. Evaluation studies should include analysis of the situation for women, seek to identify barriers to gender equality, and integrate this analysis into program components and M&E processes as soon as possible. Integrate identified gender equality objectives and targets into the monitoring and evaluation system.
 - b. Partnerships and Anti-Corruption should be reflected in the M&E Framework.
 4. All indicators will be supported by a **sound methodology**, and means of verification should be fully designed. Means of verification are not reports, but actual methods required to collect the primary data. Secondary data sources are also to be used where appropriate. All tools required to collect data must be designed and included in the annexes of the M&E Plan (for practical reasons a small number of tools may not be able to be developed during the development of the initial M&E Plan). The development of sound methodology requires the expertise of the M&E Specialist.
 5. Where **special evaluation studies** are to be conducted, the full design should be described in the M&E Plan with a description of the methods for data collection and analysis elaborated and tools developed. From time to time, additional evaluation studies may be requested by the Partnership Office on the advice of technical advisors.
 6. The **achievement and quality of outputs or deliverables** must be addressed. A number of output (initiative deliverables) indicators are required to be reported on routinely. This could include the development of a “Fact Sheet” where key project outputs are reported against in a concise form that allows efficient monitoring and reporting of the project by the Partnership Office (this is in addition to routine reporting requirements). Quality dimensions of key outputs (project deliverables) should be considered in **all** cases.
 7. Identification of how the findings of the monitoring and evaluation activities will be **disseminated and utilised**. This does not refer to a reporting frequency table, but rather to what mechanisms are in place that will ensure that findings are disseminated to all relevant stakeholders and that findings are likely to be responded to or utilised. One measure of the quality of the M&E system will be the extent to which it has informed initiative decision-making and implementation. (For further elaboration, see the section on “Knowledge Capture” under Component 2.)
 8. A full **implementation schedule** should be included that shows when all key M&E activities will be carried out, and when information will be available to decision makers and reporting requirements.

9. Identification of M&E activity **responsibilities** (that are matched to individuals' capacities and resources to meet them) should be included in this plan. Individuals responsible for carrying out these activities should be identified, not only the institution.
10. There should be a **complete costing (budget)** of the M&E plan for both personnel requirements and the costs of conducting monitoring and evaluation activities.

7.2 PERFORMANCE ASSESSMENT FRAMEWORK

The KFCP will be included as part of the Facility Performance Assessment Framework (PAF), which will also address the Managing Contractor's performance and higher-level outcomes of the Facility. The Facility PAF will be developed by the Facility M&E Specialist in consultation with partners and stakeholders very early in FY 10. The M&E Framework is contained in Attachment 8.

8.0 ESTIMATED BUDGET AND STRATEGY FOR SCALING UP DEMONSTRATION ACTIVITIES

8.1 BUDGETING APPROACH AND ASSUMPTIONS

A summary budget, covering the Preparatory Phase and FY 2009/10 through 2011/12 of KFCP implementation is in Attachment 7. KFCP has a total budget of AUD 30 million, of which AUD 22.5 million is available to implement KFCP activities. AUD 7.5 million is nominally assigned to technical advisory and project management costs, and support of the Partnership Office. The summary budget also reflects an additional AUD 1.4 million for GHG measurements and monitoring.

8.2 SCALING UP AND MANAGING CONTRIBUTIONS FROM OTHER PARTIES

It is intended that IAFCP will scale up operations as implementation progresses. It is anticipated that the Facility will initially help implement \$35 million worth of programs and activities (encompassing Australia's \$40 million commitment minus \$5 million already expended on activities). The implementation of KFCP against its existing design will absorb most of this. In order to undertake further REDD demonstration activities – and indeed to complete reforestation activities already identified under KFCP – additional funds are required. For additional REDD demonstrations the Managing Contractor will be required to facilitate the design (led by the Coordinators and the Forest and Climate Specialists in the Partnership Office), implement and project manage. The MC should be aware that systems for the Facility may have to cope with up to \$110 million. Additional funds may come from a variety of sources including:

1. The Government of Australia;
2. The Government of Indonesia;
3. Private sector firms keen to improve their environmental credentials;
4. Private sector entities seeking investment opportunities in REDD generated credits;
5. Other donors with a desire to use Facility's management and implementation structures; and
6. Other donors with a desire to contribute to the goals of the Facility and use its management and oversight arrangements for coordination but not disburse through it.

Other sources of funding may also become available during the course of implementation. Additional contributions from the Government of Australia would be simple to manage, but each of the other potential sources of funds mentioned above would bring with them their own special challenges for integration. Each potential source will require an examination of its merits and management implications and these will need to be undertaken by the MC, the PO and the Steering Committee as they become apparent.

ATTACHMENTS

1. Livelihoods, Social Economic Development, Gender Equity and Peat Land use in the KFCP Area
2. Village Engagement Process
3. Payment Mechanism Issues and Options
4. Synopsis of Peat Restoration Strategy – awaiting completion of strategy
5. GHG Emissions Baseline and Monitoring
6. Fire Management Analysis
7. Summary Indicative KFCP Budget
8. Monitoring and Evaluation Framework
9. Implementation Schedule
10. Risk Matrix

DRAFT

ATTACHMENT 1. LIVELIHOODS, SOCIAL ECONOMIC DEVELOPMENT, GENDER EQUITY AND PEAT LAND USE IN THE KFCP AREA

1. **Background**

The recent century has witnessed dramatic changes and transformations in the KFCP target areas. From a remote, sparsely populated peat dome, the Southern part of Borneo has turned into a degraded peat landscape where most of the unique biodiversity has disappeared, and is now vulnerable to a rapid conversion to estate and cash crops.

The Ngaju Dayak people are the most prominent indigenous group and the most dominant ethnic group. Besides Christianity and Islam, Keharingan or Dayak religions and world views are the most commonly adhered to beliefs. This group has been relatively well studied. They are part of an immigration wave, most likely from China, which entered these areas via the rivers, moving northwards. While evidence exists that migrants have moved far inland prior to European colonization, most of those living in the area depended upon forest gathering, swidden agriculture and collecting of non forest timber products for trade albeit at a relatively limited scale. There is ample evidence that trade relations have been in existence at least since the first centuries AD¹⁷.

The first major change occurred in the early 20th century when demand for rubber started to increase¹⁸. The first major rubber price boom in the years 1909 -1912 triggered a widespread increase in the crop throughout Kalimantan.¹ After 1920, Dayak farmers began to plant rubber in former shifting-cultivation fields. In addition, considerable areas of forest around villages were cleared and planted with rubber. The village of Katujung was established in 1930, and is a good example of the settlements that emerged when rubber cultivation started to become the most prominent source of livelihoods.

The second major change was the exploitation of the forests of Kalimantan for Timber. The impact has been significant. The introduction of timber concessions in 1970's and 80's meant that access to land became restricted and communities were often alienated from their ancestral land. These concessions were driven by the agricultural law reform which was initiated in 1960. Most of the forest land managed through Adat law, with the forestry law of 1967, was converted to forestry land and given out as concessions. This process had not involved the actual land managers. The lack of engagement laid the foundation for later conflicts over land and forest resources. This was followed by a transmigration program that was initially small scale, and focussed mostly on tidal swamps areas¹⁹. However in 1994, the Indonesian government launched an effort to convert 1,4 million ha of peat swamps into rice paddy fields. This ill fated attempt led to the major destruction of peat land ecosystems and significant green house gas emissions. This caused gigantic fire outbreaks and loss of livelihood assets such as traditional fishpond and rubber gardens.

The big bang Decentralization boom in 1999 led to the end of massive transmigration schemes and initiated widespread illegal logging. This caused conflict over forest resources between district and central government and saw a rapid increase in illegal logging which provided income and employment to many in illegal saw mills, logging operations and led to claims over ancestral lands being asserted. Customary leaders often acted as brokers and were selling off timber.

¹⁷ K. MacKinnon, G. Hatta, H Halim & A Mangalik, 1996. *The Ecology of Kalimantan*. Singapore: Periplus

¹⁸ **Harold Brookfield, Lesley Potter, and Yvonne Byron, 1995. *In place of the forest***, United NationsUniversity Press: Tokyo/New York/Paris

¹⁹ E Frankenbeg, D. McKee & D Thomas, 2004., *Health Consequences of forest fires in Indonesia*, California Center of Population Research, University of California. On line Working Paper series 36p.

The area²⁰ Mega Rice Project was terminated in 1999. In 2003, the Indonesian government compensated those who had lost livelihood assets due to the digging of channels. The compensation was perceived as modest and has created different perspectives on land ownership. These differences continue to cause conflict between forestry, communities, district government and central government. Communities claim up to 3-10 km from river banks as their own. Forestry is using the Presidential Instruction 2 as a guiding document which implies that all land within the ex Mega Rice area is forestry land, whilst the local government continues to claim large parts for palm oil development.

2. Livelihoods, Resources and Outcomes

Livelihoods are diverse and compromise of 'off farm' and 'on farm' activities. The CARE livelihood monitoring data is based on repeated monitoring and analysis using MONQI-L software, which was developed by the Wageningen University and research Centre. The data sets go back as far as 2002 for the Block A area, but does however require further analysis.

Mentangai/Block A

For the Mentangai regions, 124 households were monitored since 2006 and over 80 since 2002. The overall incomes were around 700,000 IDR in early 2006 and increased over 2007 to about 900,000 by early 2008. On average household earning has been around 825,000 IDR/month over the period. This rapid increase seems to be caused by increased income from rubber and more importantly, increased income from non agricultural sources. If viewed from a longer term perspective, the improvement is more remarkable even if inflation is taken into account. The same survey tool showed average incomes of around 500,000 IDR per household, per month for 2004, which is an increase of over 80% over a 4 year period (inflation has been around 10% annually). This indicates a rapid increase in income and recovery from the impact of the environmental destruction caused by the ex PLG. Incomes generated in Block A/KFCP are at present similar to the Sebangua area and slightly below the block E villages.

It is worrying however, that the drivers of these improvements are based on improved rubber prices which ended in late 2008, and improved employment outside the agricultural sector as well within agriculture (mostly saw mills and land clearing). In most cases, these activities have had significant impact on the environment. A recent increased effort to control illegal logging has reversed this trend. It is important to note also that despite being frequently referred to, fisheries are a relatively marginal activity.

Rubber cultivation has seen significant changes over the recent decade. It is moving away from the traditional jungle rubber systems²¹. This has occurred via the introduction of new clones which perform well on peat soils. Analysis of rubber on peat underlines this trend as most of the rubber (over 90%) was not in production yet and had been planted in recent years. Weeding is increasingly mechanized and herbicides are widely used (gly-phosphate based ones such as Round Up). These systems often include a mix of crops like pineapple which are sold in the urban centres. Food crops are planted after clearing which explains why 54% of food crops are planted on peat but productivity is low (less than 1 MT Rice equivalent/ha).

The opening and cultivation of peat lands initially follows a similar pattern to swidden systems, in which land is opened with food crops for the first year and rubber intercropped. However instead of having jungle rubber systems developed, farmers are identifying land use. New crops like pineapple are being planted, which are better suited to the sub humid conditions that exist in the degraded landscape. Pineapples have a low labour need, can be planted on water way embankments and are relatively easy to handle. Farmers mentioned that costs are low so despite low productivity, cash flows are still interesting. Most of the pineapples are sold to traders.

²⁰

²¹ Eric Penot, 2007. From shifting cultivation to Sustainable Jungle Rubber., p 577-599 in: M Crains, Voices of the forest; integrating indigenous knowledge in sustainable upland farming. RFF Pres: Washington

Timpah/Block E

Incomes are higher than in Mentangai, around 905,000 IDR per month (see Annex 2). Rubber is of less importance (around 100,000) as is agriculture in general. Fisheries are more important as well as work outside agriculture, mostly gold panning, mining and other forms of employment. The general wealth status is better and the reliance on natural resources is less. 'Off farm' employment and cash crops generate the majority of the income which is underlined by limited importance of food production (less than 10% is own produced, the remainder is bought on the market). Land access and use is low, total rubber owned is around, 6 ha while land access is 1,9 ha, so most land is left to fallow. Rubber cultivation here is traditional and of smaller scale. Most of the land is still forested and trees are relatively old. Around 32% of the rubber is planted on peat land but acreage wise it is less than what is planted in Mentangai where households depend more on rubber. Interestingly for Block E, incomes were higher when monitoring started in 2006 and have been relatively stable since, which given inflation means a decline in bargaining power. In particular, 'off farm' income shows little improvement, mostly due to increased efforts towards combating illegal logging and gold mining.

Impacts on peat lands

The rapid modernization trend in rubber cultivation, combined with increased planting in peat lands, has been identified as a serious threat to carbon stock stored in peat lands. The clearing of land requires the use of fire. Recent research shows that during extreme dry years, the pace of land clearing increases, which leads to climate regulated fire emissions²². This in itself could be a threat to rubber gardens.

The prioritization of threats indicates that fire is the most important. Fires are an important element of livelihoods. This has to be based within the framework of wider development. The impact of agricultural technology development on REDD has to be better understood. Improving technology leads to increased returns to land which will cause increased opportunity costs which will enhance payment demands and is fuelling the use of fire to claim land. Agricultural development tends to lead to more inequity and resource control by the elite, mostly former nobility, often with significant spiritual roles in villages. These dynamics are not well understood but are a potential threat and should receive more attention. It is important to understand that:

- Besides rubber, most other interventions initiated by NGOs have shown low returns or failure. This is confirmed by field work and data analysis. Without undertaking additional activities, it will be difficult to make micro credit work. On its own, credit investment would not be effective as in the end people are likely to have accumulated debt and without additional income. This could result in a renewed reliance on land clearing and logging.
- Whilst in West Kalimantan credit unions have been very successful, in the KFCP area, this seems not to be the case. This implies that more needs to be invested into encouraging community groups to start saving together.
- PNPM activities seem mostly to have focused on infrastructure (constructing village roads etc), others however, are mentioned as not successful.

