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STRATEGIC ENVIRONMENTAL AND SOCIAL ASSESSMENT (SESA)

MINISTRY OF ENVIRONMENT AND FORESTRY

EAST KALIMANTAN PROVINCE

REPUBLIC OF INDONESIA

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LIST OF ACRONYMS

ADB	Asian Development Bank
AMAN	Indigenous Peoples' Alliance of the Archipelago (*Aliansi Masyarakat Adat Nusantara*)
AMDAL	Environmental Impact Assessment (*Analisis Mengenai Dampak Lingkungan*)
APBD	Provincial/District Budget Allocation for Development (*Anggaran Pendapatan Belanja Daerah*)
APBN	National Budget Allocation for Development (*Anggaran Pendapatan Belanja Nasional*)
APL	Other Use Areas *(Area Penggunaan Lain*)
ATR/BPN	Ministry of Agrarian and Spatial Plan *(Kementerian Agraria dan Tata Ruang/Badan Pertanahan Nasional)*
Bank	World Bank
BAPPEDA	Development and Planning Agency at Provincial/District Level (*Badan Perencanaan Pembangunan Daerah*)
BAU	Business as usual
BDLHK	Forestry and Environment Education and Training Agency (*Balai Diklat Lingkungan Hidup dan Kehutanan*)
BI	Bank Indonesia
BIOMA	Man and Biosphere Foundation (*Yayasan Biosfer dan Manusia*)
BKSDA	Conservation of Natural Resources Agency (*Balai Konservasi Sumber Daya Alam*)
BLU	Badan Layanan Umum
BMP	Best Management Practice
BP	Bank Policies
BPDASHL	Watershed and Protected Forest Management Authority (*BalaI Pengelolaan Daerah Aliran Sungai dan Hutan Lindung)*
BPN	National Land Agency (*Badan Pertanahan Nasional)*
BPSKL	Balai Perhutanan Sosial dan Kemitraan Lingkungan
BRG	Peat Restoration Agency *(Badan Restorasi Gambut)*
BSM	Benefit Sharing Mechanism
CBFMMS	Community-based Fire Management and Monitoring System
CO_2	Carbon Dioxide

CO_2e	Carbon Dioxide equivalent
COP	Conference of the Parties
CSF	Center for Social Forestry University of Mulawarman
CSO	Civil Society Organizations
DD	Village Allocated Fund (*Dana Desa*)
DDPI	Regional Council on Climate Change *(Dewan Daerah Perubahan Iklim)*
DG	Directorate General
DGCC	Directorate General of Climate Change Mitigation
DG PHPL	Directorate General of Sustainable Production Forest Management (*Direktorat Jenderal Pengelolaan Hutan Produksi Lestari)*
DG PKTL	Directorate General of Forest Planology and Environmental Regulation (*Direktorat Jenderal Planologi Kehutanan dan Tata Lingkungan)*
DGCC	Directorate General of Climate Change Mitigation (*Direktorat Jenderal Pengendalian Perubahan Iklim)*
DNS	Debt for Nature Swap
DPMD/K	District Community and Village Development Agency (*Dinas Pemberdayaan Masyarakat Desa/Kampung di Kabupaten*)
DPMPD	Provincial Community Empowerment and Village Government Agency (*Dinas Pemberdayaan Masyarakat dan Pemerintahan Desa di Provinsi)*
DPMPTSP	Provincial Investment and Integrated Licensing Service (*Dinas Penanaman Modal dan Perizinan Terpadu Satu Pintu*)
DPR-D	Regional (Provincial/District) House of Representatives (*Dewan Perwakilan Rakyat Daerah*)
EBA	Ecological Biodiversity Approach
ENSO	El Niño – Southern Oscillation
ER	Emissions reductions
ERP	Emissions Reduction Program
ERPA	Emission Reductions Payment Agreement
ERPD	Emission Reduction Program Document
ERPIN	Emission Reduction Program Idea Note
ESMF	Environmental and Social Management Framework
FCPF	Forest Carbon Partnership Facility
FCPF-CF	Forest Carbon Partnership Facility – Carbon Fund

FGD	Focus group discussion
FGRM	Feedback and Grievance Redress Mechanism
FIP	Forest Investment Program from World Bank
FMT	Facility Management Team
FMU	Forest Management Unit (*Kesatuan Pengelolaan Hutan*)
FOERDIA	Forestry and Environmental Research Development and Innovation Agency of the Government of Indonesia
FORCLIME	Forests and Climate Change Programme
FPIC	Free, Prior and Informed Consent
F-REL	Forest Reference Emission Level
GCF	Governor's Climate and Forest Task Force
GFW	Global Forest Watch
GGGI	Global Green Growth Institute
GHG	Greenhouse gases
GIS	Geographic Information System
GoI	Government of Indonesia
GDP	Gross Domestic Product
GUP	Conflicts in plantation area (*Gangguan Usaha Perkebunan*)
ha	Hectares
HCV	High Conservation Value
HCVF	High Conservation Value Forest
HGU	Cultivation rights *(Hak Guna Usaha)*
HKm	Community forestry *(Hutan Kemasyarakatan)*
HTI	Industrial timber plantation (*Hutan Tanaman Industri*)
HTR	Community timber plantation (*Hutan Tanaman Rakyat*)
HuMa	Society of Law Reform based on Community and Ecology (*Perkumpulan untuk Pembaharuan Hukum Berbasis Masyarakat dan Ekologis*)
IBA	Important Biodiversity Area
IFC	International Finance Corporation
INCAS	Indonesian National Carbon Accounting System
Infokom	Information and Communication Agency (*Dinas Informasi dan Komunikasi*)

IPCC	Intergovernmental Panel on Climate Change
IPM	Integrated Pest Management
IPPF	Indigenous Peoples Planning Framework
ISFL	BioCarbon Initiative for Sustainable Forest Landscape
ISO	International Organization for Standardization
ISPO	Indonesian Sustainable Palm Oil
IUP	Mining permits (*Izin Usaha Pertambangan*)
IUPHHK-HA	Natural forest concessions (*Izin Usaha Pemanfaatan Hasil Hutan Kayu – Hutan Alam*)
IUPHHK-HT	Timber plantation companies (*Izin Usaha Pemanfaatan Hasil Hutan Kayu – Hutan Tanaman)*
Kanwil BPN	Provincial Land Agency (*Kantor Wilayah Badan Pertanahan Nasional*)
Kaltim	East Kalimantan (*Kalimantan Timur*)
KAT	Isolated Indigenous Community (*Komunitas Adat Terpencil*)
KBA	Key Biodiversity Areas
KBK	State forest area *(Kawasan Budidaya Kehutanan)*
KFCP	Kalimantan Forests and Climate Partnership
Keppres	Presidential Decree (*Keputusan Presiden*)
Kesbangpol	Office for National Unity and Politics
KLHS	Strategic Environmental Assessment (*Kajian Lingkungan Hidup Strategis*)
KMIS	Knowledge Management and Information System
KPH	Forest Management Unit (*Kesatuan Pengelolaan Hutan)*
MAASP	Ministry of Agrarian Affairs and Spatial Planning
MHA	Indigenous peoples *(Masyarakat Hukum Adat)*
MoEF	Ministry of Environment and Forestry (*Kementerian Lingkungan Hidup dan Kehutanan*)
MoF	Ministry of Finance (*Kementerian Keuangan*)
MoU	Memorandum of Understanding
MoHA	Ministry of Home Affairs
MPWH	Ministry of Public Works and People's Housing (*Kementerian Pekerjaan Umum dan Perumahan Rakyat*)
MP3EI	Masterplan for Indonesia's Economic Development Acceleration (*Masterplan*

	Percepatan dan Perluasan Pembangunan Ekonomi Indonesia)
MRV	Monitoring, Reporting, and Verification
MT	Metric Ton equal to 1000 kg
MusrenbangDes	Village Development Plan Forum (*Musyawarah Perencanaan Pembangunan Desa*)
NDC	Nationally Determined Contribution
NFMS	National Forest Monitoring System
NGO	Non-Governmental Organizations
NTFP	Non-timber Forest Product
OP	Operational Policies
P3SEKPI	Center for Social Economic Forest Policy and Climate Change (*Pusat Penelitian dan Pengembangan Sosial Ekonomi Kebijakan dan Perubahan Iklim)*
PAD	Provincial/district revenue (*Penadapatan Asli Daerah)*
PCI	Principle Criteria Indicator
Perpres	Presidential Regulation (*Peraturan Presiden*)
Pergub	Governor Regulation (*Peraturan Gubernur*)
PERDA	Local Provincial/District Regulation (*Peraturan Daerah*)
PF	Process Framework
PHPL	Sustainable Forest Management (*Pengelolaan Hutan Produksi Lestari*)
PIAPS	Indicative Map on Social Forestry (*Peta Indikatif dan Areal Perhutanan Sosial)*
PIPPIB	Moratorium on licenses (*Peta Indikatif Penundaan Pemberian Izin Baru*)
PNPM	National Program on Community Empowerment (*Program Nasional Pemberdayaan Masyarakat*)
PMP	Pest Management Plan
PP	Government Regulation (*Peraturan Pemerintah)*
PPTKH	Acceleration for Land Conflict within Forests Area (*Percepatan Penyelesaian Tanah dalam Kawasan Hutan*)
PRA	Participatory Rural Appraisal
Program	Emission Reduction Program
PRISAI	Indonesia's Principle, Criteria and Indicators of Safeguards (*Prinsip, Kriteria, Indikator Safeguards Indonesia*)
PSKL	Social Forestry and Environmental Partnership (*Perhutanan Sosial dan Kemitraan Lingkungan)*

PSP	Permanent Sample Plots
PT	Private Entity (*Perseroan Terbatas*)
PTSL	Complete and Systematic Land Registration (*Pendaftaran Tanah Sistematis Lengkap*)
RAD GRK	Regional Action Plan for Greenhouse Gas Emission Reduction (*Rencana Aksi Daerah Penuruan Emisi Gas Rumah Kaca*)
REDD+	Reducing Emissions from Deforestation and Forest Degradation
REL	Reference Emission Level
RIL	Reduced Impact Logging
RKU	Forestry work plans (*Rencana Kerja Usaha*)
RPHJP	Long-term Forest Management Plan (*Rencana Pengelolaan Hutan Jangka Panjang*)
RPHJPendek	Annual Forest Management Plan (*Rencana Pengelolaan Hutan Jangka Pendek*)
RPJMD	Regional Medium-term Development Plan (*Rencana Pembangunan Jangka Menengah Daerah*)
RPPLH	Environmental Protection and Management Plan (*Rencana Perlindungan dan Pengelolaan Lingkungan Hidup*)
RSPO	Roundtable on Sustainable Palm Oil
RTRW	Spatial Planning (*Rencana Tata Ruang Wilayah*)
SEA	Strategic Environmental Assessment
SEKDA	Governor/Provincial Secretariat (*Sekretaris Daerah*)
SES	Social and Environmental Standard
SESA	Strategic Environmental and Social Assessment
SFM	Sustainable Forest Management
SIGAP	Community Inspirational Action for Change *(Aksi Inspiratif Warga untuk Perubahan)*
SIK	Forestry Information System (*Sistem Informasi Kehutanan*)
SIS	Safeguard Information System
SIGAP	Community Inspirative Action Towards Changes (*Aksi Inspiratif Warga untuk Perubahan*)
SNI	Indonesia National Standard (*Standar Nasional Indonesia*)
SOP	Standard Operation Procedure
SPPL	Commitment Letter for Environmental Management (*Surat Pernyataan Pengelolaan Lingkungan*)
SRAP	Provincial Strategy and Action Plan *(Strategi & Rencana Aksi Provinsi)*

STRANAS	National Strategy of Emission Reduction
TFCA	Tropical Forest Conservation Agreement
TNC	The Nature Conservancy
ToR	Terms of Reference
TORA	Agrarian Reform Program (*Tanah Obyek Reforma Agrarian)*
TSED	Tropical Environment and Sustainable Development, Mulawarman University
UN	United Nations
UNFCCC	United Nations Framework Convention on Climate Change
UNDRIP	United Nation Declaration of Rights for Indigenous People
UNMUL	University of Mulawarman (*Universitas Mulawarman*)
UNTAG	University of 17 August 1945 Samarinda
UKL/UPL	Environment Management Action and Monitoring Plan (*Upaya Pengelolaan Lingkungan/Upaya Pemantauan Lingkungan*)
UPT	Technical Implementation Units *(Unit Pelaksana Teknis)*
UPTD	Local/Regional Technical Implementation Units (*Unit Pelaksana Teknis Daerah)*
USD	United States Dollar
UU	Laws (*Undang-Undang*)
UUD	Basic Laws/National constitution (*Undang-Undang Dasar*)
WWF	World Wide Fund for Nature

1.0 INTRODUCTION

1.1 BACKGROUND

The Forest Carbon Partnership Facility (FCPF)[1] has provided the Government of Indonesia (GoI) with a grant to support the preparation of REDD+ (Reducing Emissions from Deforestation and Forest Degradation) implementation. The grant, together with other funding sources, is used to improve Indonesia's readiness in implementing REDD+ activities. In January 2017, Indonesia's Readiness Package was submitted and endorsed by the FCPF Participants Committee[2].

The Emission Reduction Program (hereafter ERP) will advance the implementation of REDD+ at the national level, and thus contribute to the achievement of nationally and internationally significant emissions reductions. This Program is also expected to assist Indonesia in achieving its climate resilience targets and international commitments.

The GoI has made significant international commitments to reduce Indonesia's greenhouse gas (GHG) emissions and recognizes that the primary source of these emissions is the land use and forestry sector. At the Conference of Parties (COP) meeting in Paris in 2015, the GoI pledged to reduce its GHG emissions by 41% by 2030 with international assistance (29% with its own resources). According to Indonesia's nationally determined contribution (NDC), submitted in 2016 under the Paris Climate Agreement, emissions from the forestry sector, including peat fires, made up 49% of national emissions in 2010. For Indonesia to reach its commitment of a 41% reduction below business as usual (BAU) emissions in 2030, it will need to decrease emissions by 1,082 million MT CO_2e (metric tons of carbon dioxide equivalent), with 60% of this target expected to come from the forestry sector.

Indonesia has made significant progress toward national REDD+ readiness. Following COP13, Indonesia has been an active participant in REDD+ negotiations and in important international REDD+ programs, including the FCPF Readiness Fund and the United Nations (UN)-REDD Program. In 2010 the country signed the above-mentioned bilateral agreement with Norway. Significant progress has been made in developing the necessary enabling environment for REDD+. Through the resources provided under the FCPF Readiness Fund since 2010[3], Indonesia has made important progress and effectively engaged with the international community on REDD+. In September 2017, Indonesia presented its readiness package to the Participants Committee of the FCPF, which is an important and internationally recognized milestone towards REDD+ implementation centered around a comprehensive assessment of progress. The FCPF Participants Committee (representing 47 REDD+ countries and 29 donor countries) commended Indonesia for the progress made to date and encouraged Indonesia to take important steps towards REDD+ implementation at the sub-national level. This includes strengthening the framework to mitigate potential environmental and social risks

[1] The FCPF was created in 2008 as a multi-lateral initiative managed by the World Bank to promote REDD+ readiness in partner countries and to pilot an incentive mechanism that would leverage results-based payments for REDD+ at scale (having pioneered such carbon finance at the project level for more than 10 years).

[2] The following document shows Indonesia's overall progress toward readiness for REDD+ https://www.forestcarbonpartnership.org/sites/fcp/files/2017/Sep/FCPF%20Indonesia%20R%20Package%20-%20Final%20revised%20July%2028%20version.pdf.

[3] The World Bank signed two grant agreements to support Indonesia's REDD+ readiness. The first grant (USD 3.6 million from 2013 to 2016) focused on the analysis of drivers of deforestation, strengthened the forest monitoring system and supported a strategic environmental and social assessment for REDD+. A second grant (USD 5 million from 2016 to 2019) provides resources to complete national REDD+ readiness and to strengthen sub-national implementation capacity in two priority provinces, East Kalimantan and Jambi.

associated with REDD+ implementation and the effective implementation of the ongoing policy reform process in relation to forests.

While continuing to advance the national framework, Indonesia is now shifting its focus towards implementation of REDD+ programs at the provincial level, which has the potential to leverage significant payments for emissions reductions (ER) if successfully implemented. Work at the jurisdictional (provincial) level is aligned with Indonesia's REDD+ readiness process and decentralization efforts, and provides an opportunity to demonstrate how policies, programs and systems can be strengthened to reduce emissions and improve natural resource-based livelihoods. In terms of scope, implementation through the provinces facilitates coordination of district-level activities, while providing a sufficiently large accounting area with sizeable potential emissions reductions.

Under the FCPF support, the GoI has proposed a national approach sub-national implementation on emission reduction program that focuses on the East Kalimantan Province. East Kalimantan, together with Jambi Province in central Sumatra, are currently being proposed for financing under the BioCarbon Initiative for Sustainable Forest Landscape (ISFL)[4]. Together these areas form 8.8% of Indonesia's total forest area and therefore could potentially contribute a significant reduction of land-based emissions.

The East Kalimantan national approach sub-national implementation on Emission Reduction Program builds on the substantial commitments of the GoI and the Government of the Province of East Kalimantan to reducing emissions from deforestation and forest degradation. The ERP aims to reduce deforestation and forest degradation in an area that covers the entire 12.7 million hectares (ha) that comprise the Province of East Kalimantan. Approximately 54% of that area remains covered by tropical forests, which are home to one of the Asia's greatest biodiversity spots. Forests in this region are also well-known for being used and support numerous indigenous and other local communities livelihood. More than 10% of East Kalimantan's remaining forest was lost over the past decade, and this was mainly triggered by the expansion of palm oil plantations, timber plantations, and mining, as well as by other drivers. Besides loss of habitat and other key ecosystem services, deforestation and degradation have led to emissions of CO_2 averaging 17,3 million tCO_2e per year.

The ERP will address deforestation by addressing underlying governance issues through policy reforms, by engaging with palm oil and forestry companies, and by engaging with local communities. The ERP is expected to lead to emission reductions of (gross) 86.3 million tCO_2e over the five-year ERPA period (2020–2024). Around 73% of this is expected to come from reduced deforestation within areas allocated to estate crops.

The ERP was developed through a participative process involving all relevant stakeholders. Stakeholders in East Kalimantan helped identify the local drivers of deforestation, which are the basis of the ER activities proposed by this program. The proposed ERP is also closely linked to Indonesia's and East Kalimantan's REDD+ plans, which are the outcomes of a comprehensive consultation process.

The activities of the ERP are aligned with East Kalimantan's green development plans and associated policies, and this will ensure long-term impact and reduce the risk of future reversal. In addition, as

[4] BioCarbon ISFL is designed to expand the scope for emissions reductions from forests to the wider landscape (i.e., to include agriculture and pastures). A key objective of the ISFL is to support countries in decoupling commodity production from emissions. Currently, the Jambi Province is being proposed as a pilot jurisdiction for BioCarbon ISFL.

Indonesia's first jurisdictional REDD+ program, the ERP will help accelerate the national REDD+ program, supporting future emission reductions beyond the accounting area.

The overall cost of the ERP may exceed USD 90.7 million for five years period. Sources of funding will come mainly from government budget (75%), with the remaining fund is expected from the private sector contribution (21%) and non-government agencies partners (4%). It is expected that the ERP will generate USD 110 million in performance-based payments through the emission reductions trade-off to the FCPF Carbon Fund. In addition to emission reductions, the ERP will generate significant non-carbon benefits include the protection of biodiversity and other ecosystem services, sustaining livelihood of local communities, reducing conflict over land ownership, and improved recognition of indigenous land claims.

1.2 OBJECTIVE

All countries participating in the FCPF Readiness Mechanism are required to perform a strategic environmental and social assessment (SESA) to assess the potential impacts from national REDD+ programs and policies, formulate alternatives and mitigation strategies, and enhance the decision-making process around the design of the national REDD+ framework. The SESA is considered to be an adequate tool for this purpose, as it offers a platform for consultations with a broad range of national and sub-national stakeholders, including potentially affected communities, to integrate social and environmental concerns into the upstream policy-making process. Since East Kalimantan has been selected as a pilot province through FCPF support, the SESA outcomes reflect:

- Environmental and social risks and concerns, and the extent to which such risks and concerns have been integrated into the development and implementation processes of REDD+ and the ERP;
- Consultations and engagement with relevant stakeholders, and how their views have informed the decision-making process related to REDD+ and the ERP;
- Recommendations for addressing gaps in relevant policy and legal frameworks, as well as institutional capacity to manage environmental and social impacts/risks associated with REDD+ and the ERP; and
- Measures to leverage positive benefits that may accrue from the proposed activities under the ERP.

The SESA forms the basis for an integrated Environmental and Social Management Framework (ESMF), which will guide potential investments in the proposed emission reduction programs toward compliance with World Bank safeguards policies. The ESMF sets out the principles, guidelines, and procedures to assess environmental and social risks and proposes measures to reduce, mitigate, and/or offset potential adverse environmental and social impacts and enhance positive impacts and opportunities of said projects, activities, or policies/regulations. The ESMF is presented as a standalone document, with reference to the SESA.

1.3 SCOPE OF THE SESA

The SESA represents a consultative process under REDD+ readiness at both national and provincial levels to ensure that environmental and social concerns are integrated into the decision-making process around the design of REDD+ framework.

As guided by the Terms of Reference, the SESA was developed to address the following aspects:

- Analysis of strategic context of REDD+. This was carried out through identification and shortlisting of issues to determine drivers and root of deforestation;
- Analysis of environmental and socio-cultural characteristics in priority emission reduction locations in East Kalimantan Province. This was carried out by analysing secondary data (from reports, lessons learned, and publications) relevant to the REDD+ preparation to date and verified through a series of public consultations;
- Stakeholder analysis through interviews and focus group discussions with key stakeholders, including community representatives in East Kalimantan Province. An initial grouping of stakeholders is as follows:
    - Central government agencies;
    - Regional (provincial and district) governments;
    - Academics and regional councils;
    - Non-government organisations;
    - Private companies and association; and
    - Community and/or customary (*Adat*) representatives.
- Assessment of legal and institutional frameworks. A gap analysis is provided to assess the GoI's legal and institutional frameworks and capacity and the safeguard requirements under the ERP;
- A scenario analysis in sample priority areas; and
- Policy implications and proposed recommendations, based on the basis of existing analyses of strategic issues, environmental and social characteristics, stakeholders, legal and institutional aspects, the SESA proposed policy, and legal and technical recommendations to address potential risks and impacts. Such recommendations are further elaborated on in the ESMF developed under the ERP.

2.0 APPROACH

The overall framework of SESA development for East Kalimantan Province is aligned with Government Regulation (*Peraturan Pemerintah* [PP]) No. 46/2016 on Strategic Environmental Assessment (SEA). Although there is no spesfic method to conduct a SESA, it has been agreed that under the ERP, the overall SESA process should include the following elements:

- Iterative diagnostic consultative processes and analytics on socio-economic, environmental and social aspects of REDD+ readiness, including assessing existing capacities and gaps to address identified environmental and social issues;
- Consultations with different stakeholders, identifying various views, perceptions and concerns, as well as identifying any exclusion of relevant stakeholders during the ERP preparation; and

- Identification of relevant mitigation measures to address identified environmental and social issues, as well as provincial and district institutional arrangements to address safeguards.

Each of the above key elements and processes are further described in the following sections.

2.1 DATA COLLECTION

Data were obtained through primary and secondary data analyses from various sources. Primary data sources include focus group discussions (FGDs) and semi-structured interviews with stakeholders' representatives. Additionally, the primary data, as well as key assumptions and findings from the above FGDs and interviews, were verified through a series of public consultations, which also involved community representatives. A record of these series of consultations process is appended in Appendix A2.

Secondary data were collected from various research projects and assessments, as well as from previous consultations and analyses provided by the East Kalimantan working group on REDD+. Both primary and secondary data analyses were used to inform the screening and scoping processes for the SESA.

Data and information available in the East Kalimantan's medium-term development plan (RPJMD), as well as spatial data analysis (i.e., land cover, forest fire, logging, production forest and palm oil concessions), were specifically collected to support the analysis of sustainable development issues. In accordance with these issues, afformentioned data were collected from Berau and Mahakam Ulu districts as representative of East Kalimantan. The two districts were selected due to several factors as describe below:

- Berau District. This district represents relevant development issues related to palm oil plantations and forest management from the local forest management unit (FMU; *Kesatuan Pengelolaan Program* [KPH]). Berau is also the location of previous carbon program implementation (e.g., Berau Forest Carbon Program) and therefore can potentially generate a lot of lessons learned; and
- Mahakam Ulu. This remote district represents most of the intact forest in East Kalimantan and potential access restriction issues due to large portion of protection forest area as managed by FMU (KPH Mook Manor Bulatn, Batu Ayau and Batu Rok).

Secondary data sources consisted of:

- Existing and valid regulations and laws related to forestry, social, and environmental management in Indonesia;
- Capacity for performing environmental and social management;
- Data and information used in developing the ERP Document (ERPD); and
- Results of research and studies that have been validated by scientific communities and/or consensus among key stakeholders.

2.2 SCREENING AND SCOPING FOR THE SESA

2.2.1 Formulation of Drivers of Deforestation and Forest Degradation

Following the nomination of East Kalimantan as a pilot province for implementation of REDD+ program, data and information lead to the potential drivers of deforestation and forest degradation were collected through a series of consultative meetings with local stakeholders between December 2015 and October 2018 (Section 3.5 and Appendix A2). These series meetings confirmed and identified seven main drivers of deforestation and forest degradation in East Kalimantan that is:

- Timber plantations;
- Estate crops;
- Mining;
- Subsistence agriculture;
- Unsustainable logging practices;
- Forest and land fires; and
- Aquaculture.

Spatial data analyses during ERP preparation provides more clear evidence to confirm the above-mentioned drivers and at the same time provides information on locus and scale. Spatial data analysis was carried out in two steps. The first step involved identifying the recent land cover of the areas (2016) that had been deforested since 2006. The second step of the analysis involved identifying the likely drivers in the areas where the land cover itself did not point to a specific land use (i.e., on the significant areas of shrub and bare land which made up 49% of the deforested area).

The above spatial analyses were then followed up and verified through consultations with key stakeholders to understand the underlying causes of deforestation and forest degradation. On the basis of the above information, planned actions and interventions to address the identified drivers as well as underlying causes were proposed. The detailed analysis can be found in Chapter 4 of the ERPD.

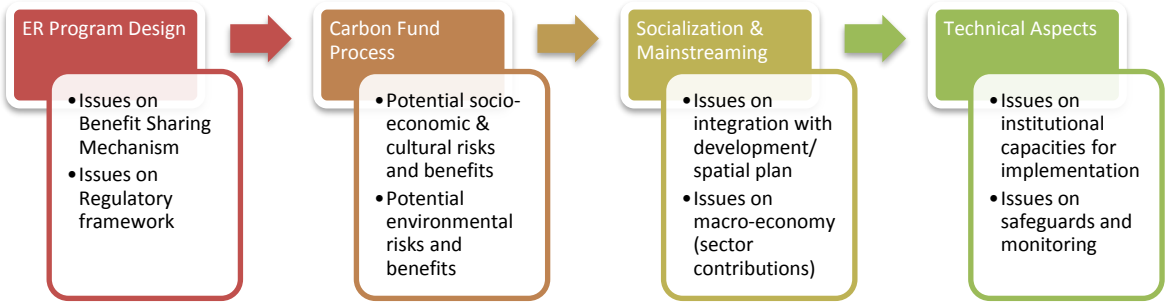
In parallel to the ERPD development, an assessment of the environmental and social aspects of each of the proposed actions and interventions is currently ongoing. Progress to date is documented in this report. A summary of consultations and stakeholder engagement for ERP preparation is appended in Appendix A2 of the SESA.

2.2.2 Identification of Environmental and Social Issues under ERP

A long list of environmental and social issues was established through data analysis and consultations with relevant stakeholders. This process was then followed by scoping and screening of the most relevant issues under each planned action and intervention under the ERP to generate a final list of environmental and social issues that will be addressed through the ESMF. The key themes during the consultation processes are presented in Figure 1. Additionally, the need for increased capacity for REDD+ implementation (i.e., safeguards for addressing environmental and social risks)

were identified during the discussions on mainstreaming the Carbon Fund (2016) and the evaluation of readiness (2017). The results of recent FGDs and interviews in East Kalimantan have also been incorporated into the analysis below, while the summary of the consultation process is provided in Section 3.5.

Figure 1 Summary of themes in identification of key issues.



Several consultations were carried out to identify the priority environmental and social issues/risks, drivers of deforestation, and ultimately the underlying causes of drivers for deforestation and forest degradation. On the basis of consultations and scoping processes, the following issues remain prominent:

- Potential key environmental risks include: loss of natural habitats and key biodiversity species at areas designated as non-forest and/or through indirect introduction of invasive species; contamination of soil and water; and health risks associated with the use of pesticides and as result of poor waste management practices. successes in reducing impacts on forests could lead to displacements of these impacts to other areas; and
- Potential key social risks include: risks associated with activities conducted in areas under existing and potential conflicts and/or disputes; those conducted in areas with overlapping boundaries and/or claims between customary and common/formal laws and processes; and those in areas with competing claims especially with concessions. Livelihoods impacts include: displacement due to license revocation and/or bans on timber logging, oil palm plantation and artisanal mining activities; impacts to livelihood of indigenous peoples; loss and/or damage to physical cultural resource (e.g., Sangkulirang Mangkalihat); community and health risks due to fire prevention and suppression activities; lack of awareness; inadequate management capacity and participation of community in managing social forestry and sustainable aquaculture; institutional capacity constraints to manage potential environmental and social risks at field level, as well as gender inequalities and social exclusion.

Seven main drivers of deforestations in East Kalimantan are closely associated with the following key issues:

1. Rights to land and territory (timber plantation, estate crops, mining, subsistence agriculture);
2. Rights to use of natural resources (subsistence agriculture, timber plantations, estate crops and mining);
3. Recognition and appreciation of diversity of traditional knowledge (subsistence agriculture, forest and land fires);

4. Forest Governance (timber plantation and un-sustainable logging practices);
5. Prevention of leakage (estate crops, timber plantation, forest and land fires);
6. Prevention of Reversals (forest and land fires, aquaculture, unsustainable logging practices);
7. Transparency and accountability (timber plantation, estate crops, mining);
8. Conservation of biodiversity and ecosystem services (timber plantation, estate crops, mining; forest and land fires)
9. Improving people's welfare (subsistence agriculture and aquaculture);
10. Community participation of customary/local or vulnerable/marginalized groups including gender issues (subsistence agriculture and aquaculture); and
11. Benefit sharing (timber plantation, estate crops, mining, subsistence agriculture, aquaculture).

These key issues are used as parameters in the scenario analysis to identify environmental and social risks associated with ERP implementations. Environmental and social risks identified in this process include:

1. Conflicts and Disputes, especially tenurial conflict in oil palm/plantation sector due to HCV allocation that may affect both concession holders, workers and local communities;
2. Access Restrictions and Impacts on Livelihoods changes and displacement due to forest and/or protected area delineation;
3. Impacts to Indigenous Peoples, as most of the areas under ERP already have customary designations;
4. Loss and/or damage to Physical and Cultural Resources due to the weak management within protected areas, forestry concessions, and expansion of plantation and mining;
5. Community Health and Safety Risks due to pollution from mining and plantation operations;
6. Lack of Awareness, Management Capacity and Participation of key stakeholders (further discussed in Sub-chapter 2.3 on stakeholder analysis);
7. Institutional Capacity Constraints to Manage Potential Environmental and Social Risks;
8. Gender Inequalities and Social Exclusion;
9. Loss of Natural Habitats and Biodiversity, especially in the habitat of ten endangered species of East Kalimantan (including orangutan and proboscis monkey), and;
10. Contamination and Pollution from mining effluent and harmful pesticide uses; and
11. Leakages or Displacements and reversals due natural disasters and anthropogenic impacts such as forest fires.

2.3 STAKEHOLDER ANALYSIS

2.3.1 Stakeholder Identification

The approach that has been adopted for the identification of stakeholders has been mainly through self-selection. At the national level, the Ministry of Environment and Forestry (MoEF) coordinates with relevant ministries and agencies to nominate relevant stakeholders for consultations. At the sub-national level, such self-selection process has been supported by local agencies. Indigenous Peoples have been engaged through civil society organizations (CSOs), as well as through Indigenous Peoples' institutions at the village level.

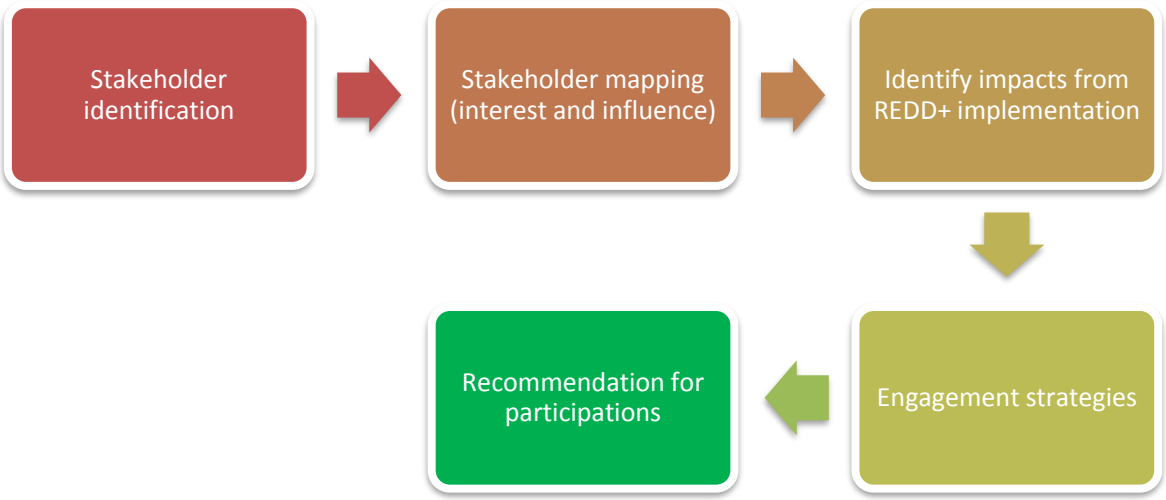
Various channels have been used to reach targeted entities, and media types have included: videos, printed materials, radio, and online publications. Strategies to reach local stakeholders, including vulnerable groups, involved coordinating with local government agencies and non-governmental organizations (NGOs) which provide services to these groups, establishing provincial and district REDD+ working groups, and creating climate change networks at the local level.

An analysis of stakeholders' influence and impact (both positive and negative) on the ERP is provided in Section 2.3.2 on Stakeholder Mapping.

2.3.2 Stakeholder Mapping

Stakeholders consisting of government and non-government agencies at the national, provincial, district and grass root levels are identified in Chapter 1 of the ERP Document. At this point, further analysis of stakeholders was conducted to refine analyses of environmental and social aspects as well as their potential influencer. This is described in in Figure 2 below.

Figure 2 Stakeholder mapping for the SESA process.



Based on the type of influencer, stakeholders may categorised into:

- Stakeholders that influence the implementation of the ERP may be further categorised into:
  - Positive influencer: stakeholders who support the ERP implementation. These include stakeholders who play an essential role for the success of ERP implementation;

- Negative influencer: stakeholders who can potentially oppose the ERP, and/or create constraints and/or barriers to the ERP implementation; and
- Neutral: stakeholders who are relevant to the ERP, but neither support nor constrain the ERP implementation.

- At the same time, stakeholders that potentially will get impact from ERP implementation are further categorised into the following:
  - Positively impacted: stakeholders who potentially receive benefits from the ERP. These include stakeholders who are involved in the implementation;
  - Negatively impacted: stakeholders who can potentially bear the risks and receive negative consequences from the ERP implementation; and
  - Neutral: stakeholders who are relevant to the ERP implementation, but neither receive benefits nor face adverse impacts from the ERP implementation.

Furthermore, in the development of the SESA, stakeholders who hold relevant information on the ERP were also engaged. These include those who were involved in formulating the ERPD and managing the knowledge/data relevant to the ERP.

It is important to note that stakeholder categorization is subject to change due to various possible factors that may affect perception, the nature of impacts, and the level of interest and support. This stakeholder analysis will continue to be revisited as the ERP is being prepared, and a stakeholder engagement strategy will be developed as part of the ERP implementation.

In conjunction with the categorization above, an assessment of two main groups of stakeholders (i.e., stakeholders who could influence the ERP and those who would benefit from the ERP) was done to assess which roles will create the most influence, as well as feel the most impact (benefits or loss), from ERP implementation.

2.3.2.1 Relevant Stakeholders in ERP Implementation

Government Stakeholders

Government stakeholders relevant to the ERP implementation include:

- **Central Government**: MoEF (Directorate General of Climate Change Mitigation [*Direktorat Jenderal Pengendalian Perubahan Iklim* (DGCC)], Directorate General of Sustainable Production Forest Management [*Direktorat Jenderal Pengelolaan Hutan Produksi Lestari* (DG PHPL)], Directorate General of Forest Planology and Environmental Regulation (*Direktorat Jenderal Planologi Kehutanan dan Tata Lingkungan* (DG PKTL)] and Center for Social Economic Forest Policy and Climate Change [*Pusat Penelitian dan Pengembangan Sosial Ekonomi Kebijakan dan Perubahan Iklim* (P3SEKPI)] as the host for Carbon Fund and Bio Carbon Fund) and Ministry of Finance (MoF) for negotiating and establishing the ERP agreement. MoF plays a crucial role in formulating the ERP's benefit sharing mechanism (BSM) and therefore, needs to be engaged prior to and throughout ERP implementation.

  Central government agencies are positive influencers that are essential for ensuring the ERP implementation. Additionally, DGCC and P3SEKPI represent stakeholders who are key to ERP's knowledge management. DG PHPL play roles on the implementation of Reduced-

Impact Logging and Sustainable Forest Management in general while DG PKTL plays on the processing any license permit over forest area including mining in forestt area.

As government institution body, MoEF (DGCC, DG PHPL, DG PKTL and P3SEKPI) roles in the ERP are most likely persist throughout the project period 2020-2024. The minister itself may change for every 5 years following the policy of new elected president but ERP program will be continued as Indonesia commitment to international community especially FCPF-CF .

Policy Influence at the central government level may also include other ministries, such as: Agrarian and Spatial Planning (for land reform and spatial plans), Energy and Mineral Resources (mining sector), Coordinator of Ministry under Economic Affairs, Ministry of Village and Under-Developed Region (village fund allocation), Ministry of Agriculture (plantation sector), Ministry of Home Affairs (capacity building and governance aspects), and Ministry of Marine and Fishery (mangrove and aquaculture).

- **Provincial Government:** Development and Planning Agency (BAPPEDA), Forestry, Plantation, Fishery and Marine, Environment, Energy and Mineral Resources (Mining), Information and Communication Agency (*Infokom*), Governor/Provincial Secretariat (SEKDA) and Provincial Land Agency (*Kanwil* BPN) will involve the implementation of ERP. All of these provincial agencies (excluding *Infokom*) are positive influencers and are essential in ERP implementation. At the stage of the ERP preparation, Infokom may remain neutral, but upon engagement, these agencies may potentially play a crucial role in synchronizing various systems under the Program's FGRM, as well as in knowledge management. Additionally, SEKDA/Governor are currently positive influencers, as he or she determine the political conditions suitable for ERP implementation.

- **District Government**: BAPPEDA, Environmental Agency, Estate Crops Agency, Community and Village Development Agency (DPMD/K) and District Land Agencies (*Kantor Pertanahan*) for implementation.

- **Village Government**: Village governments are proposed to be involved in managing forested areas in other use areas (APL), as well as in organizing aquaculture initiatives in the villages. In keeping with the practices of local communities and customary communities, the village government is crucial in the ERP implementation.

It is worth noting that there are jurisdictional issues in coordinating, mediating, and intervening in cases occurring in areas without clear designation (forestry, plantation, or mining) due to map discrepancies. Approach may require interventions by MoEF and ATR/BPN simultaneously, which can anly be facilitated by having an integrated cross-sectoral conflict resolution mechanims/FGRM.

Non-Government Stakeholders

Non-government stakeholders relevant with the ERP implementation consist of (but are not limited to):

- The Regional Council on the Climate Change (DDPI), national and regional forestry councils. These stakeholders act as positive influencers and are therefore essential for implementation of the ERP. DDPI, which is a key partner in the implementation of the ERP and represents the interests of the regional and local governments, university and civil society organizations, has been closely involved with the development of the East Kalimantan Environmentally Sustainable Development Strategy, the Strategy and Action Plan (SRAP) and the East

Kalimantan Master Plan for Climate Change (2015-2035). DDPI is also stakeholder relevant for knowledge management.

- NGOs/CSOs, which include World Wide Fund for Nature (WWF), The Nature Conservancy (TNC), Bioma, Forests and Climate Change Programme (FORCLIME), Global Green Growth Institute (GGGI), *Kerimapuri, Kawal Borneo, Prakarsa Borneo, Yayasan Bumi* and Indigenous Peoples' Alliance of the Archipelago (AMAN). These stakeholders have been involved in the development of the ERPD and therefore play a crucial role in providing technical support for the implementation and oversight of the ERP.

- University & Research Institute: Forestry Faculty, Fishery and Marine Faculty, Centre for Climate Change Study, Mulawarman University, Center for Social Forestry (CSF) Mulawarman University, Tropical Environmental and Sustainable Development (TESD) Mulawarman University, Center for Geospatial Information Infrastructure Development Mulawarman University. These stakeholders have been involved in the development of the ERPD and have provided scientific data to support the development of the ERP design. While these stakeholders may remain neutral since they are not implementing the Program, they may act as positive influencers and independent observer for the implementing agencies under the ERP.

- Working Groups: District REDD+, Green Economy, Timber Legality. These groups may act as positive influencers and watchdogs since they may provide tools, guidance and supervision to safeguard mechanisms and implementation. These groups may have relevant technical experts and experience, which is expected to strengthen the ERP implementation.

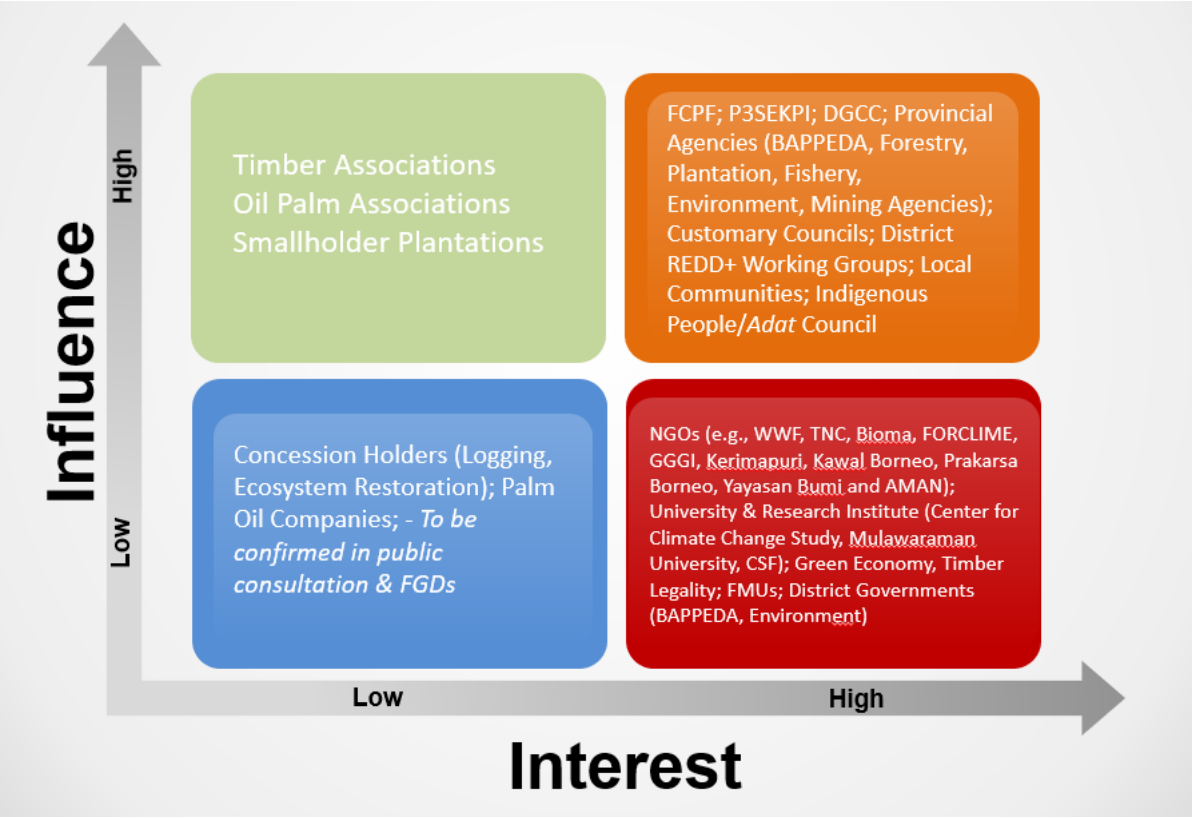
- Private sector: Estate crops and forestry companies are concession holders who are relevant to ERP implementation. The implementation of ERP will depend on the companies' cooperation (i.e., best management practices, high conservation value [HCV] allocation and social/gender inclusions).

- Associations: Palm oil associations, forest concession associations and labour associations will play an important role in encouraging companies to participate in the ERP. A specific example is supporting the implementation of Roundtable on Sustainable Palm Oil (RSPO) or Indonesian Sustainable Palm Oil (ISPO) standards.

- Local Communities: Local and/or indigenous people are key stakeholders in ensuring proper ERP implementation. In addition to their involvement in forestry and plantation sectors, local communities are addressed in the sustainable livelihood scenario (Component 4 of the ERP). Therefore, participation by local communities is essential in ERP implementation. Participation of the local communities needs to be preceded by free, prior and informed consent (FPIC).

- Relevant customary (*Adat*) Council: While this council is currently assessed as a neutral party, their stakeholder status may shift towards being a positive or negative influence, depending on engagement and implementation of the ERP. Depending on the process to obtain FPIC, *Adat* insitutions can be positive influencers if they agree to participate or they can oppose the program if such consent or engagement does not take place in a good faith.

Figure 3 Stakeholders Analysis based on Influence and Interest



The stakeholder analysis above has been informed by a series of stakeholder consultations during the SESA process. The Interest axis has used the following parameters, including incentive levels, potential interest for sustainable Natural Resource Management, institutional mandates and political will. Influence is measured against the ability of the above stakeholders to drive the REDD+ agenda, including policy and regulatory development and their enforcement.

Adat communities are categorized as high influence with potential high interest due to their livelihoods characteristics which rely on the health of the ecosystem and forests. In addition, recent policy development related to the Agrarian Reform has provided a platform for these communities to pursue recognition of their land and resource rights.

Adat councils are considered as a separate entity from village government due to the fact that the Adat communities of East Kalimantan are not bound to specific villages. One Adat community may have representations in two or more villages. Furhtermore, The Adat council has certain autonomy in governing the Adat communities; thus separating the Adat authority with the village government. Despite this segregation, Adat representatives in the villages are intensively involved in participatory planning and decision making at village levels.

Indonesian government sees that Adat communities are key stakeholder that should be acknowledged to reduce conflict. Following the President Instruction No. 1/2014, Ministry of Home Affairs (MoHA) issued regulation No. 52/2014 on the procedure for Adat recognition and protection. At

the provincial level, governor of East kalimantan also issued regulation No. 1/2015 describing more detailed on MoHA regulation as mentioned above. At this moment, there are four Adat communities had official recognition in East Kalimantan from distric government decree as regulated in Governor regulation No. 1/2015. These four Adat communities are the *Hemaq Beniung*, *Kekau*, and *Hemaq Pasoq* communities in the district of Kutai Barat (established by Kutai Barat District Regulation No. 9/2014) and the *Mului* community in Paser District (established by Paser District Head Decree No. SK.413.3/2018).

At this moment, the role of Adat has been considered to play a key role in conflict resolution. For this reason, more Adat communities will be formally recognized in the coming years, noting that there is a large variety of ethnic groups in the East Kalimantan province. The majority of these Adat communities are classified under the common denominator of Dayak. Most Dayak groups still maintain their distinct collective identities, preserve their own language (besides Bahasa Indonesia), and depend on agricultural subsistence for livelihoods. (e.g. swidden agriculture). In addition to Dayak groups, East Kalimantan is also home to several Malay communities (Kutai, Berau, Paser, Bajo) that would likely qualify as Indigeneous Peoples.

The co-existance between Adat community and village governments is strongly believed to promote collaboration for sustainable natural resource management. Most Adat community heads are often the eldest members of the community who have accumulated knowledge of values and systems over multiple generations. Some values such as traditional agriculture and hunting are still relevant nowadays for the promotion of sustainable natural resource management, which is currently being threatened by new commercial developments, such as mining and agriculture.

Regarding to gender aspects, Haug (2017) wrote in her article called “Men, Women, and Environmental Change in Indonesia: the Gendered Face of Development Among the Dayak Benuaq” published in the Austrian Journal of South-East Asian Studies volume 10 (1) may represent gender dimensions amongst local communities in East Kalimantan especially among Dayak Benuaq in West Kutai district. She wrote interesting facts that male and female roles are not significantly different in daily activities. Access and mobility is relatively similar, although certain modes of transportation are not accessible, such as engine-powered boats. Motorbikes are used by both men ad women. Women’s access to political spheres is relatively more restricted compared to men. Although there are no formal restrictions for both gender, and there are some outstanding female leaders, formal political leadership is mainly in the hands of men. Nowadays, women’s participation has improved in various political for such as village parliaments (*Badan Perwakilan Kampung*) or village meetings (*musyawarah kampung*).

The implementation of gender mainstreaming is integrated in emission reduction activities. Based on the Minister of Environment and Forestry Regulation No. P.31/MenLHK/Setjen/Set.1/5/2017 on Guidelines for the Implementation of Gender Mainstreaming in the Environment and Forestry, and East Kalimantan Province Regulation No. 2 of 2016 on Gender Mainstreaming in Regional Development, governance, development and services to the community, including activities related to emission reduction must be carried out with gender responsiveness. So that women are one of the important stakeholders in the implementation of the program. In addition, disability groups and other vulnerable groups are parties that are consulted and involved in implementing the emission reduction program, as in MoEF Regulation No. P.31/MenLHK/Setjen/Set.1/5/2017 and East Kalimantan Province Regulation No. 1 of 2018 on Protection and Fulfillment of the Rights of Persons with Disabilities.

The above stakeholder analysis, factoring in the nature of their potential impact (both positive and negative) and their level of interest in and influence over the ERP, is presented in **Error! Reference source not found.**. As the diagram demonstrates, positive influencers tend to be located in the upper portion of the diagram. Whereas those who may act as negative influences are located in the bottom left handside of the diagram. Impacts of ERP implementation includes political economic aspects (discussed in Section 5.4.2) where provincial government stakeholders may have stronger influence and interests.

Based on the result of this assessment, the ERP needs to consider the following approach/engagement strategies:

- Active involvement and consultation with high influence and high interest stakeholders. Expectations from these stakeholders need to be mapped in order to ensure that their interest is adequately captured.
- Involvement of stakeholders with high interest but low influence. These types of stakeholders may support ERP implementation, though they do not have the authority to decide policies. The implementation of the ERP needs to ensure that most of the stakeholders' expectations are met;
- Consultation with and persuasion of stakeholders with high influence and low interest. These stakeholders are capable of influencing other stakeholders, as well as influencing the course of ERP implementation. Engagement is intended to increase (positive) influence over the ERP; and
- Consultation and information sharing for stakeholders with low interest and low influence is expected to increase interest and positive influence of these stakeholders in the ERP.

Feedback from the stakeholders above was properly addressed and ways to mitigate the potential impacts of the ERP were discussed and consulted. The process involved the provincial government (BAPPEDA, the Office of the Environment, and government offices responsible for the relevant land-based sectors), district governments (BAPPEDA, environmental agencies, and estate crop agencies), local and international NGOs in East Kalimantan, an indigenous peoples organization (AMAN Kaltim), academics (Mulawarman University, Widya Gama University, UNTAG, Mulia University), and labour associations (including some forestry and plantation companies). All inputs were compiled by DDPI East Kalimantan, and discussed with the East Kalimantan secretary, Forestry and Environmental Research Development and Innovation Agency of the Government of Indonesia (FOERDIA) and the Directorate General for Climate Change (DGCC). A summary of the consultation processes, together with an assessment of the extent to which key concerns and views from relevant stakeholders have been incorporated in the ERP design, is presented in Chapter 3 of the SESA.

2.3.2.2 Stakeholders Impacted by the ERP Implementation

Impacts from ERP implementation may result in benefits or losses that constitute positive or negative impacts respectively.

Government Stakeholders

- **Central Government:** The DGCC and P3SEKPI represent stakeholders who will benefit from the ERP (by achieving the performance index and targets specified in their respective

strategic plans, as well as by enhancing budgetary efficiency to address environmental issues at a sub-national level).

- **Provincial Government:** BAPPEDA, Forestry, Plantation, Fishery, Environment, Energy and Mineral Resources (Mining), Office for National Unity and Politics (Kesbangpol), Information and Communication Agency (Infokom), and Provincial Land Agency (*Kanwil* BPN) for ERP implementation. The ERP likely generates positive benefits to the following agencies: BAPPEDA (improved planning, sustainable development), Forestry Agency (i.e., capacity building, forest management, social forestry, conflict resolution and forest fire prevention), Plantation Agency (sustainable plantation and conflict resolution), Fishery (implementation of sustainable aquaculture), Environmental Agency (conflict resolution), Mining Agency (conflict resolution, law enforcement), and Provincial Land Agency (conflict resolution, including support for the agrarian reform program, clarity over forest and non-forest boundaries). These stakeholders will also receive capacity building as part of the ERP implementation, which represents positive benefits from the Program.

- **District Government**: The ERP will likely generate positive benefits to the following agencies: BAPPEDA (improved planning, sustainable district development), Environmental Agency (conflict resolution and environmental compliance), Plantation Agency (conflict resolution and sustainable plantation management), Community and Village Development Agency (DPMD/K); potential channelling of carbon benefits to the villages, village empowerment), and District Land Agencies (*Kantor Pertanahan*; conflict/dispute resolution, clarity over forest and non-forest boundaries). These stakeholders will also receive capacity building as part of the ERP implementation, which represents positive benefits from the Program.

- **Village Governments**: 150 villages were selected for the SESA, and they will be engaged with managing forested areas in APL and aquaculture/fisheries. Potential impacts on the village government may include benefit sharing from ERP. Investments such as capacity building and village infrastructure (from village fund allocation) have been made by some of these villages.

Non-Government Stakeholders

- NGOs/CSOs, which include WWF, TNC, Bioma, FORCLIME, GGGI, *Kerimapuri, Kawal Borneo, Prakarsa Borneo, Yayasan Bumi, Yayasan Konservasi Khatulistiwa (Yasiwa)* and AMAN, may benefit from the ERP implementation since the Program may advance their existing programs/projects.

- University & Research Institute: Some benefits may be accrued through support for existing and future research (e.g., carbon sequestration, reference emission level [REL], monitoring reporting verification [MRV]) as well as field work practise

- Working Groups: District REDD+, Green Economy, Timber Legality. These groups may benefit from the ERP implementation, as it will advance their existing programs/projects.

- The private sector might have negative impacted as production may decrease, or production costs may increase due to the implementation of sustainable plantation/forestry management. Also, in case of license revocation, there will be no operational activities allowed. Therefore, the ERP needs to design positive benefits to offset these potential losses. It is anticipated that

the opportunity cost associated with the private sector will be relatively high in the ERP. Positive impacts may include implementation of International Organization for Standardization (ISO) practices and an increase of stock price stimulated by best management practices.

- Associations: Palm oil associations and labour associations may receive negative impacts similar to those described for the private sector. However, associations may receive positive benefits, such as a reputation for supporting best management practices.
- Local communities may receive positive impacts from increased/alternative income provided from the ERP (e.g., social forestry and alternative livelihood). The risks associated with local communities may include the risk of reversal, if the alternative livelihood schemes cannot generate sustainable income.
- Relevant customary (*Adat*) Council: Benefits from the ERP may include support for tenure security and sustainable livelihoods. Key measures to address access restrictions developed under the Program are further detailed in the Indigenous Peoples Planning Framework (IPPF) and Process Framework (PF).

Stakeholders impacted by ERP implementation can also be identified by their dependency on forest or natural resources. The baseline data suggest that forest dependent communities impacted by the ERP may consist of:

- *Adat*/customary communities that still practice shifting agriculture, including controlled burning methods. These communities are known to exist in forest and plantation areas. This group influences the outcome of FPIC, tenurial conflicts resolution and benefit sharing mechanism. This group has interest in maintaining their customary land rights (for access and/or use) that may be targeted by ERP. Engagement strategies may include:
    - Involvement in ERP socialisation and FPIC procedures;
    - Involvement in conflict resolution mechanisms and FGRM; and
    - Obtaining consent on benefit sharing mechanism.
- Local communities (including some customary communities, women, and disability groups) involved in social forestry programs. This group influences the outcome of FPIC, tenurial conflicts resolution, reduction of deforestation and benefit sharing mechanism. Additionally, these groups share interest in NTFPs and REDD+ benefits. Engagement strategies may include:
    - Involvement related to sustainable timber harvesting;
    - Involvement in promoting NTFPs; and
    - Consent on benefit sharing mechanism.
- Smallholder palm oil planters. Similar to adat and local communities, this group influences the outcome of FPIC, tenurial conflicts resolution, reduction of deforestation and benefit sharing mechanism. This group may share interest in sustainable palm oil mechanisms. Engagement within the ERP include (but not limited to);
    - Involvement in sustainable palm oil mechanism;

- Involvement in social and environmental safeguards; and
- Consent on benefit sharing mechanism.

Other forest stakeholders include:

- Private companies holding logging or forestry plantation licenses. They may be impacted by license revocation/moratorium, and may influence the outcome sustainable forest management mechanisms (e.g., HCV and RIL). Engagement strategy within the ERP may consist of:
  - Encouraging improvement on forest governance, specifically for licensing, monitoring and evaluation;
  - Involvement in conflict resolutions and FGRM; and
  - Encouraging implementation and adoption of safeguard mechanisms such as PHPL, a moratorium and RIL (logging concessions).
- Forest management units in charge of the management of production and protected forests. This group influences the outcome of FPIC, tenurial conflicts resolution, reduction of deforestation This group shares interest in capacity building and improvement on forest supervision. Engagement strategy for these groups under the ERP may consist of:
  - Capacity building to improve forest governance;
  - Encourage involvement in implementation of safeguard mechanisms; and
  - Encourage involvement in implementation of FGRM.

2.3.2.3 Stakeholders with Potential Vested Interests

While it seems that none of the above stakeholders constitute negative influencers, there may be some vested institutional interests related to the mandate on increasing provincial/district revenue (*Pendapatan Asli Daerah* [PAD]). A large portion of East Kalimantan's regional revenue comes from estate crops and mining sectors (in addition to the oil and gas sector), so a decrease in plantation and mining productivity may affect the regional revenue. Therefore, government agencies such as the Estate Crops Agency, Energy and Mineral Resource Agency, provincial/district tax offices, licensing offices, investment/asset agencies, and provincial/district councils (or even Bupati) may have vested interest in ERP implementation. Vested interest may become more prominent during district/provincial election time.

2.4 DATA ANALYSIS

Upon establishing a shortlist of environmental and social issues under Section **Error! Reference source not found.**, a follow-up analysis was carried out to understand specific environmental and social risks associated with the ERP's components and sub-components, which covers:

- **Component 1: Forest and Land Governance**. The ER Program will focus on four key aspects that support improved land governance. Component 1 consists of the following sub-components:
  - Sub-component 1.1: Strengthening the licensing regime,

- Sub-component 1.2: Dispute settlement,
- Sub-component 1.3: Support the recognition of customary (*Adat*) land, and
- Sub-component 1.4: Strengthening village spatial planning.

In addition to leading to significant emissions reductions, it is expected that this component will provide important non-carbon benefits to local stakeholders, including concession companies and local and customary communities;

- **Component 2: Improving forest supervision and administration**. The ER Program will address institutional weaknesses to improve forest supervision and administration. Within the State Forest Area, the focus will be on strengthening East Kalimantan's FMUs, which cover the entire production and protection forest area. To improve the governance of forests outside the State Forest Area, in particular remaining forests within estate crop areas, the Program will strengthen relevant non-forestry institutions. Component 2 consists of the following sub-components:
  - Sub-component 2.1: Strengthening management capacity within the State Forest Area: Forest Management Unit (FMU) development; and
  - Sub-component 2.2: Strengthening provincial and district governments to supervise and monitor the implementation of sustainable Estate Crops;
- **Component 3: Reducing deforestation and forest degradation within licensed areas**. Component 3 aims to protect forests that are located within oil palm estates and within forestry concessions by supporting the finalization and implementation of HCV, and RIL policies. These activities directly engage the concession and estate crops companies, and thereby complement the broader policy improvements related to the licensing regime that are covered under Component 1. To further support the adoption of RIL and HCV policies, the ER Program will develop a mechanism to provide monetary and nonmonetary incentives. This will be developed through a consultative process with private and public-sector stakeholders and will be linked to the REDD+ Benefit Sharing Mechanism. Reducing deforestation linked to palm oil expansion to address the lack of incentives and capacity for sustainable management practices (forest, estate crops). Component 3 consists of the following sub-components:
  - Sub-component 3.1: Implementation of HCV policies for Oil Palm Estates;
  - Sub-component 3.2: Support for smallholders and Community Based Fire Management and Monitoring Systems (CBFMMS); and
  - Sub-component 3.3: Implementation of SFM and HCV for Forestry Concession.
- **Component 4: Sustainable Alternatives for Communities**. This directly addresses the lack of alternative sustainable livelihoods which was identified as an underlying driver of encroachment. Activities are designed to provide livelihood opportunities within sensitive areas, including peat areas, mangroves, and conservation areas. Also, by promoting social forestry activities within the State Forest Area, the component supports improved access to forested areas for local communities and contributes to improved land governance. In addition to reducing deforestation and degradation linked to encroachment, the activities in this

component are expected to lead to significant non-carbon benefits, contribute to more equitable outcomes, and are an important part of the strategy to reduce the risk of reversal. Component 4 consists of the following sub-components:

  - Sub-component 4.1: Sustainable livelihoods;
  - Sub-component 4.2: Conservation partnerships; and
  - Sub-component 4.3: Social forestry.

- **Component 5: Project Management and Monitoring**. This component consists of the following sub-components:

  - Sub-component 5.1: Project coordination and management;
  - Sub-component 5.2: Monitoring and evaluation; and
  - Sub-component 5.3: Program communication.

Identification of key risks under the ERP's components and sub-components forms the basis for the development of the Program's ESMF. Ultimately, this process fed into improvements in the ERP.

2.4.1 Risk and Impact Analysis

The key objective of the SESA process is identifying environmental and social implications from the implementation of plans, policies and programs proposed under the ERP. Risk and impact analysis was carried out as a hypothetical exercise based on multiple factors and strategic issues as mentioned in previous section. Plans, policies and proposed interventions under the ERP were examined in light of the contextual risks based on the result of consultation with stakeholders and analysis of spatial data.

The baseline conditions and socio-economic characteristics presented in the SESA serve as a starting point for a preliminary analysis of potential risks and impacts from each program component and sub-component. This process was then followed by a shortlisting of environmental and social issues through a series of stakeholder consultations in East Kalimantan with the purpose of:

- Verifying initial assumptions/hypothesis;
- Obtaining additional data relevant to the assessment of risks and impacts;
- Identifying new stakeholders for future engagement; and
- Forming the basis for the ESMF.

Once the risks are identified, the next step includes impact assessment to forecast the potential impacts if risks are not mitigated or managed. Impacts identified in this step are descriptive, and may be ranked using categories (low, medium and high). Quantification of impacts will be done through stakeholder participations and/or expert judgement.

Subsequently, as part of the shortlisting process, impacts identified using the above process will be grouped into the following clusters:

- Positive environmental impacts;

- Negative environmental impacts;
- Positive social impacts; and
- Negative social impacts.

Cross referencing between risks and impacts clusters is designed to identify relevant World Bank Operational Policies (OP) and Bank Policies (BP) that can potentially be triggered. These Ops and BPs consist of:

- Environmental Assessment (OP/BP 4.01);
- Natural Habitats (OP/BP 4.04);
- Forests (OP/BP 4.36);
- Pest Management (OP 4.09);
- Physical Cultural Resources (OP/BP 4.11);
- Involuntary Resettlement (OP/BP 4.12) in the context of precautionary for potential access restriction, and resettlement risks; and
- Indigenous Peoples (OP/BP 4.10).

Risk and impact analysis and identification of World Bank's OP/BPs that can potentially be triggered by ERP lead to the gap analysis.

2.4.2 Gap Analysis

Gap analysis was done by comparing the risks identified in the interim SESA (and further analysed in the SESA) with existing safeguards and World Bank's OP/BPs. Gap analysis is done to ensure that all risks caused by the ERP are addressed by the existing safeguards and to ensure compliance with the World Bank's standards. Gap analysis was also done to identify shortcomings in the current regulatory framework to address the safeguards' requirements.

This analysis aims to identify whether existing national regulations and safeguards (e.g., SIS REDD+, PRISAI, and SES REDD Kaltim) are relevant to address the above-mentioned risks. Safeguard mechanisms to address these risks will be formulated in ESMF documents that will be developed separately from the SESA.

2.5 PUBLIC CONSULTATION

Public consultation is done to ensure input and subsequent buy-ins from relevant stakeholders. The output of this process will be used to formulate recommendations for:

- Addressing key environmental and socio-cultural issues (i.e., avoiding, mitigating, or offsetting negative impacts), as identified in the scoping process;
- Implementing capacity building and engagement strategies to allow proper action to address key environmental and socio-cultural issues; and
- Identifying (indicative) financial requirements for the above recommendations and subsequent REDD+ implementation. This may also be linked with potential emission reduction payments.

2.6 LIMITATIONS

Data collection (done by DDPI) only covered limited geographical extent (Berau and Mahakam Ulu) and therefore the analysis may not be able to represent the overall contexts and risks in the ER accounting areas. Further consultations with target communities are yet to be conducted.

3.0 STRATEGIC CONTEXTS OF REDD+ IN INDONESIA

This chapter presents:

- Key REDD+ and readiness processes;
- Strategic rationale of REDD+ in Indonesia;
- REDD+ consultation process;
- Safeguard Initiatives;
- Selection of East Kalimantan Province;
- REDD+ consultation process; and
- Lessons learned from previous REDD+ implementations.

3.1 KEY PROCESSES OF REDD+ READINESS[5]

Indonesia is a globally important country in terms of reducing GHG emissions from forest carbon sources. The successful implementation of REDD+ initiatives in Indonesia will contribute substantially to global efforts to contain climate change. Although much is still to be done in terms of implementation, Indonesia has made significant progress toward REDD+ Readiness (MoEF, 2018). The country has been an active participant in REDD+ dialogues and programs since 2007. In 2009, Indonesia committed to reduce GHG emissions by 26% through its own efforts and by up to 41% with international support, below the business as usual scenario by 2020. Later in 2015 (at COP 21 in Paris) Indonesia committed to reduce 29% of its emissions through its own efforts, and up to 41% with international support, below the business as usual scenario by 2030, through submission of the Nationally Determined Contribution (NDC).

Indonesia has made significant progress toward developing national REDD+ architecture and is at a point where a jurisdictional program will provide added stimulus and practical knowledge for finalizing the national system. A critical next step toward national REDD+ implementation is the finalization and implementation of sub-national REDD+ frameworks. The proposed program offers to test a comprehensive approach to REDD+ that covers policy-level changes as well as field-based activities, and that addresses drivers of deforestation that are prevalent in most of Indonesia's forested regions. Provincial governments will have an important role in REDD+ implementation, for example through their responsibility for managing most Forest Management Units. The province-level approach will be scalable to other provinces across Indonesia. Lessons gained from implementing the ERP in East Kalimantan will be valuable in finalizing the design of the national REDD+ framework, including the national MRV system, safeguards approaches, benefit sharing and ER registration.

[5] Source: Emission Reduction Program Document (ERPD) East Kalimantan Province

The proposed ERP will cover the entire province of East Kalimantan which includes diverse forest and land types, including coastal forests, lowland forests, and upland forests, and which has been a significant source of national emissions. East Kalimantan's annual emissions from deforestation, forest degradation, and peat degradation are approximately 38.9 million MT CO_2e/yr (or 6% of the equivalent emissions at the national level). Over the ERPA period (2020 to 2024) the ERP is estimated to lead to total emission reductions of 35.8 million tCO_2e, which is equivalent to an 18% reduction in the province's reference level emissions over that period.

At the national level, the ERP is placed under the responsibility of the MoEF. The Emission Reduction Program Idea Note (ERPIN) was developed on September 14, 2014. This document outlines an important role for the provincial and district/city governments in implementing the Indonesian approach to REDD+, which is based on national accounting and sub-national implementation. Upon acceptance of the ERPIN by the World Bank, East Kalimantan was selected for ER implementation in 2015. The ERPIN was further developed into ERPD for province-level REDD+ implementation in East Kalimantan.

The development of the province-level REDD+ framework involved further multi-stakeholder engagement processes. Key documents and plans that were developed with inputs from provincial and local stakeholders include the East Kalimantan Low Carbon Growth Strategy, the East Kalimantan REDD+ Strategy and Action Plan (SRAP REDD+), the East Kalimantan Greenhouse Gas Emission Reduction Action Plan (RAD GRK), the East Kalimantan Sustainable Development Strategy, and the Green Growth Compact.

The Regional Council on Climate Change (DDPI) in East Kalimantan has been closely involved with the development of the East Kalimantan Sustainable Development Strategy, the SRAP and the East Kalimantan Master Plan for Climate Change (2015-2035). Under the SES-REDD+ process, which is a provincial extension of the SIS-REDD+, the East Kalimantan Taskforce, under the leadership of DDPI, undertook a participatory multi- stakeholders process to adjust the national-level PCIs to fit into the province-specific context. A workshop on SESA and ESMF was conducted in Samarinda, Kutai Barat, Kutai Kartanegara and Berau District. The workshop aimed to define proposed ER activities that might have environmental and social impacts. Strategies to mitigate those impacts were consulted with relevant stakeholders at the district level.

Various meetings were held to gather inputs from the provincial government on the institutional arrangements for the ERP. Consultations with the key sectors were held to gather inputs to the program design and relevant stakeholders were consulted on the ERP's logframe in July 2017. On 20 November 2017, a focus group discussion was conducted to define high priority areas for proposed ER activities within East Kalimantan. Drivers of degradation and deforestation, ERP activities, and the benefit sharing mechanism were discussed with the key stakeholders in East Kalimantan in November 2017.

In 2010, Indonesia received FCPF funding. The funds, together with other funding sources, are used to improve Indonesia's readiness in implementing REDD+. In January 2017, Indonesia's Readiness Package was submitted and endorsed by the FCPF Participants Committee. Readiness process has provided Indonesian government with exposures to safeguard mechanism required by the UNFCC, as well as hands-on experience in developing the safeguard mechanisms suited for the Indonesian national and sub-national contexts. Additionally, readiness package also enabled sharing of experience among different countries (Indonesia, Vietnam, and many other countries) as a collective learning process in preparing the ERPD. Improvement on SIS-REDD+ Indonesia, improvement on

capacity for implementing and monitoring of safeguards, and quality assurance to ensure proper safeguard implementations are needed to ensure the robustness to address environmental and social aspects throughout REDD+ initiatives at national and sub-national levels.

Key progress in terms of REDD+ readiness is presented in the ERPD's Chapter 1 and summarized in Table 1.

Table 1 Summary of REDD+ Readiness in Indonesia.

Components	Progress	Key Gaps
Component 1. Readiness Organization and Consultation		
Sub-component 1a. National REDD+ Management Arrangement	Since 2015, all REDD+ related matters are managed under the Ministry of Environment and Forestry's Directorate General for Climate Change (DGCC). At the sub-national level, DGCC has 5 technical implementation units to speed up the readiness progress at the sub-national level. One of these is responsible for the Kalimantan Region. Sub-national REDD+ institutions have been developed in 11 provinces. Sub-national REDD+ institutions in 23 further provinces are under development.	Coordination among institutions and agencies (the Ministry of Finance, the National Planning Agency, and other sectoral agencies such as in agriculture, mining, agrarian or other sectors) needs to be further improved. Human resource capacity for local governments and DGCC regional offices needs to be strengthened. A Feedback and Grievance Redress Mechanism is available, but needs to be better adapted to REDD+ and further tested.
Sub-component 1b. Consultation, Participation and Outreach	Participation, engagement and consultation processes for various REDD+ readiness aspects have taken place at the national and sub-national levels. This is summarized in Section 3.5.	The existing consultation, participation and outreach processes need to be further extended to reach all relevant entities across the country.
Component 2. REDD+ Strategy Preparation		
Sub-component 2a. Assessment of Land Use, Land-Use Change Drivers, Forest Law, Policy and Governance.	Numerous studies related to land use and land use change, forest law, policy and governance have been undertaken. These studies have led to improved policies, such as the One Map Policy, the forest and peat land concession moratorium policy, forest and land fire prevention policy, and increased recognition of local community rights.	Unclear tenure rights remain a constraint to the implementation of land-use regulations. The data management system for spatial and statistical information related to the ERP needs to be put in place.
Sub-component 2b. REDD+ Strategy Options	National strategy for implementation of REDD+ Indonesia was developed in 2010. By 2012, eleven pilot provinces had completed REDD+ strategies. Safeguard Information System (SIS) REDD+ was developed in 2013 and is operational in 3 provinces (East Kalimantan, Jambi, and West Kalimantan). Indonesia's National Forest reference emission level was submitted in 2015 and assessed by the UNFCCC. Guidance for National and sub-National FREL was developed in	Not all local political interests at the sub- national levels support the REDD+ strategy. Understanding of the National REDD+ Strategy across sectors needs to be strengthened. The role of REDD+ within Indonesia's NDC has not been finalized.

Components	Progress	Key Gaps
	2017 (Ministerial Regulation number 70 year 2017) and Sub-national FRELs for several provinces have been established (including East Kalimantan Province). Indonesia's REDD+ MRV system and National Registry System for Climate Change were developed in 2016. Training and capacity building in these systems are in progress. Funding instruments have been in progress since 2015.	
Sub-component 2c. Implementation Framework	Numerous regulations and policies related to REDD+ programs and activities have been drafted, enacted, adopted, and implemented. These include the following: ▪ Ministerial regulations on REDD+ implementation guidance; ▪ The Moratorium on new licenses in primary forest and peatland (this is reviewed every 6 months); ▪ The One Map Policy; ▪ Forest management units (FMU) as the platform for the implementation of the REDD+ framework currently being developed; and ▪ The REDD+ National Registry is ready to be operated.	Laws and regulations related to low carbon development have not been fully adopted by the private sectors. Institutional, authority and procedures in issuing the REDD+ business permit at the protected forest areas are not yet clear. The National REDD+ Registry System has not yet been fully disseminated to the responsible and relevant entities.
Sub-component 2d. Social and Environmental Impacts	Indonesia has developed several safeguards instruments to address social and environmental impacts. These include the REDD+ SES, the national Environmental Impact Assessment System (AMDAL), Strategic Environmental Assessments (KLHS), and the Safeguard Information System (SIS) for REDD+. In 2016, the Ministry of Environment and Forestry produced a compilation of background information for the development of SESA and preparation of the ESMF was initiated. The SESA and ESMF (together with other frameworks) are available and will be finalized prior to the World Bank's appraisal.	Further consultations at the district and community levels and primary data collection will still be needed as part of the finalization of the SESA and ESMF.
Sub-component 2e. Funding Instrument and Benefit Sharing Mechanism Funding Instrument	Strategic plan for financing climate change mitigation and adaptation has been developed. Presidential Regulation on Environmental Economic Instrument (as	Participation by the private sector in REDD+ financing needs to be enhanced. The funding scheme needs a stronger legal basis.

Components	Progress	Key Gaps
	an umbrella for General Services Agency) has been enacted (Presidential Regulation No. 46 year 2017).	The benefit sharing mechanism needs to be finalized and adopted at the national and sub-national levels.
Component 3. Reference Emission Levels/Reference Levels		
Component 3. Reference Emission Levels/Reference Levels	Indonesia's FREL document was developed based on a robust methodology, and a participatory process and has been submitted to the UNFCCC	Jurisdiction boundaries used by the national and sub-national systems are not fully aligned. Measurement timeframes across various schemes need to be harmonized.
Component 4. Monitoring System for Forest and Safeguards		
Sub-component 4a. National/Sub-national Forest Monitoring System.	A National Forest Monitoring System (NFMS) and other forest monitoring-related systems have been established. National and sub- national institutions are available to implement the NFMS. There are other activities on forest and carbon monitoring developed by projects, Demonstration Activities and other REDD+-related programs (such as the FCPF, INCAS, etc.) that provide important additional data.	There are still uncertainties in the data. The system excludes forest regrowth and degradation within secondary forests. Methodologies for assessing displacement and reversal have not yet been developed. The data validation process is still under development. Other initiatives related to measurement and monitoring at the ground level need to be harmonized and aggregated to the national level.
Sub-component 4b. Information System for Multiple Benefits, Other Impacts, Governance and Safeguards	National regulations and environment assessment instruments are available. SIS-REDD+ is ready to be operated.	SIS-REDD+ needs a legal foundation to improve legitimacy. Coordination among agencies that possess forest related data at the national and sub-national levels needs to be improved. The REDD+ safeguards-related systems need to be better coordinated. Capacity of institutions at the sub-national level to operate the SIS REDD+ needs strengthening. Community involvement in the SIS needs to be improved.

In East Kalimantan, the REDD+ consultation series started with identification of stakeholders, defining the roles and authorities, as well as the institutionalisation of MRV, safeguards and benefit sharing. There is an agreement to establish a legal basis (*governor regulation*) for the MRV, safeguards and benefit sharing institution, as well as to aim for emission reduction in East Kalimantan. In addition to the legal basis and institution, enabling conditions for emission reduction through REDD+ include capacity building on safeguards, MRV and Forest Reference Emission Level (F-REL).

This program will be a performance-based payment system, and financing by way of on-budget off-treasury arrangements will be sought. This system requires a valid carbon accounting mechanism (i.e., determination of reference emission levels and subsequent monitoring, reporting and verification) and allows funds from this payment to be incorporated into the government's budget to be disbursed from national to sub-national levels. It was suggested that implementation of a Carbon Fund at the site level will involve Forest Management Unit and village administration. Additionally, sustainable palm oil plantation is proposed as a component of the Carbon Fund. Implementation of this program will be aimed to support provincial strategies for reducing greenhouse gas (*Rencana Aksi Daerah – Gas Rumah Kaca* [RAD-GRK]) and achieving the Nationally Determined Contribution (NDC) for emission reduction.

Additional activities included establishment of REDD+ working groups in select districts in East Kalimantan. The aim was to socialize/mainstream ERPs within the framework of the FCPF Carbon Fund in all districts and municipalities in East Kalimantan Province. This was done as a crucial step in building common understanding among stakeholders in the process of reducing emissions and deforestation and degradation. District commitments on the ERP were observed through the integration of REDD+ programs in district RPJMD.

In regard to technical aspects, 319 permanent sample plots for carbon stock assessment, were established in East Kalimantan. The methodology implemented will be part of the agreed methodology for self-assessment on readiness to implement REDD+ in Indonesia.

Initial implementation resulted in agreement on the MRV methodology, as well as identification of drivers for deforestation and degradation. Additionally, needs for mainstreaming the Carbon Fund were identified at the district level, as well as capacity building requirements to properly implement the Carbon Fund. Implementation of the Carbon Fund as a performance-based payment system now needs to be formalised through a MoU between MoEF and the Governor of East Kalimantan. Such an MoU will need to regulate the organisation of data, as well as identify the data custodian/s. Data management should allow access by FCPF, DGCC, P3SEKPI, and DDPI, according to a data sharing agreement that outlines copyright and data protocols.

Ultimately, the ERP will be equipped with safeguard mechanisms to ensure that negative impacts can be prevented/mitigated, while the positive impacts of the program can be amplified. Following the COP in Cancun, Mexico (29 November – 11 December 2010), seven safeguard principles were established as the main/global reference for any REDD+ implementation. The GoI adopted the Cancun principles into Safeguards Information System (MoEF Regulation No P.70/2017), a safeguard mechanism adjusted to the Indonesian context. SIS was established through a series of consultations and field testing that took place between 2011-2013. This Safeguard Information System (SIS REDD+) was developed between 2011 and 2013 by analysing compatibility of existing mechanisms (e.g., FPIC, SESA and HCV) to accommodate safeguard principles and criteria (based on Cancun and PRISAI). A series of consultations was done to analyse these existing mechanisms and set up seven principles (consisting of 17 criteria and 32 indicators) as the basis for registry in SIS REDD+.

SIS REDD+ became operational in May 2015. Key progress on safeguards is included in the summary of consultation processes in Section 3.5. The ERP will incorporate and address the seven safeguard principles established as the global reference for REDD+ through the SIS REDD+. In addition, the overall safeguards management of the Program will fully comply with the World Bank Safeguards policies triggered under the operation.

3.2 STRATEGIC RATIONALE

Participation in REDD+ initiatives is highly relevant to Indonesia's commitment to reduce emission levels by 41% with international support. Implementation of the Carbon Fund as an ERP is intended to contribute to this commitment, which is reflected in the National Strategy of Emission Reduction (STRANAS). The ERP will advance the implementation of REDD+ at the national level; will contribute to the achievement of nationally and internationally significant emissions reductions, helping Indonesia achieve its climate targets and international commitments; and will support East Kalimantan's path toward a green economy.

East Kalimantan has produced a provincial strategy for emission reduction (Strategi & Rencana Aksi Provinsi [SRAP]), East Kalimantan (as well as North Kalimantan) has received support for several REDD+ initiatives such as the Berau Forest Carbon Program, Social Safeguard try out (under SIS REDD+ development), and strategic action plan development in Berau, Kutai Kartanegara, Kutai Barat and Mahakam Ulu districts. This work provided East Kalimantan with more exposure to REDD+ initiatives compared to other provinces. Moreover, these previous interventions have provided the province with enabling conditions, documentation, and lessons learned on REDD+ initiatives. As a consequence of this past work, East Kalimantan Province is seen as a strategic platform for continuing and scaling up REDD+.

A provincial jurisdictional approach was selected as the best strategy for the ERP, as it allows integration of REDD+ into development planning and licensing[6]. The decision to use a provincial level approach (rather than a district level approach) was strategic, to ensure wide land coverage and a significant contribution to the national commitment on emission reduction.

In addition to Indonesia's commitment to international conventions (i.e., ratification of Kyoto Protocol), political commitment at the national level is reflected in the establishment of the:

- Directorate General of Climate Change (DGCC) as the national institution to manage and coordinate REDD+ implementation in Indonesia;
- Technical Management Unit of Climate Change to facilitate REDD+ implementation at the regional level;
- Peat Restoration Agency (*Badan Restorasi Gambut* – BRG), established through Perpres No. 1/2016, to develop a national peat land map, then restore and rehabilitate the degraded peat land; and
- Centre for Research and Development on Socio-Economic, Policy and Climate Change (P3SEKPI) as a research institution that has a mandate to provide scientific recommendations to inform climate change policy.