Other Livelihood Impacts: Health and Other Basic Human Services

The data is limited, and comprises of government data and the CKPP village assessment (for two villages Katunjung and Lawang Kajang). The picture emerging is that the health, water, sanitation, and education situation is poor.

Education

²² G. R. van der Werf, J. Dempewolf, S. N. Trigg, J. T. Randerson, P. S. Kasibhatla, L. Giglio, D. Murdiyarso, W. Peters, D. C. Morton, G. J. Collatz, A. J. Dolman, and R. S. DeFries Climate regulation of fire emissions and deforestation in equatorial Asia. p20350–20355 ! PNAS ! December 23, 2008 ! vol. 105 ! no. 51

The MONQI data set shows a break down for every household by gender and education level. The data shows that women are less well educated than men, which differs from the average Indonesian picture. While as many men as women have a relatively low level of education, men are more likely to have had a higher education. This is common given the Ngayu Dayak are patrilineal. For comparable areas in most of the outer island similar trends occur. However, it underwrites the need to pay more attention to gender inequity than is happening under current programs.

Health

Key human health issues are mainly related to haze and relatively poor sanitation practices in the area. This is underlined by the CKPP baseline 37% of all children underweight (national 27,5%) while the MDG target is 18%. The underweight percentage acts as indicator of the overall child welfare and household wealth. This therefore provides a strong indicator of the overall welfare situation, which is poor and alarming based on international set standards.

Major driving factors behind poor health have been identified as

- o acute respiratory infections (especially during haze period). Detailed research²³ has shown a strong impact between haze exposure and human health. In acute respiratory infections during periods of low rainfall and about the same time as hotspot densities are increasing²⁴;
- o poor water quality and sanitation practices, river water remains the main source of water and it is contaminated.
- o cultural practices such as early age marriage cause significant risk to women during pregnancy, leading to relatively high maternal mortality rates and low birth weights.

In general, basic human services data is scarce and more information needs to be gathered to underbuild and draw better conclusions. A note has to be made on the use of mercury for gold panning. This will have devastating health impacts if no action is taken.

3. Gender, Livelihoods and Peat Lands

One of the key challenges is gender in relation to peat land development. Land clearing and the use of fire has traditionally been a male task amongst Ngaju Dayak. The role of the women has changed as rubber tapping is something that is a shared task of men and women. Women tend to be responsible for key tasks such as nursery management but lack access and control over financial resources. Customary tenure over land is male focussed and females, even single headed households cannot ascertain control over their land.

The burden women are carrying is significant. Fertility is relatively high and women tend to be engaged in more labour intensive, but less economically attractive activities. This requires a better balance in the design of livelihood interventions. It is not advisable to engage women in activities like fire fighting and peat land restoration for the reasons mentioned above. This should enable women to reduce demands on their labour through the introduction of tools and technology to increase productivity and improve bargaining power through facilitating the establishment of more equitable value chains.

Limited access and engagement of women in the management of peat land will have to be considered as part of the payment mechanism. To effectively address the poor health situation, more investment is needed to target women. Gender mainstreaming in REDD will most likely need to generate a separate funding stream for women controlled and managed activities. These should be located in areas close to the house such as nurseries.

²³

²⁴ D. Soekarjo & J Kieft, 2008, The impact of peat fires on Human health; towards better understanding on how are ENSO, fire outbreak and key health impacts are linked. CARE: Unpublished paper

4. Concluding Remarks

The present socio-economic development situation is below average and remaining alarming, but the area is not dramatically poor as compared to some parts of Eastern Indonesia, pockets urban Jawa or Central Javanese share cropper where monthly incomes are averaging between 350,000-600,000 IDR/hh. Incomes are around or slightly above the Indonesian poverty line (which is below the World Bank one dollar a day based a family of five) but non-income related poverty is more problematic as health facilities and access to drinking water is limited. Cultural practices such as under age marriage are aggravating the current situation. The area is relatively poor when non income related poverty is taken into account.

Peat land restoration and livelihood development could be and should be integrated through REDD. Livelihoods development is at the cost of the environment. Peat land restoration will demand labour and resources. It will be important that these opportunities will:

- Provide value chain improvement for Rattan, Jelutung and NTFPs. This is relative cheap and if done well, will be effective, and directly linked to resources.
- Develop livelihood opportunities through peat land restoration work. Deforestation and channel blocking work as well as their maintenance could provide employment and skills in other industries other than agriculture (construction). A payment scheme should be related to this. This is the Yogya approach. The advantage for the project is that synergies are relatively easy to establish through nursery development etc. Both women and men could tap into this.
- If longer term REDD funding is secured, a first step to develop trust to manage funding would be to initiate saving and loan groups together, and create a sustainable mechanism to develop livelihoods based on the standards. Micro finance has to build on this social capital and combined with improved learning on what livelihood options work that do not depend on opening peat lands. When groups begin to function well, then REDD funding can be introduced..
- Through the livelihood standards, better screening of activities is proposed to improve quality of work.

The picture is mixed, people seem to have coped well with large scale environmental disasters and have rapidly embraced 'off farm' employment and new technologies. However on the other hand the population remains living based on age old traditions and gender division. REDD could provide and has to provide an alternative if forests are to remain in the area.

ATTACHMENT 2. VILLAGE ENGAGEMENT PROCESS

The following table was developed at a KFCP workshop in January 2009 through a consultative process among the implementing partners and other KFCP stakeholders. The process is depicted in Figures 2.1 and 2.2.

TABLE 2-1. STEPS FOR VILLAGE ENGAGEMENT

Activity	Time	Who is involved
1) The process should start in close consultation with district governments focusing on reaching agreement on implementation, especially that village plans will be considered legal village development documents, thus activities not funded under KFCP could then either be funded through the government budget or through other support.	1 month	District government, KFCP coordinator
2) Prepare material and team members for public consultation regarding Master Plan with focus on REDD and KFCP. This includes developing materials and short visits to test materials.	1 month	NGOs, Universities, local government and research agencies
3) Public consultations to introduce REDD and KFCP (within context of MP) to the target communities. This includes explaining the meaning of REDD, changes expected under KFCP and REDD, and mechanisms, and benefits of KFCP and REDD. Note: <i>Use local languages in public consultations.</i>	2–3 months to reach 50-100% of the population in all the villages	NGOs, local government, formal and informal village leaders
4) Power analysis and a village organisational assessment to better understand who has resources and how they are managed (as this has not been done, focussing on all villages).	1 month	NGO (Kemitraan), households, household members, village leadership, customary/religious leaders and village government
5) Conduct a village <i>Baseline</i> in the 16 settlements (desa, dusun dan dukuh). This activity includes setting methodology, reviewing secondary data, collecting primary data, and feeding back results to the villages. This process will be based upon results generated through CKPP.	2 months	NGOs, universities, local government, research groups
6) Provide TOT (Training of Trainers) in gender biased community facilitation /planning/MUSREMBANGDES for community leaders (formal and informal) on Community Planning. The training includes Note: <i>Allocate 3 days for each settlement.</i>	2 Weeks (3 days per settlement)	NGOs, local government
7) Conduct community planning exercise focusing on REDD mainstreaming. This involves: a) Village Vision Mapping, strategies, priorities, and village scenarios within the framework of a peat restoration strategies b) Assess where conflict/issues with regards	1.5– 3months	Participants of the TOT, village members, NGOs, ICRAF, Kemitraan, and local government

Activity	Time	Who is involved
to land use and asset losses may occur if peat restoration strategy is implemented c) Land tenure analysis to identify land issues and efforts to solve them d) Develop village plan and budget as part of the village 5 year development plan (RPJM-Desa)		
8) Enhance local capacity to implement <i>Musyawarah Perencanaan Pembangunan Desa (MUSRENBANG Desa)</i> – village planning public consultation process in equitable and gender biased fashion to ensure that everyone has access to community decision making to generate widespread consensus on how to integrate REDD zoning and activities in village planning	(MUSRENBANG Desa are held in January (Hamlet) and February (Village)	Village members, NGOs, local government
9) Strengthening village institutions that will be involved in implementing the village plan: a) Form or strengthen existing village/social institutions to implement the village plans that relate to REDD and the KFCP program b) When appropriate, develop a village institution responsible for managing REDD benefit/payment mechanisms and to oversee its implementation either through village budgets or payments to households. Notes: i) <i>Village level institutions for REDD benefits require agreement on REDD mechanisms at higher levels as well as consensus on adjusted spatial planning.</i> ii) <i>Develop REDD benefits mechanisms will require full village participation and agreement.</i>	2 months	TOT participants, university, government and NGOs.
10) Implement KFCP Activities at village level based on the agreed upon planning documents). This includes: a) Canal Blocking b) Forest Restoration c) Fire management d) Livelihoods development	During length of project – note that canal blocking and restoration activities can not take place during dry season.	Community members and groups, Universities, Local Government and Line Departments, NGOs
11) Participatory monitoring and evaluation to: a) Learn together b) Gain feedback on activities' process and results c) Provide input to village planning and Musrenbang (activities 6 in truncated form and 7)	Iterative	Masyarakat, Universitas, Pemerintah, NGOs, Lembaga Penelitian

Suggestions for the Implementation Schedule:

- KFCP will provide support to implement Inpres (Presidential instruction) 2/2007 on the rehabilitation of the ex Mega Rice project as it is further elaborated in the Master Plan EMRP
- Adopt the following principles:
 - Community-based* planning and evaluation

- b. Bring land tenure and land use together
- c. Integrate the village budget sources into one overall budget (while noting recording the source)
- d. Include capacity building for community and government
- e. Promote learning together
- f. Community are integral participants in planning, implementation, and receiving benefits from activities

3. Support Community and Government

TABLES 2-2 AND 2-3. IMPLEMENTATION SCHEDULE

Group 1 (The 5 villages of CKPP that already have Village Plans)

Time	Activity
June– July 2009	Community consultations and introduction of KFCP to communities
August–September 2009	1. ToT on Community Planning 2. Review existing village plans and integrate KFCP activities into the plans
October 2009 –	1. Re-identify and strengthen village institutions and groups connected with KFCP activities 2. Implement activities
January 2010	MUSRENBANG Desa
<i>Depends on agreed-upon schedule</i>	Monitoring and evaluation activities depending on schedule agreed upon by village

Group 2 (Settlements not yet facilitated by CKPP)

Time	Activity
June – August 2009	Introduction and community consultation of KFCP, including trust building and materials development
September 2009	ToT on Village Planning
October 2009 – January 2010	Village analysis, assessment, visioning, and planning)
January 2010	MUSRENBANG Desa
February – March 2010	Identify and strengthen village institutions and groups for KFCP activities
April 2010 –	Implement KFCP activities
<i>Dependent on agreed-upon schedule</i>	Participatory monitoring and evaluation for mutual learning