[6] Lessons on Jurisdictional REDD+ from Berau District, East Kalimantan. The Nature Conservancy

At the sub-national level (i.e., province level), the political commitment is reflected in the:

- Close involvement with the national commitment to reduce carbon emissions since 2009. East Kalimantan was one of the first provinces to join the GCF association, and signed the Declaration of Rio Branco, a document firmly stating the commitment to reducing tropical deforestation, protecting the global climate system, improving rural livelihoods and reducing poverty;
- Appointment of a provincial REDD+ Task Force, to undertake REDD+ activity and to embrace a Governor's priority policy for a transition to a low carbon economy;
- Augmentation of the national moratorium on peat land conversion and primary forest logging by issuing a province-level moratorium;
- Integration of REDD+ into the Regional Medium-Term Development Plan, and budget allocation (APBD, APBN) for activities related to REDD+;
- Prepared various regional regulations in support of REDD+, including the establishment of a Working Group on REDD+ and a Regional Council on Climate Change (*Dewan Daerah Perubahan Iklim* [DDPI]); and
- Understanding and acceptance by communities (through FPIC processes) to ensure participation of local communities in activities related to REDD+.

Reflections of political commitment at the district level are limited to the districts that have participated in previous REDD+ initiatives. Districts such as Paser, Berau, Kutai Kartanegara, Kutai Barat and Mahakam Ulu have produced strategic action plans related to REDD+ and/or GHG emission reduction.

Despite the previous exposure to and political commitment on REDD+ at the sub-national level, there remains a need to increase the capacity of provinces to manage environmental and social risks (i.e., implementation of safeguard mechanisms). The need for capacity building within FMUs (forest management at the provincial level) and plantation agencies (sustainable palm oil), and for management of forested area in non-state forest area emerged during the design of the ERP. This is discussed further in Section 8.4. Additionally, there are governance risks that need to be considered when implementing a Carbon Fund as a REDD+ initiative, such as:

- Carbon benefits from REDD+ initiatives are not tangible, and are not felt at a grassroots level (e.g., village administration, indigenous peoples, or social forestry groups). This creates some degree of scepticism among potential beneficiaries;
- There are several mechanisms under REDD+ initiatives such as Debt-for-Nature Swap (DNS) and performance-based payments (e.g., Carbon Fund). The former is often used as a means to compensate for emissions from developed countries, while the latter is explicitly designed to promote emissions reductions (primarily land-based emissions). This requires an understanding of the mechanisms among stakeholders to prevent misperceptions and over expectations of REDD+ initiatives;
- REDD+ initiatives, especially performance-based payments, require technical capacity on carbon accounting that relies on carbon stock assessment, defining FREL and MRV. This may create issues due to the lack of technical knowledge among program implementers; and

- REDD+ initiatives are designed to produce positive environmental and social impacts. However, care must be taken to anticipate potential negative impacts, and to formulate measures to prevent or mitigate the negative impacts using environmental and social management framework (ESMF).

Considering the above challenges, REDD+ initiatives such as the Carbon Fund require conducive political conditions, adequate economic support for preparation, and strong buy-in from stakeholders at national and sub-national levels. In Indonesia, political buy-in at the national level was formalised by establishing the BP REDD+ agency. Upon the dissolution of this agency, Indonesia's commitment to REDD+ initiatives were transferred to MoEF, DG of Climate Change (DGCC). At the provincial level, commitments to REDD+ and emission reductions are reflected in the commitment to protect areas with high carbon value. In East Kalimantan, the provincial government is prioritizing the retention of 640,000 ha of natural forest, and 50,000 ha of peatland within plantation and plantation concession areas (a total of approximately 2.5 million ha of palm oil concessions in the proposed areas). However, apart from NGO activities, buy-in from stakeholders at the grassroots level has not yet been observed.

Political buy-ins and commitments need to be supported by the proper technical capacity to design, implement, and monitor REDD+ implementations. Land-based emissions reductions in East Kalimantan will rely on forestry and plantation concession areas (approximately 3.5 million and 2.5 million ha of forestry and palm oil concessions respectively, or almost half of the total area of East Kalimantan Province). This suggests capacity needs among FMUs (forest concessions), palm oil companies and small holders (plantations), and village administrations (forested areas in APLs). Capacities needed for the Carbon Fund were identified during public consultation processes (Section 3.1). Political buy-ins also require the establishment of grievance handling, as well as mitigation of environmental and social risks (e.g., institutionalising ESMF).

Additionally, funding is needed to ensure that the abovementioned requirements are achieved. FCPF has provided readiness funds to ensure that preparations for the implementation of the Carbon Fund can be completed. The Carbon Fund offers opportunities to channel carbon benefits to implementers at the grassroots level (FMU, social forestry groups, village administration) thus providing tangible benefits. Challenges in Carbon Fund implementation include designating safeguard principles, defining accounting areas (to avoid double counting), and agreeing on benefit sharing mechanisms.

3.3 SAFEGUARD INITIATIVES IN INDONESIA

Conference of the Parties (COP) 16 in Cancun, Mexico resulted in the agreement to formulate safeguards mechanisms for future REDD+ implementation. Safeguard implementations must refer to the seven principles formulated in COP 16 (i.e, Cancun Safeguards) that consisted of seven principles and the requirement to develop transparent Safeguard Information System (SIS-REDD) as a web-based platform to monitor safeguards performance across program interventions.

3.3.1 SIS-REDD+ Indonesia

Indonesian SIS-REDD+ was developed based on existing policies and other instruments from COP 16 and additional REDD+ guidance from COP 17 and COP 19. SIS-REDD+ Indonesia was administered by the Directorate General of Climate Change (DGCC) of MoEF, and was developed to enable accessible and direct reporting of safeguards performance across implementing entities. SIS-REDD+ Indonesia was designed to be transparent, inclusive, in line with national legislations, and in

accordance with national contexts. SIS-REDD+ Indonesia is simple, and it ensures completeness, accessibility and accountability of information contained therein. Establishment of SIS-REDD+ Indonesia included development of database structure, mechanisms for data update/retrieval and institutionalisation of the system under DG CC, MoEF. SIS-REDD+ Indonesia contains safeguard principles (including ESMF and FGRM) and tools to assess safeguards implementation in Indonesia.

3.3.2 Safeguards Formulation

3.3.2.1 National Level

In compliance with the Cancun Safeguards, Indonesian government formulated Safeguards Information System that outlines seven principles (translated from Cancun Safeguards). Social and environmental safeguards have been tested in several sites in East Kalimantan (Berau and Kutai Barat districts, 2012), Central Kalimantan, and Jambi provinces.

3.3.2.2 East Kalimantan Province

To ensure that local contexts are accommodated, in 2013 East Kalimantan developed a specific Social and Environmental Standards known as SES-REDD+ Kaltim. SES-REDD+ Kaltim contains seven principles that are compatible with Cancun Safeguard, PRISAI, SIS, and SESA, including specific principle on benefit sharing. Additionally, SES-REDD+ Kaltim was aligned with Forestry Information System (*Sistem Informasi Kehutanan* – SIK) Kaltim, which was ultimately aligned with the SIS-REDD+ Indonesia. This ensure consistencies of information on safeguard implementation at provincial level with the structure and requirments at national level, as mandated by COP 16 agreement. From those above mentioned explanation, ERP in East Kalimantan clearly follows the seven safeguard principles established as the global reference for REDD+ and is also compliant with the World Bank Safeguards requirements.

3.4 SELECTION OF EAST KALIMANTAN PROVINCE

Earlier at the Emission Reduction Program Idea Note (ERPIN) stage, the GoI proposed a district approach to ER with seven districts (Kabupaten) participating in the ERP[7]. Since then, a critical next step toward national REDD+ implementation has been the finalization and implementation of sub-national REDD+ frameworks. The proposed ERP offers to test a comprehensive approach to REDD+ that covers policy-level changes as well as field-based activities that address drivers of deforestation that are prevalent in most of Indonesia's forested regions.

With the recent issuance of Law No. 23/2014, which replaced the previous Local Government Law No. 32/2014, there have been major shifts of authority and distribution of governmental functions among the central, provincial, and district governments, especially with regards to land-based sectors, including forestry, land, agriculture, and spatial planning. In the old law, most governmental functions were distributed between the central and district/municipal governments. In the new law, most governmental functions are distributed between the central and provincial governments. District/ municipal governments retain the authority for several functions, but to a much lesser degree than that was allowed under the previous law.

[7] These districts include Merangin and Bungo from Jambi Province, Kapuas from Central Kalimantan Province, Berau and Kutai Barat from East Kalimantan Province, and Tolitoli and Donggala from Central Sulawesi Province. Together these districts encompass 12.5 million hectares, or roughly 9% of Indonesia's total land area, and are home to around 1.5 million people.

With these political shifts, the provincial governments will have an important role in REDD+ implementation, for example through their responsibility for managing most FMUs. This provides a strong rationale that the province-level approach will be scalable to other provinces across Indonesia. Lessons gained from implementing the ERP in East Kalimantan will be valuable in finalizing the design of the national REDD+ framework, including the national MRV system, safeguards approaches, benefit sharing and ER registration.

In 2015, the GoI proposed East Kalimantan Province, through a letter to the FCPF Facility Management Team (FMT) dated 9 October 2015. Such a proposal was based on the following considerations:

- The enabling environment as reflected through political support and stability of the local government;
- Readiness of local institutions, including a Provincial Council on Climate Change in place, and the existence of a provincial strategy for equitable and sustainable green growth (East Kalimantan's vision by 2030). This has been supported by key documents on strategy and planning on low carbon development (East Kalimantan Sustainable and Environmentally Friendly Development Strategy, Regional Action Plan to Reduce GHG emission [legalized through 2012 Governor's decree] and the Provincial Strategy and Action Plan for REDD+ implementation);
- Support from local and international NGOs and/or CSOs working in East Kalimantan;
- Presence of other complementary investments, including existing bilateral donor supported programs; and
- Significant potential of veriable emissions reduction based on the Indonesian National Carbon Accounting System (INCAS) calculation. East Kalimantan is a member of the Governor's Climate and Forest Task Force (GCF) and signed the Rio Branco Declaration committing to reducing deforestation by 80% by 2020.

The proposal was also affirmed by the East Kalimantan Governor's commitment letter to the MoEF, dated 5 October 2015.

The ERP is therefore envisaged to advance the implementation of REDD+ at the national level and eventually contribute to the achievement of nationally and internationally significant emissions reductions, helping Indonesia achieve its climate targets and international commitments[8]; and will support East Kalimantan's path toward a green economy.

3.5 REDD+ CONSULTATION PROCESSES

Various consultation processes were held at national and sub-national levels to develop the ERP through identification of key stakeholders, issues, as well as safeguards mechanisms to address the issues. The following is a summary of the consultations and associated progress.

[8] Under the NDC, the GoI has committed to a reduction of 29% of its emissions through its own efforts, and up to 41% with international support, by 2030,

3.5.1 Stakeholder Identification

Stakeholder identification was done during Public Communication of The Idea Note (ERPIN) Emission Reduction-Program Compilation Process in the FCPF Carbon Fund Framework (November 2015) and at a Workshop on the Institution of a Land-Based Program to Reduce Emissions in the Province of East Kalimantan (December 2015). The results were:

- Identification of stakeholders (including *Adat* communities), and roles and authorities appropriate for the institutionalization of MRV, safeguards and benefit sharing;
- A Draft Provincial Regulation on the institutionalization of MRV, safeguards and benefit sharing for programs aimed at reducing emissions in the Province of Kalimantan Timur. These were further integrated into the ERP design; and
- Alignment of MRV, Safeguards, Registry System and FGRM, with the national mechanism.

Additionally, the process continued with stakeholder engagement to socialize/mainstream emissions reduction programs within the framework of the FCPF Carbon Fund in *Kutai Kartanegara* District (June 2016) and *Penajam Paser Utara* (November 2016). Stakeholders identified in this process are described in Sections 2.2.2 and 2.3.2 on stakeholder identification and mapping respectively. These meetings were done at the district level to encourage participation of district level stakeholders. However, participation needs to be improved by conducting consultations with specific groups (e.g., customary and vulnerable groups).

3.5.2 Consultation Process

Records from consultation process indicate that key stakeholders are involved in the discussion. These key stakeholders are the ones with high influence and high interest on the ERP (as described in Section 2.3.2). Moreover, these stakeholders also represent those influencing the ERP (e.g., national and sub-national governments, NGOs, Customary councils), as well as those impacted by the ERP (e.g., Indigeneous peoples, plantation companies). However, mining companies that will be impacted by ERP are not adequately represented.

The consultation process was done through FGDs, interviews and presentation of ideas and concepts. This allows dissemination of ideas among participants and stakeholders. Consultations processes have made reasonable efforts to engage and consult with vulnerable groups, including women, elder, Indigenous Peoples and other poor forest dependent communities. Outreach to these vulnerable groups has been conducted through coordination with local government agencies and NGOs as well as establishment of provincial and district REDD+ working groups, and climate change networks at the local level. Initial consultations for Free, Prior and Informed Consent (FPIC) at the district level were undertaken from 18 July – 30 August 2019. Discussions revolved around the following themes: balancing emission reduction and village-level development opportunities, including economic development, use of village funds and supporting legal framework, types, timeline and eligibility of benefits, and the need to ensure coordination and technical support to villages to achieve emission reduction objectives. Documentation of these consultations is appended in Appendix A.2 of this document. Full documentation of the consultations to date can be found in **Appendix A.2**.

Further, the process was done to encourage clarifications, questions and in-depth discussions to put more weights in analysing the key issues. Brainstorming sessions within the consultation process allowed concerns from participants (representing each of the stakholders) to be compiled as key

issues, and were considered under the ERP. Consultation to-date is sufficient to consolidate ideas, develop program design and agree on the envrionmental and social risks. However, further consultations are needed to ensure FPIC and formulation of benefit sharing mechanism.

A series of consultations to obtain Free, Prior and Informed Consent (FPIC) at the village and/or community level is currently being planned, particularly in the context of benefit sharing consultations. During these consultations, efforts will be made to outreach vulnerable groups, including poor families, women, youth and Indigenous Peoples. Such consultations will continue to be a reiterative exercise across the life span of the operation.

3.5.3 Summary of the Consultation Outcomes

Based on identification of key issues, consultation process resulted in the following outcomes:

- Aspects on land conflicts are discussed as part of the readiness evaluation. This included review of policies on land ownership. Training on conflict mediation and plantation business appraisals to mitigate the risk of conflicts. This included the discussion on an integrated FGRM under provincial secretariat (SEKDA);
- Discussion with BIOMA regarding the definition of indigenous peoples, including relevant adat claims and tenure. Definition of Indigenous Peoples, and existing regulations to support Indigenous Peoples (PERDA No. 1/2015);
- Training material for the delivery of REDD+ and safeguards, REDD+ implementation supports the needs to increase capacity for coordination across government agencies as well as private sector. Provincial REDD+ Strategy: Policy, Regulation, and Governance, Development of East Kalimantan REDD+ SES and REDD+ Experience in Jambi provides the stakeholders (provincial government agencies) with coordination aspects to consider when implementing jurisdictional REDD+;
- Biodiversity management framework discussion with University of Mulawarman (UNMUL) encourages explicit safeguards which include ability to enforce certain regulations (i.e. HCV conservation, and conservation of habitat of endangered species);
- Capacities for environmental and social risk management were discussed and improved during technical guidance on HCVF monitoring. This event continued with group discussion to fill in the ESMF matrix;
- ERPD public consultation discussed emissions calculations, benefit sharing mechanisms, and MRV. Indirect emission reduction scheme, enabler conditions, and agreed benefit sharing mechanism still need to be included in ERPD documents. Concensus on benefit sharing mechanism to indigenous peoples was also established;
- Impacts resulting from license revocation (i.e. mining, forestry, plantation) as well as improved managements of HCV and natural resources were discussed during workshop on sustainable plantations. Drivers of deforestations were identified, and license revocation may halt palm oil expansion and increase area allotments for carbon stocks; and
- The consultation process also covered the needs for data and knowledge management to allow shared learning and dissemination of information during ERP implementation. This

would allow adaptive management for continuous improvements throughout ERP implementations.

3.5.4 Next Plan for Consultation and Engagement

Following the public consultation in Samarinda (21 May 2019) and Balikpapan (23 May 2019), the plan for consultation and engagement consisted of:

- Information disclosure during socialisation of the ERP and REDD+ concept to district stakeholders (government and non-government) scheduled for 2019 in seven districts in East Kalimantan, and;
- Consultations with community at the village level, including indigenous peoples, in FPIC process, for socialisation and got consent from communities, with specific issues such as tenurial rights and access to natural resources.

District agencies during this process will consist of BAPPEDA, Forestry Agency, Environmental Agency, Estate Crops Agency, FMU, Energy & mineral resource Agency, District Land Office and Environmental Agency. Adat council will be involved in this process to ensure proper representation of indigenous peoples (i.e, Adat that have received recognition from district governments).

3.5.5 Key Issues

Consultation processes identified issues related to the following aspects:

- Environmental and social issues consisting of tenurial conflict and disputes; institutional capacity constraints in managing potential environmental and social risk; governance risks; lack of participation; lack of effective and accessible FGRM; gender inequalities and social exclusion; and access restrictions and impacts on livelihoods;
- Drivers of deforestation consisting of: timber plantations, estate crops, mining, subsistence agriculture, unsustainable logging practices, forest and land fires, and aquaculture;
- ER program design: Synchronising Deforestation Drivers with the ERPD Program Design and Calculating Emission Targets (November 2017), SESA and ESMF documents (September 2017), and Safeguards (December 2015, February 2017, August 2017, September 2017, and October 2018); and
- Institutional capacity and development of a strategy to integrate the REDD+ program into the RPJMD capacity (November 2016), capacity for addressing environmental and social risks/safeguards (July 2017), and HCV and conflict mediation (February 2017).

Key concerns that emerged from the consultation process included potential impacts of the ERP on environment and social aspects, as summarised in Table 2 and Table 3 respectively. Predicted social impacts were defined as potential benefits (positive impacts) and potential source of conflicts (negative impacts).

Table 2 Predicted environmental impacts of the ERP in East Kalimantan.

Positive Impacts	Negative Impacts
• Improve protection of protected areas and reduce the level of illegal logging	• Forest and biodiversity degradation as well as deforestation can increase due to the uncertainty of management over the period of formulating the

Positive Impacts	Negative Impacts
• Improved carbon stock • Forest area will be more protected, and this will minimize deforestation in the future • Improved forest management practices • Clear FMU boundaries will improve forest area management by FMU • Improved capacity of FMU to manage forest areas better • Improved forest protection and other ecosystem services • Improved quality of habitat, environment and protected areas within the estate crops • Better village land-use and reduced forest conversion • Sustainable benefits for environment and community • Reduced land and forest fire • Improved forest and natural habitat protection • Reduced forest conversion for new estate crops • Reduced illegal logging • HCV areas within timber plantation concession will be more protected • Positive response and interest from plantation company that will positively impact on reducing illegal logging • Reduced forest degradation and deforestation • Better protection of conservation forests • Better protection and improved mangrove ecosystems	mechanism for conflict resolution (status quo) • Contamination of soil and water, and health risks associated with the use of pesticides and as result of poor waste management practices • Successes in reducing impacts on forests could lead to displacements of these impacts to other areas • Increased soil compactness at skidding trails • Waste from equipment and vehicle operations during RIL practise • Opening of small-scale areas as a result of developing the supporting infrastructure

Table 3 Predicted social impacts of the ERP in East Kalimantan.

Positive Impacts (Potential benefits for communities or Indigenous Peoples)	Negative Impacts (Potential Sources of Conflicts)
• Better protection of natural cultural resources due to allocation for ERP • Potential inclusions and collaborations between local communities with concession holders • Improved community livelihoods due to REDD+ support and fair benefit sharing mechanism • Improved capacity of government and private sector, as well as farmer groups through capacity building activities • Improved capacity for SFM and RIL for various stakeholders • Improved capacity of small holders in sustainable crop practices • Better access to forest resources for cultural reasons and non-timber forest products • Improved capacity of community group related to social forestry • Improved capacity on forest conservation • Improved access to forest by the forest conservation partnership scheme • Sustainable income generation for local	• There is no management within the moratorium areas which would leave room for potential illegal activities • Potential uncertainty over conflict management throughout the process of formulating a conflict resolution instrument (mechanism) (status quo) • Potential discontent among specific groups which traditionally would have played a key role in conflict resolution • Potential conflict over village boundaries • Potential to limit access and activities of communities in utilizing the land, forest products, both wood and non-wood, in HCV areas and potential conflict with companies. • Communities living in and around palm oil concessions could potentially assume the HCV areas as land unused by the concession therefore leaving room for them to conduct land clearing • Local un-skill workers may be replaced by skilled workers from out side the group • For locals associated with illegal logging activities

communities • More benefits for local communities (environmental services, e.g., ecotourism, and economic activities)	may loss their job and income • Decreased shrimp/fish pond production • Culture changes and aquaculture system technology • Potential conflicts between formal and traditional laws • Community concerns may not be accommodated into the program/activities due to lack of capacities (lack of effective FGRM/FPIC) • Potential conflict between community and other entities (concession holders, FMUs)

3.5.6 Institutional Capacity Assessment

Rapid assessment was conducted by DDPI to recognise institutional capacity in managing environmental and social risks identified in sections above. Details of the assessment is provided in Appendix A3 of this report. This assessment was done on stakeholders at national and sub-national levels with the following summary:

- At national Level, coordination between GoI and FCPF requires excellent capacity at personal and institutional level. The capacity to establish coordination is also needed to ensure national and sub-national interest are accomodated. The coordination as mentioned above will address aspects such as political and management supports for one-map policy, sustainable forest management, ensuring timber legality, sustainable palm oil, sustainable mining, and integration of environmental and social safeguards into the development strategies. The benefit sharing mechanism needs to be defined and agreed upon to ensure effective flow of Carbon Fund to the eligible beneficiaries.

- At provincial Level, local regulations (i.e., PERDA) to support Green Development Vision of East Kalimantan are already available. However, capacity for coordinating ERP implementation (including safeguards mechanism) with technical support team from national government, as well as proper implementation of benefit sharing mechanism (e.g., through BLU) are still highly needed. Aforementioned technical capacity is needed to ensure optimum operation of FMUs (forest management units), plantation agency (sustainable estate crop plantation), and environmental agency. In particular, strong capacity for solving conflict (FGRM), promoting sustainable palm oil plantation, and participatory planning is required.

- District Level requires capacity relevant with recognition mechanism of indigenous peoples (District PERDA), as well as implementation of sustainable estate crop plantation standards and good mining and forestry practices. Capacity at district level will also include recommendations for HGU (plantation license) for estate crops. Such recommendation needs to consider potential risks such as access restriction and/or involuntary resettlement.

- Village Level requires capacity relevant with implementing ERP (mainly in APL), as well as taking part in administering FGRM. Participatory planning needs to be implemented at this level to allow social and gender inclusion in village development planning.

- Private sector's need to increase their capacity to engage with local communities and local government, as well as for mitigating risks. Private sectors need the capacity for implementing sustainable forest management practices such as PHPL (forestry), RIL (forestry) and HCV, as well dispute resolution and the implementation of relevant safeguard mechanisms.

3.6 LESSONS LEARNED FROM PREVIOUS ER PILOT ACTIVITIES

East Kalimantan has experience in implementing carbon and emission reduction programs in various districts. Lessons learned from these activities have been documented and are relevant for adoption into the Carbon Fund ERP. Referring to the underlying causes identified in the consultation process, the following sections summarize the lessons learned that will be applicable for the ERP.

3.6.1 Policies to Protect Natural and Forest Resources

Loft et al (2017)[9] identified that without clearly defined REDD+objectives, there are risks of overlapping and contradicting policies (e.g., policies on expanded agribusiness, mining, transportation and energy infrastructure may contradict REDD+ vision). In Indonesia, contradiction between policies for emission reduction and development has been observed in 2013 when Master Plan for Acceleration and Expansion of Indonesia's Economic Development (Presidential Decree No. 88/2011) or MP3EI threatened Indonesia's remaining forests. This contradict Government's Emissions Reduction Plan (26% without foreign support and 41% with foreign supports) from the forest sector[10].

To date, REDD+ efforts have been primarily voluntary rather than regulated. An assessment of the Berau Forest Carbon Program suggested that a clear policy framework that outlines the government's responsibilities on management of protected forests (i.e., to support clearly-defined REDD+ objective) is lacking. Consequently, there is a need to establish policies on carbon accounting, forest reference emission levels, and decision-making processes[11]. Policies are also needed to strengthen existing methodologies for reducing emission such as Reduced Impact Logging (RIL), as a methodology that can help reduce emissions from the forestry sector by up to 69% compared to conventional logging practices[12]. The provincial government has the regulatory instrument to support REDD+ in form of Governor Regulations on provincial emission reduction strategy. However, legal framework for development is supported by provincial regulation (PERDA) that overpowers the governor's regulation. Therefore, legal basis for REDD+ needs to be upgraded in order to gain the same legal strength as the development policies.

The regulatory frameworks for HCV designations as a measure for protecting natural and forest resources in forest areas, as well as in other use areas (APL) is needed. A study done by a HCV assessment team at Mulawarman University indicated that policies on nature and forest protection can be based on classification of HCV to protect ecosystems, as well as livelihood and cultural values.

These examples support the notion that development of a regulatory framework, followed by issuance of relevant regulations (e.g., PERDA) at the provincial level will strengthen the application of low-emission methodologies. The regulatory framework may need to include a mandate for implementing certain methodologies for sustainable forest management and sustainable plantation in forest area and APL respectively. Consequently, training and capacity building are needed to ensure proper implementation of the mandated methodologies.

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[9] Loft, L, et al. (2017). Risks to REDD potential pitfalls for policy design and implementation. Environmental Conservation, Volume 44, Issue 1 (Thematic section: Forest Ecosystem Services). pp. 44-55

[10] Source: https://redd-monitor.org/2013/12/20/redd-fails-to-address-the-drivers-of-deforestation-in-indonesia/

[11] Berau Forest Carbon Program

[12] RIL Updates. TNC 2015.

3.6.2 Participatory Planning and Spatial Planning

Participatory planning at the village level has previously been done (e.g., implementation of village development planning/*Musyarawah Rencana Pembangunan Desa – MusrenbangDes*) to ensure that the program was well suited to the biophysical, as well as socio-economic conditions of the village. Various planning mechanisms such as village development planning (*musyawarah rencana pembangunan desa* – Musrenbagdes) have been part of the procedure prior to receiving the Village Funds (*Dana Desa*). Implementation of REDD+ has explicitly included FPIC as a method for gaining local community acceptance of a REDD+ mechanism. The process of Musrenbangdes provides lessons learned on how communities address common needs, and ensure representation of community members in decision making. In many cases, Village Land Use/Spatial Planning (or Participatory Rural Appraisal-PRA) was used to encourage participatory planning at village level. The development of village sketch from this exercise can be regarded as a step toward village spatial plan. Validation of village spatial plans by village governments formalised the village spatial planning process. In line with participatory process, the National Program on Community Empowerment (*Program Nasional Pemberdayaan Masyarakat* – PNPM Mandiri) has implemented participatory planning, and trained village facilitators to support its implementation at village level.

Indonesia is a signatory of United Nation Declaration of Rights for Indigenous People (UNDRIP). This declaration recognises FPIC as a specific right that pertains to indigenous peoples. It allows them to give or withhold consent to a project that may affect them or their territories. Once they have given their consent, they can withdraw it at any stage. Furthermore, FPIC enables them to negotiate the conditions under which the project will be designed, implemented, monitored and evaluated[13].

FMUs are seen as the government representative that works with local communities surrounding (or within) the forest area. Social forestry schemes are part of the ERP to provide sustainable livelihoods for local communities (Component 4). Currently, the FMUs rely on support from MoEF (Directorate General of Social Forestry and Environmental Partnership). However, in the ERP the FMUs are expected to have in-house expertise for conducting FPIC[14], so that they can conduct proper FPIC independently within the ERP.

Specifically, approaches such as community inspirative action towards changes (*Aksi Inspiratif Warga untuk Perubahan* – SIGAP) REDD+ have also been implemented to comply with safeguards principles and to ensure community participation and subsequent acceptance of the program by the local communities. Experience from SIGAP implementation[15] indicates the following advantages:

- Applicability for implementation at the grassroots level, including contribution to the FPIC process;
- Contribution to the development of safeguards. SIGAP may provide actual and updated conditions at the grassroots level, and this can be used to improve safeguard implementation by adapting to the context within the communities, so the safeguard measures are adapted to address environmental and social risks at this level. This becomes more crucial, as the local communities (i.e., villages) will be involved in management of forested areas in APLs; and

[13] FAO (2016). Free Prior and Informed Consent: An Indigenous Peoples' right and a good practice for local communities.

[14] Implementation of FPIC by UN-REDD (2012)

[15] SIGAP REDD+ lessons learned. TNC (2016)

- Providing added value to the existing safeguards implementation, as SIGAP encourages equality among stakeholders in the context of village planning.

Disadvantages of SIGAP are:

- SIGAP does not necessarily bridge planning processes at the grassroots level with policies at district and/or provincial levels; and
- Monitoring and evaluation are not strongly addressed.

Nevertheless, SIGAP as a participatory mechanism in East Kalimantan has been accepted and formalised through the Regulation of East Kalimantan Governor (*Peraturan Gubernur*/Pergub) No. 26/2018 regarding SIGAP implementation. Relevance of SIGAP with safeguards can be drawn through the following analysis:

- Support for REDD+, forestry and biodiversity is relevant with SES-REDD+ Kaltim Principle 5 on biodiversity and ecosystem services;
- Mapping of community power is relevant with SES-REDD+ Kaltim principles 1 and 3 on tenurial rights and rights for community knowledge;
- Participatory planning is relevant with SES-REDD+ Kaltim Principle 6 on stakeholder participations;
- Village land use/spatial planning and mapping is relevant with SES-REDD+ Kaltim principles 6, 7 and 4 on stakeholder participation, local regulation and good governance;
- Village Development Plan is relevant with SES-REDD+ Kaltim Principle 4 on good governance;
- Fundraising to support Village Development Plan is relevant with SES-REDD+ Kaltim principles 4 and 2 on good governance and benefit sharing from REDD+;
- Establishing work plan and benefit sharing mechanism is relevant with SES-REDD+ Kaltim principles 4 and 2 on good governance and benefit sharing from REDD+; and
- Formulation and implementation of agreement is relevant with SES-REDD+ Kaltim principles 4 and 2 on good governance and benefit sharing from REDD+.

Through participatory mapping, legitimacy of village boundaries and land-use can be fostered. By doing so, this process may address social risks by facilitating amicable dispute resolution if overlapping village boundaries and/or land-use are concerned.

3.6.3 Government Capacity to Protect and Supervise Forest Areas

Management of Forest areas falls under the mandate of FMUs (*Kesatuan Pengelolaan Hutan* [KPH]). Efforts to strengthen the FMUs have been done through various programs such as Forestry and Environment Education and Training Agency (BDLHK), GGGI, FORCLIME, TNC, and the Forest Investment Program (FIP). Such efforts are implemented in response to the needs for increasing

government capacity on forest protection and supervision. This includes strengthening capacity for resolving tenurial conflicts that often occur in the FMU areas[16].

BDLHK and development partners has carried out capacity building for FMU, the Village Forest Management Institute, and local NGOs in East Kalimantan. The training included: FMU Management, Ecosystem Management, Social Forestry Assistance, SFM, Reduced Impact Logging, Conflict Resolution and Mediation, and Forestry Business Planning. In the plantation sector capacity building has been carried out for the management of HCV and land fire management, for government staff, companies, and smallholders.

EK Government has also developed operational standard procedures for conflict resolution, social forestry assistance, climate village implementation, RIL implementation, HCV management, and governor regulations are being drafted on HCV management and land conflict management. Each FMU has a Technical Implementation Unit (UPTD) that has staff, some staff have been trained. Village facilitators have been given socialization and training on Kampung Iklim+ in an effort to manage forested areas in the village. In Berau there is 1 SIGAP facilitator in each village and every sub-district. In other districts, there are 1 village facilitator for 4 villages.

One example from *Berau Barat* FMU showed the following facts:

- 95% of the FMU areas are licensed concessions;
- These management licenses aren't monitored and evaluated optimally;
- The boundary of FMU *Berau Barat* is unclear; and
- Tenurial conflicts occur, primarily in the concession of PT Inhutani.

Lessons learned from implementation of the Berau Forest Carbon Program showed the multi-dimensional nature of forest management (i.e., commercial values, community aspects and forest conservation). Due to this nature, conflicting agendas and mainstreaming forest management efforts emerged as issues that need to be addressed by the FMU. Efforts to address these issues include (but are not limited to) multi-stakeholder workshops, establishment of FMU forums, mediation and establishment of MoUs/agreements among conflicting parties. The capacity of the FMU (as a decentralised structure for forest management), specifically related to on-the-ground operational experience with multi-stakeholder forest management needs to be built[17]. This will strengthen the government's capacity to protect and supervise forest areas.

Efforts for increasing government's capacity to protect and supervise forest areas are also seen in the implementation of Forest Investment Program (FIP). The project development objective of the Indonesian Forest Investment Program 2 (FIP 2) is strengthening institutional and local capacity for decentralized forest management. Decentralization is mandated by Government Regulation (PP) No. 38/2007 to increase/improve efficiency in governance. In order to increase the success of the project, it is imperative that forest management scenarios are linked with the livelihood aspects in the target areas.

[16] Working Group on Forest-Land Tenure (2015). Tenurial Conflicts on FMU Development Lessons learned from rapid assessment on Production Forest Management Unit in Berau Barat and Kapuas Hulu.

[17] Mid-term progress report on the REDD+ readiness in Indonesia (2013)

Challenges identified prior to the development of FIP 2 included: coordination among government agencies; lack of or weak regulatory framework to justify REDD+ vision in relevance with forest management; lack of knowledge management system; capacity for identification of environmental and social risks; and capacity for formulating and implementing safeguards measures. The general strategy of FIP is an improved forest management approach, and improved forest-based livelihoods.

In addition, government roles in managing environment risk is specified in the Law No. 23/2014 on Local Government. Provincial and district government has clearly obligation to provide Environmental Protection and Management Plan (RPPLH) document, Strategic Environmental Assessment (KLHS) document, management of environmental pollution, management of biodiversity, collection and storage hazardous material, supervision to business entities performance on environment protection and trash/rubbish management. The sub-government level under district goverment which is sub-district (*kecamatan*) and village government play role on the implementation of provincial/district policy and program as well as play for supervising of entitites that work in their jurisdictional teritory. Government body and institution at all level has sufficient capacity to manage the environment risk in term of authority as regulator governed by law. However, inadequate number of personel and capacity, limited budget for conducting activities such as supervision as well as lack of coordination reduce the capacity of these bodies.

Similar to environment risk management, the role of provincial and district government in term of social aspec are provided in the same law (Law No. 23/2014 on Local Government). According to the Law No. 23/2014 on Local Government, the authority to recognized *Masyarakat Hukum Adat* (indigenous peoples) and their territories is given to provincial and district government. Furthermore, East Kalimantan Provincial Government has issued Regional Regulation No. 1/2015 which emphasize the more detail procedure for *Masyarakat Hukum Adat* (indigenous peoples) recognition including establishment of *Adat* Law Community Committees. Recognition of *Masyarakat Hukum Adat* (indigenous peoples) may reduced the number of potential conflicts between adat communities and the state, or companies. On the social aspect, sub-district government has specific task according to Government Regulation No. 17/2018 on Sub-District which is coordinating any activities related to community empowerment program by government and private sector working in sub-district jurisdiction.

3.6.4 Alternative Livelihoods, Productivity of Agriculture, and Access to Technology and Finance

Policy analyses[18] indicate that the REDD+ implementation will be more effective if targeted toward small-scale dispersed activities that enhance carbon stocks. This is in line with ERP strategy that targets smallholder farmers in the plantation sector. Smallholder farmers and private companies are identified as stakeholders in REDD+ activities proposed in the ERP.

Saito-Jensen (2015) indicated that to ensure reduction of deforestation and degradation, there is a need for forest tenure reform, particularly on recognition of customary forest tenure through communal titles. This is deemed more effective compared to transfer of titles to households. Land under communal titles have the following advantages over household title:

[18] Saito-Jensen et. al. (2015). Policy options for effective REDD+ implementation in Indonesia: the significance of forest tenure reform. International Forestry Review Vol.17(1) pp 86-98.

- The size of the area tends to be larger that that of household titles. This allow larger coverage/intervention when using communal titles;
- Communal titles are managed collectively to allow participatory decision making, as such that the decisions will address the interests of a wider audience compared to household titles; and
- Customary groups in East Kalimantan have stronger legality compared to the households. Therefore, management authority under communal title (i.e., customary groups) allows stronger protection of the land areas.

This strengthens the notion that the ERP at the grass root level needs to be based on villages or community groups, rather than households.

Additional topics on livelihood are related to gender and/or social exclusions. Women and men depend on forest resources in different ways, so the risk and impacts of the program on both genders need to be considered in the context of sustainable forest management[19]. Therefore, REDD+ initiatives need to ensure that gender considerations are included in the safeguard mechanisms. Such consideration is crucial in building institutional capacity for gender-equitable REDD+ program and considering gender-related risks and opportunities in REDD+ program[20].

An example of a REDD+ livelihood program can be seen in the Kalimantan Forests and Climate Partnership (KFCP), Central Kalimantan[21]. The livelihood program was implemented based on village agreements that entitle the villages to funding support for development programs integrated in the village development plan. Under the village agreements, KFCP and local communities agreed on a set of work packages designed specifically for emissions reductions, such as establishing seedling nurseries and reforestation. KFCP provided technical guidelines, monitoring and financial support, while communities provided materials, labor and other services. All of the communities were engaged in establishing nurseries and producing seedlings, which were later used in reforestation. Livelihood packages (e.g., small livestock, rubber cultivation, agroforestry) were made available as a “reward” for participating in the ERP.

A similar approach was undertaken in the Berau Forest Carbon Project where livelihood development (compensation and incentives) were tested as part of the village incentive agreements under REDD+. The lessons learned from this project will be applicable for Component 4 of the ERP in terms of working with community groups to reduce emissions, while providing alternative livelihoods to participating communities/villages. This can be further developed in a benefit sharing mechanism under the ERP.

REDD+ initiatives beyond East Kalimantan have shown examples of climate-smart agriculture to increase productivity. The following climate-smart agriculture[22] approaches may be applicable to the ERP (primarily Component 5):

[19] Marin & Kuriakose. (2017). Gender and Sustainable Forest Management: Entry Points for Design and Implementation. Climate Investment Funds

[20] Gurung, Giri & Setyowati. (2011). Getting REDD+ Right for Women. An analysis of the barriers and opportunities for women’s participation in the REDD+ sector in Asia. USAID.

[21] CIFOR (2014) REDD+ on the ground

[22] REDD Net (2011). REDD+ and agriculture: A cross-sectoral approach to REDD+ and implications for the poor.

- Restore cultivated organic soils for increased vegetation cover, reduced tillage, use of crop residues or manure or compost;
- Improve cropland management for improved agronomy, nutrient management, reduced tillage, water management (including irrigation and drainage), set-aside land, agroforestry;
- Improve grazing land management for increased cover of high-productivity grasses and overall grazing intensity, nutrient management, fire management and species introduction;
- Restore degraded lands for erosion control and organic and nutrient changes;
- Improve rice cultivation techniques to reduce methane emissions such as periodic drainage, intermittent irrigation and shallow flooding;
- Improve livestock management with better feeding practices, dietary additives, breeding and other structural changes, improved manure management; and
- Agroforestry tree crops, integrating trees into fallow cycles, forest fragments and trees integrated into agricultural systems (e.g. silvopastoral systems).

These approaches may require additional technology (i.e., agriculture intensification, compost production, erosion control, rice cultivation and livestock management).

3.6.5 Lessons Learned on Conflict and Dispute Resolution

Tenurial Conflicts on FMU Development in Berau (East Kalimantan Province) and Kapuas Hulu (West Kalimantan Province). Process for conflict and dispute resolution started with the identification of Object of conflict (i.e., forest area under FMU jurisdiction); stakeholders/actors involved in the conflict; and conflict style. Result from this process defined the causes of conflicts (i.e., lack of clear boundaries, lack of monitoring in licensed areas, and needs for land for subsistence/agriculture) and willingness of stakeholders to resolve the conflict. Conflict and dispute resolution required mediation by a “neutral” party that had no interest (would not gain any advantage from the object of conflict). Mediation processes were done:

- At community level to resolve conflicts between local communities and concession holders; and
- At national level to resolve conflicts between concession holders.

Conflict resolution between forestry companies and communities has been carried out in Berau and Mahakam Ulu, which have been agreed through forestry partnerships and through recognition of customary lands.

Conflict resoultion through mediation (rather than through judicial mechanism) should be prioritised, as this approach shows higher rate of success. The lessons learned also show that coordination and collaboration among different teams are important. Response Team for Environment and Forestry Cases (MoEF), and Inventory and Land Utilisation Team (Ministry of Agraria, Spatial Plan and Land Administration) are frequently involved in conflict resolutions. Involvment of Inventory and Land Utilisation Team allows conflict resolution beyond state forest areas (i.e., APL and plantation).

4.0 DESCRIPTION OF THE ERP

The ER program will support a combination of enabling conditions and promotion of sustainable management practices that will directly address the underlying drivers of emissions resulting from sectoral activities including, timber plantations, estate crops, subsistence agriculture, aquaculture, and unsustainable logging practices. The program design considers the distribution of remaining forests, the threats to those forests, and the key stakeholders involved in the respective areas.

Components 1 and 2 address the two cross-cutting governance issues that were identified in the drivers of deforestation analysis: weak land governance and weak forest supervision and administration. These issues underlie much of the deforestation associated with each of the eight proximate drivers. The component builds on the significant ongoing reforms taking place at the national level and within East Kalimantan. The proposed governance improvements are essential for achieving long-lasting impacts and form an important part of the strategy for managing risks of reversal and for producing equitable outcomes and non-carbon benefits. This component will also contribute to improving the incentives framework for sustainable investment by creating a more level playing field.

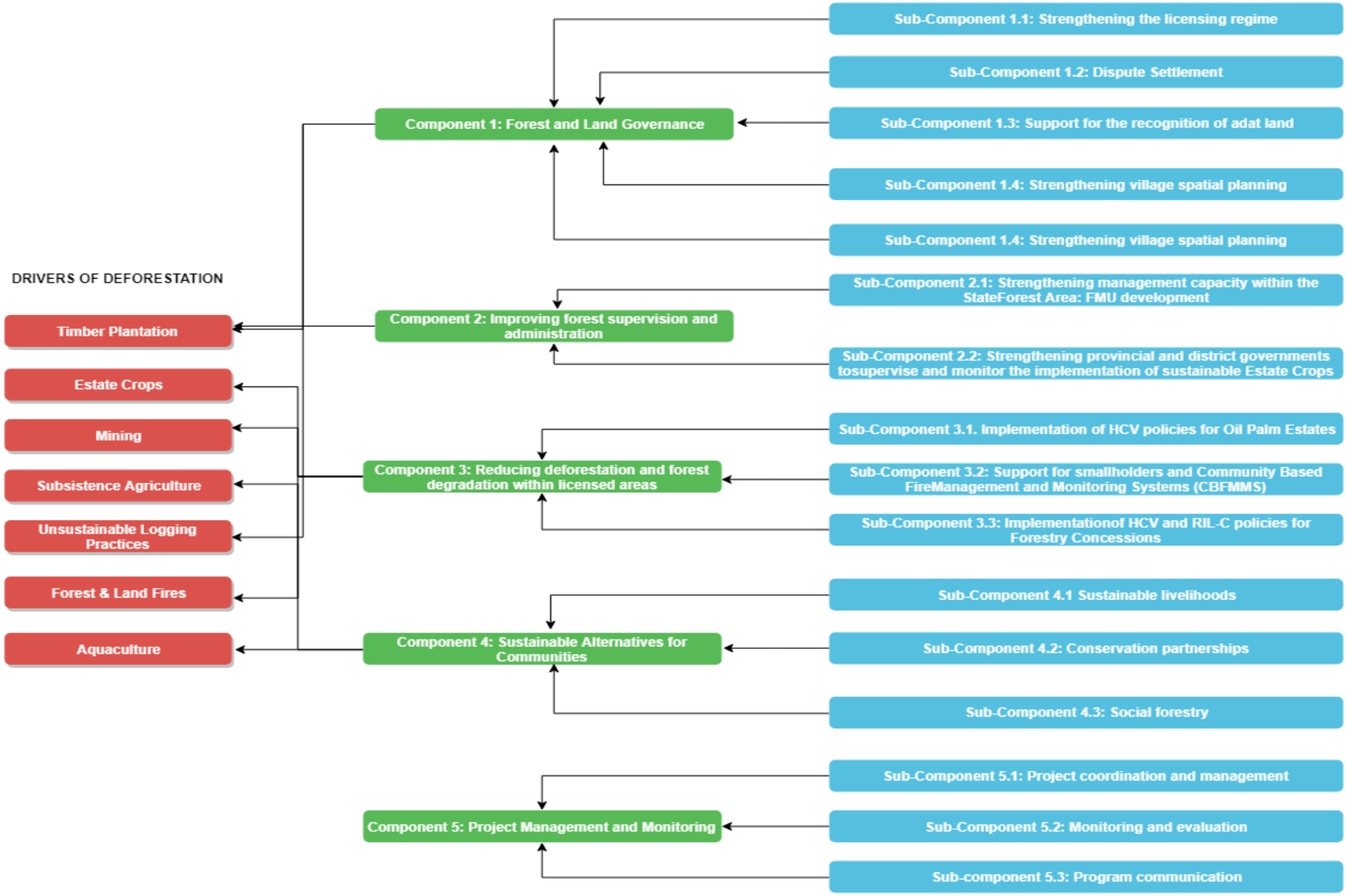
Component 1 directly addresses issues related to overlapping licenses and to conflict. Component 2 strengthens the capacity of the government to protect remaining forests. Within the State Forest Area, this will be achieved by strengthening the capacity of forest management institutions to oversee the State Forest Area. On land outside of the State Forest, the Program will strengthen the role of villages in implementing sustainable development and the role of government agencies in the administration of estate crops.

Component 3 is concerned with the management practices of oil palm and forestry companies. The ER Program will work with key actors to support them in adopting and implementing sustainability approaches, centered around the recently developed HCV and RIL policies. In addition, the component includes activities for addressing the underlying drivers of fire through technical assistance to companies for fire prevention and support for Community Based Fire Management and Monitoring Systems (CBFMMS).

Component 4 addresses deforestation linked to encroachment and agriculture from mainly by providing alternative livelihood opportunities. The component will support the government's social forestry programs, as well as partnerships around conservation areas. The component will seek to provide sustainable livelihood opportunities to local communities, also through village development programs, thereby addressing a key driver of encroachment. Component 5 includes all activities related to program management, including monitoring and evaluation.

Figure 4 provides an overall summary of the different components and sub-components of the ERP and how they respond to the drivers of deforestation and forest degradation.

Figure 4 Components and sub-components of the ERP that respond to drivers of deforestation and forest degradations.



4.1 COMPONENT 1: FOREST AND LAND GOVERNANCE

As discussed in Section 4.4, Indonesia is undergoing critical reforms related to land governance and there is an opportunity for supporting on-the-ground practical processes that complement wider policy developments. The ER Program will focus on four key aspects that support improved land governance: improvements to the licensing regime, dispute resolution, the recognition of customary land, and village planning. In addition to leading to significant emissions reductions, it is expected that this component will provide important non-carbon benefits to local stakeholders, including concession companies and local and customary communities.

4.1.1 Sub-Component 1.1: Strengthening the licensing regime

The licensing moratorium, which was recently confirmed through Governor Regulation 1 of 2018 *jo* Governor Regulation 50 of 2018, provides a window of opportunity for advancing reforms related to licensing processes. With 53% of remaining forests located within areas that are licensed to forestry or estate crop or mining companies, the activities under this component are expected to have significant impacts on deforestation rates. The component will monitor the enforcement of the moratorium, will strengthen transparency in licensing, and will support the review and revocation of existing licenses. Further, the ER Program will support the acceleration of areas allocated for social forestry licenses. Additional interventions related to the licensing regime will take place under Component 3, which engages forestry and estate crop companies, and which includes the rollout of policies for the protection of remaining forests within licensed areas.

The ER Program will monitor the moratorium on licensing (Governor Regulation 1/2018 *jo* Governor Regulation 50/2018) to ensure that it continues to be enforced. This will protect forests that are potentially at risk of conversion. The regulation covers the governance of licensing and non-licensing of mining, forest, and oil palm plantations in East Kalimantan.

The Provincial Investment and Licensing Integrated Service (DPMPTSP) will lead the development of a policy to strengthen information management and documentation related to land-use licensing process. The policy development will be conducted through consultation with the mining, estate crop, agriculture and forestry sectors. Agencies involved in licensing processes will be empowered to manage and provide information on land-use licenses and licensing processes. All spatial data will be linked to the “one map” data being developed by the central government (Act No.4/2011 on Geospatial Information).

Permits for forestry, mining, and estate crops will be reviewed and revoked where applicable, leading to clearer land-use boundaries. The Provincial Mine and Energy Service will revoke mining permits that are not “clean-and-clear”, based on Minister of Energy and Mineral Resources Regulation No. 43 of 2015 concerning procedures for evaluating the issuance of coal and mineral mining licenses and Minister of Energy and Mineral Resources Regulation No. 26 of 2018 concerning the implementation of good mining principles and supervision of mineral and coal mining. In mid 2019, the there are 519 of 1.404 IUPs that are “clear-and-clean”. The ER program is expected to accelerate and enforce the process of revocation. The review of estate crop permits will be led by the Provincial Estate Crop Service. There are 373 licenses for estate crops, some of which overlap with other existing licenses or are found inside areas that are off-limits due to the moratorium. Concessions found inside these areas will be reviewed and boundaries will possibly be amended by the Provincial Estate Crop Service. The results of reviews will be published.

The acceleration of issuing social forestry licenses will be facilitated by MoEF through the Directorate General for Social Forestry. There are currently six schemes of social forestry: Social forestry programs that will be promoted are Village forests (Hutan Desa), community forests (Hutan Kemasyarakatan), community-based timber plantations (Hutan Tanaman Rakyat), customary forests (hutan adat), title/private forests (hutan rakyat), and forest partnerships (kemitraan). The target of the social forestry program in East Kalimantan is 399,298 hectares delivered by 2024. The targeted area for social forestry is based on indicative maps for social forestry programs developed by MoEF (PIAPS). The facilitation will be supported by the Provincial Forestry Service through the working group of acceleration for social forestry, and by the FMUs.

4.1.2 Sub-Component 1.2: Dispute Settlement

The sub-component will accelerate the settlement of land tenure disputes involving claims by communities in forest areas. This process, which is an integral part of the national Agrarian Reform Program (TORA), will be facilitated and mediated by the Forestry Service with the guidance of relevant Ministries.

As part of program preparation, a participatory assessment, involving adat communities, will be conducted by sectoral agency (Forestry Agency, Estate Crops Agency). This will map existing and potential conflicts, identify existing mechanisms for settling land disputes between the government and adat communities, and assess indigenous traditions and knowledge for conflict handling and dispute resolution. The assessment will feed into the development of community-based conflict handling and resolution mechanism guidelines, produced in close consultation and with the consent from adat communities, and the Provincial and District Governments.

Each FMU identifies conflicts in forest areas and submits reports every semester to the Forestry Service and MoEF. The Plantation Office identifies conflicts in the plantation area every semester and submits reports to the Governor. The conflict complaint mechanism was also accepted by the FMU, the Forestry Service, the District / Provincial Plantation Service, the Environmental Service and the MoEF, which can be seen in more detail in the FGRM section.

The Provincial Forestry Service is in charge of mediating land tenure disputes in forest areas, and will conduct focus group discussions and consultations with relevant stakeholders, advancing and resolving disputes where possible.

To address overlaps of community activities with concessions that are near forest conservation areas, the ER Program will support forest conservation partnerships. These are regulated under Ministry Decree No P.83/2016 on Social Forestry, which aims to reduce conflict areas between communities and concession owners. Under the regulation, communities are allowed to partner with national parks and other conservation areas. This activity will be led by Provincial Forestry Service which conduct conflict mediation followed by livelihood development activities (described in Component 4).

The social forestry programs, introduced in 1.1.1, will be designed to reduce tenure conflicts in existing concession areas. By providing regulated access rights and livelihood opportunities, social forestry licenses are expected to reduce conflict. The Forestry Service will organize consultations with academics and other experts to develop the social forestry program as an option for dispute resolution. However, Forestry Agency will not be involved in conflict resolution outside the forest areas (estate crops and mining in other use areas). Conlficts in plantation and mining areas will be administererd by Plantation Agency and Environmental agencies respectively.

To address any overlapping areas between forestry and mining or estate crops, the program will seek regulations by the Governor to settle disputes. A governor regulation is being drafted and now being discussed by all sectors and stakeholders. The Economic Bureau of the Governor's Office will lead the policy development and facilitate the process until the regulation is signed by the Governor by the end of 2018.

Conflicts will be further addressed through a number of mitigation actions, such as:

- The development of joint decrees;
- Supporting and refining existing local conflict handling protocols as well as time frame for comprehensive settlement;
- Developing the FGRM which will include a mediation mechanism;
- Identification of tenurial conflicts by FMUs;
- Identification and assessment of existing conflict resolution mechanisms;
- Enhancement of communication between community/customary leaders with company representatives related to the management of HCV areas; and
- Capacity building of stakeholders including training for paralegals for community-based conflict handling mechanisms at provincial and district level.

Due to the nature of conflicts and disputes in different sectors (i.e., forestry, mining, and estate crops), a dedicated FGRM that allows cross-sectoral conflict and dispute resolutions will be needed. Thus, the ERP requires the FGRM to be established as part of its safeguard implementations.

4.1.3 Sub-Component 1.3: Support for the recognition of adat land

The ER Program will support the implementation of recent regulations concerning the recognition of *Masyarakat Hukum Adat* (indigenous peoples) and their territories. Specifically, the East Kalimantan Provincial Government will accelerate the recognition of customary rights and occupation of land inside forest areas, in accordance with the mechanism stipulated in East Kalimantan Regional Regulation No. 1/2015.

District and City Governments will establish Adat Law Community Committees, which form an important step in the adat recognition process. The Provincial Government, along with District and City Governments will implement Article 14 of East Kalimantan Regional Regulation No. 1/2015, which deals with reducing the number of conflicts between adat communities and the state, or companies.

The East Kalimantan Provincial Government, up to KPHs, and Regency/municipal governments, up to the Camat level, will be encouraged to actively identify adat territories through participatory mapping. Forest Management Units will support this process by assessing and recording adat claims within the State Forest Area, as part of the process of carrying out social inventories within their boundaries.

4.1.4 Sub-Component 1.4: Strengthening village spatial planning

The ER Program will develop guidelines and regulations for integrating REDD+ activities into village spatial planning and will support the integration of emission reduction activities into village development plans. The activity will be carried out by the District Community Empowerment and Village Government Service (DPMPD), which will support communities in integrating REDD+ activities into village spatial and development plans. Facilitation will include community training to develop guidelines for village development plans and village spatial planning. The budget will be derived from district and provincial government budgets. The facilitation may be supported by development partners, such as WWF, Yayasan Bioma, Yayasan BUMI, TNC and TFCA.

The ER Program will build the capacity and skills of village institutions to integrate low emissions development planning into village development plans. At the village level, ER program activities will be integrated into village development plans. The establishment of Green Villages, or Kampung Iklim aims to reduce emissions based on village development plan. The activity will target 150 priority villages throughout the province. Specific ER activities that could be integrated into village plans include supervision of forested areas, community-based fire management, and other ER activities.

The East Kalimantan Community Empowerment and Village Government Service will lead the preparation of village spatial and village development plans. The activity will include trainings, consultations, and community meetings. Training will cover the development of village spatial land use plans. This includes development of village policies on land use. The plans will be designed in a participatory way with communities. The agreed plans will be submitted to the district governments for approval. Local academics and NGO representatives will be invited as resource persons and facilitators. The village plans will aim to reduce deforestation and forest degradation at the village level.

Expected Outcomes of Component 1 are:

- Strengthened and more transparent Information Management and Documentation related to land-use licensing process
- Permits for forestry, mining, and estate crops are reviewed and revoked where applicable, leading to clearer land-use boundaries
- Land use boundaries are clarified as the forest area demarcation process is completed
- The moratorium on licensing (Governor Regulation 1/2018) continues to be enforced, protecting forested areas potentially at risk of conversion.
- Strengthened conflict resolution mechanisms contribute to improved land governance
- Clear guidelines and regulations are in place for integrating REDD+ activities into village spatial planning
- Customary forest and lands are identified through participatory mappings
- Adat law communities and their territories are recognized
- Key villages implement Forest Fire Management Plans leading to a reduction of fires

- Villages incorporate ER activities into their spatial and village development plans (target 150 villages in 7 districts)

4.2 COMPONENT 2: IMPROVING FOREST SUPERVISION AND ADMINISTRATION

The ER Program will address institutional weaknesses to improve forest supervision and administration. Within the State Forest Area, the focus will be on strengthening East Kalimantan's FMUs, which cover the entire production and protection forest area. To improve the governance of forests outside the State Forest Area, in particular remaining forests within estate crop areas, the Program will strengthen relevant non-forestry institutions.

4.2.1 Sub-Component 2.1: Strengthening management capacity within the State Forest Area: FMU development

The ER Program will strengthen the capacity of FMUs to manage forest areas and to supervise concession companies. Activities will include the development of planning documents, knowledge exchange, and business development.

An early part of this activity will focus on supporting FMUs in developing sustainable approaches to forest management through the development of planning documents. Development of long-term forest management plans known as RPHJP for FMUs will be supported by the MoEF. This includes the collection of social and environmental field data. The program will also support FMUs in the development of annual forest management plans (RPHJPendek) and strategic business plans.

The East Kalimantan Forest Service will work with 20 FMUs to identify business opportunities, develop business plans, and strengthen their capacity to become partially self-financing. The focus will be on business activities linked to SFM and social forestry that will directly support the reduction of deforestation and forest degradation. There will be at least five business plans completed by 2020 and 20 business plans completed by 2022.

The East Kalimantan Forest Service will also support selected FMUs with the development of guidelines and approaches for monitoring and supporting concessions in the implementation of HCV and RIL policies. The capacity of FMUs to support and implement Social Forestry programs will also be strengthened. Further capacity building of FMUs will focus on supervising, facilitating, and monitoring the implementation of Fire Prevention and Control activities carried out by concessions and local communities.

Determination of FMU boundaries and Forest Utilization Blocks will be conducted by the FMUs. This activity will be supervised by the Provincial Forestry Service of East Kalimantan. Determination of boundaries will ensure that the concession area inside FMUs does not overlap with other permits or community lands. The boundary marking will be conducted through mapping and ground checking in the field. Consultations with MoEF, the Provincial Government, and District Governments will be conducted in order to ensure overlaps are minimized and settled.

To decrease the incidence of fires, FMUs will work with forestry concession companies and with communities surrounding forest areas to support fire prevention and control.

The ER Program will support coordination activities and learning across FMUs by supporting the FMU Centre, which was established in early 2017. The Centre aims to enrich and improve the capacity of

FMUs to achieve their objectives and goals. The Centre will facilitate exchange of information and knowledge among FMUs in East Kalimantan.

4.2.2 Sub-Component 2.2: Strengthening provincial and district governments to supervise and monitor the implementation of sustainable Estate Crops

The ER Program will build on the recent declaration to restore 640,000 ha of natural forests and 50,000 ha of peat land inside estate crop concessions by 2030. This draft has been circulated to district governments and is waiting for district approval. The ER program will facilitate and accelerate the signing and approval of the declaration by district governments. The facilitation will be hosted by the Provincial Government (Governor) and includes dissemination of the declaration to a wide variety of stakeholders.

The East Kalimantan Estate Crops Service will lead a consultation process with district governments and with private companies, aiming toward a commitment to implement sustainable estate crops plantations, including the protection of remaining HCV forest areas. The Program will offer technical assistance to the government agencies for the implementation of these commitments. MoEF's Forestry Education and Training Center (Pusdiklat) will provide training on HCV management for government officials of the Forestry Service and Estate Crop Services from province and district governments. There will be seven districts targeted for the trainings. In addition, the ER program will facilitate government supervision on the implementation of HCV management by plantation companies. The target for supervision will be 100 estate crop companies by 2024.

Expected Outcomes of Component 2 are

- FMUs are strengthened by being partially self-financed through sustainable forest-related businesses
- FMUs supervise district-level forest concessions and timber plantations for compliance with RIL and HCV policies
- The declaration on sustainable estate crops is signed by seven districts and by key companies.
- Local government agencies have the capacity to oversee and implement the commitment, leading to protection of HCV forests within estate crop areas.

4.3 COMPONENT 3: REDUCING DEFORESTATION AND FOREST DEGRADATION WITHIN LICENSED AREAS

Component 3 aims to protect forests that are located within oil palm estates and within forestry concessions by supporting the finalization and implementation of HCV, and RIL policies. These activities directly engage the concession and estate crops companies, and thereby complement the broader policy improvements related to the licensing regime that are covered under Component 1. To further support the adoption of RIL and HCV policies, the ER Program will develop a mechanism to provide monetary and nonmonetary incentives. This will be developed through a consultative process with private and public-sector stakeholders and will be linked to the REDD+ Benefit Sharing Mechanism.

4.3.1 Sub-Component 3.1. Implementation of HCV policies for Oil Palm Estates

Component 3.1 will target the 3.2 million hectares that are allocated to estate crops across East Kalimantan. In 2016 this area had 677,137 ha of natural forest remaining and much of these forests are at risk of being cleared for oil palm plantations. Activities under this component will be led mainly by the East Kalimantan Estate Crops Service and will involve government agencies at the district level and up to 100 estate crop license holders.

The Estate Crops Service will work with the relevant government agencies at the district level and with plantation companies toward a declaration of commitment to sustainable estate crops, including the protection of remaining HCV forest areas. The declaration will be facilitated through consultations involving the government agencies and the private sector. The Program will offer technical assistance to the companies and to the government agencies for the implementation of these commitments. On sustainable estate crop implementation of the commitments done by private sectors. As a further incentive, the Program will provide technical assistance to companies to improve plantation productivity and for fire prevention.

Estate crop companies will receive capacity building for conducting inventories of HCV forests and other natural remaining forests within their concession boundaries. Training on inventories and HCV management, including field guidance, will be provided by the Provincial Forestry Service with coordination with the Provincial Estate Crop Service. Capacity building will be supported by academics from local universities and by specialists from NGOs. Forest protection systems for developing and managing estate crop areas will be developed and implemented by the companies. The Provincial Estate Crop Service will manage HCV inventory data and will monitor progress.

4.3.2 Sub-Component 3.2: Support for smallholders and Community Based Fire Management and Monitoring Systems (CBFMMS)

Partnerships between large estate crop companies and local communities in controlling forest and land fires will be facilitated. Companies will identify communities in areas that are vulnerable to fires and will facilitate the development of community groups for fire prevention. Capacity building for the groups will be provided. Training will focus on a community-based fire management and monitoring system (CBFMMS) which will cover fire management, response, monitoring, and prevention of fires. The company, together with guidance from district estate crop service, will develop standard operation procedures (SOP) for CBFMMS. The company and district service will monitor and evaluate the implementation of CBFMMS. The training module can be replicated in other districts or villages within the province. It is expected that 100 estate crop companies will develop and implement this initiative model partnership with 180 local framer groups in controlling forest and land fires.

The East Kalimantan Estate Crop Service will provide technical assistance and training for fire prevention and control by smallholders and will provide relevant equipment for smallholders. Improved capacity of smallholders to prevent and control fires leads to fewer and less severe forest fires.

4.3.3 Sub-Component 3.3: Implementation of HCV and RIL policies for Forestry Concessions

This subcomponent seeks to protect the remaining natural forests within timber plantation and natural forest management concessions by respectively supporting the implementation of HCV and RIL policies. The ER Program will support the finalization of the RIL policy, will support concessions in the implementation of RIL and HCV policies (see Annex 4.3. of the ERPD) and will strengthen monitoring.

The Directorate General of Sustainable Production Forest Management (DG PHPL) will lead the finalization of the RIL policy through policy review, gap analysis, focus group discussions and public consultations to complete the formulation of the draft RIL policy. Under the ER Program, the DG PHPL will invite the East Kalimantan Provincial Government and forest concessionaires (of East Kalimantan) to further discuss the commitment of the companies to implement RIL.

Training on RIL, SFM, and HCV management will be provided to concessionaires. DG PHPL together with DG PPI, the Forestry Training Center, and partners will collaborate to develop the official RIL/RIL training module. The Forestry Training Center will conduct a series of trainings on RIL/RIL practices and monitoring to forest managers of logging concessions and to FMU field officers. The workshop and training will be conducted at the national level or in East Kalimantan. There will be 26 trainings provided by the Forestry Training Center by 2024. Training on HCV management will be provided to FMUs and to timber plantation companies. 26 trainings on HCV management will be provided by 2024.

The RIL/RIL implementation on the ground will be monitored by DG PHPL and its partners, to make sure all the processes on the ground are in line with the RIL/RIL module. In the initial phase, 11 logging concessions and 4 KPHs would implement RIL/RIL. FMUs will monitor the implementation of RIL/RIL in logging concessions. They will conduct field measurements and will share field data and estimates of emission reductions with the MRV task force.

The Provincial Forestry Service and FMUs will monitor and facilitate the implementation of HCV protection by timber plantation companies. Under the ER program, by 2024, 20 timber plantation companies (IUPHHK-HT) will identify and manage HCV forests inside their concessions.

Expected Outcomes of Component 3 are:

- A substantial increase in the number of estate crop companies implementing sustainable plantation policies (including ISPO, RSPO, and HCV) leads to improved protection of remaining forests within areas allocated to estate crops;
- Estate crop companies commit to and implement more sustainable practices;
- Reduced deforestation through improved management and protection of remaining forests within areas allocated for estate crops;
- Improved management practices by smallholder oil palm farmers leads to reduced deforestation in and around smallholder plantations;
- The area of sustainably managed forest is increased;
- Forest concessionaires adopt Sustainable Forest Management practices;

- Forest management concessions carry out improved forest management practices (Reduced Impact Logging); and
- Timber plantations implement policies to protect remaining High Conservation Value (HCV) Forests within their concessions.

4.4 COMPONENT 4: SUSTAINABLE ALTERNATIVES FOR COMMUNITIES

Component 4 directly addresses the lack of alternative sustainable livelihoods which was identified as an underlying driver of encroachment. Activities are designed to provide livelihood opportunities within sensitive areas, including peat areas, mangroves, and conservation areas. Also, by promoting social forestry activities within the State Forest Area, the component supports improved access to forested areas for local communities and contributes to improved land governance. In addition to reducing deforestation and degradation linked to encroachment, the activities in this component are expected to lead to significant non-carbon benefits, contribute to more equitable outcomes, and are an important part of the strategy to reduce the risk of reversal.

4.4.1 Sub-Component 4.1 Sustainable livelihoods

Activities in this sub-component support sustainable swidden agriculture, paludiculture, mangrove management, smallholder oil palm cultivation, and other sustainable livelihoods. The activities will be integrated into village development planning and, depending on their location, will be supported by the East Kalimantan Estate Crops Service, the East Kalimantan Coastal and Fisheries Service, the DPMPD, or the provincial forestry service.

The ER Program will support sustainable swidden agriculture that does not use fire for land clearing and sustainable riparian rice farming as an alternative to converting forests to paddy fields. Under the lead of the Village and Community Empowerment Agency, training, workshops, and demonstration plots will be provided to farmers in 10 villages in 2 districts.

Sustainable mangrove practices will be supported through capacity building. The Provincial and District Fishery and Marine Service will provide trainings, seminars, and workshops for communities in coastal areas (Kutai Kartanegara, Berau, Paser, and Penajam Paser Utara Districts). The FMUs in Berau Pantai and the Delta Mahakam areas will play a key role in targeting communities living within the State Forest Area in coastal areas. Activities will include raising awareness of the ecological and social impacts of mangrove conversion; and capacity building for sustainable livelihood options, such as ecotourism, eco-friendly pond management, and nipah sugar production. Farmers will also be introduced to financing options, including microfinancing and small-grants schemes.

The East Kalimantan Estate Crop Service will provide technical assistance to oil palm smallholders to improve their capacity for complying with sustainability principles. The program will help smallholders meet the principles of the Indonesian Sustainable Palm Oil (ISPO) standard. Module capacity building on sustainable estate crop development (particularly for sustainable palm oil) for smallholder estate crops will be developed by district services through focus group discussions and consultations. Training and field facilitation to smallholders will be provided, with academics and NGO representatives as resource persons and facilitators. The district estate crop services will monitor and evaluate the implementation of ISPO by smallholders.

4.4.2 Sub-Component 4.2: Conservation partnerships

The ER Program will facilitate conservation partnership in or near conservation areas, which will include support for sustainable livelihoods. MoEF's DG of Forest Conservation will support training of communities in four conservation areas. Training will focus on forest protection and on the sustainable utilization of areas surrounding conservation areas.

Potential sustainable business opportunities will be identified and the provincial forestry service will provide capacity building. The program will target six conservation areas (Kutai National Park, Muarakaman/Sedulang Natural Reserve, Teluk Adang Natural Rerserve, Teluk Apar Natural Reserve, Padang Luway Natural Reserve, Tahura Soeharto) and will provide training for 18 village communities on alternative livelihoods.

4.4.3 Sub-Component 4.3: Social forestry

Social forestry is a system of sustainable forest management carried out in the state forest area or customary forest that is carried out by local communities to improve their welfare, environmental balance and socio-cultural dynamics, It is expected that by 2024 there will be 332,052 hectares issued by MoEF on social forestry. According to data from the East Kalimantan Working Group on the Acceleration of Social Forestry that achievements Social forestry until April 2019 for each scheme, among others, Village Forest has 23 licenses with an area of 125,934 hectares, Community Forest (HKm) 11 units with an area of 1,990 Ha, Community Timber Plantation (HTR) 12 units with an area of 7,643.98 hectares, Forestry Partnership 6 units with an area of 5,313.92 Ha, while Adat Forest 1 unit with an area of 48.85 hectares, so that the total are 53 units licensed for social forestry schemes with a total area of 140,930 hectares, This will include empowerment of village institutions (village forest management agencies) and capacity building of community businesses. The target is 70 business plans developed by 2024. This also includes formulation and facilitation of the community and village program. The facilitation will be supported by the Provincial Forestry Service through the working group of social forestry, and by the FMUs. Training will be conducted in 50 villages and will focus on the development of social forestry work plans (RKU), business plan development and forestry management. The implementation of Social Forestry schemes will be further supported through training and technical support. This will include coaching and mentoring programs, and will focus on the implementation of work plans and business plans.

Expected Outcomes of Component 4 are:

- Reduced conflict in and around conservation forest areas;
- Improved community capacity to respond to forest fires and reduced fire incidence in conservation forest areas;
- Villages implement community-focused investments that lead to emissions reductions and sustainable land use;
- Sustainable mangrove practices declared and adopted by coastal and peatland stakeholders;
- Number of small-scale commercial producers and other parts of the value chain provided capital as a result of carbon and non-carbon benefit sharing mechanisms;
- Increased establishment of social forestry groups (RKU) leading to sustainable livelihood options and reduced deforestation from encroachment in forested areas; and

- An increase in social forestry licenses promotes sustainable forestry and provides alternative livelihoods to local communities.

4.5 COMPONENT 5: PROJECT MANAGEMENT AND MONITORING

This Component envisages activities related to the overall management of the ERP in East Kalimantan. Component 5 consists of the following sub-components:

4.5.1 Sub-Component 5.1: Project coordination and management

This sub-component encompasses Management and coordination of ER program implementation across levels (Strengthening institutions for ER project management and coordination across sectors and developing coordination mechanism) and Provision of operating costs for ER program implementation (Develop financial management system for ER program and training on financial management). DG CC MoEF responsible at the national level and SEKDA (with East Kalimantan Climate Change Council) responsible on the sub-national levelt. More details can be seen in the Project Operational Manual.

4.5.2 Sub-Component 5.2: Monitoring and evaluation

This sub-component consists of implementation of monitoring and evaluation for ER program implementation (Training on SESA and ESMF, monitoring and evaluation of SESA and ESMF implementation,monitoring and evaluation of benefit sharing, training on monitoring, monitoring and evaluation of ER Program implementation, and development and implementation of HCV monitoring system); and Measurement and Reporting (improving activity data through ground truthing, improving emission factor data through Permanent Sampling Plots, developing capacity on ER Measurement, updating satellite imagery on ER Accounting Area, and developing and implementing the sub-national MMR System including SIS).

4.5.3 Sub-component 5.3: Program communication

This component consits of Knowledge management (Knowledge management database development and maintenance, and developing information, education and communication materials for shared learning) and Information dissemination (establishing and maintaining ER program website and dissemination of information, education and communication materials).

5.0 BASELINE CONDITIONS

5.1 GEOSPATIAL DATA QUALITY

According to Intergovernmental Panel on Climate Change (IPCC) principles for the reporting of national emissions and GHG removals, information should be transparent, coherent, comparable, consistent and accurate.[23] Geospatial data quality has become a crucial element of forest management used to pursue the ER target, because it is consistent with those principles. According to ISO 19157:2013 on geographic information data quality, which was adapted into Standar Nasional Indonesia (SNI) 19157:2015, there are six groups of data quality elements: completeness, logical

[23] http://www.fao.org/3/a-bc395e.pdf

consistency, positional accuracy, thematic accuracy, temporal quality and usability elements (Vullings *et al*. 2015).

Indonesia has implemented the one map policy since 2011 through the issuance of Law No. 4/2011 on geospatial information, strengthened by Presidential Regulation (Perpres) No. 27/2014 on the National Geospatial Information network, and Perpres No. 9/2016 on the acceleration of one map policy implementation at 1:50.000 scale. In line with IPCC and SNI requirements on spatial data quality, the data used should be up to date, accurate, consistent between time series, and obtained from the official data custodian. In addition to those aspects, proper metadata must be embedded into the spatial data in order to make data traceability easier.

An assessment of geospatial data quality related to the ERP has been conducted and is summarized in Table 4. Further calculations and analysis described in this document will use geographic information system (GIS) data, unless attributed to other sources.

Table 4 Quality assessment of some geospatial data used for the ERP.

Data Category	Data Custodian	Year Updated	Comments on Data Quality
Administration boundary	BIG	2013	▪ Total area of East Kalimantan Province based on spatial data calculation is 12,734,046 ha (GIS data used in RTRW document). ▪ Other sources may have different spatial data calculations. This is possibly due to accuracy and precision issues during spatial analysis and digitation processes.
Forest area	KLHK	2017	▪ Forest area is derived from Ministry Decree No. 278/MenLHK/Setjen/Pla/6/2017 on North and East Kalimantan Forest Status, mentioned in the ERP document. GIS data derived from BIG/RTRWP.
Forestry Permit: IUPHHK – HA	KHLK	2016–2018	▪ According to GIS data received on January 2017, there are 77 concessions in East Kalimantan Province.

Baseline spatial data used in the SESA are compiled according to the proposed ERP. In APLs, the ERP will address plantation areas, as well as APLs with relatively good forest cover (20% of the total APL area). Allocations for plantations and other designations in APLs of East Kalimantan Province are summarised in Table 5 and Table 6 respectively.

Table 5 Areas allocated for palm oil cultivation permits (HGUs).

District/City	Area (ha)
Balikpapan	485.34
Berau	453,290.69
Kutai Barat	441,370.87
Kutai Kartanegara	589,931.89
Kutai Timur	480,779.25
Mahakam Hulu	220,885.95

Paser	278,849.47
Penajam Paser Utara	86,793.60
Samarinda	7,828.79
Grand Total	**2,560,215.86**

Table 6 Total APLs and their current allocations[24].

Allocation	Area (ha)
Agriculture	412,096
Plantation (including palm oil)	3,681,657
Fisheries	187,304
Industry	57,176
Housing and settlement	396,266
Mining	5,227,136

Additionally, the ERP will address forest areas in East Kalimantan. A compilation of forest designations is provided in Table 7.

[24] Based on spatial pattern (*Pola Ruang*) in East Kalimantan spatial plan 2016–2036.

Table 7 Data on the current provincial and district spatial plans and the current allocations (forest designations).

District	Forest Designations											
	Other Use	Nature Reserve	Protected Forest	Production Forest	Convertible Production Forest	Limited Production Forest	Wildlife Reserve	Forest Garden	National Parks	Nature Tourism Park	(Blank)	Grand Total
Balikpapan	33,579.209	-	16,108.457	620.541	-	-	-	-	-	-	3,872.127	**54,180.334**
Berau	605,448.798	-	395,704.602	536,536.655	33,776.705	679,673.585	97.461	-	-	14.955	306.993	**2,251,559.755**
Bontang	10,951.891	-	4,802.521	-	121.115	-	-	-	670.811	-	-	**16,546.337**
Kutai Barat	746,768.421	4,785.230	56,905.421	307,038.162	11,846.090	238,317.287	-	-	-	-	-	**1,365,660.61**
Kutai Kartanegara	943,793.009	16,109.073	206,327.391	740,071.399	22,578.236	494,105.294	-	58,929.825	38,383.132	-	46.688	**2,520,344.046**
Kutai Timur	1,038,901.353	49,194.993	310,302.831	866,657.649	39,453.415	685,422.380	-	-	153,421.881	-	59.523	**3,143,414.023**
Mahakam Hulu	301,246.352	5,178.183	689,295.420	221,291.287	3,051.714	591,627.354	-	-	1,519.489	-	2.151	**1,813,211.95**
Paser	468,263.859	105,362.269	103,567.653	230,775.322	9,768.496	140,319.127	-	3,445.374	-	-	-	**1,061,502.1**
Penajam Paser Utara	163,089.406	2,771.580	27.831	122,980.150	92.325	24,491.390	-	5,868.561	-	-	3,810.728	**323,131.971**
Samarinda	71,763.657	-	-	624.946	-	-	-	-	-	-	-	**72,388.602**
Grand Total	**4,383,805.955**	**183,401.328**	**1,783,042.127**	**3,026,596.112**	**120,688.093**	**2,853,956.416**	**97.461**	**68,243.759**	**193,995.312**	**14.955**	**8,098.209**	**12,621,939.73**

Based on East Kalimantan Estate Crops Statistic (2018), there is 1,1 milions ha HGU (181 unit), 2,5 milions ha Estate Crops Licenses (338 unit), with 1,3 milions ha been planted and 677,137 ha forested area. Ground check/verification on the carbon accounting areas will need to be done once these areas are agreed. Ground check can employ fit-for-purpose approach based on planned activities on the ground. Currently, for consistency, the analysis was done based on the spatial data from MoEF.

5.2 ENVIRONMENTAL BASELINE

Environmental baseline data include information on the habitat of orangutans (*Pongo Pygmaeus*) as the flagship species in East Kalimantan Province. Areas identified as orangutan habitat in East Kalimantan are listed in Table 8. Environmental baseline data also included areas already designated with a high conservation value (HCV 1 to 4)[25], which are presented in Table 9. Rehabilitation of forest cover in APLs falls under the jurisdiction of the Watershed and Protected Forest Management Authority (BPDASHL) Mahakam Berau. Watershed areas in East Kalimantan are described in Table 10, which shows the work area of the BPDASHL. The table shows that Kutai Timur District has the largest watershed area and will provide interface for involvement of BPDASHL Mahakam Berau in the ERP.

Table 8 Habitat areas for the orangutan flagship species.

District	Area (ha)
Berau	709,091.51
Bontang	14,293.52
Kutai Barat	55,464.12
Kutai Kartanegara	522,969.61
Kutai Timur	1,355,429.41
Mahakam Hulu	17,051.65
Grand Total	**2,674,299.83**

Table 9 Areas designated as HCV 1 to 4.

District	HCV Designations (1–4) (ha)			
	HCV 1	HCV 2	HCV 3	HCV 4
Balikpapan	15,444.173	15,197.722	10,324.425	11,274.159
Berau	1,645,271.430	1,262,966.649	1,752,463.889	1,588,541.538
Bontang	3,092.236	3,081.037	3,077.545	9,265.061
Kutai Barat	637,190.461	413,228.373	610,953.653	952,185.249
Kutai Kartanegara	1,069,100.908	978,264.825	1,261,071.293	1,401,323.590

[25] HCV 1: Areas that contain globally, regionally or nationally significant concentrations of biodiversity values (e.g. endemism, endangered species, refugees);
HCV 2: Areas that contain globally, regionally or nationally significant large landscape-level areas where viable populations of most, if not all, of a naturally occurring species exist in natural patterns of distribution and abundance;
HCV 3: Areas that are in or contain rare, threatened or endangered ecosystems; and
HCV 4: Areas that provide basic ecosystem services in critical situations (e.g., watershed protection, erosion control)..

District	HCV Designations (1–4) (ha)			
	HCV 1	HCV 2	HCV 3	HCV 4
Kutai Timur	1,454,746.830	1,300,082.930	1,706,774.346	2,286,564.497
Mahakam Hulu	1,609,539.518	1,324,180.454	1,601,617.047	1,599,205.077
Paser	532,148.614	276,840.245	537,978.503	660,598.053
Penajam Paser Utara	82,031.092	38,018.979	94,649.513	224,591.056
Samarinda	4,107.156	4,018.479	3,725.722	33,662.696
Grand Total	**7,052,672.417**	**5,615,879.694**	**7,582,635.935**	**8,767,210.976**

Table 10 Watershed areas in East Kalimantan Province.