FIGURE 2-1. PROPOSED KFCP VILLAGE PROCESS

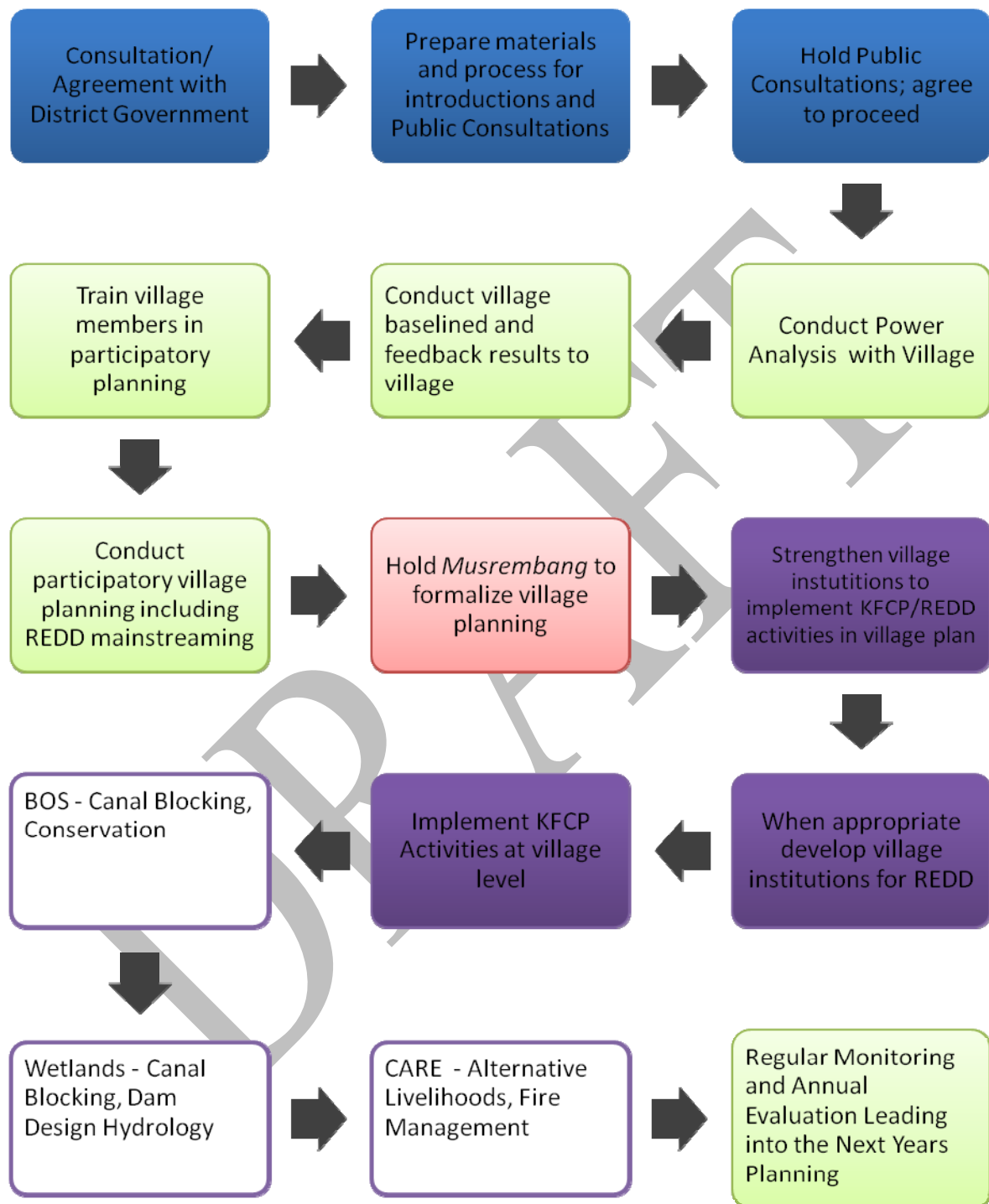
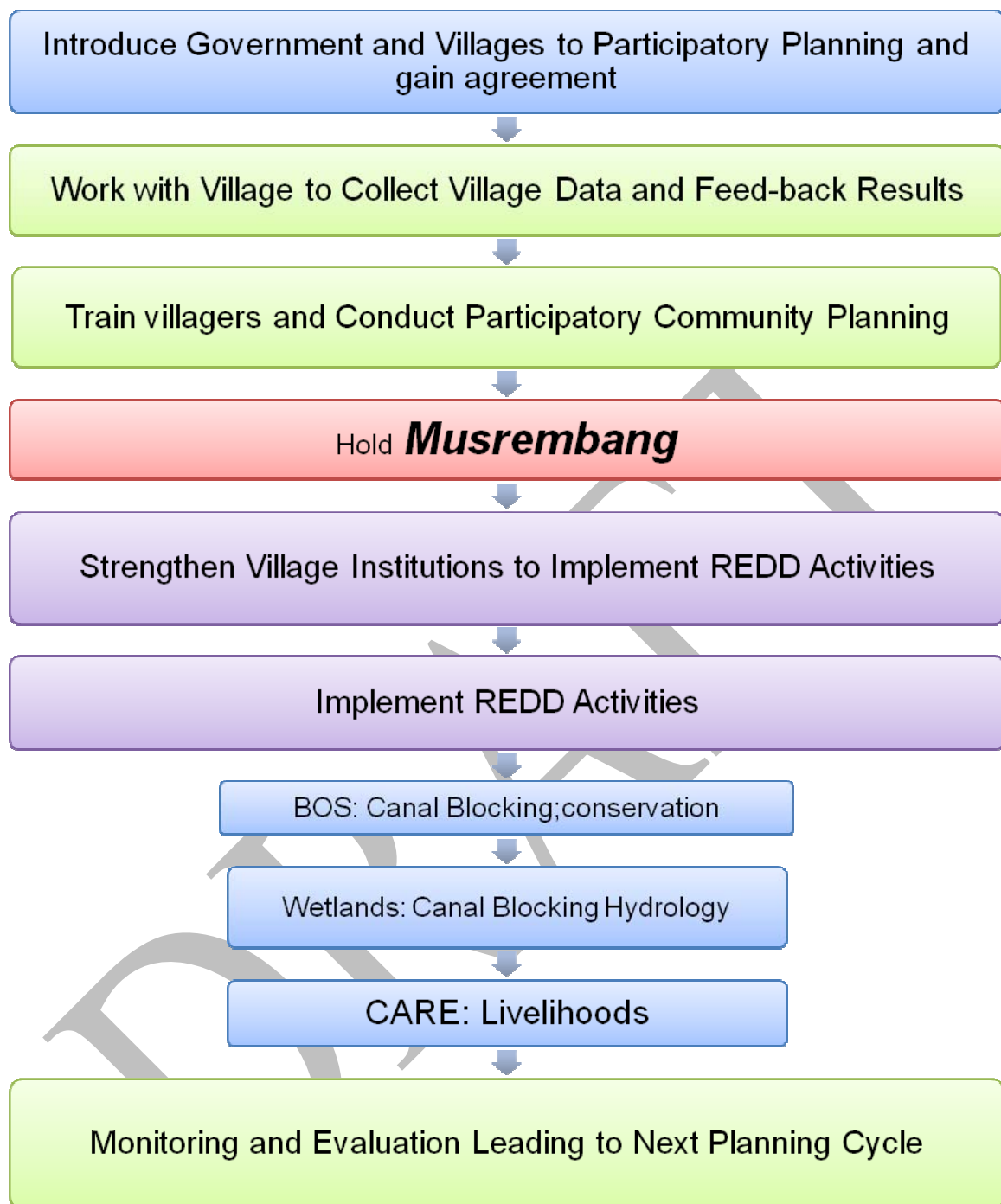


FIGURE 2-2. CONDENSED VILLAGE PROCESS FLOW CHART



Principles for Village Process:

- ◆ Village Consent – see Master Plan and INPRES 2;
 - Tell community this is a demonstration project
- ◆ The village plan is the basis and coordination mechanisms for all village activities and needs to be respected as such
- ◆ Environmental sound, all proposed plans should not negatively impact on the quality of peat land resources and should reduce threat to them based on fair and equitable compensation
- ◆ Community are integral participants in planning, implementation, and receiving benefits from activities
 - Community owned, community participation implies that communities lead and take responsibility for the process
 - Inclusive, community development efforts should provide equal access to all those residing within the boundaries of the village.
- ◆ Gender sensitive, interventions proposed lead to enhanced control of women and men over their lives
- ◆ Activities sequences to build partnership, collaboration, and commitment
- ◆ Bring land tenure and land use together
- ◆ This is an active partnership from govt, community and NGOs/donors
 - Include/corporate local NGO, CBOs, local govt. in planning efforts
- ◆ Include capacity building for community and government
- ◆ Community based planning and evaluation
- ◆ Integrate the village budget sources into one overall budget (while noting recording the source)
- ◆ Promote learning together

ATTACHMENT 3. PAYMENT MECHANISM ISSUES AND OPTIONS

KALIMANTAN FORESTS AND CLIMATE PARTNERSHIP – OPTIONS PAPER ON PAYMENT MECHANISMS

Purpose

The KFCP design framework provides general background on payment mechanisms but flags a range of issues for further analysis (see section 4.3.5). This paper aims to identify possible options for distribution of payments to a range of actors for emissions reductions activities under the Kalimantan Forests and Climate Partnership (KFCP), in order to inform the detailed design of the KFCP and highlight areas where further analytical work is required.

Policy and institutional issues relevant to establishment of KFCP payment mechanism

Indonesia's regulation on REDD demonstration activities issued in December 2008 sets out overarching requirements for demonstration activities, including the requirement that a revenue distribution plan be included in activity proposals. The initial regulation does not prescribe in detail what elements payment mechanisms should include, or how revenue or taxation arrangements will be managed, but a more comprehensive regulation is expected to be released in the first half of 2009, and may include a specific annex on REDD payment mechanisms.

It will be important for KFCP's payment mechanism to evolve consistently with GoI's emerging policy framework on payment mechanisms. This section of the paper outlines some issues that may need to be addressed on an interim, project-specific basis while longer-term frameworks for payments are being addressed. These areas will require substantive dialogue with Government of Indonesia representatives.

REDD 'concession' model

Indonesia's Regulation on REDD demonstration activities provides a framework for management and institutional arrangements that could govern payments. Among other things, the Regulation identifies management areas and proponents for REDD activities, including forest concessions and concession-holders as well as forest management units (FMUs).

The identification of concessions and concession-holders in the REDD Regulation suggests that the model of logging concessions could be adapted for the purposes of REDD (e.g., as a 'REDD concession'). Despite difficulties in the effective implementation of logging concessions, such a model would offer several advantages:

- ◆ The system is widely used and well understood inside and outside of government;
- ◆ It fits well with the MOF's conception of forest management along with commonly used regulations and institutional arrangements;
- ◆ The concession system provides (or at least suggests) channels and mechanisms for payments that can be separated from government's proper regulatory functions (though of course corruption is an issue).

The concession idea has already been adapted for other contexts, including the use of 'community conservation concessions' (see e.g., Niessen and Rice 2004).

Identifying and selecting potential REDD 'proponents'

A REDD 'proponent' is identified in the draft Regulation as a land owner or the holder of a licence to use the forest in some way (logging, planting, extraction of non-timber forest products, use or purveyance of environmental services, and so on). In the context of a REDD demonstration activity such as the KFCP, considerations in selecting proponents would include:

- ◆ The proponent is a rights-holder who may or may not play an active role in forest management. (By analogy, a land-owner or concessionaire might sub-contract logging, planting, and other management activities to other agencies; in fact, that is commonly what logging concessionaires in Indonesia have done.)
- ◆ Proponents could be private companies, community-based organizations (in community forests), NGOs, or state-owned enterprises provided the enterprise is run as an independent company rather than as a government agency. (Local governments might also form joint ventures.)

Questions

- ◆ *Is it necessary to have one lead proponent, or would it be appropriate to have a range of organisations contracted to deliver emissions reductions (e.g., a district government proponent working with several local proponents)?*
- ◆ *Could the IAFCP (as a partnership between Indonesia and Australia) function as a proponent provided its governance structure was consistent with the REDD regulation?*

Revenue sharing between different levels of government

Different levels of government will play a role in achieving emissions reductions under the KFCP. Some reductions may be achieved through policy changes (e.g., enforcement of restrictions on use of fire), while others may relate to the establishment of institutional prerequisites for the operation of REDD activities (e.g., the establishment of a national carbon accounting system).

In limited cases, specific government agencies may directly undertake activities in the demonstration activity area (e.g., rehabilitation funded by Gerhan) for which it will be relatively easy to attribute emissions reductions benefits. However, in most of the other cases mentioned, the specific link with reductions in the demonstration activity area will be harder to show. As a result, rather than making payments to governments based on specific reductions achieved, it could be more appropriate for their investment costs to be reimbursed by a more approximate form of revenue.

The revised REDD regulation is likely to set out further details about government levies, but it is feasible that levies or taxes on REDD activities and payments could take on a variety of forms such as licensing fees, fees for services such as monitoring and verification, royalties, and other taxes. To reduce transactions costs, it would be preferable for each level of government to receive revenue from REDD activities via one form of payment only rather than through a proliferation of levies. It will also be important to ensure that overall payments to government as a proportion of total income from REDD are not too high to discourage potential service providers from participating.

Government revenues from REDD could be redistributed among different levels (national, provincial, district) through existing fiscal balancing mechanisms, although these need to be carefully reviewed and additional safeguards may be required. An alternative approach would be for the proponent or trust fund (discussed further below) to pay levies directly to each level of government.

Questions

- ◆ *Should the KFCP include any project-specific payments to levels of government on the basis of specific achievements to emissions reductions (e.g., policy measures that reduce fire in the demonstration activity area)?*
- ◆ *Should levies to governments be paid directly from the trust fund, or should it be the obligation of the proponent to make those payments?*
- ◆ *Should the trust fund / proponent pay levies directly to each level of government, or should all levies be paid to the national government and then redistributed to sub-national levels?*
- ◆ *What would be an appropriate balance between government revenues and payments direct to service providers?*

Outline of POSSIBLE KFCP PAYMENT MECHANISM model

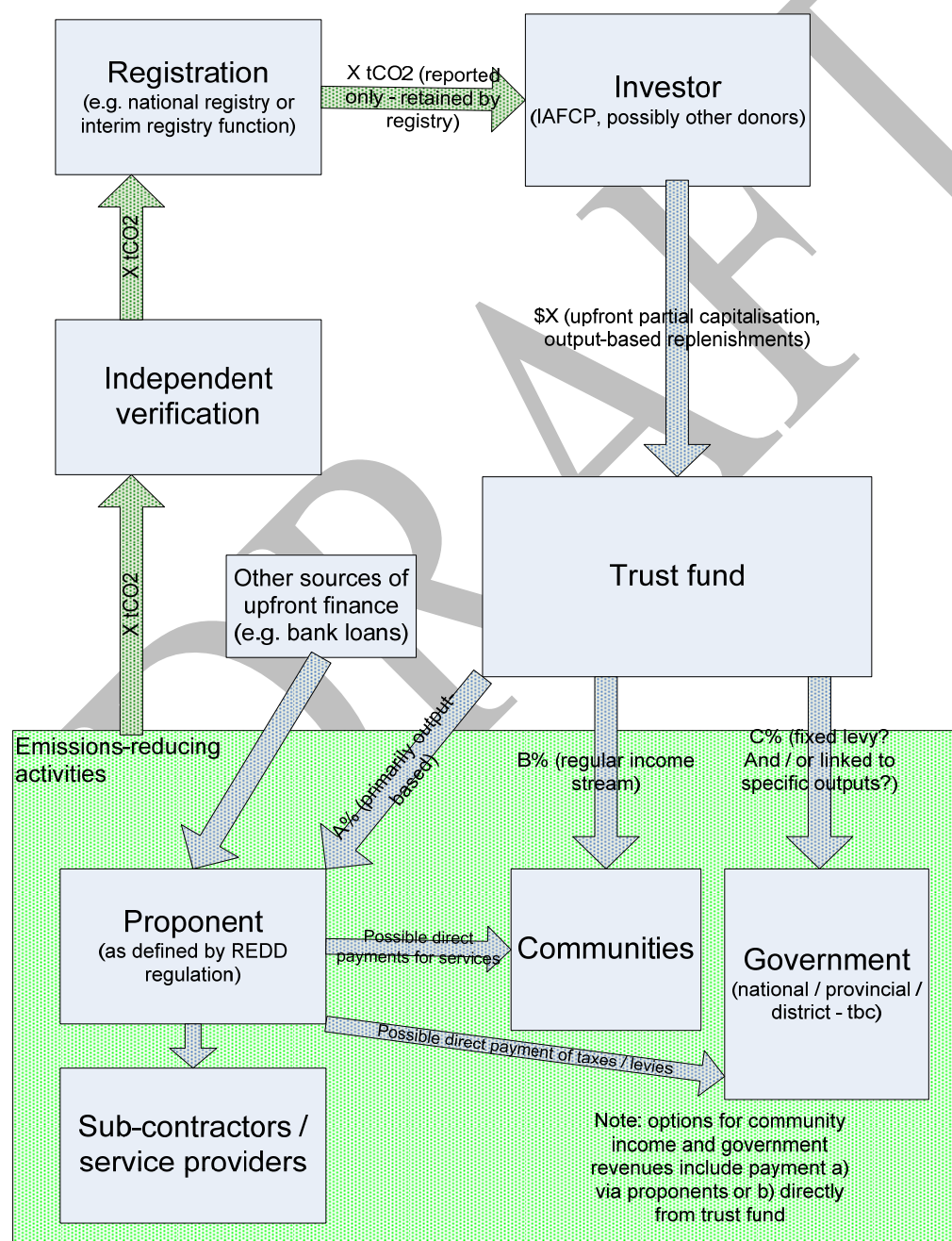
Key elements of the model are summarised in [Figure A](#) below, and outlined in more detail in the remainder of this document.