District	Name of Watershed	Area (ha)
Balikpapan		54,173.12
	Batakan	750.97
	Batakan Ds	532.15
	Damai	2,915.72
	Klandasan Ulu	701.61
	Lamaru	1,796.38
	Manggar	9,946.61
	Manggar Ds	2,060.68
	Riko Manggar	29,119.69
	Samboja Kuala	320.74
	Selokapi	3,403.60
	Senipah Ds	1,491.99
	Sepinggan Ds	447.39
	Teritip	685.60
Berau		2,249,460.49
	Berau (Segah and Kelay)	1,630,584.10
	Dumairing	10,968.03
	Karangan	31,963.85
	Kayan	93,253.29
	Mahakam	2,196.97
	Manubar	69,257.76
	Tabalar	123,615.88
Bontang		16,451.80
	Sanganakan	1,250.38
	Santan	855.79
	Santan Ds	3,018.05
	Senipah Ds	11,325.04

District	Name of Watershed	Area (ha)
Kutai Barat		1,365,660.61
	Barito	6,708.74
	Mahakam	1,346,355.81
	Telake	12,596.05
Kutai Kartanegara		2,519,705.99
	Ambarawang	593.53
	Kayan	4,081.56
	Mahakam	2,325,851.95
	Mahakam Ds	5,920.22
	Manggar	4.21
	Riko Manggar	1,225.56
	Sambera	20,176.06
	Sambera Ds	558.34
	Sambera Ds	4,621.82
	Samboja	6,412.29
	Samboja Ds	491.30
	Samboja Kuala	42,704.05
	Samboja Kuala Ds	480.96
	Sangata	674.43
	Santan	88,079.20
	Selokapi	6,736.24
	Senipah Ds	8,564.36
	Telake	1,648.59
Kutai Timur		3,142,075.41
	Bengalon	328,267.45
	Berau	23,074.06
	Dumairing	282.22
	Karangan	492,359.76
	Kayan	126.70
	Lipat	8,637.48
	Lipat Ds	8,751.06
	Mahakam	1,586,717.97
	Manubar	142,429.46
	Sanganakan	31,986.99
	Sangata	190,148.25
	Sangkima	22,524.88
	Santan	67,068.13
	Santan Ds	4,533.38

District	Name of Watershed	Area (ha)
	Senipah Ds	120.75
	Tabalar	4,676.22
Mahakam Hulu		1,811,923.96
	Barito	6,435.16
	Kapuas	763.72
	Mahakam	1,804,725.08
Paser		1,060,068.55
	Adang	24,350.82
	Adang Kuaro	39,968.06
	Barito	3,255.46
	Cengal	3,600.65
	Jengeru	28,187.84
	Jengeru Ds	2,150.86
	Kendilo	415,889.30
	Kendilo Ds	11,049.47
	Kerang Ds	3,396.37
	Kerang/Segendang	139,360.37
	Kuaro Ds	11,012.94
	Mahakam	3,738.99
	Riko Manggar	12.06
	Telake	292,675.20
	Tunan	107.61
Penajam Paser Utara		323,043.70
	Mahakam	3,115.92
	Riko Manggar	155,366.32
	Samboja Kuala	608.94
	Telake	82,135.37
	Telake Ds	3,284.97
	Tunan	60,508.78
	Tunan Ds	18,023.39
Samarinda		72,388.60
	Mahakam	72,388.60
Grand Total		**12,614,952.22**

Forestry areas fall under the FMUs (or *Kesatuan Pengelolaan Hutan* – KPH). The ERP will address issues related to production forests (logging concessions and timber plantation), the areas for which are shown in Table 11.

Table 11 Forestry concession types and areas in East Kalimantan Province.

District	Licenses (ha)		
	Logging	Plantation Forest	Ecosystem Restoration
Balikpapan	-	3,591.29	-
Berau	872,410.77	283,789.89	-
Kutai Barat	355,525.95	159,174.37	-
Kutai Kartanegara	446,673.44	603,253.78	7,533.61
Kutai Timur	817,057.61	580,315.61	77,730.11
Mahakam Hulu	665,340.39	37.54	-
Paser	238,948.91	110,449.71	-
Penajam Paser Utara	57,209.26	96,046.36	-
Samarinda	-	744.12	-
Grand Total	**3,453,166.33**	**1,837,402.66**	**85,263.72**

Component 1 of the ER addresses the needs for improving land or forest governance. Postponing new licenses or a moratorium on licensing is seen as an option to achieve the component. Areas subject to the moratorium are listed in Table 12. A moratorium involves the suspension of forestry licenses in the specified areas. Suspension of forestry licenses is closely tied with increased opportunity costs in the associated sector. Therefore the highest forestry opportunity cost for the ERP in East Kalimantan will come from Mahakam Ulu District (most moratorium area).

Table 12 Moratorium areas in East Kalimantan Province[26].

District	Moratorium			Grand Total
	Peatland (ha)	MOR Kawasan (ha)	MOR Primer (ha)	
Balikpapan	-	15,962.358	407.016	16,369.374
Berau	6,433.754	396,092.954	42,889.801	445,416.509
Bontang	-	5,446.536		5,446.536
Kutai Barat	6,999.621	61,739.720	3,628.338	72,367.679
Kutai Kartanegara	58,732.817	320,442.865	73,131.364	452,307.046
Kutai Timur	4,570.405	512,353.317	85,459.991	602,383.713
Mahakam Hulu	-	695,555.073	72,992.460	768,547.532
Paser	-	209,919.337	1,345.278	211,264.615
Penajam Paser Utara	-	10,228.908	1,136.765	11,365.673
Grand Total	**76,736.597**	**2,227,741.067**	**280,991.013**	**2,585,468.677**

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Based on indicative map of moratorium, Ministry of Environment and Forestry.

The link between forestry and communities is made through social forestry mechanisms. The Directorate General of Social Forestry and Environmental Partnership (*Perhutanan Sosial dan Kemitraan Lingkungan* [PSKL]) has established indicative maps for social forestry designations and indicative map for Adat forests.. Areas designated for social forestry in East Kalimantan Province are summarised in Table 13. The table shows that the largest allocation for social forestry is located in Kutai Kartanegara District. This allocation will provide opportunities for the involvement of the BPSKL in the ERP (primarily in Component 5).

Table 13 Areas designated for social forestry in East Kalimantan Province.[27]

District	Area (ha)
Balikpapan	314.35
Berau	40,245.53
Kutai Barat	28,361.18
Kutai Kartanegara	67,114.83
Kutai Timur	43,546.83
Mahakam Hulu	37,370.11
Paser	22,342.34
Penajam Paser Utara	384.43
Samarinda	293.04
Grand Total	**239,972.64**

5.2.1 Social Forestry

Data related to the social baseline consist of existing social forestry licences. Social forestry is intended to encourage a community's involvement in forest management, and at the same time provide alternative livelihood for communities. Community forestry schemes consist of:

- Community plantation forest (*Hutan Tanaman Rakyat* – HTR), which allows timber utilization and plantation commodities (e.g., rubber plantation) in production forest area;
- Community forest (*Hutan Kemasyarakatan* – HKm), which allows timber utilization and agroforestry commodities (e.g., coffee) in production forest area;
- Village forest (*Hutan Desa* – HD), which allows timber utilization in production forest area or non-timber forest product in protected forest. Village forests are managed by village governments; and
- Customary forest (*Hutan Adat* – HA), which allows timber utilization in production forest area, or non-timber forest products in protected forest.

Government's allocation for social forestry is called indicative map for social forestry allocation (*Peta Indikatif dan Areal Perhutanan Sosial* – PIAPS), and in East Kalimantan Province, the PIAPS cover

[27] Based on the indicative map of social forestry (*Peta Indikatif dan Areal Perhutanan Sosial* [PIAPS]), Ministry of Environment and Forestry.

239,972 ha. Areas within the PIAPS that already have social forestry licenses in East Kalimantan Province are summarised in Table 14. Progress and challenges in social forestry schemes in East Kalimantan Province are described in the following sections.

Table 14 Areas with social forestry licenses in East Kalimantan Province.

District	Social Forestry (hectares)					
	Community Plantation Forest	Community Forest	Village Forest	Customary Forest	Forest Partnership	Total
Balikpapan	-	1,400	-	-	-	1,400
Berau	1,096	-	68,126	-	225	69,447
Kutai Barat	989	-	8,405	49		9,443
Kutai Kartanegara	1,501	-	-	-	1,147	2,648
Kutai Timur	4,058	590	21,023	-	3,846	29,517
Mahakam Hulu		-	28,380	-	96	2,934
Paser		-		-	-	0
Grand Total	**7,644**	**1.990**	**125,934**	**49**	**5,314**	**140,931**

From these PIAPS, 19,583 Ha (approximately 8%) overlap with palm oil concession. This fact suggests that there will be issues of overlapping licenses associated with social forestry implementation. Except for Bontang City, all districts and municipalities in East Kalimantan Province have allocations for social forestry. The largest allocation (80,887.04 ha) is located in Kutai Kartanegara, while the smallest (61.69 ha) is located in Bontang. This figure suggests that most of the target communities for social foresty is in Kutai Kartanegara and Berau District.

Social forestry licenses are issued from MoEF based on recommendations (decree) from the district. Therefore, capacity for establishing social forestry licenses need to be empowered (especially in Kutai Kartanegara that has the largest PIAPS). This may create challenges/bottlenecks, as the capacity for social forestry licenses rest on The Agency for Social Forestry and Environmental Partnership (*Balai Perhutanan Sosial & Kemitraan Lingkungan* – BPSKL) Kalimantan Region in Banjar Baru. This agency targets for 185,268 ha of social forestry areas in East Kalimantan. However, this agency only has a few personnel to undertake this objective throughout Kalimantan. The second bottleneck is expected in establishing the customary forest, where customary people needs to be acknowledged by the decree from the Bupati/District. So far, in East Kalimantan, only Paser and Kutai Barat has the formal acknowledgement in form of district regulations (decree). In dealing with this situation, social forestry licenses will be focused on Village Forest, rather than the Customary Forest. Village Forest does not require formal recognition of customary group, although in practice the village forest is operated by customary group . indigeneous people.

5.2.2 Forest Fire

The number of cases of forest fires in Indonesia is primarily due to human factors. The vulnerability of forest ecosystem to fires causes fires to occur annually in East Kalimantan. This is sometimes aggravated by periods of prolonged drought, such as those linked to El Niño – Southern Oscillation

(ENSO) events that can lead to severe and large-scale fires that cover significant areas. ENSO is an increase in sea surface temperature in the Pacific Ocean around the equator, especially around Chile and Peru, which is followed by a decrease in water surface temperature in some territorial waters of Indonesia. The impact is the occurrence of drought in a number of regions of Indonesia.

In addition to impacting forests, fires create smoke and haze that affect the health of people nationally and regionally. This has led to significant negative attribution for Indonesia from neighboring countries and globally.

In East Kalimantan, fire is applied in agriculture and pastoralism practices (man-made fire), while the occurrence of natural wildfires (natural fire regimes) are established elements in natural ecosystem processes. Based on the above reasons, fires are part of sustainable and productive traditional land-use systems. Excessive application of fire due to rapid land-use changes leads to the destruction of productivity, carrying capacity, biodiversity and vegetation cover. Climate variability such as periodic extreme droughts caused by the ENSO phenomenon adds to the severity of fire impacts (Global Forest Monitoring Center, 2000)[28].

Fires occur across administrative land use zones, and are linked to several of the drivers described above, in particular to land-clearing for estate crops and agriculture. Fires occur annually in East Kalimantan, but periods of prolonged drought, such as those linked to ENSO events, can lead to severe and large-scale fires that damage significant areas. While the causes of fire are complex and are not exclusively anthropogenic, the use of fire for land clearing appears to be an important proximate cause. Fire is used for large-scale land clearing, for example for pulpwood and oil palm estates, as well as by farmers to clear land and burn agricultural waste (Schweithelm, 1998, Boonyanuphap et al. 2001). Areas that have been previously logged-over are particularly prone to burning, as logging leaves behind dead biomass, which serves as fuel for fires (Lennertz and Panzer, 1983). Peat fires are linked to clearing and drainage of peat areas for cultivation, including for oil palm and timber plantations.

In 1982 to 1983, fires destroyed about 3.5 million ha of forests in East Kalimantan, In 1997 to 1998, after a prolonged El Nino event, fires are reported to have burned approximately 5 million ha or 25 percent of the forests in the province. Yulianti et al (2012) [29] stated that in 2004, East Kalimantan had the highest numbers of hotspots (5,440 fires) compared to the other provinces in Kalimantan. It was found that the active fires throughout Kalimantan in 2002, 2004, 2006, and 2009 occurred when the total precipitation of the three driest months (August, September, and October) was less than 100 millimeters (Putra et al, 2011 cited in Yulianti et al., 2012).

Forest fire (and land fires) are considered drivers of deforestation and may contribute to the risk of reversals. Time series data from 2010 to 2017 show a trend of increasing numbers of fire hotspots (fire occurrences) from 2010 to 2015. Most of fires occurred in 2015, but the subsequent years show a significant reduction in the number of hotspots. These data are summarised in Table 15.

Table 15 Time series data of forest and land fires in East Kalimantan.

District	Numbers of Hotspots

[28] http://gfmc.online/intro/About1.html

[29] Yulianti, N., Hayasaka, H., Usup, A. 2012. Recent Forest and Peat Fire Trends in Indonesia The Latest Decade by MODIS Hotspot Data. Global environmental research

	2010	2011	2012	2013	2014	2015	2016	2017	Grand Total
Balikpapan	3	2	1	5	10	46	4	2	73
Berau	259	367	502	353	882	1633	214	190	4400
Bontang	20	6	9	6	18	53	15	4	131
Kutai Barat	151	298	557	459	1021	2469	86	68	5109
Kutai Kartanegara	505	489	576	486	1302	3389	706	127	7580
Kutai Timur	459	412	483	410	898	2560	1050	131	6403
Mahakam Hulu	99	101	111	93	170	349	57	24	1004
Paser	68	376	302	148	845	2178	59	36	4012
Penajam Paser Utara	11	117	65	21	119	612	27	4	976
Samarinda	6	7	2	5	5	26	14	2	67
Grand Total	**1581**	**2175**	**2608**	**1986**	**5270**	**13315**	**2232**	**588**	**29755**

Based on the above table, we can see an increase in the number of hotspots in 2014 (5,270 hotspots) until 2015 (13,315 hotspots), this is due to the phenomenon of ENSO which prolongs the dry season and reduces rainfall. The number of hotspots will be in line with the increase in the number of land fires.

Based on the years for which land cover data is available, the average annual forest area burned was 15,552 ha, with substantial variation between years. Thus in 2006, 2009, 2014 and 2015 the forest area burned was greater than 20,000 ha, while in 2011, 2013, and 2016 the area was less than 5,000 ha. In line with the increase number of hotspots, the total land burned in 2014 and 2015 is much higher than the year before and after. Land cover burned data are compiled in Table 16.

Table 16 Land cover burned in East Kalimantan 2006 – 2016 period (ha)

Land Cover	2006	2009	2011	2012	2013	2014	2015	2016
Primary Forest	403	562	113	326	197	1,041	775	13
Secondary Forest	26,059	21,188	8,322	12,046	8,445	21,914	19,207	3,808
Forest Plantation	2,719	2,970	2,110	1,473	1,691	5,198	5,209	1,985
Estate Crops	7,142	8,195	1,487	1,592	2,069	14,181	14,548	2,669
Agriculture land	8,813	13,195	5,663	6,205	1,258	4,562	4,528	2,048
Shrubs	57,707	43,800	12,112	18,673	17,575	37,131	35,608	8,219
Savana & Bare Land	4,971	4,826	1,302	2,466	1,591	3,488	7,643	4,560
Sum	**107,814**	**94,736**	**31,108**	**42,781**	**32,826**	**87,515**	**87,519**	**23,301**

5.3 SOCIAL BASELINE

5.3.1 Demographics, Livelihoods and Socio-cultural Diversity

5.3.1.1 Demographics

East Kalimantan has a population of about 3.5 million (2016) that includes ethnic groups such as indigenous Dayak and Kutai, as well as Javanese, Chinese, Banjarese, Bugis, and Malay descendants (Table 17). Bugis and Malay, who are mostly Muslim, dominate the southern part and most coastal areas of the province; the northern and north-western parts are home to minorities of Christians and indigenous peoples. Communities in remote areas often practice traditional or customary lifestyles, governed by customary law. The majority of people in rural areas practice shifting agriculture.

Population density in East Kalimantan is 27.13 people/km^2, and around 6.11% of East Kalimantan's population was classified as poor in 2016[30]. The distribution of poverty is skewed towards rural areas, where 10.1% of the population was classified as poor, compared to 4% of the urban population.

Table 17 Ethnic groups in East Kalimantan as of 2010.

Ethnic group	Population (2010)[31]	Percentage (2010)
Javanese	1,069,605	30.24
Bugis	735,819	20.81
Banjar	440,453	12.45
Dayak	351,437	9.94
Kutai	275,696	7.80
Toraja	78,251	2.21
Paser	67,015	1.89
Sunda	55,659	1.57
Madura	46,823	1.32
Buton	44,193	1.25
Others	371,552	10.51
Total	**3,536,503**	**100.00**

Source: http://bps.kaltim.go.id (2010).

The coastal area of East Kalimantan has distribution centres of trade, as well as government offices. These have attracted migrants from other islands in Indonesia and from outside Indonesia. Some migrants settled and live in the coastal areas of East Kalimantan and along its major rivers. Dominant ethnic migrants in East Kalimantan Province are Java, Bugis and Banjar. The upland area of East Kalimantan is rich with forest natural resources, which has long been a source of livelihood for the indigenous ethnic groups. The dominant ethnic groups are Dayak and Kutai.

[30] Center of Statistics Bureau for East Kalimantan, 2017.

[31] Aris Ananta, Evi Nurvidya Arifin, M. Sairi Hasbullah, Nur Budi Handayani, dan Agus Pramono. 2015. Demography of Indonesia's Ethnicity. Institute of Southeast Asian Studies dan BPS – Statistics Indonesia

Dayak groups were traditionally shifting cultivators or hunting societies governed by customary institutions. Shifting cultivation occurred predominantly in secondary forests with a long history of land use, hence these farming methods were relatively sustainable. For centuries Dayak communities have engaged in complex systems of sustainable forest management, deploying traditional knowledge to cultivate a high number of resources on relatively small plots of land (Crevello, 2003; 2004).

Cropping systems and rotational cycles on land plots varied per group. For many Dayak communities – for example the Benuaq – hunting in natural forests was a primary source of livelihood. Other groups like the Kenyah have a long tradition of growing taro and non-irrigated rice in swamp areas. However, in recent decades, many Dayak communities have adopted other farming methods and have moved to more permanent settlements, due to demographic shifts as a result of previous government programs, population mobility and growth. Irreversible change caused by the mining and logging industries left a permanent mark on Dayak traditions. In addition, the rapid conversion of forests into large rubber and oil palm plantations has made traditional farming practices impossible in many areas.

At present, umaq (non-irrigated rice) is still grown by some Dayak communities, while hunting and the collection of non-timber forest products (NTFP's) – i.e. honey, wax, nuts and bird nests – also persist (worldagroforestry, 2004). Moreover, simpukng (indigenous forest gardens) are still of importance in traditional farming systems, although the mining and logging industries threaten their existence. Simpukng are collectively managed secondary forests where Dayak communities plant fruits, rattan, bamboo and timber. They are either owned by families or communally owned by larger communities. The use of these forests is subject to customary rules. These rules regulate the gender division of labour and also serve to prevent over-exploitation of forests (Mulyoutami et al, 2009).

Data from the Bureau of Statistics indicate that the population of East Kalimantan Province grew from 3,275,844 people in 2013 to 3,575,449 in 2017, or by 2.3% per year. Statistics also shows that the numbers of poor people increased from 193,710 people in 2013 to 220,170 people in 2017. However, compared to the total population of East Kalimantan Province, the percentage of poor people remains relatively the same (5.9% in 2013 to 6.1% in 2017).

5.3.1.2 Livelihoods

Based on the contribution of economic sectors to gross domestic product (macro-economy), the economic structure of East Kalimantan Province consists of: [32]

- Mining and excavation (44.91%);
- Industry and processing (20.72%);
- Other (13.43%);
- Construction (8.26%);
- Agriculture, forestry and fisheries (7.62%); and
- Wholesale, retails, car and motorcycle repair (5.06%).

[32] Based on statistics of East Kalimantan Province 2015, outlined in the Medium Term Development Plan 2013-2018.

This structure suggests that the mining and quarrying sector is a dominant contribution to the economy of East Kalimantan Province, while agriculture, forestry and fishery only contribute 7.62% combined. Mining is identified as a driver for deforestation in East Kalimantan, yet it is a significant economic sector for the provincial economy. Therefore, the context of mining as a driver of deforestation needs to be explored for further intervention in the ERP. License revocation of active mining operation will result in termination of mining productivity that affects the macro-economy of East Kalimantan. Local communities may be involved in entry-level positions (e.g., housekeepers, gardeners, and general helpers) in mining operation, so there is a potential loss of livelihood of local people involved in this industry (e.g., employees, vendors and third party contractors). Upon termination of mining operation due to license revocation, mine closure plan (formulated by mining companies) will be used as guidance to deal with environmental and social risks.

At a micro-economic level, it is assumed that most of villagers are engaged with the agriculture sector. Except for subsistence farming, agriculture is often coupled with the need for expansion. Therefore, agriculture is seen as one of the drivers of deforestation in the ERP. The economic significance of agriculture is indicated by the Terms of Trade (*Nilai Tukar Petani*)[33] that reflect the economic strength of the villagers (i.e., farmers). The Terms of Trade are compiled in Table 18.

Table 18 Terms of Trade (*Nilai Tukar Petani*) within agriculture sub-sector[34].

Commodities	Terms of Trade		Changes
	2014	2015	
Food crops	96.41	95.29	-1.12
Horticulture	96.65	93.28	-3.37
Community estate plantation	102.24	102.99	0.75
Livestock	104.02	102.79	-1.23
Fisheries	101.46	98.38	-3.07
Cumulative Terms of Trade	**99.93**	**98.61**	**-1.32**

This table shows a trend of decreasing farmers' Terms of Trade. Food crops and horticulture show values less than 100, which suggest deficits in farmers' income in relevance with these commodities. Offsetting the deficit may include changes from food-crop and horticulture commodities to estate plantation, livestock and fisheries. Although there is no guarantee that further agricultural exploitation can overcome this deficit, there is a risk of expansion of agriculture land that may be conducted by these farmers. Alternatively, farmers may need optimise income through agricultural intensification strategy, or from optimising the forestry sub-sector. Therefore, an increase in dependency on the forestry sector (timber and non-timber forest products) needs to be anticipated.

Food security is one of the targets of the East Kalimantan Province Medium-Term Development Plan (RPJMD) 2013–2018. Achievements on food security are presented in Table 19.

Table 19 Targets and achievements for food security in East Kalimantan Province.

Target	Annual Target	Achievement	% of Target

[33] For Terms of Trade, 100 is considered a break event point. Values below 100 indicate deficits in farmers' economic capacity.

[34] Based on Medium Term Development Plan (RPJMD) East Kalimantan Province 2013-2018

		(2012–2016 annual average)	Achieved
Ratio of food fulfilment (rice)	72%	54%	75%
Rice production	438.135 tons	421,359 tons	96%
Food availability in all areas	82.41%	79.26%	96%
Productivity of prime agricultural commodities	4.06 ton/ha	4.43 ton/ha	109%
Number of agricultural facilitators	877	823	94%
Number of fishery facilitators	67	104	155%
Overall Achievements			**104%**

This table shows the overall achievement is over 100% on provincial development targets relevant to food security. This suggests that, despite low terms of trade in food crop and horticulture commodities, East Kalimantan Province has strong food security. Productivity of prime agricultural commodities suggests that the strength of food security rely on this agricultural aspect. Access to technical assistance (provided by agricultural facilitators) seems sufficient at 94% of the targeted 877 facilitators. This data only show the statistics of the facilitators, and do not necessarily reflect geographic coverage. Facilitators may be limited (or unavailable) in remote areas. In East Kalimantan, food security may still be linked with shifting agriculture practices. Due to high fluctuation of market prices of perennial crops and carbon prices, REDD+ should incorporate shifting agriculture and traditional livelihood practices (such as hunting, fishing, NTFP collection, etc.) in an overall development strategy to ensure subsistence income from various sources, as well as food security for the long term[35]. REDD+ may offer new agricultural land as part of the co-benefit mechanism, but poor households may not have enough capital to participate, and will still be forced to collect forest products for subsistence purposes[36].

Other aspects relevant to livelihood are access to markets and access to financial assistance or banking. Access to markets relies on the transportation sector to ensure that products can be delivered in a cost-efficient manner, and the value in the market chain is proportionally distributed. In 2015 the ratio of road to area is 111.72 km of road/1000 km^2 area. This is below the national standard of 115 km road/1000 km^2 area. This condition is shown by the fact that 15 sub-districts in East Kalimantan Province have not been reached by sufficient road infrastructure (only 56.73% of the road is in good condition). The implication of this is the high logistics cost for transporting goods to and from these sub-districts, which is the condition that causes the price of goods from these sub-districts to be relatively more expensive compared to other areas. Therefore, there is a risk of decreasing Terms of Trade in these areas. Although in some cases (e.g., Mahakam Ulu District) access restrictions may be linked with forest conservation/protection, this issue will be primarily linked with the conditions and availability of access (road, river transportations, etc.).

The numbers of financial institutions (banks) increased from 386 in 2010 to 666 in 2015 (14% increase every year). The composition of financial institutions in East Kalimantan consists mainly of government banks (252), followed by private banks (213) and provincial banks (141). The remaining are foreign banks (10). Relevant issues to the ERP may include the lack of credibility and/or collateral

[35] Loaiza, T.; Nehren, U.; Gerold, G. 2015. REDD+ and incentives: An analysis of income generation in forest-dependent communities of the Yasuní Biosphere Reserve, Ecuador. Appl. Geogr. 62, 225–236

[36] Bayrak & Marafa (2016). Ten Years of REDD+: A Critical Review of the Impact of REDD+ on Forest-Dependent Communities. Sustainability, 8, 620.

of villagers/indigenous people to apply for financial assistance, and the lack of bank representatives in remote areas. Issues relevant to livelihoods and the ERP are summarised in Table 20.

Table 20 Summary of livelihood issues relevant to the ERP.

Livelihood Source	Summary of Issue	Relevance to ERP	Potential Risk
Income from timber harvesting	Most of the profits go to the license holders/private companies	The need to increase community involvement in managing forest areas (e.g., social forestry)	Lack of capacity for best management practices (e.g., HCV, PHPL, RIL) among local communities and license holder
NTFPs	Not yet optimised as an income generating mechanism	Potential source of alternative livelihood	Cost for production and transport may be higher in remote areas. This would create a competitive disadvantages in the market
Agriculture	Decreased economic capacities among farmers (low terms of trade/*Nilai Tukar Petani*)	Agriculture intensification and improving aquaculture to support economic capacities	Cost for production and transport may be higher in remote areas. This would create a competitive disadvantages in the market Lack of capacity to ensure best practices (i.e., environmentally friendly practices)
Access to financial support	Lack of credibility or collateral to be eligible for bank loans	Green banking and benefit sharing mechanism that ensures receipt of financial support in local communities/by indigenous people participating in the ERP	Inaccurate business planning that cause losses for community ventures Constraints and delays in loan repayment (instalments)

5.3.2 Forest and Local Communities

Interactions between forests and local communities are shown by the size of forest areas used by local communities (including customary or *adat* communities). Land used by customary and rural settlements is the overlap between current uses with forest and conservation areas designations (i.e., some customary and rural land uses still occur outside these areas). Land used by customary and rural settlements in East Kalimantan can be qualitatively categorised[37] as:

- Settlement areas for housing and residential areas;
- Agriculture/Cultivation which normally involves shifting agriculture (*ladangs*);
- Reserve areas including customary forest, village land, cemetery, land belonging to curch and reserves for wood; and
- Conservation areas such as customary forest and primary forest.

[37] Samsoedin, Wijaya & Sukiman (2010). Landscape Concepts and Land Management of Dayak Kenyah Tribe in East Kalimantan. Jurnal Analisis Kebijakan Kehutanan Vol. 7 No. 2, Agustus 2010 : 145 – 168.

The aggregated rural and urban annual population growth shown in this report (2.3% per year) suggests that growth is small and will not massively impact forest and natural resources. However, subsistence farming conducted by rural communities is still considered the most secure and sustainable livelihood[38]; so subsistence farming/agriculture may contribute to deforestation and forest degradation (6% of the deforested area from 2006 to 2015). Therefore, subsistence farming (rather than population growth) needs to be considered as driver of deforestation that needs to be addressed in the ERP.

Mining and extractive industries are the main economic drivers (main contributors to the provincial economy). Consequently, risk of deforestation may be associated with these industries. Additionally, conflicts may be triggered by the mining sector, as well as by the forestry and plantation sectors (most notably palm oil plantations).

The Berau Forest Carbon Program shows that promoting forest tenure security can help strengthen management of forest areas. This can be achieved by conducting conflict resolution, establishing community protected areas, strengthening collaborative management mechanisms, and helping to monitor operation of forestry/plantation concessions. Forest tenure security strengthens the rights of the indigenous people and allows them to practice their local wisdom for managing the land. This can potentially prevent land grabbing by outsiders.

5.3.3 Land Tenure and Natural Resource Conflicts and Disputes

5.3.3.1 Spatial Plan of East Kalimantan

The ERP targets land-based emissions from forestry and plantations in East Kalimantan Province. Consequently, the ERP will deal with land tenure issues in Components 1, 3, 4, and 5. The main reference for land tenure is the provincial spatial plan formalised in Provincial Regulation (*Peraturan Daerah* [PERDA]) No.1/2016 on East Kalimantan Spatial Plan 2016-2036. The spatial plan contains the spatial pattern (Figure 5) that regulates land use and land allocation, including forestry and plantation allocation in forest and other use areas respectively.

The provincial spatial plan identifies disaster-prone areas[39] that may be relevant to tenurial aspects. These disaster-prone areas are associated with various risks, such as loss of property, loss of life, injury, and disturbances to daily activities. Disaster-prone areas are designated as protected areas under the PERDA. Implementation of the ERP needs to consider disaster-prone areas as uncertainties that may result in unforeseen changes in accounting area due to changes in landscape and/or land cover. Production forests (i.e., timber and forestry plantation concessions) occur in all of the proposed villages. This condition offers two possibilities consisting of negative and positive interaction between local communities with the concession holders (companies), and the possibility of establishing community partnerships such as social forestry schemes[40] relevant to Component 4 of the ERP; thus encouraging positive interactions.

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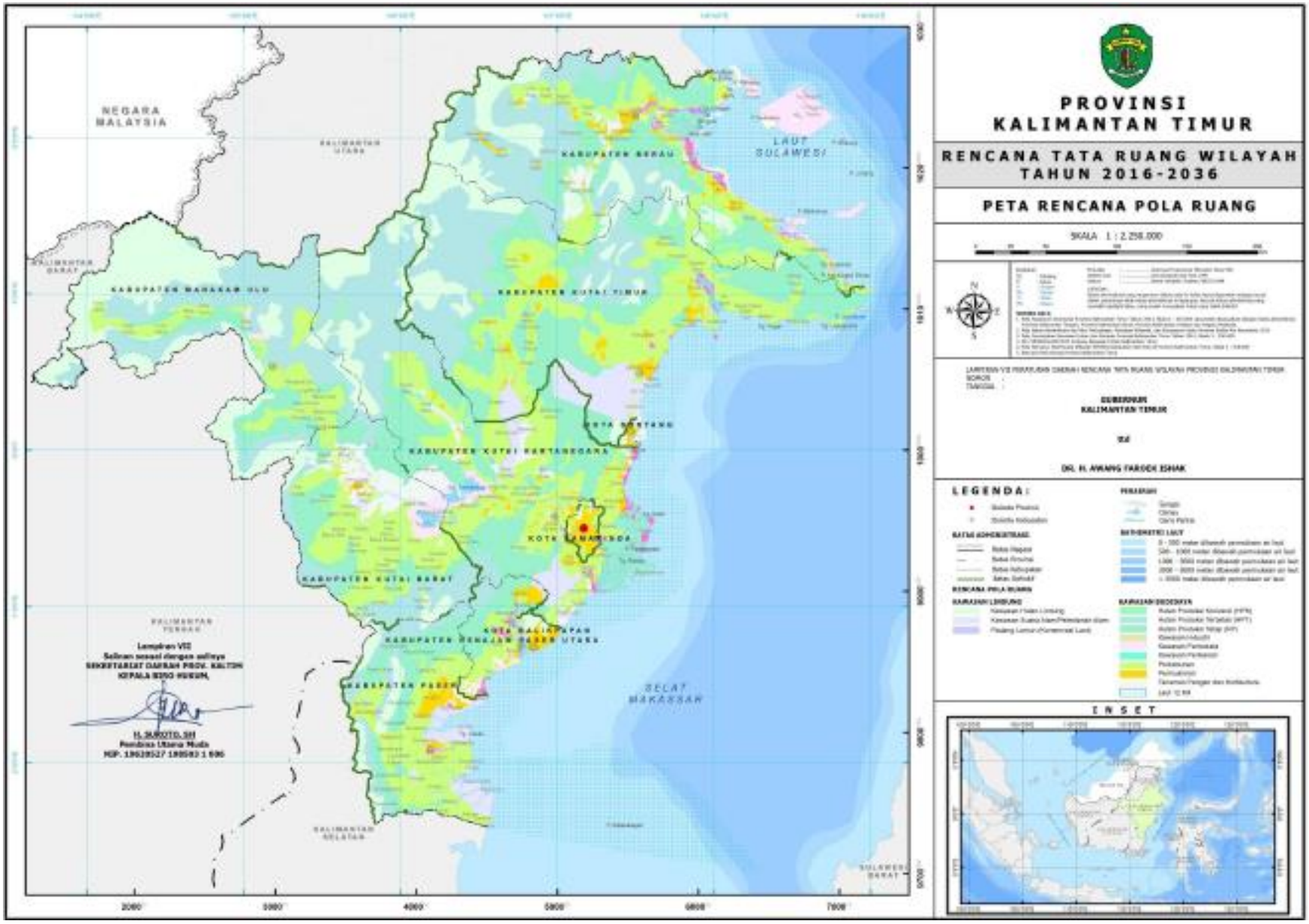
[38] Sponsel, L.E.; Headland, T.N.; Bailey, R.C. Anthropological perspectives on the causes, consequences and solutions of deforestation. In Tropical Deforestation: The Human Dimension; Sponsel, L.E., Headland, T.N., Bailey, R.C., Eds.; Columbia University Press: New York, NY, USA

[39] Evaluated based on geological, biological, hydrological, climatological, geographical, social, cultural, political, economic, and technology point of views.

[40] Ministry of Environment and Forestry allocates certain areas within production forest as social forestry allocations (*Peta Indikatif dan Areal Perhutanan Sosial* - PIAPS)

Figure 5 Spatial pattern of East Kalimantan Spatial Plan[41].



[41] PERDA No 1/2016 regarding Spatial Plan of East Kalimantan Province 2016-2036

5.3.3.2 Tenurial Conflicts

Enforcement of the spatial plan regulation needs to be improved. Overlapping forestry, palm oil, and mining licenses suggest inconsistencies in the licensing process, and this is assumed to be an indication of weak enforcement of the spatial plan regulation. This assumption is supported by spatial analysis showing that approximately 27% of the palm oil plantation concession (HGU) falls outside the designated plantation area. The same analysis shows that 0.2% of forest areas fall outside the designated forest areas in the spatial plan.

Tenurial conflicts may arise due to discrepancies between spatial plan policies with the actual land use and licensing. Conflicts may be related with overlap between community needs (including customary rights) and forest/plantation/mining concessions. Analysis of conflict risks in each of the districts targeted for ER is done based on the following categories of tenurial conflicts:

- Potential conflict areas between logging and forestry plantation concessions;
- Customary communities with logging concessions (may include encroachment);
- Customary communities with forestry plantation concessions (may include encroachment);
- Customary communities with conservation areas (may include encroachment);
- Customary communities with logging and forestry plantation concessions (may include encroachment, least frequent/observed in one district);
- Palm oil companies with logging concessions (most frequent, observed in six districts);
- Palm oil companies with forestry plantation concessions (most frequent, observed in six districts);
- Palm oil companies with logging and forestry plantation concessions;
- Palm oil companies with customary people (most frequent, observed in six districts); and
- Palm oil companies with customary people and forestry plantation concessions.

Overlapping areas may trigger tenurial and natural resource conflicts according to the above categories. The overlap size corresponds to the risk and scale of potential conflict. In addition to the risk of conflicts based on the overlap, the GoI has developed an indicative map of tenurial conflict with an inventory of around 201 conflicts, 33 of which are located in the Kalimantan provinces. MoEF's Law Enforcement Agency (Gakkum) lists three ongoing disputes between local people and companies in East Kalimantan This differentiation will be done during additional consultations scheduled in 2019 (as part of the socialisation process led by DDPI).

Forestry Sector

Designation of forest areas is formalised by the Decree of Ministry of Forestry No. 718/2014 regarding state forest areas in East Kalimantan. The state forest areas are assigned a license to manage (*Izin Usaha Pemanfaatan Hasil Hutan Kayu* [IUPHHK]) logging (*Hutan Alam* [HA]) or forestry plantations (*Hutan Tanaman Industri* [HTI]). The licensing procedure is regulated in the Regulation of Ministry of Environment and Forestry No. 9/2015 regarding licensing procedures for logging, forestry plantation and ecosystem restoration in production forest areas.

An example of a conflict within FMU's across protected forest, production forest and limited production forest designations can be seen in Berau District[42]. A study done by Working Group on Forest Land Tenure and GIZ in 2015 showed that the object of the dispute is the forest areas utilised by local communities/indigenous people. A case study for this area showed a general trend in the typology of conflicts and disputes involving primary/main actors such as companies, local communities and indigenous people. It highlighted the need to identify actors in order to set up an appropriate mediation strategy, so that the strategy can be adjusted to suit the characteristics of each actor.

The same study showed secondary or supporting actors that included NGOs and district offices, with the capacity and availability of local mediators resting mainly with the NGO. This may reflect the condition in East Kalimantan. In Berau District example, the conflict style was competitive[43] despite the possibility for cooperation and collaboration[44]. Companies and district offices were more compromising[45] and accommodative[46] with regards to the resolution of the conflict. Willingness to resolve the conflicts, as well as willingness to compromise are the main driver for conflict resolution in this case.

Root causes of the conflict were relevant, particularly as the object of the conflict (forest areas) were utilised and claimed by local communities, with the same areas designated and licensed as production forest. With regards to the Berau District conflict, the root causes were:

- Sub-optimal (or lack of) monitoring and evaluation by companies (license holders) causing the conflict to occur and escalate;
- Lack of information regarding the forestry program and concession boundaries; and
- Lack of capacity to resolve conflicts (accumulation from previous conflicts/issues).

These root causes are also relevant to timber plantations and agriculture as drivers of deforestation. A summary of livelihood issues and tenurial conflicts is provided in Table 21.

On-going activities and policies on conflict and dispute resolution include approaches at the national level (e.g., agrarian reform implementation progress) and approaches at the sub-national level. Resolution processes at the sub-national level include encouraging multi-stakeholder interaction (through workshops and dialogues), formation of communication forums, mediation and partnership facilitation, and ultimately establishment of a MoU. This should embody the results of the mediation, and was proven to be a workable milestone in the conflict resolution case in Berau District.

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[42] Working Group on Forest-Land Tenure. 2015. Tenurial conflicts on forest management unit (FMU) Development

[43] This is the "win-lose" approach. You act in a very assertive way to achieve your goals, without seeking to cooperate with the other party, and it may be at the expense of the other party. This approach may be appropriate for emergencies when time is of the essence, or when you need quick, decisive action, and people are aware of and support the approach.

[44] This is where you partner or pair up with the other party to achieve both of your goals. This is how you break free of the "win-lose" paradigm and seek the "win-win." This can be effective for complex scenarios where you need to find a novel solution and can mean re-framing the challenge to create a bigger space and room for everybody's ideas. The downside is that it requires a high-degree of trust and reaching a consensus can require a lot of time and effort to get everybody on board and to synthesize all the ideas.

[45] This is the "lose-lose" scenario where neither party really achieves what they want. This requires a moderate level of assertiveness and cooperation. It may be appropriate for scenarios where you need a temporary solution, or where both sides have equally important goals. The trap is to fall into compromising as an easy way out, when collaborating would produce a better solution.

[46] This is when you cooperate to a high-degree, and it may be at your own expense, and actually work against your own goals, objectives, and desired outcomes. This approach is effective when the other party is the expert or has a better solution. It can also be effective for preserving future relations with the other party.

To mitigate conflicts in forest areas, MoEF provides the licensing procedure for social forestry (customary forests, village forests, community forests, forestry partnership and community plantation forests). Eligible applicants for the licenses (IUPHHK) are customary groups, community groups and village administration. The licenses are issued upon recommendations from provincial governments. Customary (*Adat*) groups are defined as the customary community (*masyarakat hukum adat* [MHA]) that has received recognition through district regulation (PERDA). When applying for a customary forest license, the MHA is required to provide map of customary area and profile of the customary organisation.

Estate Crop Sector

Most conflicts in this sector are related to land grabbing. This notion is supported by the fact that, in the plantation sector, 84% of the reported conflicts (nationally) are categorised as land grabbing[47]. Land grabbing is large-scale illegal land acquisition without the consent of the existing landowners. Land is seized illegally and unfairly, using underhand and manipulative methods. Licensing for plantations (including palm oil) is regulated under Regulation of Ministry of Agriculture No. 29/2016 which was revised in Regulation of Ministry of Agriculture No. 21/2017 regarding procedures for plantation licensing. However, the risk of land grabbing may still occur due (but not limited) to the following factors[48]:

- Capital investment of large corporations that allows land acquisition at massive scales;
- Lobbying power of corporations with local governments (Governor, *Bupati* or City Mayor); and
- Governance risks such as:
    - Allocation for economic growth from plantation sector in the spatial plan;
    - Targets for district revenue affecting recommendations on licensing; and
    - Lack of mediation and facilitation with local/indigenous communities by the local government.

With such accelerated expansion, land conflicts will tend to be concentrated in the plantation concessions. This fact urges the ERP to consider ATR/BPN and its technical implementation units (province and district) as key stakeholders in the plantation sector. Engaging with this stakeholder needs to be aimed at:

- Thorough examination of recommendations from the *Bupati*/Mayor/Governor;
- Ensuring proper environmental and social impact assessment prior to HGU issuance; and
- Requiring implementation of environmental and social safeguards, especially in ERP locations.

[47] Meri Persch-Orth dan Esther Mwangi. 2016. Konflik perusahaan-masyarakat di sektor perkebunan industri Indonesia. No. 144, Juni 2016 10.17528/cifor/006144. CIFOR, Bogor

[48] Sekolah Tinggi Pertanahan Nasional (STPN). 2013. Membaca Ulang Politik dan Kebijakan Agraria

Mining Sector

Spatial analysis of mining concessions shows that existing mining licences have exceeded the allocation in the spatial plan by 22.6%, and most of this (approximately 80% of existing concessions) overlap with production forest and plantation areas. This issue is addressed by the Governor's Regulation (*Pergub*) No.1/2018 on arrangement of mining, forestry and oil palm plantation permit in East Kalimantan, which specific mentioning about moratorium of forestry concession from natural forest, and new mining licenses. This regulation is already launched and implemented. The moratorium is a step to improve governance issues related to licensing. Other issues such as euphoria and corruption are yet to be addressed.

Considering the significance of mining in the ERP, it is important to consider Ministry of Energy and Mineral Resources and Energy and Mineral Resources Agency of East Kalimantan as influential stakeholders at national and provincial levels respectively. Additionally mining companies may also be included as influential stakeholders in ERP of East Kalimantan. In relevance with land use in Other Use Area (APL), the roles of Ministry of Agraria and Spatial Plan/Land Agency, as well as its technical implemeting units at provincial and district levels become crucial in the ERP.

Conflicts in Non-State Forest Area (APL)

The ability to use land outside state forest areas (i.e., in other use areas, *Area Penggunaan Lain* [APL]) is administered through the Ministry of Agrarian and Spatial Plan (*Kementerian Agraria dan Tata Ruang/Badan Pertanahan Nasional* [ATR/BPN]). This authority is further mandated to the province (*kantor wilayah* or regional) and district offices (*kantor pertanahan*) through Presidential Decision (*Keputusan Presiden*) No. 34/2003 that vests the agrarian and land authority (including those for plantation licenses or *Hak Guna Usaha* [HGU]) to these offices.

As discussed in Section 2.3.2, stakeholders in APLs include the *Bupati/Walikota*, licensing office (*Kantor Perijinan*), relevant provincial/district agencies, and Technical Implementation Units (*Unit Pelaksana Teknis* [UPT]) of the Ministry of Agrarian and Spatial Plan, namely provincial and district offices of the Agrarian and Spatial Plan (*Kantor Wilayah Provinsi* and *Kantor Pertanahan Kabupaten*, respectively). These are the stakeholders that influence the implementation of the ERP in APL, as they are essential in providing recommendations for the issuance of plantation permits, and issuance of tenurial rights to indigenous peoples. Having such roles, these stakeholders will also be crucial in the implementation of safeguards for environmental and social risks. Provincial and district offices of the Agrarian and Spatial Plan (*Kantor Wilayah Provinsi* and *Kantor Pertanahan Kabupaten*, respectively) may also contribute to preventing conflicts by evaluating conflict potentials prior to issuing recommendations for HGU. Additionally, this agency may also be involved in facilitating Feedback Grievance and Redress Mechanism (FGRM) associated with the need to effectively resolve the conflicts.

Feedback and Grievance Redress Mechanism (FGRM)[49] is developed to facilitate conflict resolution by sectors (i.e., forestry, plantation and mining), as well as by jurisdiction (forest areas and other use areas). The FGRM mechanism will allow documentation of conflicts and the measures to resolve these conflicts.

[49] Separate document is prepared as part of the Environmental and Social Management Framework (ESMF).

Table 21 Summary of livelihoods issues and tenurial conflicts.

Summary of Issues	Root Cause/s	Frequency and/or Prevalence	Responsible Entities	Relevance to the ERP (including risks)
Overlapping uses	Sub-optimal monitoring and evaluation by license holders	Frequent (approximately 95% of the area)	License holder	Forest management to support improvement of land governance
Unclear border of FMU's	Minimum information on forestry programs/policies	Frequent	FMU	Capacity building on forest management
Tenurial conflicts	Lack of capacity to resolve conflicts	Rare (approximately 5 of 28 villages)	FMU & License holder	Capacity building on forest management

5.3.4 Relevant Gender Aspects in the ER Areas

Legal and regulatory frameworks on gender mainstreaming are provided in the medium-term development plan of East Kalimantan Province. Since 2015, this aspect has been undertaken by the Agency for Women's Empowerment and Child Protection. Gender participation and engagement in East Kalimantan is only seen in the composition of provincial government employees that accommodate an almost-equal gender representation.

The implementation of gender mainstreaming is integrated in emission reduction activities. Based on the Minister of Environment and Forestry Regulation No. P.31/MenLHK/Setjen/Set.1/5/2017 on Guidelines for the Implementation of Gender Mainstreaming in the Environment and Forestry, and East Kalimantan Province Regulation No. 2 of 2016 on Gender Mainstreaming in Regional Development, governance, development and services to the community, including activities related to emission reduction must be carried out with gender responsiveness. So that women are one of the important stakeholders in the implementation of the program. In addition, disability groups and other vulnerable groups are parties that are consulted and involved in implementing the emission reduction program, as in MoEF Regulation No. P.31/MenLHK/Setjen/Set.1/5/2017 and East Kalimantan Province Regulation No. 1 of 2018 on Protection and Fulfillment of the Rights of Persons with Disabilities.

Gender aspects can be defined based on gender development and empowerment indices[50] where:

- The gender development index considers "long and healthy life", "knowledge", and "decent living" for each gender. An index of 100 indicates equal development among genders. The gender development index in East Kalimantan in 2015 was 85.07, with development slightly favouring males; and
- The gender empowerment index shows gender participation and roles in politics and economy. Parameters used in this index are: "involvement in parliament", "roles in decision

[50] Ministry of Women Empowerment and Child Protection & Bureau of Statistics. 2016. Pembangunan Manusia Berbasis Gender (Gender-based human development) 2016.

making", and "income distribution. An index of 100 indicates equal empowerment among genders. The gender empowerment index in East Kalimantan was 55.96 in 2015, suggesting unequal empowerment among genders.

5.4 ECONOMIC ASSESSMENTS RELATED TO THE ERP

5.4.1 Economic Situation in East Kalimantan

The vision of East Kalimantan Province is to be a "Green Province" that provides a global example of how to combine GHG emission reduction goals with economic development, while ensuring that development is sustainable and environmentally friendly (Berau REDD+ Working Group, 2011). The program has four overarching goals:

- Improving the overall quality of life in the province, through a balance of economic, social, cultural, and environmental aspects;
- Reducing the threat of ecological and climate change related disasters such as floods, landslides, droughts, and forest fires;
- Reducing pollution and the degradation of terrestrial ecosystems, water and air; and
- Increasing knowledge and awareness among institutions, the government and the people of East Kalimantan about the importance of conservation of natural resources, and the wise use of renewable natural resources.

Political commitment to reducing GHG is formalised through Governor's Regulation No. 54/2012, which states that the carbon emissions from forest loss and land degradation are to be reduced by 15.6% by 2020. Despite the goal of East Kalimantan's Green Province vision and the political commitment to reduce GHG emission, East Kalimantan's economy is dependent on two land-based commodity sectors consisting of coal mining and palm oil. These two commodity sectors were identified as the drivers of deforestation and degradation in the ERP.

The Bank Indonesia (BI) of East Kalimantan predicted economic growth by 3.5% due to an increase in coal prices.[51] This growth suggests that coal is the significant commodity sector that supports the economy of East Kalimantan. This is significant growth compared to the 2015–2016 period, when East Kalimantan experienced an economic recession.[52] This positive trend indicates that provincial economic growth heavily relies on the coal price, rather than on increased production of coal.

An analysis of the contributions of East Kalimantan's economic sector to the GDP, the province's economic base, the multiplier effect (income, production factor, and output) and the linkages between sectors identified ten sectors that are important to the economy of East Kalimantan (including the mining sector). These ten leading sectors are: trade, paper and printed goods, financial institutions and other financial services, fertilizer, chemicals and other rubber products, hotels and restaurants, general government, fisheries, excavation, and mining without oil and gas.[53] From this list, mining is the sector most relevant to the ERP (identified as a driver of deforestation and forest degradation).

[51] Tempo.co.id. December 9, 2017

[52] Indonesia-investments.com. February 2016. Trade Indonesia: Exports Resource-Rich East Kalimantan Plunge

[53] Ahmad,Z. 2018. Determination of economic sector in East Kalimantan, Indonesia. Journal of Chinese Economic and Foreign Trade Studies 11(1)

Despite the absence of palm oil plantations from the above-mentioned list of leading sectors, palm oil production (i.e., HGU licenses) increased from 2000 to 2013. The trend is consistent with the provincial government policy to allocate 2 million ha of palm oil HGU by 2018.[54]

The efforts towards green development (i.e., reducing GHG emissions) in East Kalimantan pose a governance risk, as coal and palm oil offer immediate economic benefits compared to the reduction of GHG emissions. The ERP needs to strengthen engagement with key stakeholders to ensure that GHG emission reduction considerations outweigh economic considerations. This strategy is relevant to Components 1 and 2 of the ERP, which aim to improve land governance and increase the capacity of government institutions. Additionally, Component 3 of the ERP specifically aims to work with stakeholders in the palm oil plantation sector.

The Agrarian Reform Program aims to re-structure the licenses for unproductive production forest and allow for use by local communities. The map of agrarian reform released by MoEF in 2017 indicates the presence of such land allocation in Berau (2,091.78 ha), Bontang (98.32 ha), Kutai Barat (10,490.70 ha), Kutai Kartanegara (11,860.28 ha), Kutai Timur (27,929.68 ha), Mahakam Ulu (244.79 ha), and Paser (632.58 ha). These data show that the largest allocation is in Kutai timur District. The presence of these allocations offers opportunities for strengthening the tenurial rights of indigenous people through social forestry mechanisms (Component 5 of the ERP). Additionally, the restructuring of licenses can also be used to improve land and forest governance (Component 1 of the ERP). To implement the activities outlines in Component 1 of the ERP, it is important for the FMU (as the management authority of the production forest under the Agrarian Reform Program) to increase its capacity to support license restructuring, including license revocation and conflict/dispute mediation.

The application of sustainable palm oil principles, such as RSPO, has shown a positive impact. The application of RSPO principles in Kalimantan resulted in a decreased deforestation rate in RSPO concessions, from 13,417 ha/year between November 2005 and November 2007 to 1,839 ha/year after May 2014.[55] The rate of deforestation remained higher in non-RSPO concessions. This example shows promising results that can be achieved by introducing sustainable palm plantations (Component 3 of the ERP).

5.4.2 Political Economy of East Kalimantan

Political economy of East Kalimantan is shaped by the macro-economic profile (Gross Domestic Products, economic growth, inflation rate, and social welfare) and political commitment of the Governor to support national development targets. Medium Term Development Plan (*Rencana Pembangunan Jangka Menengah Daerah* – RPJMD) of East Kalimantan Province (2013-2018) was formulated based on five strategic issues consisting of:

- Low competitiveness of human resources in East Kalimantan;
- Low economic growth (-1.28% between 2010 to 2015 due to decline in coal price and decreasing contribution of mining sector);
- Basic infrastructure is not well distributed;

[54] Anderson et.al., 2015. Growing the Economy: Oil palm and green growth in East Kalimantan, Indonesia. An international academic conference 5-6 June 2015, Chiang Mai University.

[55] Meijaard et.al., 2017. An impact analysis of RSPO certification on Borneo forest cover and orangutan populations. Technical Report. Borneo Futures.

- Lack of good governance; and
- Lack of good and healthy environmental quality.

All of the above issues are considered as causes for sub-optimal economic growth and welfare of people in East Kalimantan Province. Implementation of ERP will be relevant with human resources, governance and environmental issues. Improving environmental quality (including improvement on licensing regime, community awareness, and companies' compliance to environmental regulations) and reducing greenhouse gas emission are part of the political commitments to achieve good and healthy environmental quality. Green Kaltim Vision and Governor's decree on action plan for emission reduction are examples of these political commitments.

The main challenge in political economic situation of East Kalimantan is to balance the needs for economic growth and environmental sustainability. In this context, ERP may be able to contribute to at least three of the five strategic issues by providing support for:

- Human resource quality and livelihood (Component 1, 2 and 4);
- Good governance on mining, forest and estate crop (Component 1, 2 and 3); and
- Environmental quality by preventing fire, mangrove loss and encroachment/degradation (Component 3 and 4).

This alignment supports the justification of ERP as jurisdictional emission reduction program in East Kalimantan Province. Improvement on capacities of relevant provincial government agencies (e.g., environmental, forestry, mining and mineral resources and plantation agencies) is needed.

Interventions to the mining, forestry and estate crop sectors are feasible due to political enabling conditions at national and provincial levels. Implementation of ERP may gain leverage in forestry sector from moratorium (*Peta Indikatif Penundaan Pemberian Izin Baru* – PIPPIB). In mining sector, Governor's Regulation No. 1/2018 on restructuring mining licenses may provide political commitment needed for ERP implementation. In plantation/estate crop sector, Provincial Regulation (Peraturan Daerah – PERDA) No. 7/2018 on sustainable plantation.

Challenges in implementing ERP in forestry sector may include aligning licensing mechanism and moratorium with provincial policies. This will be needed to ensure consistent application by FMU on site. Another challenge may include agrarian reform at national level (TORA). This policy was aimed towards improving community access to "dormant" or mismanaged forestry concessions in production forest. From ERP's point of views, this policy may support welfare of local communties. However, application of TORA will result in changes of land status from forest to other use area. Ultimately, such land parcel will become individual property that may have the following implications to the ERP:

- Shifting of policy stakeholders from FMU (provincial) into land agency/land office when dealing with environmental and social risks. Such shift and subsequent stakeholder engagement needs to be anticipated; and
- Shifting of ERP target groups from private companies (forestry concession holders) to individual person or household. Shifting of approach and strategy may need to be anticipated. Benefit sharing mechanism also needs to be considered if such shift occurs.

In the context of political economy in East Kalimantan, ERP needs to consider two main market forces consisting of conventional and carbon markets. Conventional market still play major role in macro-economic factor of East Kalimantan Province (i.e., GDP contribution from mining and estate crop sectors). Conventional market may act as negative influencers to the success of the ERP, as conventional sectors may still be crucial to provincial economy. On the other hand, carbon market may serve as positive influencer that supports the success of ERP. Carbon market or carbon mechanism may be able to provide incentives and benefits to complement (or substitute) those from conventional market. However, much still needs to be done to prepare East Kalimantan to enter carbon market (e.g., setting up baseline, registration, and carbon accounting capacities).

5.5 ENVIRONMENTAL AND SOCIAL RISK INDICATORS

5.5.1 Scenario Analysis

As described in Section 2.2.2, ERP is designed to address seven drivers of deforestations (mining, timber plantations, estate crops, subsistence agriculture/encroachment, aquaculture, forest and land fires, and unsustainable logging practices). Scenario analysis was done to assess opportunities for ERP implementation and potential impacts that may result from such implementation. Additionally, scenario analysis also considers 11 key issues identified in Section **Error! Reference source not found.** of this report.

The scenario analysis defines two development scenarios: a business as usual (BAU) and ERP scenario, and explores their direct and indirect impacts on the natural environment, taking into account the opportunities, constraints, and vulnerabilities of the East Kalimantan natural systems; the individual and cumulative direct environmental impacts and potential indirect impacts of the planned ERP. Considering the signifcant impacts to deforestation and degradation, plantation, forestry and mining sectors are used as the focus in the scenario analysis.

5.5.1.1 Business as Usual (BAU) Scenario

Issues identified in the ERPD consist of:

- An issue of concern is the presence of 255,398 ha of remaining forests within areas allocated for timber plantation concessions. Legally, only highly degraded forest should be converted to timber plantations; however, in the past, lack enforcement of rules allowed concession holders to log the natural forests in their concessions (Kartodihardjo and Supriono 2000). This issue also includes forest conversion into industrial timber plantation (HTI) and the needs for better forest fire control;
- Mining operations can lead to a direct loss of forest cover, especially with surface (or open pit) mines where the topsoil including vegetation is removed prior to mineral extraction. Land reclamation is often difficult or poorly executed, leading to excessive erosion and preventing reestablishment of forest cover; and
- Cross-cutting issues in form of weaknesses in the land and resources tenure framework, which includes weaknesses in the licensing regime, and lack of formal recognition of customary territories. In addition, weaknesses in the administration of forest areas, facilitate illegal land uses and overlogging.

Business as Usual (BAU) scenario was defined by assessing past trends (historical) of land productivity. Land productivity can provide indicative political economy impacts (i.e., contribution to macro economy), and indicative impacts on conflicts (overlapping concessions with Indigenous peoples). Historical data were used to calculate trend of increase of lands used in the three sectors. Furthermore, the calculated trend was projected towards 2020 to identify total areas at the end of ERP implementation period. Business as usual scenario as as follows:

- Palm oil plantation area is 1,192,000 ha as part of fulfillment of provincial target of 1 million hectares. In 2010, palm oil plantation was There has been an increase of 110% within seven years (or approximately 16% per year). Assuming this average increase, calculated BAU scenario indicates a possibility of increasing palm oil plantation up to 1.9 million ha (allocated in the spatial plan of East Kalimantan 2016-2036);
- Production forest area is allocated for 5,309,719 ha in the spatial plan 2016-2036;
- Data on mining area are scarce, so analysis of this sector is not optimal. Coal mining area is approximately 5.2 million hectares in 2018 with an estimated production of 200 metric tons per year (506 of 1,404 licenses are in production stage). Estimated 4 billions IDR are generated annually as provincial revenue. Mining concessions in East Kalimantan overlap with forestry, plantation, settlement and conservation areas (including habitat of endangered species).

5.5.1.2 ERP Scenario

Emission Reduction scenario was defined by taking into account lands set aside for emission reduction. These allocation cosist of:

- Total forest areas subject to licenses postponement (moratorium) based on indicative moratorium map (*Peta Indikatif Penundaan Pemberian Ijin Baru* – PIPPIB); and
- Total forested areas on estate crops area allocated for emission reduction consisting of 640,000 ha existing concession and 50,000 ha of peatland.

In comparison with the BAU scenario:

- ERP Scenario involves reservation of 640,000 ha of existing estate crop area for HCV that can reduce production by 36% (based on proportion of HCV allocations versus the total plantation area in BAU scenario). This may impact private companies, as the revenue will decrease. However, HCV allocations will support conservation of biodiversity and ecosystem services (including peatland conservation and prevention of fires);
- Similarly, forest license moratorium will hold licensing process 2,585,468 ha ha of forest areas (production forest and peatland). This will result in the 49% decrease of potential revenue from forestry sector (based on proportion of moratorium area versus total production forest allocation). This moratorium may cause decrease in revenue from forestry sector (compared to BAU scenario), but it may contribute to the prevention of unsustainable logging practices;
- In mining sector, 406 form 1,404 licenses are revoked based on the Governor's regulations (Pergub No. 1/2018). Although provincial revenue is expected to decrease, the requirements for reclamations imposed on the existing licenses may benefit the environment.

Other environmental .components to consider in ERP scenario are:

- Environmental aspects such as risks of leakage and reversals. Leakage may occur due to increased emission-inducing activities (BAU scenario) than cannot be offset by ERP. Reversal may occur due to deforestation and environmental degradation that occurs after ERP is completed. Reducing the risk of fires (plantation sector and peatland) will help reduce the risk of reversals; and
- Social aspects such as access restrictions and loss of jobs need to be considered when implementing moratorium and license revocation. Political economy aspects may need to be considered, as decrease in provincial revenue is anticipated as the result of ERP.

5.5.2 Environmental and Social Components

Based on the scenario analysis, potential environmental risks include loss of natural habitats and key biodiversity species at areas designated as non-forest and/or through increased human activities, contamination of soil and water, and health risks associated with the use of pesticides and as result of poor waste management practices, successes in reducing impacts on forests could lead to displacements of these impacts to other areas.

Potential social risks include risks associated with activities conducted in areas under existing and potential conflicts and/or disputes or areas with overlapping boundaries and/or claims, between customary and common/formal laws and processes and in areas with competing claims especially with concessions, livelihoods impacts including displacement due to bans on timber logging, oil palm plantation and artisanal mining activities, impacts to indigenous peoples, loss and/or damage to physical cultural resource, community and health safety risks for fire prevention and suppression activities, lack of awareness, management capacity and participation of community in managing social forestry, institutional capacity constraints to manage potential environmental and social risks at field level, as well as gender inequalities and social exclusion.

In addition to the environmental and social components, ERP implementation needs to consider the following aspects:

- Regulations to support and/or strengthen mitigation of environmental and social risks (e.g., environmental permit regulations to support mitigation of negative environmental impacts, and guidelines on conflict resolutions from MoEF). There are also potentials for conflicting policies and regulations such as policies on improving agricultural production that does not explicitly encourage the use of organic fertilisers or pesticides (integrated pest management); and
- Law enforcement to uphold the policies and regulations may need to be considered. Recent separations between conservation and law enforcement (DG of Law Enforcement, respectively) may add another layer of bureacracy in protecting biodiversity. Conservation area managers do not have authorities to conduct law enforcement activities. This will have to be done through coordination of two directorate generals.

5.5.3 Environmental and Social Indicators

Indicative environmental and social risks that can be analysed in the SESA are summarised in Table 22. These will be discussed further in the social and environmental impact assessment provided in Section 7.0.

Table 22 Summary of relevant environmental and social (E&S) indicators to monitor/track over the course of ERP implementation.

E&S Indicators	Summary of Issues	Data Sources	Timeline for Reporting
Changes in access to land and natural resources	Previous and existing rights or usage of local communities and Indigenous Peoples	▪ Village administration; ▪ Community consultations ▪ FMU;	Six-monthly
Occurences of conflicts and disputes in forest areas	▪ Overlapping allocation and concessions for oil palm and forestry plantations ▪ Unclear border of FMUs ▪ Accumulation of unresolved problems, including overlapping claims, conflicts, unsustainable forest use; ▪ Conflicting licenses	▪ FMU; ▪ Community consultations ▪ FGRM mechanism ▪ SIS-REDD+ database	Quarterly
Occurences of conflicts and disputes in non-forest areas (e.g. plantation conflicts, revocation of mining permits)	▪ Tenurial conflicts between communities and palm oil plantations/mining concessions ▪ Accumulation of unresolved problems, including overlapping claims, conflicts, unsustainable resource use, etc. ▪ Disputes over benefit sharing (i.e. in the case of small-holder palm oil plantations) ▪ Conflicting licenses; ▪ Inter-communal conflicts due to competing land access and resources; ▪ Limited capacity on good agricultural practices and intensification may incentivize palm oil expansion;	▪ Plantation agency; ▪ Community consultations ▪ FGRM mechanism ▪ SIS-REDD+ database	Quarterly
Occurences of access restrictions and livelihoods displacement,	Forest and plantation concessions may result in access restrictions to land	▪ FGRM mechanism through SIS-REDD+;	Quarterly The frequency of monitoring may be

including those affecting Indigenous Peoples	use, livelihood activities and cultural rituals	▪ Community consultations ▪ Concession holders; ▪ RAPs, or PoAs	adjusted depending on likelihood of emerging risks. This will be assessed during implementation.
Changes in biodiversity	▪ ERP accounting areas overlap with key biodiversity areas with presence of endangered species ▪ Community- based monitoring is not optimal ▪ Lack of clear conservation guidelines, and awareness of biodiversity conservation	▪ FMU; ▪ Community consultations ▪ BKSDA	Annually
Cases of contamination and pollution	▪ Use of pesticides in agriculture and plantation sector ▪ Small-scale civil/construction works and waste management	▪ Environmental agency (Province)	Quarterly
Changes in political actions	▪ Lack of cross-sectoral conflict resolution mechanisms (e.g., plantation, forestry sectors and environmental disturbances) ▪ Lack of agreement/concensus on benefit sharing mechanism	▪ FGRM mechanism ▪ SIS-REDD+ database ▪ DGCC ▪ FCPF (P3SEKPI)	Six-monthly
Institutional capacity to manage environment & social potential risk	▪ Capacity constraints to implement & monitor RIL-C, HCV management amongst FMUs ▪ Limited ability for environmental and social conflicts mediation ▪ Lack of capacity to implement sustainable palm oil plantation, particularly to support implementation of ISPO targeting small holder plantation	▪ FMU; ▪ Forestry agencies; ▪ Plantation agencies; ▪ Concession holders	Six-monthly

	owners;		
Number of grievances documented and status of resolution in the FGRM	▪ Lack of cross sectoral conflict resolution mechanisms (e.g., plantation, forestry sectors and environmental disturbances) ▪ Lack of formal designation for FGRM institutions and resources to operationalize the system	▪ Implementing agencies ▪ FGRM mechanism through SIS-REDD+; ▪ Plantation agencies ▪ Environmental agency ▪ Forestry agency / FMU	Quarterly
Changes in access to sustainable livelihood options	▪ Limited capacity and resources to support alternative livelihoods options for local people; ▪ Market incentives for palm oil expansion and resource extraction; ▪ Limited participation, incentives and access amongst target communities in sustainable NRM activities.	▪ District government (BPMPD), Bappeda; ▪ Provincial agencies (plantation, forestry/FMU)	Six-monthly
Incidents related to community health & safety	▪ Health and safety aspects in fire control/prevention measures	▪ Health Agency (Province) ▪ Environmental Agency	Quarterly
Changes in patterns for gender and social inclusions	Sub-optimal involvement of women and lack of participation	District agencies: Bappeda, Women Empowerment Agency	Quarterly
Number of cases indicating risks of leakages and reversals	▪ Shifting carbon emissions to other areas or provinces ▪ Lack of participation in fire control/ prevention resulting in increased carbon emission	▪ DGCC ▪ DDPI	Annually

6.0 POLICY AND REGULATION FRAMEWORK

6.1 GOI REGULATIONS

Activities under the ERP should adopt and promote sustainable development principles, including environmental, social, cultural, and economic considerations, following applicable national and

regional regulations. This SESA document adopted the GoI's laws and regulations to the extent that they are in compliance with the World Bank Policies on Environmental Assessment (OP 4.01), Indigenous Peoples (OP 4.10) and Physical Cultural Resources (OP 4.11). Specific provisions are described in the ESMF to address any aspect of the World Bank policies that are not fully addressed through GoI laws and regulations. Applicable national and regional regulations for the ERP related to environmental and social aspects are outlined below:

- Law (UU) No. 32/2009 concerning Environmental Management and Protection. For the government executing agency (national and regional level), this law mandates that provinces and districts develop a strategic environmental assessment that will guide the regional spatial planning for development. This law also obligates any development program in the private sector to implement proper environmental and social considerations, including an environmental assessment, a management plan and a monitoring plan;

- Law No. 41/1999 concerning Forestry. The 1999 law regulates the designation and management of forest areas and includes some conservation-oriented policies. It divides forests into three categories: conservation forests, protected forests and production forests. It also empowers the Ministry of Forestry to determine and manage Indonesia's forest area (National Forest Estate). This regulation is also used as the basis for the recognisiton of customary forest;

- Law No. 6/2014 on Villages. This law potentially has major implications for the forestry sector by expanding the authority of villages to manage their own assets and natural resources, revenue and administration. It reallocates a specific portion of the state budget to village administrations, providing all of Indonesia's villages with annual discretionary funding for making local improvements that support poverty alleviation, health, education and infrastructure development;

- Law No. 23/2014 on Regional Governance. This law effectively weakens Indonesia's system of regional autonomy by withdrawing authority over natural resource management (including forestry) from district and city governments and shifts it to provincial and national-level governments;

- Law No. 26/2007 concerning Spatial Planning. It amends Law No. 24/1992 (Spatial Planning Act) in the context of decentralization, urbanization and other factors. It grants authority over spatial planning to provincial governments (*pemerintah propinsi*) and district governments (*pemerintah kabupaten* and *pemerintah kota*). Provision of this authority is not stipulated within previous spatial planning laws. It also provides some new ways for enhancing development control, including zoning, planning permits, implementation of incentives and disincentives, administration and criminal sanction. Law No. 26/2007 also acknowledges the importance of public participation in spatial planning;

- Law No. 18/2013 on the Prevention and Eradication of Forest Degradation. This law strengthens law enforcement by providing additional legal certainty and defining the penalties for those engaged in forest destruction. It clearly defines which activities are banned for individuals and organized groups who log in forests, as well as for organizations involved in the illegal timber trade and officials engaged in the falsification of permits;

- Government Regulation (PP) No. 27/2012 concerning Environmental Permit, Regulation of the Minister of Environment No. 16/2012 concerning Guidelines for Preparing Environmental Documents (AMDAL, UKL/UPL, and SPPL);
- Ministry of Environment and Forestry Regulation No. P.83/2016 concerning on Social Forestry;
- Ministry of Environment and Forestry Regulations No. 31/2015 regarding private forests. This provides the procedure for recognition of customary forests by MoEF;
- Presidential Regulation (Perpres) No. 88/2017 concerning Resolution of Land Conflict within Forest Area (PPTKH);
- Ministry of Agrarian and Spatial Plan/Head of National Land Agency No. 6/2018 concerning a Complete and Systematic Land Registration (PTSL);
- Ministry of Agrarian and Spatial Plan/Head of National Land Agency No. 10/2016 concerning communal land titles; and
- Other applicable environmental standards on water quality, air quality, erosion control, etc.

The ERP activities will potentially involve and have an impact on indigenous peoples. The project should provide benefits to and manage its impacts on indigenous peoples. The GoI's policy on indigenous peoples includes:

- Presidential Decree (*Keppres*) No. 111/1999 concerning Development of Isolated Indigenous Community (KAT) which provides a broad definition of indigenous peoples and the need for government assistance;
- UUD 1945 (Amendment) Chapter 18, clause #2 and Chapter 281 clause # 3;
- Law No. 41/1999 on Forestry (and Constitutional Court Decision No. 35/PUU-X/2012);
- Ministry of Home Affairs (MoHA) Regulation No. 52/2014 on the Guidelines on the Recognition and Protection of MHA (*Masyarakat Hukum Adat*);
- MoEF Regulation No.43/2013 regarding delineation and designation of forest areas under the jurisdiction of Forest Management Units; and
- Regulation of the Minister of Land Agency and Spatial Development No. 9/2015 on the Procedures to Establish the Land Communal Rights on the MHA Land and Community Living in the Special Area.

The above regulations will support the ERP, and no contradiction is foreseen in the regulatory framework. Implementation of Presidential Regulation No. 88/2017 must be carefully planned, so the modification of forest areas (e.g., into other use areas) and the Agrarian Reform Policy (TORA) will not cause deforestation or land degradation. Additionally, Constitutional Court Rule (*Putusan Mahkamah Konstitusi* [MK]) No. 35/2012 should be interpreted responsibly, so it does not provoke massive land claims within forest area.

Baseline data on forest areas (production, protection and ecosystem restoration) in Table 11 (Section 5.2) show that East Kalimantan Province consists of more than 30% forest area; therefore, according to Presidential Regulation No. 88/2017, resettlement will not be used as a measure for resolving

conflicts over forest areas. Consequently, it is important that the forest tenurial conflict resolution team strengthens the strategy for social forestry and environmental partnership in production and protected forests. Additionally, the team may also refer to the Regulation of Director General (*Peraturan Dirjen*) KSDAE No. 6/2018, which provides specific guidelines for establishing partnerships with communities in protected areas such as nature reserves, wildlife reserves and national parks. Under community partnership and communidy development program, options may include validation of Village Land use Plan that regulates agro-forestry activities permissible in production forest. Village law should opt environ cultivating plantation commodities (Palm Oil) in the forest estate, and promote NTFP if relevant

Summary of institutional and regulatory issues are provided in Table 23.

Table 23 Summary of institutional and regulatory issues for the ERP.

Regulation/Policy	Issue	Relevance to REDD+	Relevant E&S Risks
Conflict resolution in forest areas	Implementation of Presidential Regulation No. 88/2017, MoEF Regulation No. P.84/2015	FGRM and conflict resolution mechanism to ensure "clean-and-clear" conditions prior to implementation	▪ Access restrictions ▪ Overlapping land uses
Conflict resolution in non-forest areas (Other Use/APL)	Implementation of conflict resolution mechanism by the Estate Crops Agency and Environmental Agency does not allow concerted efforts on conflict resolutions in APL	FGRM and conflict resolution mechanism to ensure "clean-and-clear" conditions prior to the implementation	▪ Access restrictions ▪ Overlapping land uses ▪ Gender and social exclusions
FGRM	Lack of regulation that leads to an integrated FGRM mechanism (i.e., forest and other use areas)	FGRM and conflict resolution mechanism to ensure "clean-and-clear" conditions prior to implementation	▪ Unresolved conflicts and disputes ▪ Accumulation of conflicts and disputes
Land for Agrarian Reform Program	Requires careful interpretation of Presidential Regulation No. 88/2017	Preventing deforestation and degradation triggered by land conversion within forest area	▪ Forest conversion for agricultural practices ▪ Land grabbing
Provincial Regulation 1 of 2015 on customary land rights	Requires careful interpretation of the rule to avoid massive land claims	Preventing deforestation and degradation triggered by land conversion within forest area	▪ Abuse of MHA attribution for land claims
Commitment to emission reduction	Land based emissions are the largest contributor of GHG emissions in Indonesia	Designation of roles and responsibilities of DGCC (MoEF) on emission reduction	▪ Proper FREL and MRV application as objective measures of GHG emissions

6.2 REGULATORY ENFORCEMENT AND CAPACITY ASSESSMENT

Implementation of the policy and regulatory framework have been assigned to the following levels of governance:

- National level policies (forest and protected areas): Policies mainly fall under the jurisdiction of MoEF. Policies are related to forest area designation, issuance of licenses, moratorium on licenses (PIPPIB), moratorium on peatlands, agrarian reform (TORA), social forestry, and environmental partnership mechanisms. The policy of the Ministry of Home Affairs is relevant to national policy on recognition of customary community (MHA);
- National level policies (other use areas/APL): Policies related to land allocation validation falls under the jurisdiction of the Ministry of Agrarian and Spatial Planning. Authorities for this ministry are mandated to offices at the provincial level (*Kanwil* BPN) and at the district level (*Kantor Pertanahan*);
- Provincial level policies: BAPPEDA plays an important role in ensuring synergy between forestry and plantation sectors. Policies on forest management fall under the jurisdiction of the Forestry Agency, while grass root implementation is administered through the FMUs (KPH). Kesbangpol (National Unity and Political Stability Agency) and Infokom (Information and Communication Agency) can potentially serve as support for provincial level policies, especially on FGRM implementation. The Regional Council on Climate Change (DDPI]) is not a regulatory instrument, but is essential in supporting the BAPPEDA and Forestry Agency; thus playing a crucial role the implementation of the ERP in East Kalimantan Province. Capacity gaps include the lack of capacity for FGRM, conflict resolution, and FREL, MRV, and HCV assessment and management;
- Forest Management Unit (KPH) will be the frontline of safeguards in forestry sector. For the purpose of the SESA, a strong capacity of the KPH is reflected by the availablity of long-term forest management plan (RPHJP). 11 out of 20 KPHs in East Kalimantan (38%) already have this long-term plan. This indicates that more than half of the KPHs still need to be empowered to ensure safeguard capacities required in the ERP; and
- District level policies: BAPPEDA plays an important role in the recognizing customary (*Adat*) communities and in ensuring proper implementation of ER at the grass root level. The District Agency for Village Empowerment and Development (*Dinas Pemberdayaan Masyarakat dan Pemerintahan Desa* – DPMPD) is essential in ensuring policies for channelling funds to the villages under the village fund (*Dana Desa* – DD) and village fund allocation (*Alokasi Dana Desa* – ADD) from provincial and national government authorities. These institutions have the capacity to support provincial policies on FGRM, conflict resolution, and HCV assessment and management. Additionally DPR-D (local legislative), district heads (bupati) and mayors are also involved in mediating plantation conflicts.

Recent changes in forestry regulations (e.g., social forestry, indigenous people/customary access, environmental partnerships) and in ERP requirements, such as FPIC, FREL and MRV, mean that a new approach at national and sub-national levels is required. These new regulations and requirements may not be familiar to government officials at national and sub-national levels; therefore, relevant capacity building sessions may need to be conducted. However, the most important aspect,

in light of the new developments, is the need to establish collaboration with NGOs. Such collaboration would allow knowledge sharing between government and non-government organisations. A summary of the roles and relevance of government agencies is provided in Table 24.

Table 24 Summary of regulatory and institutional frameworks relevant to the ERP.

Agency	Relevant Mandate	Relevance to ERP	Capacity Assessment	Key Gaps
DGCC	Implementation of REDD+ initiatives	▪ Development of documents to support ERPD and subsequent ERPA ▪ FREL, MRV	▪ Technical capacity to develop documents and conduct FREL measurements and MRV	▪ Adequate knowledge, but need support for additional manpower (quantity of human resources)
P3SEKPI/FCPF	Planning and implementation of REDD+ initiatives	▪ Management and day-to-day implementation of the ERP ▪ FGRM at national level ▪ FREL, MRV	▪ Program management and coordination capacity ▪ Technical capacity to support FREL and MRV	▪ Adequate knowledge, but need support for additional manpower (quantity of human resources), especially to support sub-national implementation
BAPPEDA (Province)	Synergy of REDD+ initiatives with regional development plan	▪ Lead the ERP implementation with support from DDPI ▪ FGRM at provincial level	▪ Coordination capacity ▪ Analysis using multi-objective land allocation to ensure that economic and ecological objectives are accommodated in the spatial planning	▪ Requires additional knowledge of REDD+ initiatives (possibly from DGCC)
Governor/ Provincal Secretary (SEKDA)	Implementing Green Development in East Kalimantan (Vision of RPJMD)	▪ Benefit sharing mechanism ▪ Revocation of licenses (e.g., mining) that do not meet clean-and-clear criteria ▪ FGRM at provincial level (forestry, mining,	▪ Establishment of BLU, and development of profitable business plan for the BLU	▪ Expansion of palm oil as part of the provincial development plan outweighs the ERP ▪ Establishment of conflict resolution desk to address forestry-related

Agency	Relevant Mandate	Relevance to ERP	Capacity Assessment	Key Gaps
		plantations and environment)[56]		conflicts ▪ Lack of conflict resolution regulation for mining sector ▪ Unequal benefit sharing
Provincial Land Agency (*Kanwil* BPN)	Overseeing land issues and ensuring alignment with the spatial plan	▪ Issuance of HGU (e.g., for plantations) in APL area	▪ Sustainable palm oil practices ▪ Environmental and social risk assessment ▪ Safeguards	▪ Preventing land grabbing ▪ Preventing issuance of HGU that were not based on proper environmental and social assessment
Forestry Agency (Province)	Synergy of REDD+ initiatives in forestry sector/forest areas	▪ Implement ERP relevant with forestry sectors ▪ FGRM at provincial level (forestry sector) involving concession holders, local communities and government	▪ Technical capacity for forest management (through FMUs), including FGRM/conflict resolution ▪ Network for conflict resolution and mediation	▪ Requires additional knowledge of REDD+ initiatives (possibly from DGCC/FCPF) ▪ Capacity for tenurial conflict resolution and/or mediation
Estate Crops Agency (Province)	Synergy of REDD+ initiatives in plantation sectors/other use areas	▪ Implement ERP in non-forest/other use areas ▪ FGRM at provincial level (plantation sector)	▪ Technical capacity for plantation management, including FGRM/conflict resolution ▪ Effective response and resolutions to conflict (i.e., disturbance to plantation business) ▪ Multi-sectoral approach to address economic,	▪ Requires additional knowledge of REDD+ initiatives (possibly from DGCC/FCPF) ▪ Proper documentation of conflict resolution process as part of the proposed FGRM

[56] Kertas Kebijakan Yayasan Bumi #02/2017 Kelembagaan Konflik Agraria Dan Lingkungan Hidup Di Kalimantan Timur

Agency	Relevant Mandate	Relevance to ERP	Capacity Assessment	Key Gaps
			social, legal, social, cultural and environmental aspects of the conflicts	
BAPPEDA (District)	Synergy of REDD+ implementation at grass roots level	▪ Implement ERP at district level and ensure synergy across relevant agencies ▪ FGRM at district level	▪ Coordination and planning capacity	▪ Requires additional knowledge of REDD+ initiatives (possibly from DGCC/ FCPF/DDPI)
DPMPD/K (District)	Synergy of REDD+ implementation with village development and funds channelled to village level.	▪ Implement ERP at sub-district and village levels	▪ Technical capacity for community empowerment	▪ Requires additional knowledge of REDD+ initiatives (possibly from DGCC/ FCPF/DDPI) ▪ Environmental and social risk assessment ▪ Safeguard mechanism for agriculture and aquaculture initiatives
Women Empowerment and Child Protection	Synergy of REDD+ implementation with gender mainstreaming/ gender empowerment	▪ Implement ERP at sub-district and village level to ensure gender and social inclusion	▪ Technical capacity for gender inclusion/ gender mainstreaming	▪ Requires additional knowledge of REDD+ initiatives (possibly from DGCC/ FCPF/DDPI)

6.3 IMPLEMENTATION OF SAFEGUARD POLICIES

There have been cases of safeguard implementation in Indonesia that are comparable with safeguard for ERP include:

- Safeguard mechanism for International Fund for Agricultural Development (IFAD) supported by ADB. Safeguard under IFAD is to mitigate environmental and social impact risks (e.g., environment, involuntary resettlement and indigenous people). The program is designed to

help improve institutional capacity and governance to contribute to sustainable operation of irrigation system[57];

- Integration of environmental safeguard mechanisms into existing Indonesian government policies (i.e., Law 32/2009);
- Application of World Bank's OP/BPs in financing mechanism for infrastructure through Indonesian Ministry of Finance. This includes setting up Environmental and Social Safeguards (ESS) for a state-owned infrastructure company. PT Sarana Multi Infrastruktur (SMI) to ensure environmentally-and-socially-friendly business activities[58]; and
- Private companies seeking financial support (loans) from IFC will need to adopt performance standards required therein.

These experiences provided Indonesia with familiarity with multilateral bank's safeguard policies among government (including state-owned companies) and private sectors. All cases indicate that the safeguard mechanisms were built upon exsiting system/mechanism. Moreover, the mechanism of safeguardsare always suited to the environmental and social risks identified in a dedicated assessments.