Investors and buyers

Even if the KFCP does not initially generate tradeable credits, it would be useful for the KFCP to simulate key roles of not only sellers of emissions reductions but investors or buyers as well. The IAFCP (along with any other donors who may wish to contribute) is the principal investor in the KFCP. However, unlike buyers on commercial markets, Australia would not receive any credits generated from the activity. This would not exclude the possibility of the Government of Indonesia acquiring credits generated from Australian-funded emissions reductions, or the possibility of private investors acquiring credits from funding that they invested.

FIGURE A.

Kalimantan Forests and Climate Partnership – possible payment mechanism



Establishment of a trust fund

While in theory payments could be distributed directly from the IAFCP (e.g., out of the Australian aid program's consolidated fund) to actors involved in reducing emissions, in practice it would be preferable to designate a separate financial instrument in which payments from Australia (and potentially other donors) could be deposited, and then disbursed for KFCP incentive payments according to agreed procedures. Holding the funds in a trust fund would have the advantage of providing a strong signal to governments and communities that emission reductions would be paid for. IAFCP could partially capitalise the trust fund upfront (say for the estimated costs of the first two years of operation), and then make periodic replenishments subject to agreed benchmarks. Independent governance of the trust fund could help ensure that if disputes arose about entitlements to receive funds, they could be resolved in a transparent and fair way. Options for funds are discussed further in the IFCA study on REDD Payment Mechanisms.

Questions

- ◆ *What elements of a trust fund governance structure would help support efficient and transparent disbursement of funds?*
- ◆ *Should funding for readiness (e.g., technical assistance outlined below) be channelled through the trust fund? (where assistance is provided in kind this may not be necessary)*

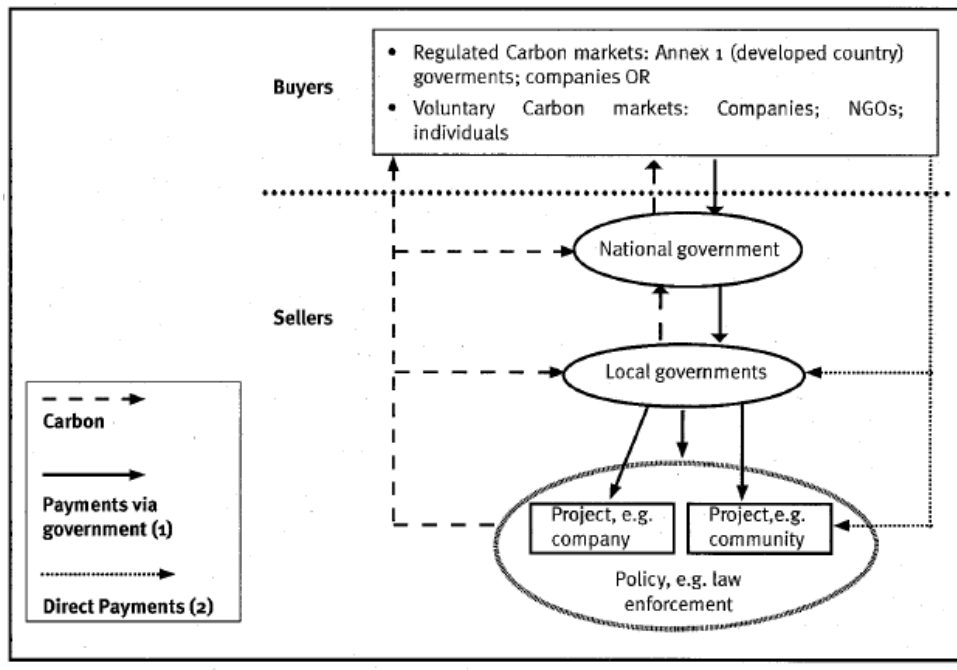
Distribution of payments to communities, service providers and other stakeholders

Direct or mediated payments. A key initial issue in relation to distribution of payments is whether payments should go directly from the trust fund to specific actors involved in achieving emissions reductions (e.g., communities and individuals), or to the national government for distribution to sub-national actors (see Figure 2). While a 'national' approach to REDD would involve payments from international financiers primarily to national governments, this is not strictly necessary in a project-based or nested approach. Importantly, IFCA's analysis suggests that transactions should go as directly as possible to actors whose behaviour can reduce deforestation (IFCA 2007). By requiring proponents to submit a revenue distribution plan, the REDD regulation implies that proponents may play an important role in payment administration.

Following the concession model, REDD payments would flow directly and primarily from the fund to proponents (that is, the holders of forest utilization rights or licenses):

- ◆ A portion of this revenue would be paid to sub-contractors and service providers, and some might be distributed as earnings or incentives to share-holders, partners, or other constituents.
- ◆ Local communities participating in REDD schemes might do so as proponents (in community forests); as partners or shareholders of proponents (such as through membership in a cooperative venture); or as service providers.
- ◆ Members of a community could play more than one role in a particular REDD activity. Thus, for example, they might receive benefits as proponents or share-holders in a community forest managed for REDD while also earning fees for services such as protection or habitat restoration in a neighbouring conservation area.

FIGURE 2. SOME OPTIONS FOR PAYMENT STREAMS (PESKETT AND HARKIN 2007)



Targeting of individuals and communities. To some extent the identity of payees will be defined by the borders of the demonstration activity area. However, within that area, a competitive process could identify particular individuals or communities that could play a role in emissions reductions (referred to in this paper as ‘service providers’, i.e., providers of environmental services). Payments to individuals may promote more precise matching of benefits and opportunity costs, but payments to communities may reduce transactions costs (see Peskett et al 2008:42), and in practice a mix of these payments may be appropriate.

Form of payment. While payments to proponents would presumably be principally in the form of cash, payments to other actors may be in kind (for example funding may be directed to community infrastructure, basic services or conditional land use rights), particularly where it would otherwise be difficult to target individual payees with any precision. Making some payments in kind may also help to distribute payments to a wider constituency that may not be involved in direct provision of environmental services but could help to build popular support for REDD and reduce risks of rent-seeking (Peskett et al 2008:56). Payment to areas outside the demonstration activity area could help to reduce some incentives (to the extent that they exist) for immigration into the demonstration activity area. The viability and form of cash payments to communities or individuals may depend on the availability of certain types of financial services (e.g., deposits into bank accounts) and local institutions (e.g., village committees or partnership schemes).

Questions

- ◆ Should the proponent be responsible for all payments to communities, or should there be a split, e.g., proponent pays communities for direct service provision, and trust fund makes payments for ongoing protection?
- ◆ What types of in-kind payments would be appropriate? (e.g., is it appropriate for part of the payment to include conditional land use rights, particularly in cases where land use planning envisages that such rights would be granted in any case?)
- ◆ Would it be possible to use existing programs and institutions to deliver payments?

Negotiating payment agreements with service providers

Depending on whether some funds would also be disbursed directly from the trust fund to communities, the IAFCP could also enter into direct payment agreements with communities. Payment agreements would need to incorporate a range of substantive conditions discussed in further detail below. However, a critical element of the credibility of payment mechanisms will be the *process* by which payment agreements are negotiated. Given potentially significant power and information imbalances between parties, it will be essential for negotiations to be preceded by substantial awareness-raising and consultation. Negotiations should then be conducted in a way that is sensitive to local cultural contexts and ensures adequate participation, taking account particularly of issues of gender and disability. Given the existence of a number of years' experience of negotiating agreements under payments for environmental services activities, lessons from this area should be incorporated into the KFCP negotiation process.

Questions

- ◆ *Should the IAFCP negotiate any agreements with service providers directly (other than the principal proponent)?*
- ◆ *What specific lessons from PES activities should inform the design of payment agreements?*

Basis and frequency of payment

Payments to proponents – a phased approach. Given that emissions reductions constitute the primary aim of REDD, it would be preferable in the longer term for payments to proponents to be made on the basis of a given price for achieved emissions reductions. However, in the short term, until monitoring and verification systems and local implementation capacity are well-established, it may be appropriate to make initial payments to proponents based on 'intermediate' outputs such as number of canals blocked etc. In the longer term, payments could be made annually following verification of emissions reductions, but in the short term payments may need to be made more frequently.

Payments to other service providers. For other actors who may be providing services as sub-contractors to the proponent or for communities involved in ongoing protection, it may be appropriate even in the longer term to maintain payments on the basis of intermediate outputs (or alternatively emissions reductions achieved within a sub-section of the site). Given the likely high degree of vulnerability and poverty of communities involved in the KFCP, it would be appropriate for payments to communities to be made on a more frequent basis (e.g., weekly? in the case of labour provided for canal blocking, or quarterly for ongoing protection). Regular and predictable benefits will be particularly important for the poor, who may be more vulnerable to other income fluctuations such as crop cycles (Peskett et al 2008:41).

Link between baseline / reference emissions level and payment. To the extent that payments are directly linked to emissions reductions, there remains the question of whether proponents should be eligible for payment for *any* reductions above a business as usual (BAU) baseline, or whether a different 'crediting baseline' should be set so that payments start to flow only once proponents have reached a given level above BAU.

Pricing. Pricing of emissions reductions could be determined on a competitive basis through bidding by potential proponents. Negotiations on price should be informed by likely opportunity costs as well as current voluntary market prices (although prices agreed with proponents may be below voluntary market prices given that the IAFCP would absorb many of the costs that would otherwise need to be taken on by private sector proponents).

Partial upfront payments. In the initial stages it may be necessary to provide upfront payments to both proponents and other actors to help with the startup costs of personnel and capital. In general there should be a strong preference for output-based payments to proponents in the longer term ensure that the link between payments and genuine emissions reductions is maintained. However, a preference for output-based payments to other service providers has the potential to disadvantage the

poor, and there may need to be greater flexibility in payment schedules for those without access to alternative sources of credit or income (Peskett et al 2008:52). An alternative to providing upfront payments from the trust fund would be to identify other sources of upfront financing (such as lending facilities managed by commercial institutions or other donors).

Questions

- ◆ *Should payments to proponents be made for any reductions above business or usual, or against a more stringent crediting baseline?*
- ◆ *What would be a suitable proportion of upfront to output-based payments for a) proponents and b) other service providers?*
- ◆ *Should separate or additional payments be made for achievement of co-benefits such as biodiversity protection?*

Managing payment-related risks

Risks of non-permanence could be dealt with in a number of strategies. While some of these may need to be addressed through policy measures, some strategies could be relevant to the design of the payment mechanism, including temporary crediting, project credit buffers or risk pooling across several demonstration activities (see CIFOR 2008:80ff).

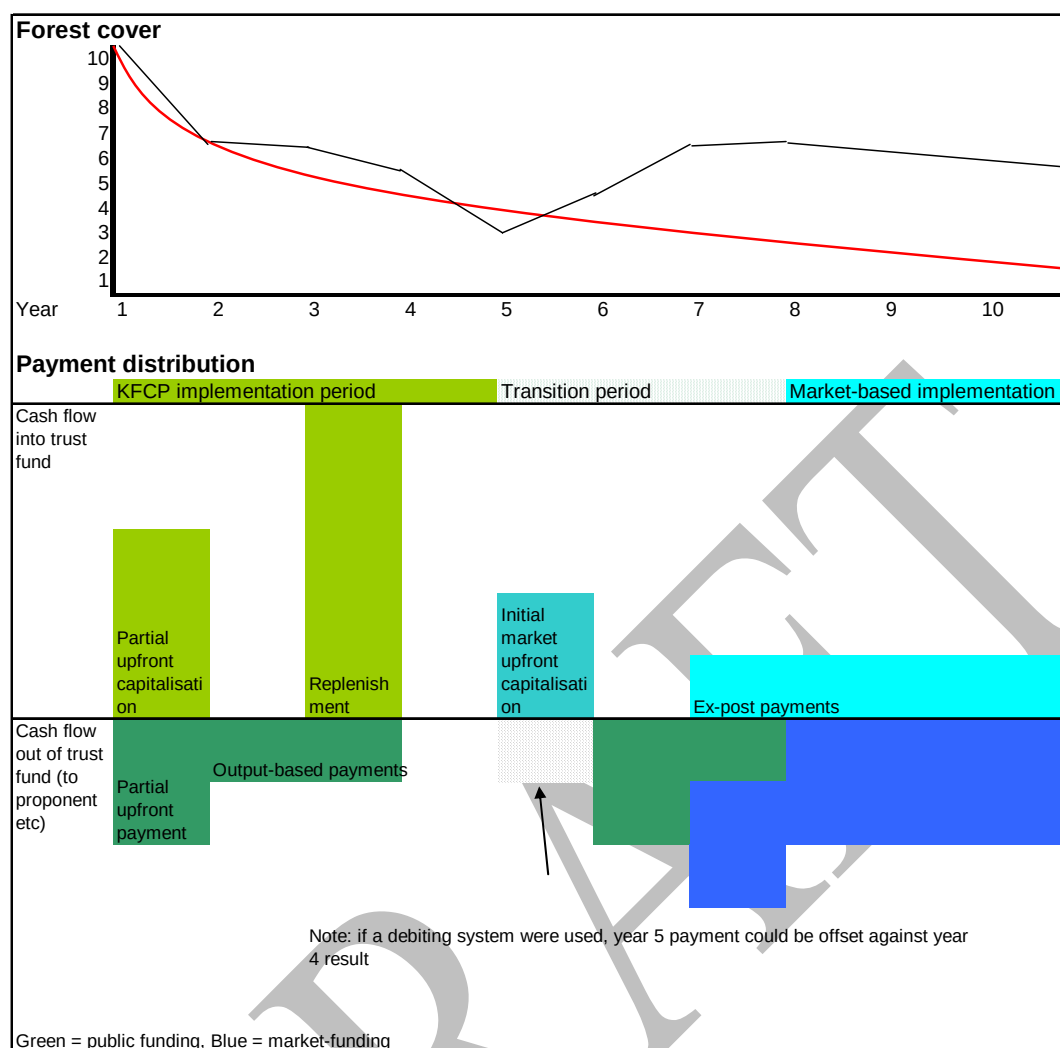
Duration of output-based payments. Given that the KFCP is intended to be a demonstration activity in anticipation of a future compliance market, it may be appropriate to adopt a temporary crediting approach. In this regard, it is important to distinguish several different timeframes:

- ◆ *KFCP project implementation timeframe:* already agreed at four years (2008-09 to 2011-12)
- ◆ *Disbursements from trust fund:* likely to extend at least several years beyond the implementation timeframe in order to encourage sufficient long-term commitment (e.g., five years)
- ◆ *Overall timeframe for output-based payments from all sources ('project crediting period'):* would need to be determined by level of funding available from future markets, but it may be appropriate to aim for at least 20-30 years.²⁵

If the overall funding timeframe is relatively long, and payments are made on an output basis, this will help ensure permanence at least for the funding timeframe.