6.4 GAP/COMPATIBILITY ANALYSIS

Chapter 4.0 describes that the ERP consists of five components. Sub-components and activities under each component are grouped under Category B (EA is required, but its scope corresponds to the limited environmental impacts of the project). However, since East Kalimantan peoples, especially in the village areas where the ERP will be implemented, are mosltly *Dayak* and *Mala*y communities, the World Bank sees that the Indigenous Peoples aspect of the project falls under Category A. A full Indigenous Peoples Planning Framework will be needed and has been developed under the ESMF.

A summary of the key gaps in the regulatory framework are:

- Lack of policies that regulate or enforce the development of the ESMF for the ERP. The development of SESA, ESMF and other related framework documents are mainly mandated by donor agencies, rather than by the GoI;
- Potential contradicting provincial policies on GHG emissions (i.e., Green Development/*Kaltim Hijau* vision) with policies for expanding palm oil production.
- Sustainable palm oil is regulated by Ministry of Agriculture Reg. No. 11/2015 concerning ISPO. There is no specific regulation that enforces RSPO and HCV, and no specific regulations that can prevent land grabbing;
- Lack of or weak regulatory framework on the establishment of a conflict resolution desk to address forestry-related conflicts and disputes;
- Lack of or weak regulatory framework on conflict resolution in mining sector. Currently the mechanism refers to agrarian and environmental regulations to resolve conflicts/disputes in the mining sector;

[57] Integrated Participatory Development and Management of Irrigation Program (2017).

[58] Environmental and Social Safeguard (ESS) Procedure of PT SMI (2016)

- Separate guidelines for forest and non-forest conflict resolution. This could create difficulties when handling cross sectoral issues (i.e., forest and plantation sectors); and
- Lack of regulations on the benefit sharing mechanism for ERP.

Potential environmental and social impacts are described in Appendix A1 as well as in Section 14.2.2 of the ERPD. Province plays important roles through KPH, but the role of MoEF (central government) is still crucial in issuing licences. Therefore, there is a need to find a schematic to link/involve the KPH in the decision for license issueance. A gap analysis was conducted to see how adequately the existing safeguards (GoI) address those issues/risks and whether they fulfil WB requirements. An overview of how the existing safeguards address those risks/impacts is outlined in Table 25 below.

Table 25 Compatibility analysis between existing safeguards (including GoI relevant regulations) and the World Bank safeguard policies.

WB Safeguards Policies	Aspects	Indonesian Safeguards*				Compatibility/Gap Analysis	Recommendation to Fill the Gap
		Applicable GoI Regulations[59]	SIS REED	PRISAI	SES REDD Kaltim		
OP/BP 4.01, 4.04	Environmental Assessment	Environmental and social assessments are conducted through the Strategic Environmental Assesment in accordance with the MoEF Regulation No. P.69 of 2019 to ensure that the principle of Sustainable Development has become the basis and integrated in the development of a region and/or Policy, Plan and/or Program. EK Bappeda and EK Environmental Agency has compiled an SEA for the Regional Spatial Planning for 2016-2036 and the Medium Term Development Plan for 2018-2023.	P1,5	P3,6	P5	Need capacity building on monitoring	Environmental assessment refers to the Indonesian Regulations and the ESMF that require the development of environmental documents according to the results of screening. UKL-UPL assessments are expected to be required for the nature and scale of the ERP activities. Enhance the capacity development and training for conducting environmental assessment and implementation of environmental and social management plans.
OP/BP 4.01, 4.04	Environmental Screening	Based on articles 7-8 MoEF Regulation No. P.69 of 2019, that screening is carried out in preparing SEA, including on the issue of climate change.	P1,5	P3,6	P5	More detailed assessment are needed at the site level, to ensure that all those identified in the SEA are handled at the field level.	Preliminary screening process against negative list for ER activities in the ESMF that include identification of potential impact towards involuntary resettlement/access restriction, indigenous peoples, and

[59] The overarching regulation is PP No. 46/2016 regarding the precedure for conducting strategic environmental assessments. This regulation requires the identification of risks and relevant mitigation measures, which is similiar to the safeguard principles.

WB Safeguards Policies	Aspects	Indonesian Safeguards*				Compatibility/Gap Analysis	Recommendation to Fill the Gap
		Applicable GoI Regulations[59]	SIS REED	PRISAI	SES REDD Kaltim		
							physical cultural resources.
OP/BP 4.01, 4.04, 4.10	Management of environmental and social impacts	Environmental and social assessments are conducted through the SEA and AMDAL process in accordance with MoEF Regulation No. P.69 of 2019 and the Ministry of Environment Regulation No. 5 Year 2012 on business activities mandatory to have AMDAL. Joint Reg. between MoHA, MoEF, MPWH, and Head of BPN No. 79/2014, PB.3/2014, 17/2014, and 8/2014 concerning Procedures for Conflict Resolution on Land within Forest Area	P2,3,4	P3,4,5, 6	P3, 5	The management and monitoring plan developed through the AMDAL process, in general, supports the Bank requirement, however the source of fund for ESMP implementation is not covered in the Ministry of Environmental Regulations. Capacity for management of environmental and social impacts is needed for FMU and private companies. There is no integrated system of conflict resolution across sectors in East Kalimantan.	Strengthens the SEA and Environmental permits by providing specific Environmental Codes of Practices (ECOPs) for ER activities such as agroforestry, aquaculture and ecotourism and a template for ESMP.
OP/BP 4.01, 4.10	Grievance Mechanism	Ministry of Environment and Forestry No. P.84 of 2018 regarding handling tenure conflicts in state forests Ministry of Environment and Forestry No. P.22 /2017 regarding Management of Grievances related to Indications of Pollution and/or Environmental Damage and/or Harm to Forests. Joint Reg. between MoHA, MoEF, MPWH, and	P2, 3	P1, 3, 4	P1, 2, 4	There is no specific and integrated mechanism for managing and resolving grievances related to ER activities.	To set up ESMF that provides a Feedback and Redress Grievance Mechanism (FGRM) for managing and resolving grievances related to implementation of ER activities. This mechanism should be able to address cross-sectoral grievances

WB Safeguards Policies	Aspects	Indonesian Safeguards*				Compatibility/Gap Analysis	Recommendation to Fill the Gap
		Applicable GoI Regulations[59]	SIS REED	PRISAI	SES REDD Kaltim		
		Head of BPN No. 79/2014, PB.3/2014, 17/2014, and 8/2014 concerning Procedures for Conflict Resolution on Land within Forest Area					
OP/BP 4.07, 4.09, 4.36	Possible contamination to soil and water as result of pest management practices	There are several regulations about fertilizer and pesticide[60]	P5	P6	P4, 5, 7	Capacity building is still needed in implementing this	Avoidance of using harmful pesticides. A preferred solution is to use Integrated Pest Management (IPM) techniques. Empower the government executing agency (national and regional level), this law mandates that provinces and districts develop a strategic environmental assessment that will guide the regional strategies on pest management (i.e., integrated pest management) Enhance the capacity of the authorities for enforcing the compliance to the regulations.
OP/BP 4.04	Possible loss of natural habitats and biodiversity	Law (UU) No. 32/2009 concerning Environmental Management and Protection. Law no. 5/1994 regarding conservation of biodiversity and ecosystem. This regulation refers to	P5, 6	P6, 7	P4, 5, 7	Laws and regulations are in place on protection of forest, threatened and endangered species at the national and provincial levels. High conservation values	Encourage involvement of concession holders (forestry, plantation and mining sectors) to adopt high conservation value principles. Sustainable forest management needs to be

[60] More detailed on http://psp.pertanian.go.id/index.php/page/publikasi/72

WB Safeguards Policies	Aspects	Indonesian Safeguards*				Compatibility/Gap Analysis	Recommendation to Fill the Gap
		Applicable GoI Regulations[59]	SIS REED	PRISAI	SES REDD Kaltim		
		international conventions on biodiversity Law no 41/1999 regarding forest. This regulation defines forest status and functions, including those related to conserving biodiversity Ministry of Environmental regulation No 29/2009 on Guidelines for Regional Biodiversity Conservation				have been identified at non-forest designated land. Capacity building is still needed in implementing and monitoring	enforced among private companies in forestry sector. Sub-national government needs to establish measures for protecting abiotic natural resources (e.g., geopark designations, karst and physical cultural resources) ESMF will address the measures to strengthen the screening process for natural habitats, critical habitats and cultural resources. Capacity building in assessing impacts to biodiversity, particularly for natural habitat and critical habitat.
OP/BP 4.11	Impacts on physical cultural resources	Law No. 11/2010 about Cultural Heritage states that cultural heritage needs to be preserved and protected. These sites are recognized by the government through issuance of a decree.	P3, 5	P4	P1	Cultural sites that have not been recognized by the government, but have cultural values need to be preserved by the ERP.	The ESMF needs to provide framework for preserving and reporting unexpected discovery of physical cultural resources
OP/BP 4.12	Access Restriction to to designation of areas under ERP	Presidential Decree No. 111/1999 and MoHA Regulation No. 52/2014 concerning Isolated Indigenous Communities. FGRM under the DG of PSKL	P2, 3	P1, 3, 4	P1, 2, 4	ERP may involve delineation of areas with high conservation values (HCV). These areas may be under protection by forestry and/or plantation	Access Restriction Planning Framework (ARPF), Resettlement Planning Framework (RPF) and Process Framework (PF) need to be developed to identify program-

WB Safeguards Policies	Aspects	Indonesian Safeguards*				Compatibility/Gap Analysis	Recommendation to Fill the Gap
		Applicable GoI Regulations[59]	SIS REED	PRISAI	SES REDD Kaltim		
		Government Reg. No. 2/2015 concerning Implementation of UU No. 7/2012 concerning Handling of Social Conflict Joint Reg. between MoHA, MoEF, MPWH, and Head of BPN No. 79/2014, PB.3/2014, 17/2014, and 8/2014 concerning Procedures for Conflict Resolution on Land within Forest Area				concessions. Such protection may result in restriction of access to livelihood (e.g., access to farmland or access to cultural sites). There is currently no specific mechanims to address resettlement of forest dependent communities and access restriction to natural reserves and/or other protected areas.	affected people, and ensure that proper procedures are available to address issues related to access restriction (and potential relocation that may be needed). Further, specific issues on restriction of access among indigenous peoples need to be addressed in IPPF.

Notes: * The list of applicable GoI regulations contains the most relevant regulations related to the issues/risks. More regulations at the project implementation level are described in the SESA and ESMF. Between SES-REDD+, PRISAI, and SES-REDD+, SIS-REDD+ is the most recognized and nationally accepted and is most frequently referred to in Indonesia.

This table indicates that the key gaps in addressing environmental and social management consist of:

- Presidential Decree No. 111/1999 and MoHA decree 52/2014 are compatible with OP/BP 4.10 regarding the identification and recognition of Indigenous Peoples by the state, as well as in the inclusion of the Indigenous Peoples in welfare improvement, even though the GoI does not have a regulation that specifies the use of a particular IPPF for a project. In order to be fully compatible with World Bank's OP/BP 4.10 and 4.11, a specific FGRM and IPPF for ERP are needed;

- The current regulation on land tenure conflict and social conflict is compatible with OP/BP 4.10 and 4.11, although no specific procedures are required for a project. Joint regulation (MoHA, MoEF, MPWH, and ATR/BPN) recognises the tenurial rights of Indigenous Peoples and provides guidance for land acquisition. Although the existing regulation is fully compatible with the World Bank OP/BPs, an ESMF and environmental management and monitoring plan specific to the ERP will be needed;

- Current regulations on forest boundary delineation (Regulation MoEF No.43/2013) consider the rights of the communities. Furthermore, Presidential Regulation No. 88/2017 describes options, which consist of the exclusion of existing land claimed by the community from forest designation; land swap with areas elsewhere; rights for use through social forestry and/or environmental partnership; and relocation. Considering the possibility of relocation of communities from the designated forest areas, the ERP needs to consider OP 4.12. Additionally, there is the possibility that access restriction and relocation may also occur in palm oil plantations currently found in APLs. However, Presidential Regulation No. 71/2012 on Land Acquisition for the Public Interest is the only regulatory framework on relocation/resettlement[61]; and

- The lack of dedicated mechanism to address Involuntary taking of land, resulting in relocation or loss of shelter; loss of assets or access to assets; loss of income sources or means of livelihoods, whether or not the affected persons must move to another location; or involuntary restriction of access to legally designated parks and protected areas resulting in adverse impacts on the livelihoods of the displaced persons. Such mechanism should apply to all sub-projects and/or interventions under the ERP that result in involuntary resettlement, regardless of the source of financing.

This table also shows gaps in the compatibility of existing safeguard mechanisms. The seven safeguards principles from COP 16 (Cancun Principles) were used to develop the national level safeguards. The process of developing the national safeguards consisted of[62]:

- Aligning the Cancun Principles with existing instruments at the national level (e.g., SEA, PHPL, HCV, SESA and others). This step resulted in the elements that form the basis for developing PRISAI;

- Analysing the practicality and effectivity of the above elements as indicators of REDD+ implementation and achievements. This process resulted in the recommendations of which

[61] Palm oil and forestry allocations may not be considered as in the public interest.

[62] Pusat Standardisasi dan Lingkungan. 2013. Pinsip, Kriteria dan Indikator untuk Sistem Informasi Safeguards REDD+ (SIS-REDD+) di Indonesia

elements need to be monitored. The result of this step included the development of parameters for SIS REDD+; and

- Conducting a gap analysis between the Cancun Principles and REDD+ elements at the national level to be discussed with key stakeholders. This resulted in the refinement of SIS REDD+.

The above process continued with discussions at the sub-national (provincial) level that consisted of the following steps:

- Aligning SIS-REDD+ with the provincial targets, and using the Cancun Principles as the main references. This alignment was also aimed to adapt the above principles to address the local context in East Kalimantan. This step identified 11 strategic issues that can be aggregated into three main categories on land tenure, governance, and communities; and
- Developing principles, criteria and indicators specific to East Kalimantan (SES REDD Kaltim). These principles, criteria and indicators were consistent with SIS-REDD+ and Cancun Principles. In fact, the SES REDD+ *Kaltim* addressed specific issues for addressing the risk of deforestation from over logging and timber plantations, which was not specifically addressed in PRISAI.

Therefore, it is logical to use the SES REDD+ *Kaltim* for the ERP. The basis for this argument is the fact that it was developed based on Cancun Principles and SIS-REDD+; it is consistent with the international and national safeguard mechanisms; and it completes the national safeguard by addressing specific issues for East Kalimantan.

A specific regulatory framework is needed for:

- Designating SES REDD+ Kaltim[63] as the main reference for ESMF; and
- Developing and validating an agreed benefit sharing mechanism for national to sub-national and grass root levels.

Disaster prone areas are identified in the provincial spatial plan. The spatial plan covers areas with a risk of natural disasters such as floods and landslides. These areas are distributed throughout the province. Policy on spatial pattern takes the disaster-prone areas into consideration in the designation of protected areas in East Kalimantan Province. Spatial plan policy restricts infrastructure development, but allows for the establishment of forestry and/or plantations to mitigate the risk/impact of floods and landslides. The structure of East Kalimantan Spatial Plan includes policies for infrastructure development. Unless involved in the revision process, the ERP may not be able to alter this plan, even in the case of infrastructure development (e.g., road) in forest areas. The full assessment of the gap analysis is presented in Appendix A1 of this report.

Overall, information from Table 25 shows that there are no significant gaps between Indonesian safeguards and World Bank safeguards policies. The gaps that were identified were used to provide guidance on the development of the ESMF. With the gap analysis results as presented in Appendix A1, the SESA and ESMF highlight the need to strengthen the existing safeguards related to

[63] SES REDD+ Kaltim addresses issues specific to East Kalimantan Province, and accommodates principles from other safeguard mechanisms. Therefore, SES REDD+ Kaltim is seen as the most suitable measure for East Kalimantan Province.

Indigenous Peoples participation, grievance mechanisms, access to forest resources, environmental and social management and monitoring programs. Among all environmental and social aspects, indigenous peoples are the most important aspect that needs to be emphasized in ER program design. The development of an Indigenous Peoples Planning Framework and the inclusion of Indigenous Peoples in other management plans are crucial to ensuring that the ERP complies with the World Bank safeguard policies.

7.0 ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT

As part of the assessment in the SESA, the environmental and social impact assessment is based on the identification of environmental and social risks. The impact assessment was conducted to identify the type and severity of impacts (if risks are not mitigated or managed), and to provide the basis for developing an environmental and safeguard management framework.

The strategic issues that have been identified are based on the baseline data in Chapter 5.5.0 and are consistent with the interim results described in the ERPD. These issues were also identified during the deliberative process during public consultations. Strategic issues are linked with the underlying causes and main drivers of deforestation that will be addressed by the ERP. As described in Section 5.5, environmental and social impacts (risks) are identified as follow:

1. Conflicts and disputes in non-forest areas (e.g., plantation conflicts, revocation of mining permits);
2. Access restriction to land and natural resources;
3. Impacts received by indigenous peoples;
4. Loss/Damage to physical & cultural resources;
5. Community Health & Safety;
6. Lack of awareness, management capacity and participation;
7. Institutional capacity to manage potential environmental & social risk;
8. Gender and social inclusion;
9. Loss of natural habitat and Biodiversity;
10. Contamination and Pollution; and
11. Risks of Leakages and reversals.

The impact assessment for ERP components and sub-components was done by assessing the risk of ERP implementation associated with any of the above categories.

7.1 COMPONENT 1: FOREST AND LAND GOVERNANCE

Component 1 consists of the following four sub-components:

- 1.1. Strengthening the licensing regime,
- 1.2. Dispute settlement,

- 1.3 Support the recognition of customary (adat) land,
- 1.4 Strengthening Village Spatial Planning

7.1.1 Sub-component 1.1: Strengthening the licensing regime

Analysis of linkages between Sub-component 1.1 of the ERP with the above mentioned issues is summarised in Table 26.

Table 26 Summary of analysis of issues related to Sub-component 1.1.

Issues	Context	Analysis	Source of Data/Information
Rights to land and territory	Improving governance of land used license and permits	Enforcement of the use of one map data in all aspects of land use governance, especially concession permits will significantly reduce the occurrence of land use conflicts,	
	Awareness for the important of HCV and establishing management of HCV and Moratorium area	According to the results of the HCV study, in 50% of HCV areas (criterion 4, erosion prevention functions, hydrological functions and forest fire prevention) in the Province of East Kalimantan provide functions for environmental service. This value has not been included in the other criteria in determining HCV. The HCV area had identified should be protected and managed properly to make sure the value and fungction of area is keeping preserve. Its need the unit management that focus on managing the HCV area (moratorium area in the consession) There is also moratorium area in the free access area (outside of concession area). For those area, its need willingness from the government to issued a management unit or forest licenses that appropriate with the moratorium purposes, for example hutan desa.	Sulistioadi, et.al., 2017, Identification of High Conservation Values (HCV) on the Landscape Scale in East Kalimantan Province,
Benefit sharing	Existing permits limiting people's access	SIS followed up on the direction of the Cancun agreement to advance Indigenous Peoples' rights for access to local natural resources	Petikan Pelajaran Penerapan Safeguard TNC & Pendekatan SIGAP, TNC

The analysis in the table above shows that the implementation of Sub-component 1.1 will have social impacts. However, sometimes conflicts cannot be avoided as a result of mistakes from area management or because of personal problems. Therefore, natural resource management companies (mining, plantation and forestry) must have guidelines for handling conflicts. Sometimes the issue of conflict can also lead to suspension or even revocation of licenses.

Spatial analysis cannot directly identify the implications of permit revocations on tenurial conflicts. However, learning from tenurial conflict assessment in the forestry and estate crops (palm oil) sectors, it can be inferred that:

- Permit revocation directly influences license holders. Permit revocation may create a “status quo” that eliminates license holders from the picture. If not managed properly, this condition may add the risk of deforestation. Deforestation may occur due to the increased access of local communities to the unmonitored “no-man’s land” forest resulting from the revoked license. Therefore, the ESMF should include measures for empowering the FMU for forest protection, management and community development. Similar conditions apply for mining and palm oil (plantation) concessions;

- Permit revocation directly influences jobs and employments in East Kalimantan Province. In 2017, provincial statistics show that 328,448 people (21.32% of the workforce in East Kalimantan) participated in agriculture, plantation, forestry, and fishery sectors; while 125,663 people (8.16% of the workforce in East Kalimantan) participated in mining and quarrying sectors. Loss of jobs due to license revocation in forestry, plantation and mining sectors will affect the numbers of jobs, as well as the workforce participation within these sectors;

- Permit revocation indirectly influences FMUs responsible for managing the forest area. Without license holders, the responsibility for managing forest areas rests solely on FMUs. Increased capacity for conflict mediation and community development is needed to prevent deforestation in forest areas. The situation may be more complex in plantation and mining sectors, as license revocation leaves Energy, Mineral Resource, and Plantation agencies as the institution responsible for managing these concessions; and

- Permit revocation directly influences local communities/Indigenous People, as the license holders (companies) would no longer be involved in forest management. The absece of license holders may reduce benefits for the local communities that have collaboration with the these license holders.

Various documentations show that central and provincial governments have considered license revocation to improve governance in forestry, plantation and mining sectors. This suggests that the government authorities will be responsible for the revoked areas. This approach is designed to reduce boundary disputes; thus ensuring “clean-and-clear” status of the concessions. Despite positive impacts on governance, negative social impacts may include unemployement. Estate crop plantation and forestry sectors are estimated to have at least around 600,000 workers distribute in rural and urban area. These figures are based on survey data from the Central Statistics Agency and include data from companies, and this data does not include work in illegal operations (Simangunsong, GITZ, 2004). Impacts of license revocation on political economy may include decrease in provincial revenues. Therefore, Government needs to develop safeguard mechanism to mitigate the environmental and social risks from license revocation. [64]

In cases where the capacity of management authorities (FMU, plantation agency and environmental agency) is sufficient, strengthening license regime practices may promote an increase in protected areas to reducing emission. Consequently, the potential environmental impacts from these sub-components may consist of positive indirect impacts on sustainable environment within forest area.

[64] https://kalimantan.bisnis.com/read/20170510/408/652634/tertibkan-izin-pertambangan-kaltim-tetap-hati-

7.1.2 Sub-component 1.2: Dispute settlement

Spatial data analysis shows risk of tenurial conflict between customary communities and production and protected forest areas. Management and resolution of conflicts both within forest estates and outside forest estates should be integrated in Governor/Provincial Secretariat (SEKDA). The summary of the conflict analysis for Sub-component 1.2 is provided in Table 27.

Table 27 Summary of analysis of issues related to Sub-component 1.2.

Issues	Context	Analysis	Source of Data & Information
Rights to land and territory; Rights to use of natural resources; Recognition of traditional knowledge;	Occurrences of conflicts between communities and palm oil plantations (disturbances to plantation); environmental pollution (e.g., mining effluent/contamination); and access restriction due to forestry concessions.	In East Kalimantan until December 2017 there had been complaints consisting of 79 plantation disturbances (GUP) involving 61 companies. These complaint reports consisted of 57% tenurial conflicts and 43% non-tenurial conflicts.	Estate Crops Agency, 2017
Forest Governance	Need to handle cross-sectoral conflicts and overlapping allocations and concessions for palm oil and forestry plantations	Study identified the FMUs and the MoEF are institutions that have the greatest responsibility for resolving forest conflicts (both at 57.41%), followed by district-level governments (44.44%) and the Ministry of Agrarian Affairs and Spatial Planning (MAASP), which has the authority for regulating and coordinating overall land use policies (39.22%) The three levels of government (national, provincial and district) have the greatest influence on forest management. Meanwhile, the NGOs serve a key role in extension and communication. Concession holders can exert both positive and negative influence – positive if they manage their site effectively. Communities have the most immediate and direct relationship to the forest in regards to economic and social benefits, and also for sustainability.	Fisher, et al. 2017. Managing Forest Conflicts: Perspectives of Indonesia's Forest Management Unit Directors. Research Article, Forest and Society. Vol. 1(1): 8-26, April 2017 GIZ & KLHK. Sept 2016. Safeguard Information System for REDD+ in Indonesia.
Prevention of reversals	Tenurial conflict is often triggered by land dispute among concession or between concession granted by government and community especially indigenous people. It is widely known that the problem arise due to lack of spatial data as well as lack of coordination among agencies that has authority to grant permits.	Prevention of reversal in term of dispute settlement can be done through enhancing cross-sector coordination among agencies in central, provincial and district government especially in term of granting permits or licences. Good coordination may result less overlapping on licenses. Dispute is also need to be addressed carefully and control in term of time. Delaying conflicts may triggered another problem such as further encroachment over dispute areas. In this case, the	Anonymous .2016. Supporting Forest Conflict Resolution in Indonesia through Mediation. FORCLIME – Forest Governance Program in corporation with Ministry of Environment and Forestry and Working Group on Forest Land Tenure. Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)

Issues	Context	Analysis	Source of Data & Information
	Problem occured when concession overlap with comunal land or other concessions. At the same time, there are problem of in-effective supervision from relevant institution especially in forestry and estate sector which lead to conflict.	presence of government institution at site level is highly necessary such as FMU in forest area or District Estate Agency for non forest areal which obligate to solve conflict.	GmbH.
Transparency and accountability	Good governance leads to good forest management practise. Good governance is indicated by tranparency and accountability which may lead to public participation in any kind of development program in their proximity areas including in forestry and estate sector. Active participation from public will reduce conflict especially tenurial conflict in East Kalimantan.	Making forestry information like concession boundaries available can help decision-makers make better, more informed decisions around land use, such as mining, logging and agriculture. This can reduce conflict arising from overlapping land claims, and decrease illegal logging by improving the capacity and timeliness of enforcement. It can also help quantify the ecosystem services provided by forests, and ensure that civil society has the information it needs to hold governments accountable to decisions.	Webb, J. 2015. Increasing Forest Transparency through the Open Government Partnership. Available at https://www.wri.org/blog/2015/10/increasing-forest-transparency-through-open-government-partnership Accessed on August 13, 2019
Community participation; Benefit sharing	Government of East Kalimantan has been accomodated public or community participation by issuing Governor regulation No. 26/2018 on SIGAP. It means that participation for any development activities are welcome including criticism. Using digital technology, a web-based channel has been created to absorb feedback as well as grivience from public.	Conflict in natural resources management is often associated with failure to involve various social elements of the community. The role of government is providing regulation to accomodate all stakeholder (community and private sector) in term of natural resources management. Following exsisting regulation, public and community involvement in development agenda is conducted through hierarchical step starting from the lowest level (village), sub-district, district and province up to the national level. FGD and colsultation forum are used to absorb ideas and concern before formulated into program, activities or policies.	Peraturan Gubernur No. 26/2018 tentang Aksi Inspiratif Warga untuk Perubahan (SIGAP)

The table above indicates that dispute settlement is a response to tenurial conflict, governance risk (e.g., overlapping concessions), lack of participation, lack of access for FGRM and social exclusion. Cases above also show that cross-sectoral conflict resolution or dispute settlement is needed in the context of ERP. East Kalimantan Province is looking into the possibility of setting up an integrated FGRM mechanism under the Provincial Secretariat (SEKDA). This is a good option for allowing cross-sectoral conflict mitigation and conflict resolution mechanisms in the province.

Currently, dispute settlement can be achieved through mediation by legal institution or by local leader. Existing formal cases indicate that the disputes revolve aorund issues such as tenurial rights and compensation. Documentations of community agreements show that dispute types among local communities are more complex compared to the formal cases. Mediations need to be more intensive and continuous. Existing conflict resolution mechanism involves working group for tenurial conflict resolution (forestry sector), task force for resolving disturbances to plantation (plantation sector), and task force for resolving environmental complaints (mining and other sectors).

Yasmi (2012) shows that at least three underlying and interrelated factors enable conflict: (i) contested statutory and customary tenure; (ii) exclusionary conservation and economic development policies; and (iii) poor coordination between land use planning agencies. The range of observed conflict management techniques (negotiation, mediation, coercion, avoidance) reflected varying power relationships and political contexts. The techniques' success in all cases was relatively low due to the complexity of addressing tenure and exclusion issues. The results underline the need to involve local people in the design of the evolving REDD+ mechanism, as well as to ensure their rights and benefits.[65]

Based on analysis summarised in the table above, potential impacts on the implementation of Sub-component 1.2 are related to the following social aspects:

- Land conflict occurrences;
- The need for appropriate solution and conflict mediation; and
- The need for institutional capacity building, including the need to increase public access to a mechanism for conveying complaints (FGRM).

Tenurial conflict issues may suggest the occurrence of social exclusion issues where there are unequal opportunities for local communities to utilise forest resources. Additionally, there are:

- Risks for conflict between formal and traditional laws; and
- Community concerns that are not accommodated in the program or activities due to the lack of a proper/accessible FGRM mechanism.

Data processing in spatial analysis shows that there are 200,437 ha of overlapping area between protected and production forest area and the area of Indigenous People. This overlap indicates a risk for conflict between Indigenous People and license holders. Spatial analysis was used to identify the risks of dispute settlement in Berau, Kutai Barat, Kutai Timur, Mahakam Ulu and Paser districts. Most of this risk area (66%) is in Mahakam Ulu District.

7.1.3 Sub-component 1.3: Support the recognition of customary (adat) land

Recognition of customary (adat) land becomes an urgent aspect to ensure inclusion of indigenous people surrounding the forest area. Implementation of this subcomponent may face challenges, such as tenurial conflicts and disputes, governance risk, lack of participation, and lack of accessible FGRM, summary of analysis can see at Table 28 below:

[65] Yasmi et.al. 2012. The Struggle Over Asia's Forests: An Overview of Forest Conflict and Potential Implications for REDD+. International Forestry Review 14(1).

Table 28 Summary of analysis on customary land and tenurial rights.

Issues	Context	Analysis	Source of Data/Information
Rights to land and territory; Rights to the use of natural resources; Recognition of traditional knowledge	Tenurial conflicts between communities/indigenous people and palm oil plantations/forest areas	In East Kalimantan until December 2017 there had been complaints consisting of 79 plantation disturbances (GUP) involving 61 companies. These complaint reports consisted of 57% tenurial conflicts and 43% non-tenurial conflicts.	ERPD, Satgas penanganan konflik Disbun
Forest Governance;	Limited involvement is due to the need of strong support for coordination with indigenous people	There are already provincial regulations for guidelines for recognition of indigenous peoples, but only 4 indigenous peoples have been recognized through regulations.	▪ Yayasan Bumi, 2017. Kertas Kebijakan #02/2017, Kelembagaan Konflik Agraria Dan Lingkungan Hidup Di Kalimantan Timur

Implementation of this sub-component will have positive impact to support proper forest & land governance. Ultimately, recognition of customary rights will help achieve resolutions of tenurial conflicts in customary land (customary law is well respected in some areas); reduce governance risk; encourage participation; and provide the basis for accessible FGRM. This sub-component will also promote positive impact, as it will help better harmonization among local communities, official government, private sector and other stakeholders.

7.1.4 Sub-component 1.4: Strengthening village spatial planning

Spatial planning is one of the benchmarks of good governance in land administration. Then, effort to strengthen spatial planning at village level can be considered as a prerequisite to reach land & forest governance under the ERP. The implementation of this subcomponent may face issues such as tenurial conflict and disputes, governance risk and lack of participation. Summary of impact analysis to some of the ERP strategic issue in implementation of this subcomponent is provided in Table 29.

Table 29 Impact analysis of strengthening village spatial planning.

Issues	Context	Analysis	Source of Data/Information
Prevention of leakages; Preventionof reversals; Improving people's welfare; Community participation	Limited involvement is due to the limited information and capacity of FMU officials about village land use planning/participatorymethodologies	Study identified the FMU and MoEF as the institutions having the greatest responsibility for resolving forest conflicts (both at 57.41%)	Fisher, et al. 2017. Managing Forest Conflicts: Perspectives of Indonesia's Forest Management Unit Directors. Research Article, Forest and Society. Vol. 1(1): 8-26, April 2017
		Lack of participation from local communities in the implementation of land-based	Sardjono, *et.al*. 2015.Strategi dan Rencana Aksi Provinsi

Issues	Context	Analysis	Source of Data/Information
		REDD+ in local scale due to economic matter.	(SRAP) Implementasi REDD+ Kaltim. Pemprov Kaltim.

Village spatial planning will encourage proper allocation of land-uses within the village. Based on environmental point of view, this will encourage identification proper use of natural resources (existing and potentials), as well as allocation of restricted areas to prevent depletion of resources therein. From social perspective, village spatial planning encourages participatory planning; thus reducing potntials for tenurial conflict and disputes. At the same time, the implementation of this sub-component will decrease the risk of land governance and will address the lack of participation from stakeholders. Additionally, village spatial planning/participatory planning process puts value on social cohesion among stakeholder to collaborate in land utilization.

Challenges in strengthening village spatial plans consists of not completing village boundaries. This can lead to conflicts between villages. Another challenge is the lack of capacity from relevant agencies (e.g., Village Empowerment and Development Agency and FMU) to facilitate proper village spatial planning and participatory planning processes.

7.2 COMPONENT 2: IMPROVING FOREST SUPERVISION AND ADMINISTRATION

Component 2 consists of the following sub-components:

- Sub-component 2.1: Strengthening management capacity within the State Forest Area: FMU development.
- Sub-component 2.2: Strengthening provincial and district governments to supervise and monitor the implementation of Sustainable Estate Crops:

7.2.1 Sub-component 2.1: Strengthening management capacity within the state forest area: FMU development

Baseline data analysis shows that Sub-component 2.1 is relevant to seven issues. Strengthening management capacity is expected to boost the FMU's capacity to deal with tenurial conflict and to handle complaints. However, strengthening their capacity may also result in new conflicts related to the enforcement of Forest Area demarcation boundaries. This risk needs to be addressed more explicitly. Such risks can be addressed using RPF and PF, specifically on access restriction. Consequently, FMU needs to be empowered with RPF and PFA. Summary of the analysis is provided in Table 30.

Table 30 Summary of analysis of issues related to Sub-component 2.1.

Issues	Context	Analysis	Source of Data & Information
Forest Governance	Strengthening government capacity on: Institutional	Since Indonesian government established the FMUs as forest management in the fields, there are several issues that related with staff capacity on how they achieve their target and vision. The FMUs is relatively new	GIZ, GGGI, KLHK,

	building	organization on the forestry sectors, there is still have gap regulation, lack of human resources capacity, etc.
	Planning and implementation of Sustainable forest management	As a forest manager, the FMU is required to have capabilities for landscape management and planning, because in reality in the FMU region - there are various types of land uses with varying capacity of management units, including IUPHHK-HA, IUPHHK-HTI, Protection Forests, social forestry, etc. The forestry sector business activities in East Kalimantan consist of: 64 IUPHHK-HA Units, 48 HT IUPHHK Units. From existing permits, 23 units have obtained SFM, 23 units have SVLK and 5 units have FSC. Need more intervention from FMU to improve the achievement of unit management (private sectors) on sustainable forest management.
	Social economic Development	The FMU also has a mandate to increase forestry sector revenues. In the field, there are community activities around the forest for subsistence or economic interests. The FMU has challenges in providing the legality of community activities, including to improve the economy of the community. The potential of non-timber forest products has not been optimally pursued, where this can improve community welfare and reduce emissions, and can reduce land conflicts

Capacity building for forest administration will provide officials with the capability to manage, supervise and ensure that activity conducted by the private sector in managing the forest area is aligned with licensing requirements (including some measures to address environmental and social risks). Improved capacity for forest fire prevention is urgent, as fires destroyed more than 6,000 ha of forest in East Kalimantan from 2006 to 2015, in addition to illegal logging that destroyed 17,349 ha (outside of concession areas) in the same period.

Government capacity limitations may directly impact environmental management, especially regarding FMU function for sustainability and emission reduction and sustainable forest management. Acceleration of the implementation of the One Map Policy is needed, for it may reduce complexity in mapping for forest administration. Therefore, governments' implementing the One Map Policy also need to be encouraged to allow a comprehensive conflict resolution strategy. In the environmental sector, the implementation of this sub-component will result in some positive conditions, such as:

- Clear FMU boundaries that will improve forest area management by the FMUs;
- Improved capacity for the FMUs to manage forest area;
- Improved forest protection and other ecosystem services (enhancing biodiversity); and
- Improved quality of habitat, and environment and protected areas within estate crop areas.

Strengthening government capacity is linked with expectations such as:

- Capacity to handle complaints and resolve tenurial conflicts;
- Ability to provide access to alternative livelihoods, resulting in improved community livelihoods; and
- Social inclusion for vulnerable groups so that they receive benefits from programs.

Other anticipated impacts include:

- Potential delay in capacity building for conducting Environmental Assessment (OP/BP 4.01) and developing Environmental Action Plan (OP/BP 4.02); and
- Lack of reputable training providers for conducting Environmental Assessment (OP/BP 4.01), Environmental Action Plan (OP/BP 4.02), natural habitats management (OP/BP 4.04), and forest management (OP/BP 4.36).

There is a need to increase FMU capacity to support implementation of agrarian land reform (TORA). Communities obtaining a license under the TORA scheme will need to be facilitated by the FMU to ensure proper identification of forest area (i.e., unproductive area, and changing the forest status to other use area), as well as ensuring that principles for preventing environmental and social risks are adopted by the new "owners" of the area. Therefore, skills in facilitating/mentoring for local communities will need to be improved as well within the FMU.

Challenges in improving the function of FMU include improving the quality and quantity of human resources, especially in recruitment process. Current capacity within FMU revealed that 56% of technically-capable employees were recruited at national level, and only 44% were recruited locally. In addition, subjectivity and personal favouritism still occur during recruitment. Furthermore, FMUs urgently need important capacity in managing conflicts or resolving problem, especially when confronted with dispute settlement in overlapping rights in areas with concessions or customary land.

The role of the FMU in licensing needs to be strengthened and justified. FMUs can provide technical recommendations during licensing process for large corporations. During licensing process for micro/small scale businesses, FMU can be given a more significant role beyond recommendations.[66] For this reason, governance guidelines for licensing by FMU are needed. FMU that can operate well (i.e., model FMU), can serve as an instrument in good forestry governance.

In the context of ERP, development of FMU should be strengthened toward sustainable forest management. It will bring positive impacts in environment and social aspects through improvement and resolution in tenurial conflict and dispute; capacity building of official; overcome governance risk; increasing participation of stakeholder; increasing access to FGRM; facilitating social inclusion; and open access to human livelihood surrounding the forest area. Actions to accelerate the development of independent and strong FMU are also relevant with aspects such as infrastructure, capacity building and financial scheme.[67]

[66] Strategi Pengembangan FMU dan Perubahan Struktur Kehutanan Indonesia. 2014. Direktorat Jenderal Planologi Kehutanan – Kementerian Lingkungan Hidup dan Kehutanan & GIZ.

[67] Butarbutar, T. 2017. Percepatan dan Pengarusutamaan Pembangunan FMU menuju Hutan Masa Depan. Rembug Nasional Lingkungan Hidup dan Kehutanan. GIZ

7.2.2. Sub-component 2.2: Strengthening provincial and district governments to supervise and monitor the implementation of sustainable estate crops

Summary of the analysis for Sub-component 2.2 is provided in Table 36.

Table 31 Summary of analysis of issues related to Sub-component 2.2.

Issues	Context	Analysis	Source of Data & Information
Forest governance;	protect remaining forest or high conservation forest value	The East Kalimantan Government has designated area as plantation area approximately 3,269,561 Ha. And there is around 871,947 ha forested area established inside those area. Part of thus forest is identified as high conservation value that should be protected. So far, unit pengelola perkebunan tidak memiliki kapasitas dan ketrampilan dalam pengelolaan hutan (HCV area). In the scheme of sustainable palm oil development, both ISPO and RSPO, have encouraged the protection of HCV areas in their concessions. However, this protection has not been supported by regulations that support the protection of plantation HCV areas,	▪ Forum Kepala Sawit Berkelanjutan Indonesia, 2017 ▪ ERPD, 2017
	Promote activity for reducing deforestation and sustainable plantation principle	Construction of palm oil plantations in East Kalimantan need to account for the protection of natural forest areas. If expansion is needed, the main step is not to increase the area, but increase land productivity. If forced to open new land, then use marginal land with low carbon stock. Eventually, it will overcome the risks of forest governance to reduce deforestation in East Kalimantan. Initially, oil palm farmers paid little attention to the use of certified seeds to ensure productivity. In addition, garden management that has not been effective causes the average productivity of oil palm plantations to only reach around 2-3 tons per ha, still far enough compared to Malaysia, where production reaches 12 tons per ha.	DDPI, 2017
Issues	**Context**	**Analysis**	**Source of Data & Information**
Forest governance;	protect remaining forest or high conservation forest value	The East Kalimantan Government has designated area as plantation area approximately 3,269,561 Ha. And there is around 871,947 ha forested area established inside those area. Part of thus forest is identified as high conservation value that should be protected. So far, unit pengelola perkebunan tidak memiliki kapasitas dan ketrampilan dalam pengelolaan hutan (HCV area). In the scheme of sustainable palm oil development, both ISPO and RSPO, have	▪ Forum Kepala Sawit Berkelanjutan Indonesia, 2017 ▪ ERPD, 2017

Issues	Context	Analysis	Source of Data & Information
		encouraged the protection of HCV areas in their concessions. However, this protection has not been supported by regulations that support the protection of plantation HCV areas,	
	Promote activity for reducing deforestation and sustainable plantation principle	23 estate crops companies have got ISPO certification. The delayed assessment of plantation companies has become an obstacle in implementing ISPO. The guidelines for sustainable smallholders needed to implementation of sustainable plantations	Estate Crops Agency, 2017

Facilitation of sustainable palm oil plantations will optimize production and promote best practices. Sustainable plantations (e.g., RSPO, ISPO) can help reduce degradation, and it will be achieved when the capacities of the above-mentioned stakeholders are enhanced. Sustainable plantations can be achieved with effective cooperation from all stakeholders. Indonesia targets for increase palm oil production to 40 million tons by 2020[68], this development needs to be accompanied by environmenal and social considerations. Other principles to support sustainable estate crops include High Conservation Values (HCV). Principles of HCV can be applied in plantation sector, and can ultimately contribute to the protection of natural resource at provincial scale.