²⁵ The Voluntary Carbon Standard, for example, specifies a range of 20-100 years for REDD projects (VCS 2008:17).

FIGURE 3. POSSIBLE PAYMENT DISTRIBUTION OVER YEARS



Risk buffers. Another relatively widely used means of dealing with non-permanence both within and beyond implementation timeframes is the use of risk buffers (see e.g., VCS 2008a:35). Risk buffers are generally used where credits are generated (and payments made) upfront, as in the case of VCS activities. A pure output-based payment mechanism may not require a risk buffer at the project level, but if some upfront payments are made under the KFCP (as proposed above), it could still be useful to incorporate a risk buffer. As a general indication, the VCS provides for a buffer of 10-40% for REDD projects depending on the assessed implementation risks (VCS 2008b:10).

Liability for non-performance. If emissions in a given year are higher than the business as usual baseline, there is the option of choosing a ‘no-lose’ system whereby proponents are paid for emissions reductions below the baseline but incur no liability where reductions are above the baseline (see Angelsen 2008:58-60). An alternative approach is to introduce a debiting arrangement, whereby emissions above the baseline in a given year are deducted from reductions that are accredited in future years. If the frequency of payments to proponents were reduced (e.g., every two years rather than annually) this could also help to smooth out some of the potential short-term fluctuations between performance and payments.

If payments made for emissions reductions fall short of the investment costs required to achieve those reductions, the use of output-based payments implies that proponents bear the risk of non-performance (except to the extent that they receive partial upfront payment). However, if payment of sub-contractors is contingent on achievement of intermediate outputs, this would mean that even where reductions did not fall below the baseline (and consequently the proponent did not receive a

payment from the trust fund) but a particular community achieved reductions within its smaller area, the community would still be entitled to payment from the proponent or the trust fund.

Managing risks of leakage. Some project-based approaches include direct liability of proponents for leakage outside the project area.²⁶ However, a nested approach may not involve direct liability of proponents for leakage. Rather, leakage may be dealt with at a sub-national or national level, and could be addressed through risk buffers. In the case of the KFCP, it may be sufficient to monitor leakage on a sufficiently large scale rather than introducing direct liability at this point.

Questions

- ◆ Should KFCP seek to establish a risk buffer, and if so should it be pooled with other activities?
- ◆ Should reductions that fall short of the baseline be debited against reductions in future years?

Accountability mechanisms

Effective accountability mechanisms will be critical to the credibility of payment mechanisms. Accountability mechanisms need to track both achievement of results and payment of benefits, as outlined in the table below:

Type of activity	Form of accountability mechanism	
	Accountability for results	Accountability for payment
Emissions reductions	- Proponent's internal accounting - Independent verification (remote sensing / ground-truthing etc)	- Trust fund's internal accounting - Trust fund audit
Intermediate outputs	- Proponent's internal accounting - Independent verification? (would require a different form of performance reporting that may go beyond data monitoring)	- Trust fund's internal accounting - Trust fund audit - Proponent's internal accounting - Audit of proponent's financial transactions

Questions

- ◆ Would the institution that provides independent verification of emissions reductions also be best placed to independently verify achievement of intermediate results and accountability of payment distribution, or should these functions be performed by different institutions?
- ◆ Could social accountability initiatives used in other sectors (e.g., health and education funding) be adapted to ensure transparency of KFCP funding distribution?

Technical assistance for establishment of payment mechanisms

Targeted assistance may need to be provided to government, communities and other service providers to support the establishment of the payment mechanisms and the necessary systems and process to ensure that the mechanisms operate effectively. Other complementary assistance outside the scope of this paper (e.g., for clarification of spatial planning and land tenure rights) may likewise be required to ensure payment mechanisms can be effective.

Questions

- ◆ What are the highest priority areas for technical assistance to develop payment mechanisms?

General questions about the proposed model

- ◆ Does the proposed model achieve an appropriate degree of alignment with partner government systems?

²⁶ Under the Voluntary Carbon Standard, for example, emissions due to leakage are subtracted from the credits that can be issued under the activity (VCS 2008a:24).

- ◆ *Is there greater scope for harmonisation of particular mechanisms across several demonstration activities (e.g., IFCI's second demonstration activity and possibly activities of other donors)?*
- ◆ *Does the model take sufficient account of potential to ensure that the KFCP promotes co-benefits such as poverty reduction as well as reducing emissions? (see e.g., poverty implications outlined in Peskett et al 2008)*

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ATTACHMENT 4. SYNOPSIS OF PEAT RESTORATION STRATEGY

To be included in final draft – Report not yet submitted.

DRAFT

ATTACHMENT 5: GHG EMISSIONS BASELINE AND MONITORING

PART OF ATTACHMENT 5 OF THE KFCP FRAMEWORK DESIGN DOCUMENT (OCTOBER 2008)

Emissions Accounting and Monitoring

In preparing for REDD there is a need to:

1. Decide on definitions;
2. Decide on baseline characteristics;
3. Determine suitable accounting and monitoring data and ascertain access to necessary data;
4. Decide on a system for national baseline setting; and
5. Decide on a methodology for monitoring.

Indonesia will need to establish a system for time series data as well as improvements in long-term data and methods. Climate change more than any other challenge requires a reconsideration of the way in which the agencies of government relate to each other, share resources and share information.

Five steps are essential to ensure an effective and functional forest monitoring system:

6. Clear understanding of responsibilities — who does what and when;
7. Regular and timely reporting of accurate and precise data;
8. Access to data between different groups inside the ministry, government and stakeholders;
9. Using the data to have improved decision making; and
10. Using the data to enforce laws.

Not all these requirements will be met through the work on the measurement regime. The new Forest Resource Information System (FRIS) is a logical beginning for a Government-wide integrated decision and policy support system.

Establishing a Baseline²⁷

A baseline is a projection of emissions from deforestation and degradation against which reductions in emissions can be measured. The baseline is prepared based on projected area change of forests and a calculation of the change in carbon stocks that the change would represent. The change in area and the carbon stock represented by the change in vegetation must both be estimated with an acceptable level of certainty. Since it is likely international credits will be awarded against a National baseline only if it is particularly important in the context of a market for trading in emissions.

As a result of the work undertaken by the IFCA prior to the COP 13 in Bali, the likely approaches to setting a 'baseline' or reference period against which to benchmark reductions in deforestation and degradation were identified. They and the questions associated with them are:

1. A linear projection of the past - over which time interval and how far back?
2. An average of past conditions - again over which time interval and how far back?
3. A modelling projection based on unplanned (unsanctioned) activities and planned land use to meet development goals - which models and how far into the future?

Where deforestation and degradation in natural forests or protected areas is unplanned a historical spatial analysis may be appropriate. Modelling may be more suitable where conversion of forest estate to plantation for non-forest uses such as oil palm estates is planned.

²⁷ This section has drawn on the IFCA Draft Consolidation Report of February 2008.

Historic baseline

Logically the time period, termed the reference period, chosen for historic baseline projection has a critical influence on the result. Rates of deforestation change over time due to a range of factors, sometimes speeding up and at other times slowing. Indonesia has a history of periodic severe fire seasons, for example 1982/83, 1992/93, 1997/98, that will need to be considered. Inclusion or exclusion of a particular fire season in an historic baseline will also have a strong influence. Depending on which baseline is chosen there are substantial differences in the potential pool of carbon credits.

Modelled baseline

Applying a modelling approach allows the identification and assessment of affects in the future of the drivers of deforestation that include population growth and economic development. The IFCA process notes that economic models can be used to project deforestation based on planned development. This enables variation between provinces in a country to be identified and considered, such as a relatively undeveloped province where large areas of the forest remains as compared to a province with strong development where forest has been converted. An analysis that considers the full suite of drivers for deforestation requires a wide range of related primary, secondary and proxy data. Collecting, collating and verifying data to predict the deforestation pattern is a key task in modelling a baseline.

A baseline for the KFCP demonstration activity

There is not yet any internationally agreed guidance on developing REDD baselines. The process for this will be subject to negotiation among Parties. Whichever approach is negotiated, a credible baseline of emissions from REDD should be established for the KFCP using existing scientific and technical tools and models. Both approaches will need to be developed for the demonstration activity in order to inform international negotiations and enable Indonesia to consider options and approaches to national baseline preparation that most suitably reflect national circumstances.

Assessment and monitoring will be required at a range of scales as part of the KFCP. Crediting may be based on local or project level activities in the context of a broader national approach while accountability for leakage could lie with national governments or potentially with provincial authorities. Project level baselines and monitoring will support assessments of changes to local carbon stocks and emissions for the purpose of carbon crediting. The capacity to monitor forest cover and factors relating to emissions will support the assessment of permanence. National assessments, a national carbon accounting system, will identify leakage by wall-to-wall coverage that will monitor all relevant lands for change. The KFCP will need to be designed in a way to complement and integrate with this national system as it is developed.

Monitoring against a Baseline

REDD demonstration activities require a credible reduction in emissions from deforestation and degradation to be measured against the baseline at specific intervals, for example annually. The monitoring will confirm the effect of REDD activities, management change and policies variation in terms of reduced emissions against the baseline. In a fully developed REDD project, this should include monitoring of the displacement of deforestation and degradation from one area to another, the “leakage”. Emission reductions identified compared to the baseline may then be made available as carbon credits.

For the KFCP, the two key parameters to be monitored are:

1. Change in forest cover which includes change in forest area and reduction in forest cover; and
2. Change in carbon stocks and emissions of non-CO₂ gases.

Remote sensing provides a strong approach to monitoring forest cover change that is constantly evolving, considering new data sets and refining approaches. Indonesia is currently considering a system, guidelines, and protocols for measurement and processes for preparing a national carbon accounting system. This demonstration of REDD under the KFCP will identify the underpinning science, data collection methodologies and approach for applying a national baseline at the

demonstration, provincial and national scale to assess emissions over time and inform knowledge around the issues and problems of reporting the carbon account from local to national levels. While detailed data collection will focus primarily on the specific locations selected for the KFCP demonstration activity area, the methodologies developed would have broader benefits for Indonesia's FRIS and assessment of tropical peat carbon stocks and flows internationally.

Present Methodologies for Assessing Forest Information

Indonesia has commenced work in evolving its existing approach to forest information and the collections of historical and scientific data into FRIS, with the support of the World Bank, the Government of Australia and others. FRIS will enable baseline and emissions monitoring through the development of some the key elements required, some of which have been discussed and are being incorporated in the design of FRIS. These include among other elements:

11. Review existing models relevant to peat systems, especially those which model emissions and stocks, rather than just stocks;
12. Review and improvement of existing sampling protocols to ensure that the methodologies meet all the requirements of Indonesia including aspects such as root to shoot ratios and wood density;
13. Review of existing allometric equations relevant to Indonesian tree species;
14. Development of carbon stock estimates for all the Permanent Sample Plot and Temporary Sample Plot data;
15. Review and analysis of all national scale spatial datasets;
16. Estimation of carbon stocks through destructive sampling and assessment of changes in total soil C under differing land uses;
17. Demonstration of how to apply same standards at all the different levels - national, project, scientific levels;
18. Analysis of non-CO² emissions from peat lands using chambers ;
19. Analysis of combustion efficiency of peat under differing conditions, including non-CO²; and
20. Methods of fire mapping in peat systems.

These activities are also required for the KFCP demonstration activity. The aim is that the KFCP will be designed to complement the work on Indonesia's national carbon accounting system. In doing so, it will take advantage of the concentration of resources and support already existing in the province, within GoI, and from other sources, and enable the development and testing of elements of the Indonesia's national carbon accounting system at useful scales.

Present Methodologies for Assessing Peatland²⁸

For tropical forests on peat soils, the greenhouse gases from peat usually dominate the emissions from disturbances such as wildfire, deforestation and conversion to agriculture, or forest degradation. The non-CO₂ emissions, CH₄ and N₂O, from peat are very important due to their high Global Warming Potentials. Change in peat depth can be a very poor indicator of net GHG emissions from disturbed (e.g., burned, drained, cultivated) peat. There is marked variability in emissions from peatlands and capacity to estimate GHG emissions from peat is low. Information required includes:

21. Spatial distribution of peat soils;
22. Properties and depth of peat ;
23. Spatial extent and nature of wildfires and management burns;
24. Combustion of peat and associated emission factors for individual GHGs; and
25. Trends over time in emissions of CO₂ and non-CO₂ gases after disturbance.

²⁸ This section has been prepared with reference to material from the Forest and Peatland Fire Prevention and Management Pre-Feasibility Study Report FINAL DRAFT 9 November 2007 and a brief note on research needs for GHG fluxes in peat soils prepared by R.J. Raison (john.raison@csiro.au), Chief Research Scientist, CSIRO Forest Biosciences, Canberra Australia.

A systematic program of new research and collection of supporting data to address the above gaps should be conducted within the framework that is used to operationally estimate GHG emissions.

There have been some methods applied for assessing peatland carbon. Broadly these have involved:

26. Existing Soil Maps developed by various sources and at various scales from 1:250,000 to 1:1000,000 at different times using methodologies to be identified and assessed;
27. Information on peatland thickness, types and area from various sources collected at different times using methodologies that do not appear to be heavily documented; and
28. Bulk density and carbon contents of peatlands where available, though this does not appear to have been widely collected using methodologies to be identified and assessed.

Refinements required to assess peatland for national carbon accounting include:

29. Effective mapping of peatland distribution, peatlands and peat characteristics (such as depth, density and type) through:
 - Compilation and analysis of existing data for preparation of base maps, data compilation and processing;
 - Assessment of existing methodologies for assessing peatland and peat characteristics and the setting out of methodologies for peer review and confirmation to establish standardised methods;
 - Ground survey to confirm presence and characteristics of peatlands using standardised methods;
 - Development of correlations and relationships with remotely sensed data;
 - Review of existing methods, including the field guide developed by Murdiyarso et al (2004), and others to identify a standardised method or methods to evaluate in field trials;
30. Area burnt is a key input for estimating GHG emissions from peat soils;
 - Burnt area assessment using remote sensing techniques has been researched with some management applications;
 - Ground truthing and field verification is needed to confirm the reliability of estimates based on remote sensing;
31. Combustion of peat:
 - The amount of peat actually burnt in wildfire or in management burns is a critical determinant of GHG emissions, and highly spatially variable with subjective judgements of this variable having been used;
 - Moisture content of the peat, which is determined by seasonal rainfall and by peat drainage activities, appears to be the most important variable;
 - Field studies under a wide range of conditions are needed to determine the relationship between moisture content and the depth and mass of peat burnt;
32. Emission factors for CO₂, N₂O and CH₄ emissions during peat fires;
 - Very little data is available for peat fires and measurements of GHG emissions during combustion of different peat under a range of burning conditions are needed; and
33. Temporal trends in CO₂ and non-CO₂ GHG emissions:
 - Systematic field measurements to quantify the effects of disturbance in peat systems should aim to develop a process-based understanding of the observed GHG fluxes that can then be used, through tested models, to make broader-scale estimates.

Additional Aspects of Peat

In the mission there was the opportunity to visit and consider field activities and operations that have been conducted by the stakeholders and actors working in the EMRP area and in Sebangau National Park. The team and those they met noted the issues of remote sensing to track changes in peat

emissions. There were a number of aspects about peatlands that require clarification and further consideration:

34. Peat Hydrology:

- The efficacy of canal blocking and planning the restoration of peat lands requires a clear understanding of how water moves through peat:
 - Where does the water come from?
 - How fast does it move through the peat dome?
 - What influences the movement of water through the peat and peat domes? Gravity? Hydraulic forces? Capillary action?
- Water table movements:
 - There are a number of records of the water table height. The method for obtaining that data requires validation and is not clear;
 - The 'natural' variation of water tables in undisturbed peatland and in peatland under various types of management does not appear to be identified;
 - The response of water tables to actions such as canal blocking and replanting has been recorded but the patterns are not clear, the influences on the water table may vary depending on:
 - Peat characteristics;
 - Canal size;
 - Type of dam for blocking;
 - Water flow in the canal;
 - Hydrology of peat;
 - Peat dome shape and height;
 - The influence of replanting trees on water tables;

35. Canal blocking:

- Observations in the field and the data on water tables do not paint a clear picture of the effectiveness of canal blocking in re-flooding and restoration of peatlands;
- Discussion with some wetland and hydrology specialists and the University suggest that the effectiveness of dams blocking canals is not clear and needs to be confirmed; and
- It may be that the apparent variation in performance of canal blocking is due to the varying characteristics of peat among and between the locations.

ATTACHMENT 6. FIRE MANAGEMENT ANALYSIS

TOWARDS AN INCENTIVE BASED FIRE MANAGEMENT STRATEGY FOR KFCP

Summary

Fire is a key risk to the peat dome encompassing the KFCP target area. Research has made explicit links between land clearing, drainage and rainfall anomaly as causing a non linear fire and emission response. This urges the need for better and more efficient fire control strategies as current efforts have proven insufficient. In addition, fires play an important role in livelihoods as it is a tool to manage biomass and soil fertility.

A strategy should focus on high risk periods and high risk areas. As opposed to current practice, fire control and suppressions have to be prioritised and should be benefit driven based on clear weather based indicators. The idea being, this would trigger a response and if a community performs well, there would be a performance based payment. Furthermore, peat restoration strategies should address land tenure issues and conflict over peat lands as a first step to control fire, improve water management and restore the peat land ecosystems.

Background

Before the start of the ex Mega Rice Project fires were relatively rare²⁹ in the KFCP project area. The Mega Rice Project led to the development of a grid of waterways that had a main East-West channel (meant as the primary inflow) and a series of smaller channels. The area was nearly completely cleared of vegetation. The channels started to act as a major cause of drainage and the disappearance of the natural vegetation led to a landscape of scrubs, sedges and ferns which on top of the drained peat, significantly enhance vulnerability to fire. The rapid increase in vulnerability these changes caused led to the dramatic fire events of 1997, 2002, 2004 and 2006. Some estimate that these fires have caused green house gas emissions³⁰ and peat subsidence³¹.

While estimates tend to differ widely, peat fires are generally identified as Indonesia's most significant source of green house gas emissions. Present estimates of CO emissions from drained peat-lands are calculated to be between 355 and 874 Mt³². For REDD programs on degraded peat lands, fires are the most serious threat as they pose the most significant risk to carbon stocks stored in peat lands as well as to carbon sequestration of above ground biomass.

As such, without an effective strategy that leads to a significant reduction in fires, REDD/avoided deforestation of peat related emissions will be difficult. Unfortunately current strategies have not proven to be efficient. Claims of increased efficiency since the provincial government embarked on new fire risk management policy have to be questioned, as the last two years have been extremely wet. Fires are the largest source of emissions and are a key cause of environmental degradation. For REDD to be successful, fire risks³³ have to be prioritised

What makes the area so vulnerable to fire?

²⁹ Historic evidence suggest that fires have been present historically but were relative rare upon 20 years ago in peat lands (see G. Hope,, U. Chokkalingam & S.Anwar, 2005 The stratigraphy and fire history of the Kutai Peatlands, Kalimantan, Indonesia. Quaternary Research 64 (2005) 407 – 417

³⁰ S. E. Page, Florian Siegert, J.O. Rieley, H-D. V. Boehm, A. Jayak & S. Limink, 2002. The amount of carbon released from peat and forest fires in Indonesia during 1997. Letters to nature NATURE | VOL 420 | 7 NOVEMBER 2002

³¹ J. Jaenicke, J.O. Rieley, C. Mott, P. Kimman, F. Siegert, 2008. Determination of the amount of carbon stored in Indonesian peatlands. Geoderma 147 (2008) 151–158

³² **Hooijer, A., Silvius, M., Wösten, H. and Page, S.** 2006. PEAT-CO₂, Assessment of CO₂ emissions from drained peatlands in SE Asia. Delft Hydraulics report Q3943 (2006)

³³ Risk is defined as Risk = (Hazard * vulnerability)/Capacity

Most research indicates that the incidence of peat land fires is strongly influenced by temporary rainfall anomalies, while spatially reduced forest cover and increased access have proven to be linked to the spread of fires. Most recent research shows that these two are mutually reinforcing which leads to a non linear response³⁴. Non linearity of response indicates that sustained burning in areas with high fuel loads (including peatlands and forests) increased with drought severity. This is aggravated by increased land clearing activities during prolonged periods of drought. It has to be acknowledged that communities and other stakeholders gain from fire use in forest frontier areas in which KFCP is located because of the opening up of forest areas and the coinciding large scale projects/investments that create new dimensions with regard to tenure and dramatically change livelihood patterns.

As such four key factors determine fire risk:

1. rainfall anomaly influenced by changes in the El Nino Southern Oscillation activity;
2. increased availability of fuel due to falling water tables during an El Nino period which leads to abundant availability of dried vegetation and peat;
3. increased access leads to increased opportunity for land clearing as land becomes easily accessible and biomass easier to process. Land clearing is used as a tool to secure control and some form of land tenure. Unclear boundaries and resource alienation by government has undermined previous functional land management systems and led to a need to secure rights over claims; and
4. a changed landscape demand more careful use of fire. Fire is an important tool in agriculture in Kalimantan. However environmental circumstances have changed dramatically.³⁵

ENSO; The ENSO influences rainfall through either weakening (El Niño) or strengthen (La Niña) the western trade winds. This causes a regular period of prolonged drought, a period of extreme wet weather and a dramatically changed environment (from moist lowland peat rainforest to degraded peat lands composed of vegetation which is susceptible to drought). Furthermore evidence exists that the frequency of extreme weather events caused by the ENSO might lead to increased levels and greater impacts of green house gas emissions and climate change³⁶. Thus enhancing the risk of fire, droughts and flooding to which local communities and carbon stocks.

Increased access: Recent work in the target areas has indeed indicated that the hotspot density could be predicted based on the sub surface sea temperatures in the Central Pacific³⁷. The results underline that the ENSO induced drought events trigger fire outbreaks under current environmental conditions in the areas, but that the risk is significantly lower if the natural environment is not disturbed. Most recent spontaneous fire outbreaks have underlined that the majority are caused by deliberate ignition and that during a dry period, fire use increases. In other words, people tend to use more fire during a dry period than during a wet period.

This has lead to fire patterns which are closely linked to access roads and water ways. An in depth assessment on fire occurrence in the area showed that hot spot intensity was linked to distance to the village and road access. This explained about 70% of differences in hot spot density. Soil types did not prove to be significantly related to hotspot density³⁸. The results underline that fire incidence is

³⁴ G. R. van der Werf, J. Dempewolf, S. N. Trigg, J. T. Randerson, P. S. Kasibhatla, L. Gigliof, D. Murdiyarso, W. Peters, D. C. Morton, G. J. Collatz, A. J. Dolman, and R. S. DeFries Climate regulation of fire emissions and deforestation in equatorial Asia. p20350–20355 ! PNAS ! December 23, 2008 ! vol. 105 ! no. 51

³⁵ See for a review of indigenous systems; K. MacKinnon, G. Hatta, H Halim & A Mangalik, 1996. The Ecology of Kalimantan. Singapore: Periplus

³⁶ Hansen, J., Sato, M., Ruedy, R., Lo,K., Lea, D.W., and Medina-Elizade, M. 2006. Global temperature change. Proceeding of National Academy of Science 103: 14288-14293

³⁷ J. Kieft, 2007 Climate-Informed Incentive Systems to Fight Fire and Poverty in Central Kalimantan “ Presented during the IRI-Columbia University supported site event UNFCCC COP 13 Bali

³⁸ N Surati Jaya, R Boer, Samsuri, and Fathurakhman, 2008, Development of a wildfire vulnerability index in Central Kalimantan. IRI/IPB/CARE: unpublished paper.

spatially defined and located in the vicinity of human settlement in areas where access has been improved.

Fire accelerated the process of opening land. In other areas in Indonesia this has led to resource exploitation and land grabbing which caused increased fire exposure due to increased human activity leading to wild fires and the use of fire as a tool. Fire has been a key tool for local communities to rapidly gain control over land and access to new livelihood assets. Work in East Kalimantan³⁹ underlines the resource user's use of fire to enhance its economic productivity. In the case of the project area fires, it has enabled the opening of large tracts of lands which can then be planted with rubber. This allows communities to claim access and customary tenure over the land and demand compensation from projects. The community's response is stimulated by past experiences of marginalization and resource alienation while it also strengthens control over the resource. In the most dominant culture of the KFCP the Dayak Ngayu⁴⁰, tree planting secures individual tenure rights.

Fuel availability: Drainage and replacement of rainforests by scrubs and ferns have created an environment that, when it is dry, is extremely vulnerable to fire. WWF monitoring data showed that the ground water table fell to below 2 metres during the 2006 El Nino even though the area was under improved water management. Land managers have not developed skills and knowledge to manage fires under these circumstances. Traditionally, the environment would remain moist and the probability of fires inflicting damage on surrounding vegetation was small.

Fire use in agriculture: Local communities who had developed knowledge of fire management in a moist environment, now have to face an environment consisting of ferns and scrub over forests on drained peat lands. Local livelihood systems were built around a culture of using fire for land clearing using low intensity fires. These fires, on surrounding mineral soils in particular, such as on the levees and in heat forest areas lead to an increase in P (Phosphate availability)⁴¹. Furthermore for smallholders, fire remains the cheapest and easiest way to process biomass.

Fire and forest dependant livelihoods require prolonged period of temporarily residence in forests. As tenure is uncertain and the state has been unable to effectively gain full control over land use, incentives have been generated to claim land. In particular this is the case for Central Kalimantan, where forest use planning and spatial planning issues are not resolved. This has been fuelling the degradation of peat land areas and areas along the roads in the northern part of the dome as fire is used as a key land clearing tool to support the significant expansion of rubber.

Experiences with fire management in Central Kalimantan

Since 1997/98, national and sub national level programs have been initiated to cope with fires in Central Kalimantan. These programs have been implemented by NGOs (CARE SIAP and PEAT projects, CIMTROP, Wetlands International⁴²), bilateral donors (European Commission; South and Central Kalimantan Production Forest Management Project and USAID amongst others). Furthermore the government has initiated significant efforts and political commitment to fight fires. The establishment of an Early Warning Centre (PIL = Pusat Informasi Lingkungan) and investment in community brigades as well as heavy equipment underlines these commitments. As Indonesian disaster response mechanisms are getting revamped, it is likely that the new Disaster Management Agency will have branches at district and provincial levels and will play a more significant role in the future.

³⁹ Chokkalingam, U., I. Kurniawan, and Y. Ruchiat 2005. Fire, livelihoods, and environmental change in the Middle Mahakam peatlands, East Kalimantan. *Ecology and Society* 10(1): 26. [online] URL: <http://www.ecologyandsociety.org/vol10/iss1/art26/>

⁴⁰ J.A. Weinstock, 1979, Land Tenure practices of the Swidden cultivators of Borneo. Unpublished paper

⁴¹ Ketterings QM, Van Noordwijk M, Bigham JM., 2002. Soil phosphorous availability after slash and burn fires of different intensity in rubber agroforests in Sumatra. *Agriculture, ecosystems and Environment* 92: 37-48

⁴² W C Adinugroho, I. N. N. Suryadiputra, B. H. Saharjo & L Siboro, 2005. Manual for the control of fire in Peatlands and Peatland Forests. Bogor: Wetlands International

The 2006 fire episode underlines that most of these initiatives have had limited impact. Key reasons are:

- That the scope and nature of fires during El Nino years is different. The exponential spread of fires, the remoteness and excessive availability of fuel makes approaches tested on mineral soils difficult to apply. Furthermore early warning is based on hotspots and fire danger rating, both allow for limited response time; and
- Most fire initiatives assume that communities and stakeholders have an interest in controlling fire and are willing to invest in fire management. More recent reviews of fire management activities and trends in land use suggest that some gain from fire. For example:
 - increased access and removal of the vegetation allows for the poor to harvest non forest timber products and fell logs; and
 - for land owners it enables them to clear large tracts of land.Thus, a fire management strategy and most likely a peat restoration strategy should be based on an understanding of why people use fire and what are the (economic and social) gains of fire use;
- Fire suppressions put a significant burden on communities. In so far this input has been voluntary but it costs some up to 3-5 months of labour. This makes it a heavy burden with limited returns for those who implement it. The social dynamics of fire fighting are not understood but most likely the least empowered are the most involved; and
- For a proper analysis of the impact of fire management policies, circumstances have to be taken into account. As is explained above, fire use is strongly related to the ENSO thus explaining the reduced incidence of fires during 2007/08 when fire use was criminalised by Governoral directive. The ban reduced the use of fire but most of these fires were linked to the need for clearing of agricultural land. This seems to have led however, to a significant decrease in income, and the ban also impacted on local food production. This led to protests and political pressure to change the restricted use of fire. It is crucial that a fire risk management strategy assumes fire use as an integral part of livelihood strategies and is used to increase access or enhance quality of livelihood assets (land).

A REDD based fire management strategy should acknowledge the importance of fire as source of emissions and the economic importance it has. It has to go beyond suppression and focus on improving land use planning, water management and aim to reduce incentives for land encroachment.

Towards an incentive based strategy

A key element of a fire management strategy has to be on El Nino events while reducing the long term trend of environmental degradation. Restored peat land ecosystems are rarely exposed to fire risk however restoring of peat lands even within a REDD scheme will take at least 15-20 years before fire risks are significantly reduced. The recent experiences with improved water management underline that blocking channels only, is unlikely to be sufficient. At least for the coming 5-10 years, fire risk management will have to be the priority for KFCP. A minimum of 2-3 major fire events are to be expected during that period.

An effective fire management strategy should entail:

- A very good understanding of the following: a baseline socio-economic data of the KFCP area; baseline environmental data, including hydrological information and peat dome characteristics of the KFCP area; and baseline greenhouse gas emissions from peatlands and the KFCP area as a whole, under current practices; and
- Work based on the assumption that fire remains a critical tool for smallholders as alternatives are more expensive or impractical. Nevertheless during El Nino (dry period) fire use should be banned to reduce incentives as then fire is causing most of the damage. El Nino can be predicted and a strong commitment by political decision makers to law enforcement has proven to increase opportunity costs of fire use.

The project could benefit if fire management efforts are placed within the institutional framework of the Indonesian government. This will require, that local decrees concerning fire management be consistent with higher level government policies, despite the fact that these fall short in addressing drivers. As such, community participation in fire management is of the greatest importance and communities need to be given the responsibility of managing this, taking into account the above mentioned hurdles. As such, embedment within the village government, planning, development, implementation and a monitoring system can be integrated within the socio-economic and cultural village structure. Within the KFCP framework it will be essential to further outline and assign role, responsibilities and tasks for the various agencies (forestry and the district based disaster management agency). Within the KFCP this requires coordination mechanisms between administrative levels as well as the already existing fire management structures of village fire crews, Manggala Agni fire crews and others. It is important that these are elaborated and well described. Hence, the design of an incentive system for local livelihood development embedded in local indigenous and governmental institutions and linked to higher levels of the state is of critical importance.

Strategic directions:

- Fire control and management are emphasised during El Nino years. When a dry period is anticipated fire use should be banned and access restricted. This includes:
 - the use of a weather based index (an index based on rainfall which trigger uniform payments of benefits based upon performance when a benchmark criteria is reached), as currently is used for smallholder agricultural crop insurance. This should be developed to provide policy makers and REDD projects with a clear signal to be used in adjacent communities to initiate a fire ban: and
 - a fire suppressing benefit mechanism needs to be based on a clear benchmark. The work of Van Der Werf, Surati Jaya and CARE/IRI (see footnote 6) provides guidance to set these benchmarks. Depending on vulnerability, communities can be paid based on a clear set of indicators such as hotspot density or peat subsidence in fire affected areas. The better the performance, the higher the payments. Potentially, reverse auction systems can be used to set a price per unit output delivered. However this requires additional research.

These interventions do not require significant construction of infrastructure and are building on existing interventions by CKPP partners. However given the potential risks to the project, they should commence as soon as possible.
- Fire risk management through the prioritization of fire risk has to be main-streamed in a peat land restoration strategy.
 - High risk areas are areas where most likely conflicts over tenure exist and areas that are easily accessible.
 - Resolving conflicts over tenure has to have priority over restricting access. If tenure is not addressed, the risk is that there will be no interest in maintaining dams or involvement in restoring peat land ecosystems: and
 - Immediately after tenure is resolved, access should be restricted through channel blocking and the institutionalization of payment mechanism should be started.
 - Access should be better controlled and should not only entail waterways but has to include planned road infrastructure.
- The development of alternative livelihoods through REDD payments. Community facilitation should start emphasizing the need to develop alternatives after agreement is reached on a community based management plan. Reduced reliance on fire implies reduced dependency on land through:
 - non agricultural related livelihoods, examples are processing of non forest products: and

- o intensive agriculture on levees. Land is available but requires investment in management of soil fertility. This requires will as well better and more reliable access to markets as it implies stronger emphasis on a few key crops like rubber.

REDD benefits and payment schedules have to make the use of fire less attractive by taking away the drivers of fire use, while simultaneously stimulating during fire outbreaks more proactive suppression. This requires first of all stabilised and agreed upon tenure boundaries, while developing alternative livelihood options. This will entail direct cash payments to compensate for lost livelihood opportunities. In the mean time however this should be performance based, e.g., communities need to develop alternatives and not continuously rely on cash transfers

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ATTACHMENT 7. INDICATIVE SUMMARY BUDGET

The following budget provides a summary cost figure for each of the major line items in the budget including the five components. The final version of the design document will contain a detailed budget for Year 1 of implementation.

	Preparation Phase	FY 10	FY 11	FY 11	Total
Staffing	-	141,000	100,800	105,840	347,640
Equipment	4,000	99,700	-	-	103,700
Recurrent Costs	8,600	33,600	35,910	37,706	115,816
Travel	14,000	53,300	36,750	38,588	142,638
Preparatory Phase	1,763,340	-	-	-	1,763,340
Component 1	-	4,275,000	6,326,250	6,577,188	17,178,438
Component 2¹	12,500	70,500	60,900	63,945	207,845
Component 3	560,000	1,300,000	700,000	950,000	3,510,000
Component 4	123,000	41,000	43,050	8,820	215,870
Component 5	-	163,000	134,400	141,120	438,520
TOTAL	2,485,440	6,177,100	7,438,060	7,923,206	24,023,806

¹ Most of the costs under this component will be the time inputs of long term personnel from either the PO or MC staff that are already paid for under other budgets.

ATTACHMENT 8. INDICATIVE PERFORMANCE ASSESSMENT FRAMEWORK

This KFCP Performance Assessment Framework (PAF) is indicative and will be finalized by the Facility M&E Specialist as part of the overall IAFCP PAF.

Objective statements	Potential Indicators	Comments on Data Collection & Performance Assessment
Goal: To inform a post-2012 global climate change agreement and enable Indonesia's meaningful participation in future international carbon markets	• Contribution to Australian and/or Indonesian REDD submissions to the UNFCCC • Contribution to international knowledge on REDD • Contribution to international knowledge on emissions from peatland	The contribution to international knowledge on emissions from peatland should include: • The measurement and monitoring of peatland emissions • Successful approaches to peatland rehabilitation and reforestation CIFOR and other research partners will play a role in tracking performance at the policy level.
Purpose: To demonstrate a credible, equitable, and effective approach to reducing greenhouse gas emissions from deforestation and forest degradation, including from degraded peatlands.	• GHG reductions • Development of processes for establishing emission baselines and measuring emission reductions • Development of payment mechanisms which provide incentives to achieve and sustain emission reductions • Social impact (and contribution to poverty reduction and gender equality) • Increased capacity to sustainably manage peatlands.	The GHG and Peat Working Group will assist with developing specific indicators regarding the GHG monitoring system. The Payment Mechanisms Working Group and research partners will assist with developing indicators regarding payment mechanisms. The Socioeconomic Baseline and Livelihoods Group will assist with developing social impact indicators.
Intermediate Result 1: Deforestation and Forest Degradation Reduced		
Outputs/Activities to build community support and capacity	• Gol approved community land use plan • International quality Socioeconomic Baseline • Knowledge of REDD demonstrably improved. • Area of burned forest reduced. • Improved livelihoods adopted.	The Socioeconomic Baseline and Livelihoods Group will assist with designing the baseline survey and monitoring protocols. Knowledge, Attitudes, and Practices survey baseline for measuring attitude change.

Objective statements	Potential Indicators	Comments on Data Collection & Performance Assessment
	Impacts on poverty and gender.	
Outputs/Activities to rehabilitate and restore degraded peatland and reduce emissions from deforestation and forest degradation	- Defined area of degraded peatland re-flooded - Area of degraded peatland reforested and number of trees established - Monitoring indicates GHG emission reductions from rehabilitation - Cost effectiveness of rehabilitation activities in comparison to the likely value of emission reductions - Areas of forest and non-forest land planted and numbers of trees planted for economic, conservation and forest restoration purposes - Area of forest under improved management through active protection or conservation activities - Area of forest now under active management, with clear management objectives and plans approved at different levels of government - Demonstrated and verifiable GHG emission reductions from activities to reduce emissions from deforestation and forest degradation - Cost effectiveness of interventions (in comparison to the likely value of emission reductions).	Will need to report on the activities of both KFCP and NGOs if working in an area with ongoing NGO activity
Intermediate Result 2: Capture and Communicate Knowledge	- Quality/timeliness of information provided to GoI, DCC, and research partners. - Level of REDD awareness among target audiences. - Regular knowledge contributions of Research Partners to KFCP. - Knowledge from PAF and REDD monitoring system results effectively captured and communicated.	Communications Strategy and Knowledge Capture Strategy should provide detailed performance indicators.
Intermediate Result 3: Emissions accounting and monitoring	Useful contribution to development of the methodologies for establishing emission baselines and monitoring	

Objective statements	Potential Indicators	Comments on Data Collection & Performance Assessment
	emission levels • Submission for peer review of: ◦ Emission baselines and recommended baseline for (i) the demonstration area and (ii) broader area of surveillance (e.g., Kapuas District); ◦ Emission calculations for (i) and (ii); and ◦ Calculated emission reductions in (i) and (ii).	
Intermediate Result 4: Payment mechanisms	• Clarification and acceptance of the roles and responsibilities of various parties (government at different levels and local communities) • Agreement by the same parties as to one or more payment mechanisms that will be trialled; agreement on calculated cost, suggested mechanism for payments and the method to calculate the size of the payments • Analysis of payment mechanisms, in terms of (i) social/gender impact, (ii) effectiveness in delivering emission reductions in the short and longer term; and (iii) the economic viability of payment mechanisms (when compared to the likely value of emission reductions) and the contribution to an REDD investment climate	
Intermediate Result 5: Readiness and capacity	• Provincial and District KFCP Coordination teams and Secretariats are functioning and playing their designated role. • REDD-related legal and institutional framework at province and district levels is demonstrably improved. • FMU or other operational framework for KFCP is established. • REDD technical capacity of local government and other stakeholders demonstrably improved.	REDD Legal and Institutional Assessment will provide a baseline against which to measure change.
Cross-cutting issues:		

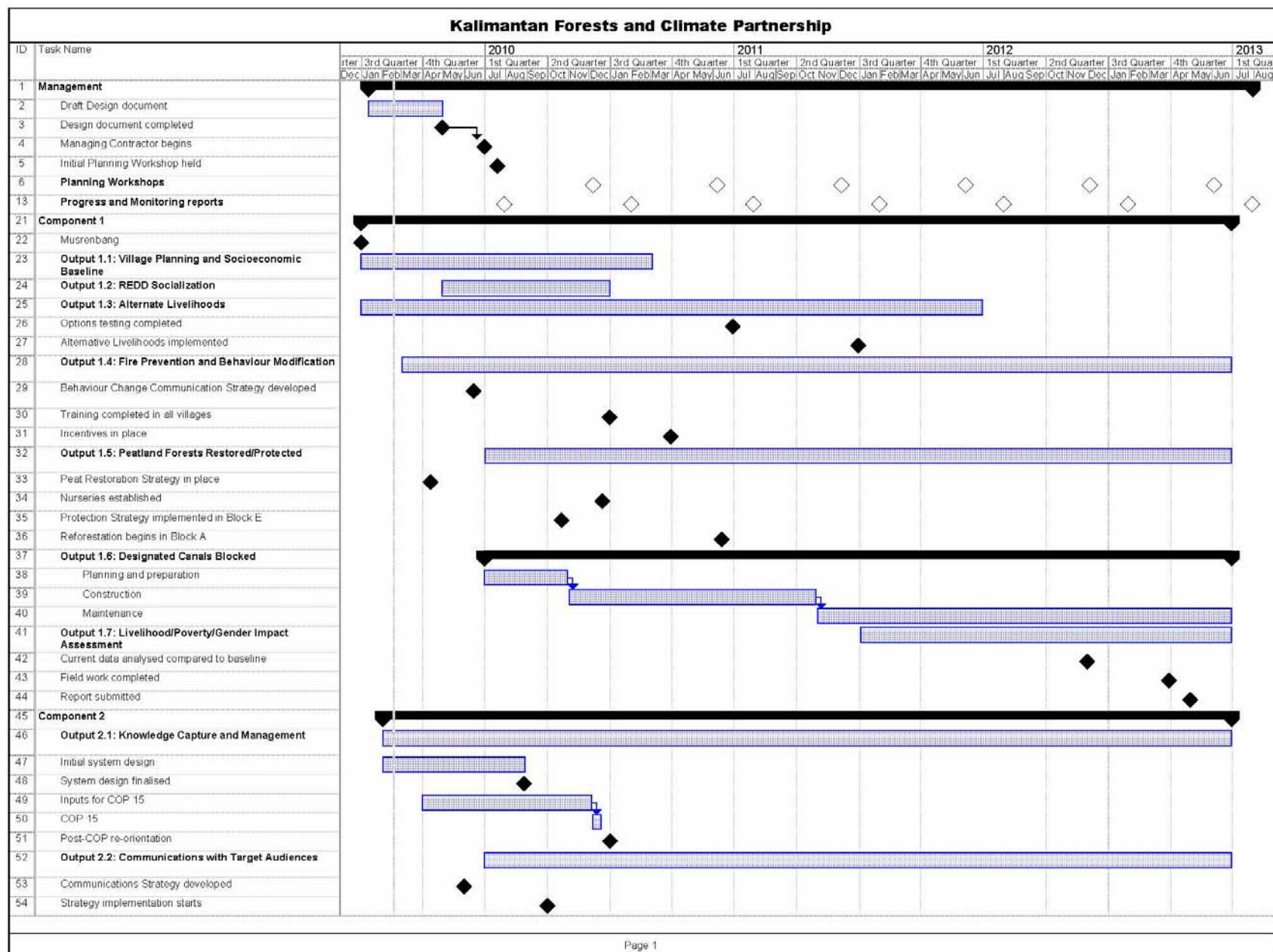
Objective statements	Potential Indicators	Comments on Data Collection & Performance Assessment
Environment	- Improvements in natural resource management - Improvements in environmental governance - Improved response to climate change within Indonesia - Environmental co-benefits (e.g., biodiversity and improved watershed management) produced by interventions	Incorporated in the purpose (capacity building indicator) and Intermediate Result 1.
Gender	- Participation of men and women in KFCP interventions - Allocation of benefits (from the REDD demonstration activity) to men and women	Incorporated in the purpose (social impact indicator) and Intermediate Results 1 and 4.
Anti-corruption	- Established and widely agreed processes for establishing emission baselines and measuring emission reductions - Clear and fair payment mechanisms - Transparency and accountability in all measurements and financial transactions - Strengthened REDD governance.	Incorporated in Intermediate Results 3, 4 and 5
Managing contractor performance:	- Clear rolling implementation plans developed, in consultation with other stakeholders, and circulated as appropriate - Effective support provided to the Coordination Teams. - Effective coordination of Implementation Partners - Effective knowledge capture and communication with all stakeholders. - Alignment of support to GoA and GoI policies and priorities - Effective use of technical advisors and technical advice - Effective engagement of local government and level of local program ownership and participation (provincial, district and village levels) - Development of approaches which are appropriate, innovative and sustainable - Provision of physical and financial data to enable the steering	

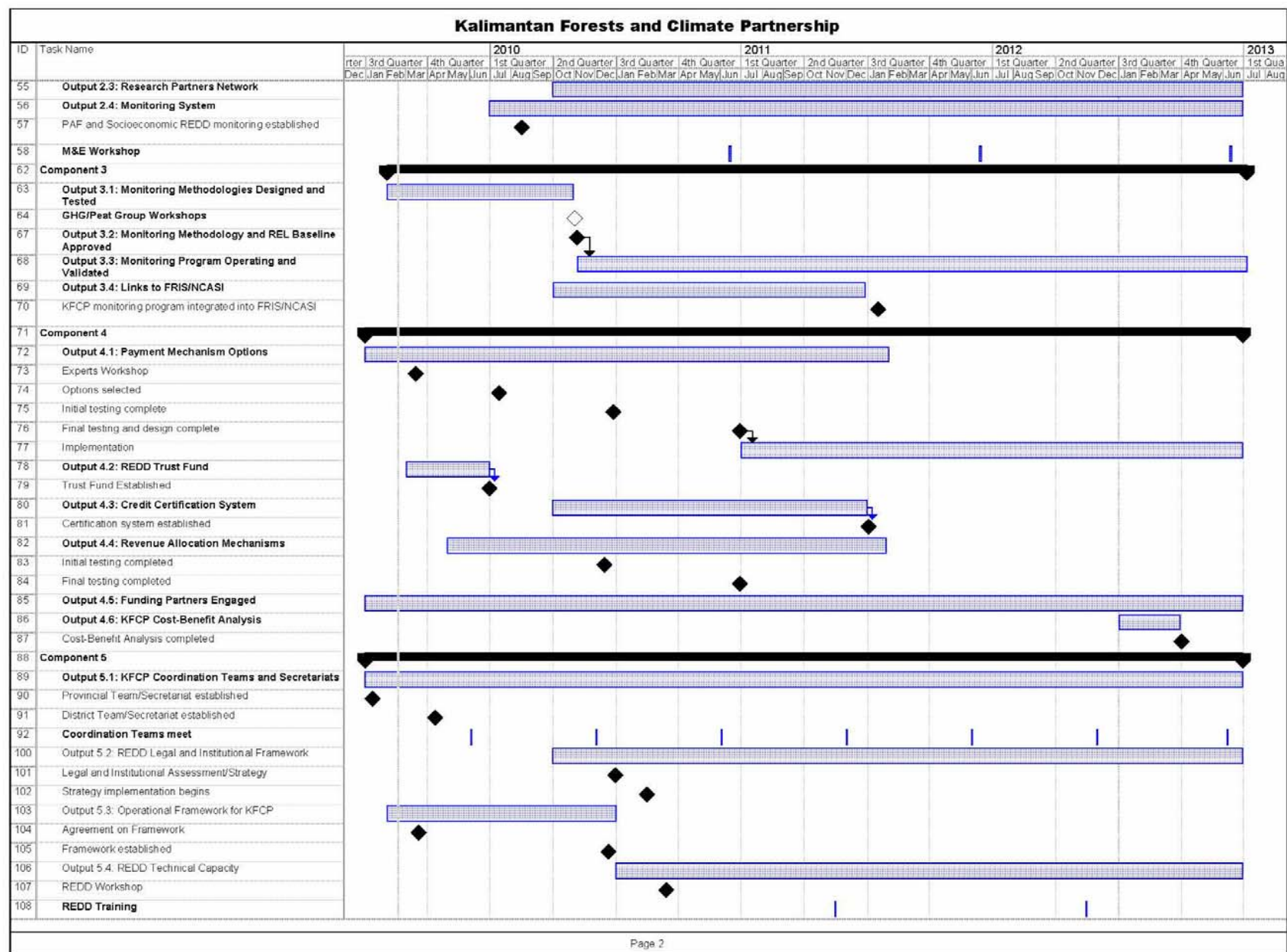
Objective statements	Potential Indicators	Comments on Data Collection & Performance Assessment
	committee to effectively monitor progress and evaluate performance and impact • Effective treatment of risks • Demonstration of continuous learning • Donor harmonisation • Promotion of gender equality and effective treatment of gender issues • Sufficient emphasis given to capacity building	

ATTACHMENT 9. PRELIMINARY IMPLEMENTATION SCHEDULE

The following preliminary implementation schedule covers all KFCP components. The schedule will be finalized in the final version of the design document after consultation with implementing partners.

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ATTACHMENT 10. RISK MATRIX

The Preliminary Risk Assessment includes an assessment of risk based on the following criteria:

L = Likelihood of occurrence (1=Rare, 2=Unlikely, 3=Possible, 4=Likely, 5=Almost certain)

C = Consequence of occurring (1=Negligible, 2=Minor, 3=Moderate, 4=Major, 5=Severe)

R = Risk level - a combination of the above two assessments (E=Extreme, H=High, M=Medium, L=Low)

Further details relating to the likelihood and consequence scores, and resulting assessment of risk level, are provided in AusGUIDELines (refer www.aisaid.gov.au/publications - Ausguide)

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Potential Risk	Potential Impact	Assessment			Preliminary Mitigation Strategy
		L	C	R	
1. Land use disputes or uncertainty (including allocation of land for other economic purposes such as oil palm and timber plantations)	Land use disputes could limit the ability to either rehabilitate land that is deforested or degraded, or to conserve intact forest areas. Given the hydrological characteristics of peat domes, this may reduce the effectiveness of work to re-flood (and therefore revegetate degraded areas).	4	4	E	The proposed REDD demonstration site is an area that has been zoned for protection under INPRES 2/2007, and was previously zoned as a protected area under the provincial land use plan. Despite this, it will be critical to confirm land use plans for the proposed demonstration area with both provincial and district authorities, and seek their support for the location of the proposed REDD demonstration site.
2. Parts of Block E are designated as protected area	Should the proposed demonstration area within Block E be designated as a protected area, questions may be raised as the additionality of any emission reductions achieved.	2	3	M	It will be important to confirm land use plans for the proposed demonstration site with both provincial and district authorities.
3. Failure to agree and/or accept proposed payment distribution mechanisms or approaches to supporting alternative livelihoods	If any level of government (national, provincial or district) does not agree with the payment distribution mechanism proposed, they may withdraw their support. This could, for example, lead to alternative land uses being proposed. If communities are not provided with an incentive to participate in the proposed interventions, the effectiveness of the interventions, and/or their sustainability will be diminished.	3	4	H	As a preliminary step, raise awareness on REDD and what an internationally acceptable REDD demonstration must include. In addition, clarify the roles and responsibilities of different stakeholders, and using this as a basis, develop payment mechanisms that reflect (i) the likely value of actual emission reductions and (ii) the effort required by different stakeholders to achieve these reductions.
4. Inconsistent or conflicting policies between different levels of government	Reduced scope for implementing desired interventions, possibly risking the ability to reduce emission levels, and probably reducing the benefits derived from the REDD demonstration.	4	3	H	Working in the EMRP area should reduce the scope for conflicting government policies, but it will be important to liaise with a wide range of government agencies at national, provincial and district level and seek unilateral support for the REDD demonstration site, the proposed interventions, and the payment mechanisms.
5. Lack of coordination by/with government at different levels	Potential implementation delays, and potential for reducing the interventions trialled, possibly risking the ability to reduce emission levels, and probably	3	4	H	As above.

Potential Risk	Potential Impact	Assessment			Preliminary Mitigation Strategy
		L	C	R	
	reducing the benefits derived from the REDD demonstration.				
6. Lack of community support/engagement, including failure to address the social and economic needs of communities as part of a REDD system	Potential to limit the scale of desired interventions, or the longevity of any actual emission reductions.	3	4	H	Ensure the role of communities in achieving emission reductions are outlined clearly, and develop payment mechanisms that reflect their role and help address their basic needs. Also need to ensure that interventions are designed in a way that doesn't adversely affect communities' livelihoods, e.g., ensuring dams are constructed in a way that doesn't unnecessarily limit ability to use waterways for transport.
7. A shortage of locally available labour for proposed interventions	It may not be possible to undertake the desired scope of works, limiting the effectiveness of the interventions and the REDD demonstration activity	2	3	M	Consult with communities during the preparatory phase to gauge their interest in the proposed interventions, and the labour available, and develop interventions and/or work programs that reflect available resources.
8. Inability to meet \$100 million funding target through raising up to additional \$70 million in external funding	Project activities will not be scaled up and the initial targets (discussed by the two Governments) will not be reached. However, current targets (based on the initial A\$30 million contribution) should not be jeopardised.	4	2	L	Identify a range of appropriate and realistic options for external contributions, and maintain the flexibility so that the KFCP can still operate effectively even if it does not reach the \$100m target.
9. Interventions are not effective in achieving expected levels of emissions reductions	If the proposed interventions do not lead to a measurable and sustainable decrease in emissions the REDD demonstration will be of limited use.	2	4	H	Assess existing interventions, conduct research as appropriate, and trial a range of interventions. Thoroughly study, monitor, and evaluate all interventions to capture knowledge of value regardless of outcomes.
10. Lack of capacity to implement interventions on a large-scale to international standards	It may not be possible to undertake the desired scope of works, limiting the effectiveness of the interventions and REDD demonstration.	3	4	H	Identify roles and responsibilities of different stakeholders, identify the capacities needed to implement or support the implementation of the REDD demonstration, and provide capacity building as required. Manage expectations about the geographic scope that the KFCP can cover with limited resources.
12. UNFCCC meetings make limited progress on, or	Failure to reach agreement on how REDD might be included in a future international climate framework,	2	4	H	Ensure the KFCP has a direct link to national and international organisations working on REDD and ensure a

Potential Risk	Potential Impact	Assessment			Preliminary Mitigation Strategy
		L	C	R	
provide little support for, the inclusion of REDD in a post-2012 framework to address climate change.	may reduce the incentive to proceed with the REDD demonstration (although there may still be sufficient incentive to proceed on the basis of environmental and poverty alleviation objectives).				two-way flow of information.

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