Furthermore, increasing the capacity of government officials (provincial & district) will also have a positive effect on social conditions surrounding plantation area. Positive impacts may include higher participation of stakeholders in protecting the natural resources surrounding forest areas to support sustainable estate crops. This sub-component also seeks to address plantation conflict by supporting the Working Group for resolving disturbances to plantation activities (currently under the administration of Plantation Agency at provincial level. Empowering provincial and district governments mean increasing the numbers and capacity of staffs involved in the conflict resolution. Ultimately, this will improve the mechanism at district level. This can be part of the proposed FGRM (integrated under provincial secretariat).

7.3. COMPONENT 3: REDUCING DEFORESTATION AND FOREST DEGRADATION WITHIN LICENSED AREAS

Palm oil plantations as licensed areas expand into forest areas, and cause reductions in forest area. Based on identification of deforestation driver, 51% of the total decrease of forest cover in East Kalimantan is due to palm oil plantations. In East Kalimantan, palm oil plantations expanded from 800,000 ha in 2012 to 1.2 million ha in 2016. There are three sub-components under this component:

- Sub-component 3.1 Implementation of HCV policies for Oil Palm Estates:
- Sub-component 3.2 Support for Smallholders and Community Based Fire Management and Monitoring System (CBFMMS), and
- Sub-component 3.3 Implementation of HCV and RIL Policies for Forestry Concessions

[68] https://rspo.org/news-and-events/news/studi-bersama-isporspo-sebuah-pencapaian-penting-dalam-kerjasama-mewujudkan-minyak-sawit-berkelanjutan-di-indonesia

7.3.1. Sub-component 3.1 Implementation of HCV policies for oil palm estates

A summary of the analysis of issues related to Sub-component 3.1 is provided in Table 32.

Table 32 Summary of issues relevant to Sub-Component 3.1.

Issues	Context	Analysis	Source of Data & Information
Prevention of leakages; Improving people's welfare	Land conflicts and disputes will be impacted by management of protected forested areas, particularly around the palm oil plantation area	In 2015, there were 1.3 million ha of palm oil concessions, 2.5 million ha of plantation business licenses and 3.29 million ha of land allocated in the East Kalimantan Spatial Plan (RTRWP). Out of 188 plantation companies that have legal licenses, 45 companies are in operation and 143 other companies abandoned their permits, and received administrative sanctions in the form of license revocations. Follow up on the revocations may include license renewal (upon satisfactory fulfillment of previously missing requirements),or re-assignment to other companies or local communities There are 89 cases involving palm oil companies, with 62% including tenurial conflict such as overlapping permits, land occupation, and customary land disputes. In East Kalimantan until December 2017 there had been complaints consisting of 79 plantation disturbances (GUP) involving 61 companies. These complaint reports consisted of 57% tenurial conflicts and 43% non-tenurial conflicts.	Disbun Kaltim, 2015 Infosawit, 6 April 2018
	Reducing deforestation in palm oil plantations should ensure accessibility to all social strata of the community to be involved in the plantation process	The ISPO was officially effective as of March 2012. It was targeted that all palm oil plantation companies will obtain the ISPO certificates by 2014 through in cooperation from stakeholders.	Boer, 2016. Potential of Reducing GHG Emission from REDD+ Activities in Indonesia
Prevention of reversals	Needs to increase capacity to implement HCV & ISPO, and avoid burning techniques for preparing area for plantation	The GoI also plans to apply a mandatory certification system for palm oil: Indonesian Sustainable Palm Oil (ISPO), that needs support from official	Boer, 2016. Potential of Reducing GHG Emission from REDD+ Activities in Indonesia

Issues	Context	Analysis	Source of Data & Information
Conservation of biodiversity	Management of forest areas in palm oil plantations will reduce the risk of tenurial governance.	All palm oil plantation companies will be obliged to conserve HCV areas in their concession and to apply good practices in reducing GHG emissions. This policy is expected also to reduce deforestation.	Boer, 2016. Potential of Reducing GHG Emission from REDD+ Activities in Indonesia
	Protection of forests in palm oil plantation areas requires the participation of related elements/ stakeholder	ISPO is launched to speed up the implementation of sustainable palm oil. It requires response from the GoI to meet the increasing market demand for sustainable and green products and participate in mitigating climate change.	Boer, 2016. Potential of Reducing GHG Emission from REDD+ Activities in Indonesia

The potential for environmental impacts related to the implementation of HCV policies for Oil Palm Estates can certainly be applied by the proper capacity of government officials to implement HCV (along with sustainable plantation mechanism such as RSPO and ISPO). Trained officers are needed to work with all stakeholders, to share the role of forest protection amid ongoing palm oil plantation expansion. Positive environmental impacts might include a reduction in land and forest fires, improved forest and natural habitat protection, and reduced forest conversion for new estate crops. These will contribute to the emission reduction.

Areas of overlap of palm oil concession and habitats of endangered species can be visualized by overlaying biodiversity areas (Important Biodiversity Area - IBA, Ecological Biodiversity Approach - EBA, and Key Biodiversity Areas - KBA) with palm oil concessions. Through this analysis shows that the overlap area is 1,837,807 ha. A similar analysis shows that the overlap area between palm oil concessions and orangutan (*Pongo pygmaeus*) habitat is 552,641.05 ha. The overlap area between palm oil concessions and HCV areas is 154,671.9 ha. Potential conflict areas related to tenurial issues are reflected in overlap areas between forest areas and palm oil concessions, which is 215,632.28 ha. Additionally, the risk of conflict is reflected in overlapping areas between palm oil concessions and indigenous peoples, which reaches 60,803 ha.

Currently palm oil is still the largest contributor to Indonesia's foreign exchange, and East Kalimantan is ranked as the 8th as producer of palm oil in Indonesia.[69] Along the journey of the existence of oil palm plantations in East Kalimantan experienced a variety of disturbances, recorded concession holder convey 79 disturbances in plantation business (GUP) documented by the Plantation Office of East Kalimantan Province.

One of the solution to dealing with plantation business disruptions is coordination of disturbances, starting from identification followed by conflict mediation, the Estate Crops Agency will accompany to deal with plantation conflicted parties through mediation.[70] Inevitably, capacity of the government official needs to include skills for handling conflicts, such as knowledge about conflict handling

[69] http://disbun.kaltimprov.go.id/berita-646-maksimalisasi-cpo-terkendala-infrastruktur.html

[70] https://www.infosawit.com/news/7892/pemda-kaltim-gandeng-imn-tangani-konflik-di-perkebunan

procedures, negotiation and mediation capabilities are needed to get comprehensive solution. This disruption is generally related to the mechanism of multi-sector cooperation. Conflict or disruption in handling oil palm plantations is relevant with Plantation agencies, the Environment, Spatial Planning and Plantation institution. Consequently, Environemental Agency, Estate Crops Agency and other competent organizations may be considered as parts of FGRM.

7.3.2. Sub-component 3.2 Support for smallholders and community-based fire management and monitoring systems (CBFMMS)

Sub-component 3.2 is relevant to six of the seven issues. A summary of analysis of issues related to Sub-component 3.2 is provided in Table 33.

Table 33 Summary of analysis of issues relevant to Sub-component 3.2.

Issues	Context	Analysis	Source of data & information
Prevention of reversals;	Capacity building of smallholders in implementing sustainable estate crops will reduce the potential risk of fires	Smallholders plantation still practices burning for preparing land for palm oil plantation. To reduce risk of fires, smallholders plantation needs to practice non-burning methods for plantation. Non-burning method has been used in some plantation estate (especially in large areas)	▪ Riggs, et al. 2016. Forest Tenure & Conflict in Indonesia. ELSEVIER. ▪ Forum Sawit Berkelanjutan Indonesia, 2017
	Improves the ability of the official and community for social and environmental monitoring	Requires the capacity of the plantation officials, as well as participation of smallholder farmers. Enhancement of village government as the prime mover in the local site is very urgent, since environment official not only regarding preparation of plantation, but also to tackling impact of plantation such as land fire, and it requires the capacity to coordinate cross sectoral monitoring.	
	In the midst of its current potential, increasing the capacity of the smallholder in the process of implementing sustainable plantations is needed	In 2018, the area of smallholders (palm oil plantations) in East Kalimantan Province was 284,523 ha, with a local workforce of about 115,759 people National Action Plan (NAP) of sustainable forest management was designed by stakeholders in line with government plans regarding the development of sustainable palm oil plantations. NAP aims to support the goal of 70% sustainable palm oil development by 2020 (Permentan 11/2015). NAP is divided into four main issue components, namely: (1) Increasing the capacity of planters; (2) Environmental management and monitoring; (3) Governance and mediation of conflicts, and (4) Implementation of ISPO and market access.	▪ Dinas Perkebunan, Kaltim, 2018 ▪ Forum Kelapa Sawit Berkelanjutan Indonesia, 2017
	Capacity building for smallholders to increase involvement in the	Disruption in the management of palm oil plantations is a problem, since it will impact or disrupt investment and social conditions and create weak law enforcement. Coordination in	Infosawit, 6 April 2018

Issues	Context	Analysis	Source of data & information
	implementation of sustainable plantations, and open access to grievance mechanisms	plantation disruptions or conflicts, including identification of mediation measures, needs to be based on community grievance mechanisms. Effective FGRM may enchance the CBFMM system, as it would allow effective reporting mechanism	
Community participation	Involvement of all elements of the community is needed in the implementation of sustainable plantations	In the second quarter of 2017, 266 out of 867 plantation companies that had submitted ISPO certification documents had received their certification. In order to improve sustainable palm oil development, it is very important to accelerate the implementation of ISPO certification for companies and planters. The public-private partnership model is one of the strategies to accelerate ISPO certification for planters. The implementation of the ISPO is one means for planters to increase the productivity of their land.	Forum Kelapa Sawit Berkelanjutan Indonesia, 2017
	Access restriction due to HCV, and potential increase of land productivity	The implementation of HCV may limit access to the areas with social and cultural significance (HCV 5 and 6). However, it is anticipated that the ISPO may help increase the productivity of smallholders' land.	Forum Kelapa Sawit Berkelanjutan Indonesia, 2017

Environmental risks include contaminations due to the use of pesticides in palm oil estate, and burning practices that create fire hazards. From 2006-2016, 7% of land and forest fires occurred in plantations. The ERP will encourage best management or sustainable palm oil practices (e.g., RSPO, ISPO), and contribute to the effort of protecting forest areas, as well as preventing loss of biodiversity.

Fire hazard may be minimised by avoiding uncontrolled burning practices, thus preventing forest fires as one of the drivers of deforestation. In 2018 the area of smallholder palm oil plantations in East Kalimantan Province reached 284,523 ha with a local workforce of about 115,759 people (East Kalimantan Province Plantation Service, 2018). Therefore, strengthening the capacity of smallholders (as well as providing incentives) and community to implement sustainable estate crops will address the estate crop issues. Introduction of non-burning methods as part of sustainable palm oil plantation eliminates fire hazards and risk of burning. Non-burning method is labour intensive (use of bulldozers and excavators are feasible only in large areas), so application of this method may increase chance of social inclusions. Despite its contribution to preventing fires, the use of bulldozers and excavators may have negative environmental impacts such as pollution (fossil fuels combustions and oil leakage) and damage to the topsoil/erosion.

Sustainable agriculture is the innovation that bring new treatment in agriculture, surely can be expected to: (1) conserve the natural resource and prevent the degradation of soil, water, and air quality; (2) contribute to the economic and social well-being; (3) ensure a safe and high-quality supply food and other agricultural products; (4) safeguard the livelihood and well-being of farmers to live

harmony with environment.[71] Align with the goal of sustainable agriculture, innovation of new technologies usually applied in sustainable agriculture efficiently reach optimum productivity. In palm oil plantation, PPKS (*Pusat Penelitian Kelapa Sawit*) is developing bio-molecular technology to improve conventional cultivation systems. Application of tissue-culture multiplication can increase production potential to more than 10 tons of crude palm oil per hectare.[72] This innovation will diffuse smoothly with the support of village government official to communicate with community and promote the benefit of innovation with villagers and other relevant stakeholders. Additionally, the capacity of village government to prevent and monitor fires need to be improved. Such improvement would allow fast and effective response to fires at village/grassroot level.

7.3.3. Sub-component 3.3 Implementation of HCV and RIL policies for forestry concessions

Sub-component 3.3 is relevant to three of the seven issues. A summary of analysis of issues related to Sub-component 3.3 is provided in Table 34.

Table 34 Summary of analysis of issues related to Sub-component 3.3.

Issues	Context	Analysis	Source of Data/Information
Prevention of leakages; Prevention of reversals	Overlapping allocations and concessions for palm oil and forestry plantations creating disputes on the responsibilities to implement HCV/RIL	Overlaps between palm oil concessions and forestry concessions: 179.165,12 ha	Spatial data processing from MoEF, 2018
	Limited involvement is due to the limited capacity within FMU officials about implementation of RIL & HCV	Study identified the FMU and MoEF as the institutions having the greatest responsibility for resolving forest conflicts (both at 57.41%)	Fisher, et al. 2017. Managing Forest Conflicts: Perspectives of Indonesia's Forest Management Unit Directors. Research Article, Forest and Society. Vol. 1(1): 8-26, April 2017
		Next step after identifying RIL is the training needed for FMU officials, particularly for auditing/monitoring in implementation of RIL	RIL (IFM) Updates Kaltim, 2015, TNC
		RIL can reduce 40% of emissions logging and will contribute more than 13% of the total emission reduction target, and it depends on commitment and official capacity of FMU.	Dinas Kehutanan Provinsi Kalimantan Timur. 2018. *Kebijakan-Kebijakan Pemprov Kalimantan Timur dalam Mendorong Penerapan*

[71] Syuaib, F, M. 2016. Sustainable Agriculture In Indonesia: Facts And Challenges To Keep Growing In Harmony With Environment. Vol. 18, No. 2. AgricEngInt: CIGR Journal Open access at http://www.cigrjournal.org

[72] https://kalimantan.bisnis.com/read/20170719/452/672684/kelapa-sawit-inovasi-teknologi-pacu-produktivitas

Issues	Context	Analysis	Source of Data/Information
			RIL untuk Mendukung carbon fund (FCPF).
		Key success factor for RIL implementation is commitment of institution to conduct it comprehensively, whilst targeting toward HCV as well.	Narkata Rimba. 2018. *Pembelajaran Penerapan Ril-C Di Perusahaan (Penerapan Praktek Pengelolaan Rendah Emisi Di Hutan Produksi*. Bogor.
Conservation of biodiversity and ecosystem services	Lack of governance system in forestry, it's needs instrument to protect and assure that sustainable environment can be implemented	Needs of strengthening to reforms and policy revisions for more conducive implementation of emission reduction and biodiversity conservation	Dinas Kehutanan Provinsi Kalimantan Timur. 2018. *Kebijakan-Kebijakan Pemprov Kalimantan Timur dalam Mendorong Penerapan RIL untuk Mendukung* carbon fund (FCPF).
		Challenges in implementing RIL consist of the needs of trained personnel to apply and audit the process. Policy instrument is required to support implementation of this program, inparticular for incentive & law enforcement.	Ruslandi, 2018. *Pembalakan berdampak rendah karbon (RIL) untuk pengurangan emisi dari hutan alam produksi: Potensi dan Tantangan*. TNC. Bogor.

RIL and HCV are instruments that can be used towards sustainable environment in forest area. Their applicatioin will keep natural resource in forest license area, and will comply with sustainable natural resource management principles. Implementation of this sub-component will face challenges such as tenurial conflicts in forest concessions; institutional capacity constraint to implement RIL and HCV; and weak system in forestry governance to protect natural resources. Indirect impacts may include decrease of excessive logging activities (positive impact); access restriction due to HCV allocation (especially HCV 1 to 4); and potential reduction of economic opportunity from the reduced logging activity and access restriction.

7.4. COMPONENT 4: SUSTAINABLE ALTERNATIVES FOR COMMUNITIES

There are three sub-components under this component:

- Sub-component 4.1 Sustainable Livelihood
- Sub-component 4.2 Conservation Partnership
- Sub-Component 4.3 Social Forestry

7.4.1. Sub-component 4.1 Sustainable Livelihood

This sub-component has links to six of the seven issues and is summarized in Table 35 below.

Table 35 Summary of analysis of issues relevant to Sub-component 4.1.

Issues	Context	Analysis	Source of Data & Information
Rights to use natural resources; Recognition of traditional knowledge	Enhancement of environmentally and ecofriendly aqua culture and sustainability farming within optimize land field.	The implementation of those activities mostly brought the positives impact and improved quality of mangrove covers in program areas; land covers of traditional field agriculture; and improvement of land and top soil. Either in the social impacts raised up the economic or community income from commercial wood trading; communities' participation is strengthened and production capacities from fishpond are increased. There is one aspect the identified as negative impact about traditional knowledge of Dayak might be degraded by time. There is a need for ensuring capacity of government staff to help facilitate participatory planning, village land-use planning, sustainable forest and mangrove management and sustainable natural resource use with local communities; thus helping to reduce environmental and social risks. Regarding aqua culture and or ecofriendly fish ponds are managed by community due the capacity building development.	Provincial Action and Strategic REDD+ on East Kalimantan,2013 Sustainable aquaculture in ponds: principles, practice and limits, Roel Bosma and Marc J. Verdegem, (Livestock Science - LIVEST SCI. 139. 58-68. 10.1016/j.livsci.2011.03.017July 2013 Provincial Action and Strategic REDD+ on East Kalimantan,2013 East Kalimantan SES REDD+, 2013
Forest governance	Mangrove covered and improved management	In village level needs to strengthen mangrove management, land covered and increasing the local entrepreneur.	Sustainable aquaculture in ponds: principles, practice and limits, Roel Bosma and Marc J. Verdegem, (Livestock Science - LIVEST SCI. 139. 58-68. 10.1016/j.livsci.2011.03.017July 2013
Community participation; Improving people's welfare; Benefit sharing;	Participation can be realized if the community understands the potential economic benefit, while promoting conservation	The understanding of economic benefit is limited to economic/livelihood activities. Benefits of conservation (e.g., REDD+ initiatives) have not been felt by local communities. In term of benefits sharing, moving beyond district governments, village administrations represent both the lowest tier of government in Indonesia and the level of government closest to communities. Intergovernmental fiscal transfers for conservation at the village level offer the potential to incentivize positive natural resources management at the local level while contributing to community development and reducing poverty	Enrici, Hubacek, 2018. Challenges for REDD+ in Indonesia: A Case Study of 3 Project Sites. Resilience Alliance. Village transfers for the environment: Lessons from community-based development, John D. Watts, et all, 2019

Sub-component 4.1 specifically relates to implementation of sustainable livelihoods, conservation partnership and social forestry. Focusing on sustainable livelihoods are reducing encroachment by providing sustainable alternatives is anticipated to divert people from activities that can potentially cause deforestation and/or degradation; thus, bringing positive impacts to the environment and bit negative of traditional knowledge. From unsustainable aquaculture practices. Such risks may reduce the quality of aquatic environments, a significant portion of remaining mangrove area is under threat from the expansion of aquaculture.

In term of safeguards, the activities refer to environmentally fishponds or aquaculture; rotary cultivation and agriculture on intercropping farming with commercial and fast-growing plant (for example: Sengon) as optimization of substitute for land clearing without fire as their traditional knowledge; Institutional Community based economic strengthened. The activities will be integrated into village development planning and, depending on their location, will be supported by the East Kalimantan Estate Crops Service, the East Kalimantan Coastal and Fisheries Service, the DPMPD, or the provincial forestry service with Working of Social Forestry.

Other causes of unsustainable livelihoods occur in the conversion to agriculture, development of industrial and urban areas, and logging for wood and charcoal. Therefore, strengthening villages to create sustainable livelihoods by increasing intensification and technical improvements will address aquaculture and subsistence agriculture as a driver of deforestation.

Technical capacity at district and provincial levels to conduct RIL, participatory planning (e.g., SIGAP REDD+) and mangrove rehabilitation (based on regulation of Directorate General of Watershed and Protected Forest Management - PDASHL) No. 8/2016 is still limited. The role of NGOs in facilitating transfer of knowledge and introducing new methodologies/approaches is crucial to ensure introduction and implementation of sustainable livelihood schemes among the communities.

Under the lead of the Village and Community Empowerment Agency, some mitigations are provided with financial and management training and/or workshop for Village business unit (BUMDES); village and or community products expansion; Adat communities and Adat Forest recognition; and corroborate the village innovation program.

In addition to the low awareness of the community on sustainable agriculture and aquaculture, mitigation guidelines (e.g., integrated pest management) are required to complement activities within this sub-component. Additionally, community training and mentoring must also be more intensive and regularly conducted to increase general awareness of community.

7.4.2. Sub-component 4.2 Conservation partnership

This sub-component is related to five of the seven issues and summarized in Table 36 below.

Table 36 Summary of analysis of issues relevant to Sub-component 4.2.

Issues	Context	Analysis	Source of Data & Information
Community participation	Tenurial conflicts will prevent collaboration to reach conservation	Potential tenurial conflicts are reflected in the size of overlapping settlement areas with conservation areas. In East Kalimantan there are currently 225,144 ha of settlement areas (including those of Indigenous People) within conservation areas. Therefore, collaboration among local communities	Spatial data analysis from MoEF, 2018

Issues	Context	Analysis	Source of Data & Information
	targets	to support conservation is crucial for reducing the risk of negative impacts on conservation forest.	
	Community-based monitoring efforts will encourage community participation in nature conservation	Monitoring of environmental parameters can be done in a number of ways i.e., through combining both remote sensing and community-based monitoring or monitoring by an independent agency. Community-based monitoring of forest cover over a number of years has proven to be accurate, cost-effective, and to increase community involvement in other aspects of forest management	Enrici, Hubacek, 2018. Challenges for REDD+ in Indonesia: A Case Study of 3 Project Sites. Resilience Alliance.
	Social inclusive community to protect nature conservation	Strong relationships and a project built on collaboration with the local communities meant that encroachment can be addressed by management authority of the conservation area and local communities. There are recognized community forests in the proposed ERP areas, and forest access and use are regulated by local communities.	Enrici, Hubacek, 2018. Challenges for REDD+ in Indonesia: A Case Study of 3 Project Sites. Resilience Alliance.
Conservation of biodiversity and ecosystem services	Capacity weakness of officials will allow encroachment into conservation areas	Lack of support from local officials can result in occurrences of encroachment, and land use conflicts (Indriatmoko et al. 2014). Recent policies within MoEF (authority of conservation areas) placed conservation and law enforcement jurisdictions under different different directorate generals. This creates constraints in linking conservation with law enforcement as an approach for managing environmental risks.	Enrici, Hubacek, 2018. Challenges for REDD+ in Indonesia: A Case Study of 3 Project Sites. Resilience Alliance.
Improve people's welfare	Clear conservation guidelines will provide communities with rules that ensure access to livelihood activities to support daily subsistence.	Collaboration should align the requirements between conservation & local livelihood with the win-win solution, either for community & sustainable forest conservation. However, many cases have shown that conservation areas (including HCV designation) can potentially restrict local communities' access to livelihood and/or culturally significant areas.	Enrici, Hubacek, 2018. Challenges for REDD+ in Indonesia: A Case Study of 3 Project Sites. Resilience Alliance.

The implementation of a community partnership in a conservation forest area is predicted to have a positive direct impact on environmental conditions, considering that this sub-component has an objective of reducing tenurial conflicts and disputes, as well as preventing activities that can create deforestation and/or degradation. Moreover, in social sector, this subcomponent will bring positive impact, such as increasing participation of stakeholder in conservation process, increasing social inclusion.

In parallel, the capacity of government officials needs to be increased in order to properly implement community partnerships in the conservation of forest areas. There is a risk of inadequate quality of data resulting from community-based monitoring. To prevent this, capacity building and proper

training are required prior to assigning local communities collaborate with official to conduct forest monitoring within partnership process.

Form social perspective, there is a risk of restriction for community to manage and cultivate the land surrounding forest area as source of community livelihood. This is due to the fact that conservation process usually supports environmental agendas, rather than economic.

7.4.3. Sub-Component 4.3 Social forestry

This sub-component is related to five of the seven issues and summarized in Table 37 below.

Table 37 Summary of analysis of issues relevant to Sub-component 4.3.

Issues	Context	Analysis	Source of Data & Information
Rights to land and territory; Rights to use natural resources;	Encroachment begins with tenurial issues (customary and/or communal claims)	Overlapping concessions and dispute boundaries have been documented in Indonesia, and are driven by claims of a certain customary community. Colchester et al. (2006) claim that between 60 and 90 million people in Indonesia are directly dependent on forest areas for their livelihoods.	Enrici, Hubacek, 2018. Challenges for REDD+ in Indonesia: A Case Study of 3 Project Sites. Resilience Alliance.
	Community involvement in managing forest areas within the concession area	The potential of a social forestry program especially the Forestry Partnership scheme with Concessions can reduce conflict, but until now not many concessions are interested. The most worrying thing is that there will be additional costs if the concession follows this program. For this reason, it is necessary to conduct joint mediation between the DG, SFEP and DGSFM in order to be able to make a joint agreement for the progress of this partnership program,	Workshop on East Kalimantan social forestry, by Working Group on Social Forestry Acceleration and BPSKL Kalimantan Regional, 2018
Forest governance	Urgency of capacity building for officials (especially FMU and Provincial Social Forestry Working Group) to reduce encroachments	Building capacity and enforcing project boundaries is essential to achieve project success and is also important to prevent widespread encroachment and forest degradation.	Enrici, Hubacek, 2018. Challenges for REDD+ in Indonesia: A Case Study of 3 Project Sites. Resilience Alliance.
	Capacity building for Forestry Agency for support social forestry programs	Encourage coordination and supporting stakeholder's consolidation for community empowerment through social forestry scheme	Working Group on Social Forestary acceleration, Roadmap of East Kalimantan Social Forestry Acceleration 2017 – 2022
	Submission and response of complaints is one way to reduce	Social forestry will provide access for the community with assistance from NGOs and Forestry Officials. Social forestry may also support conservation agreement (discussed in	Kadishut Kaltim: *Masyarakat Bisa Kelola Hutan KBK*. Koran Kaltim, 11

Issues	Context	Analysis	Source of Data & Information
	encroachment	Section 7.4.2)	May 2018
Conservation of biodiversity and ecosystem services	Involvement of women to contribute in forest management will help reduce encroachment, and deforestation	Increasing women's participation in forest decision-making improves forest sustainability and could give women more opportunities to convey their aspirations and participate in policy-making processes. This path can address women's concerns, points of views and needs, and incorporate their knowledge in the discussion. There is a positive correlation between women's participation and forests that have lower percentages of degraded areas.	Marin, Kuriakose. 2017. Gender & Sustainable Forest Management: Entry Points for Design & Implementation. Climate Investment Funds.
Community participation; Benefit sharing;	Social forestry opens access to alternative livelihoods for the community	Social forestry is one of forest management model that combines forest management and alternative livelihoods, such as ecotourism and agroforestry.	Kadishut Kaltim: Masyarakat Bisa Kelola Hutan KBK. Koran Kaltim, 11 May 2018

Potential impact of this program into the environmental sector is positive, since it offers alignment between forest/environmental protection with economic and social aspects of surrounding community. Challenges include the lack of FGRM that links various stakeholders and sectors (i.e., integrated FGRM), as implementation of social forestry requires multi-stakeholder collaborations. Negative impacts may occur in form of increased activities, if social forestry mechanism is located within protected forest areas. Additionally, negative impacts may also occur if NTFPs commodities are overharvested.

Improved access to forest resources by the forest conservation partnership scheme, improved community livelihood, improved capacity on forest conservation, and sustainable income generation for local communities are among the potential positive social impacts from social forestry program. There is a risk of gender and social exclusions, due unequal opportunities to participate in the program.

Tenurial conflict may still be part of the risks associated with this sub-component. This is reflected by the overlap in areas for social forestry and production forests of 207,650.19 ha. Additionally, overlap between protected forests and social forestry is 34,060.05 hectares. There is a need to improve FMU's capacity in facilitating social forestry operation.

Increasing numbers of social forestry activities in East Kalimantan suggests greater initiative from the social forestry working group to expand (guided by the indicative maps for social forestry). This approach is anticipated to have potential conflicts due to unequal opportunities for community members to participate, and the lack of awareness on forest conservation. Implementation of social forestry may cause unequal representation of customary (Adat) contributions to forest management. Adat communities are involved in both customary forest and village forest licenses. Confining Adat contribution strictly to customary forest licence is not recommended. There is a need for developing a business plan to ensure a viable business model for the social forestry mechanism.

There is an indication of potential conflicts with the plantation sector. Consequently, a cross-sectoral (plantation – forestry) conflict resolution mechanism (FGRM) is needed.

7.5. PROJECT MANAGEMENT AND MONITORING

Project management is an overarching component to ensure that other components are impelemented properly. There are three sub-components under this component:

- Sub-component 5.1 Project Coordination and Management,
- Sub-component 5.2 Monitoring and Evaluation,
- Sub-component 5.3 Program Communication.

All of the sub-components deal with managerial concern, as policy, data, institution, and other instruments are already provided. The significance of this sub-component is to support functions such as coordination, management, monitoring, evaluation, and communication.

7.5.1. Sub-component 5.1 Project Coordination and Management

This sub-component is related to three out of the seven issues and summarized in Table 38.

Table 38 analysis of issues associated with Sub-component 5.1.

Issues	Context	Analysis	Source of Data/Information
Forest governance; Transparency and accountability; Community participations	Various level of forest governance authority	In ER program implementation, there is still facing issue that related with spreaded authority on managing the forest. The provincial government as program implementor didn't have all authorization on managing the forest area, for an example is authority for issuance of forest management license, most of authority on forest management is on central government. Beside that, the authority in outside of forest area (or development area) on district government. So it is need tight collaboration with national and district government.	Law No. 23/2014
	Sectoral integration	The driver of deforestation and forest degradation would be contributed from various activity sectors such as plantation, forestry, maining and from subsistence community activities. for achieving the optimum emission reduction result, it is needed integration effort of sectors and community participation	

For this sub-component, coordination and management are highly important aspect to ensure implementation of ER from deforestation and forest degradation program. As we known, the organizing of implementation ER program should be involved and integrated various sectors in the provincial government. The East Kalimantan Regional Council on Climate Change (DDPI) as an ad hoc institution that focus on climate change issues can take responsibility to integrate sectors program that potentially contribute to emission reduction. Beside coordination effort, its needed to developed performance indicator that measure achievement of emission reduction.

On the other hand, availability of credible information that related to activities plan, development fund, and baseline information about existing land used in the jurisdiction program area are important for delivering program. Innovation for program integration can be seen in development plan, Program integration requires information on proposed activities and budget as well as exsisting landuses in targeted areas. Key indicator for program integration can be evaluated through planning document which integrated to one map data infrastructure.

7.5.2. Sub-component 5.2. Monitoring and Evaluation

This sub-component is related to three out of the seven issues summarized in Table 39 below.

Table 39 Summary of analysis of issues relevant to Sub-component 5.2.

Issues	Context	Analysis	Source of Data/Information
Transparency and accountability; Forest governance Community participation	Integrated safeguard and monitoring system including Measurement, Monitoring and reporting system	To anticipate dispute on implementation of management natural resources are needed establishment of safeguard and monitoring system. Considering to the jurisdiction of East Kalimantan Province, various of stakeholder involved, and expectation of parties participation, the program should create and improve Integrated safeguard and monitoring system. That system should be recognize and integrated into regular development government mechanism and accessable for community participation. Beside the safeguard system, the program also should developed and established the Measurement, Monitoring and reporting (MMR) of emission reduction activities progress including of carbon status. The system will support also carbon verification processes from national entities (ministry of forestry and Environment-MoEF), the system will integrate with national carbon monitoring system.	
	Established feedback and grievance redress mechanism (FGRM)	For implementation of program is need a tool for early identification, assessment and resolution on any complaints or conflicts on the activities and physical investment. The tool will be called FGRM	

Issues	Context	Analysis	Source of Data/Information
		and it should be accommodated and accessible for participation of parties and communities. It will express also program transparence and accountability	

Actually, there is an existing monitoring system and FGRM in East Kalimantan, those system has been established to support sectors program implementation for improving social and environmental governance. The monitoring system and FGRM for FCPF carbon fund will used the existing system with improvement some parts to adapt with requirement of FCPF program implementation. Safeguard system, monitoring system, and FGRM is will be shown how the program delivered and containing information of program implementation. The system can be accessed online by parties or community, and any one can be given input or even complain directly through the system. For managing the system, East Kalimantan government will be established committee that involved multi stakeholder member.

7.5.3. Sub-component 5.3. Program Communication

This sub-component has links to three of the seven issues, and is summarized in Table 40.

Table 40 Summary of analysis of issues relevant to Sub-component 5.3.

Issues	Context	Analysis	Source of Data/Information
Transparency and accountability; Forest governance Community participation;	Knowladge management system	Communication is very important instrument for implementation emision reduction program in East Kalimantan. East Kalimantan is the first REDD project as national approach and sub national implementation that will implement indonesia. Experience during processes since preparation and implementation will become important lesson for ER program development in Indonesia. Because, it can be important knowledge or lesson for other sub national contribution on NDC. For most of people, ERP is relatively new development approach. Therefore FPIC is important step to deliver informatioan and knowledge to the community.	

Communication is key for success of program implementation. ER is new approach in Indonesian development. This program is expected to bring many positive advantages during 5 years period. Knowledge management and program communication will allow documentations of success story and lesson learned on implementation ER program. Knowledge management system and communication would enhance lessons learned and the knowledge sharing experience. Ultimately, this would provide opportunities for improving the strategies (learning from beginning). Additionally, program

communication will allow participation of stakeholders in formulating approaches to prevent deforestation and degradation.

The potential environmental impacts from these sub-components would be indirect impacts from improved land governance. Environmental outcomes such as increased land cover and reduced fire hot spots can be anticipated. Additionally, improved forest management practices may promote an increase in protected areas or HCV areas. Negative impacts could include increased deforestation due to the increased access of local communities to forest areas. Such risk should be mitigated by empowering government staff/institutions at provincial and district levels (Component 2 of the ERP).

8. POLICY IMPLICATIONS AND PROPOSED RECOMMENDATIONS

8.3. KEY ENVIRONMENTAL AND SOCIAL CONSIDERATIONS

SESA identifies the risk and potential impacts related to the ERP implementation. The identification process resulted in a set of key environmental and social considerations, which are the basis for developing the ESMF (Environmental and Social Management Framework)..

8.3.1. Environmental Considerations

Spatial data analyses show that the targets for ER programs (production forest, protected forest, plantation concession and forest cover outside forest areas) overlap with habitats of endangered species, as well as with key biodiversity areas. The environment key which need to consider in ESMF are as follows:

- Development of Biodiversity Management Framework for the Project, or inclusion of biodiversity management under HCV allocations or non-carbon benefits;
- Addressing the risk of access restrictions due to protected area and HCV allocations;
- Introduction of sustainable management of forest and palm oil to ensure best practices (including optimising the use of organic and/or biodegradable pesticides); and
- The risk of deforestation and degradation due to alternative livelihoods provided in the ERP (e.g., aquaculture).

8.3.2. Social and Political Considerations

The SESA identified the following social and political aspect that need to consider:

- Provide technical guidelines and/or manuals (*Petunjuk Pelaksanaan* and *Petunjuk Teknis*) to enforce the moratorium, and to anticipate social and environmental risks from license revocation. This may be linked with the needs to institutionalize ESMF applications at provincial and district levels;
- Establish a cross-sectoral grievance redress mechanism (e.g., conflict resolution desk) that allows response and mediation on existing or past conflicts. It is important to resolve these conflicts, and to avoid further accumulation of conflicts in carbon accounting areas of the ERP;

- Establish a mechanism for addressing involuntary resettlement (if triggered) and access restriction due to forest delineation and/or palm oil HGU (not intended, only for precaution)
- Establish and formalize a benefit sharing mechanism to ensure proportional fund flows to eligible recipients.

At the program level, social considerations may include:

- Community economic development program to substitute the loss of restriction to access forest resources due to boundary strengthening for private concession;
- Enforcing FGRM and establish a project contact person to facilitate any complaints and to use the existing mechanism as the main conflict resolution platform. This may include the development of a one-roof FGRM mechanism (possibly under the Communication and Information Agency) to enable cross sector FGRM (e.g., plantation, forestry and mining sectors);
- Establish a social mapping database and regularly update in order to reflect the dynamics of social issues;
- Address the risk of access restriction due to protected area and HCV allocations;
- Regular monitoring of the social forestry program to avoid any failures that can be a trigger to open forest areas and/or more deforestation;
- Prepare a proper Indigenous Peoples Planning Framework (IPPF) and conduct training with relevant stakeholders;
- Create an alternative community economic development program that can substitute livelihoods from illegal logging activities. In the ERP, Component 4 will address this issue through several programs, including alternative livelihoods, ecotourism, and access to finance;
- Effective scheduling and planning, which are required to minimize the risk of delay in capacity building activities;
- Proper identification of credible trainers and/or training institutions to deliver the required capacity building sessions;
- Encourage participation of local farmers groups on the forest and land fire management program/community based forest and fire management;
- Encourage participation from private sectors on land and forest fire management; and
- Development of a Gender Action Plan for the ERP.

8.3.3. Policy Analysis

Key policy issues consist of inadequate cross-sectoral collaboration, overlapping boundaries, dual land administration systems between forest and non-forest management, HCV management within concessions (both forestry and non-forestry concessions), operationalization of FMUs, addressing tenurial conflicts and disputes, including grievances and access restriction.

8.3.3.1. Strength of existing policies

Moratorium of issuance forestry concession permits on Primary forest and Peatland (Presidential Instruction No. 6/2017) is part of forestry management policy and is relevant for application to avoid overlapping boundaries among forest concessions. Renewal of moratorium map, currently under Decree of MoEF No, 3588/2018 is underway, and needs to be maintained to ensure updated information. At provincial level, existing policies on sustainable palm oil plantation (Local Regulation/PERDA No. 7/2018) and moratorium on mining (Governor's Regulation no. 1/2018) address the needs to clarify boundaries of existing palm oil and mining concessions; thus avoiding overlapping boundaries. Furthermore, provincial government has issued Governor's Regulation (*Peraturan Gubernur/Pergub*) No. 26/2018 regarding participatory mechanism for village planning. Participatory planning may help reduce the risk of conflicts and disputes. Due to significance prospect to reduce emission from poential deforestation and degradation, these afformentioned policies need to be consistently supported.

8.3.3.2. Improvements to Address Environmental and Social Risks

Based on the above environmental and social considerations, improvements and/or altering existing policies should consist of (but not limited to):

- Improvements on Governor's Regulation No. 1/2018 regarding mining moratorium need to encourage environmental and social audits on existing mining concessions. The regulation needs to allow sufficient period for environmental recovery, as well as to address commodities other than coal (e.g., limestone);
- Overarching provincial policy to support integrated FGRM (initiative was observed within Provincial Secretariat/Sekda) to centralized conflict resolution mechanism from plantation, mining and forestry sectors under coordination of Sekda;
- Policies on sustainable forest management such as HCV and RIL need to be immediately complied by forestry and plantation companies; and
- Policies to encourage capacity building among FMU staffs and village officials. This policy should be addressed the gaps in human resource capacity for managing forest and non-forest areas, as well as support the operationalization of FMUs.

8.4. LINKING SESA STRATEGIC OPTIONS WITH ERP

Strategic Environmental and Social Assessment (SESA) has contributed to the development of ERP from two perspectives namely: improvement of general approaches proposed in the ERP, and better anticipation of environmental and social risks to comply with World Bank's Operational Policies and Bank Policies (to be elaborated in ESMF). The overarching input for the ERP is to recommend a concensus on the map used for ERP implementation. In the absence of One Map Policy, this concensus may provide consistencies in environmental and social considerations throughout ERP implementation.

8.4.1. Environmental Considerations

Analysis throughout SESA exercise established that the ERP will have positive impacts on the environmental status in East Kalimantan. These include potential preservation (or increase) of forest cover, which in return will increase carbon stock. Additionally, non-carbon benefit of the ERP may

include preservation of biodiversity and important habitat of key species in East Kalimantan. Strategic options that SESA provided for ERP are relevant with:

- Sustainable estate crop (i.e., Palm Oil plantation). East Kalimantan ERP has committed to implement sustainable approach for estate crop plantation such as non-burning methods and HCV allocation. However, there is a minor risk for the use of chemical pesticides that may trigger OP/BP 4.09 on Pest Management. Strategic options from SESA include integrated pest management, and the use of organic pesticides;
- Implementation of RIL for logging companies. Although implementation of RIL is considered as a low-carbon approach, this method involves manual labours. Increased human activities in forest concession areas may trigger OP/BP 4.04 on natural habitats if the activities occur in natural forest areas. Strategic options from SESA include better monitoring of impact from RIL on the natural habitat. This will be elaborated further using environmental code of practices (ECOP) in ESMF; and
- Implementation of alternative livelihood schemes (mangrove, aquaculture and sustainable agriculture). Strategic options from SESA include the recommendations for compliance with OP/BP 4.09 (Pest Management) and 4.04 on natural habitat.

8.4.2. Social & Political Consideration

Analysis with SESA has highlightes several aspects that are linked directly with the ERP, and provide recommendation for improvements accordingly. There are numerous social and political considerations that SESA provided for the ERP, and some include the following:

- Recognition of Indigeneous peoples. East Kalimantan has diverse cultural ethnicity that has different standards of recognition (NGOs register, classification based on academic researches, and recognition from district goverrntment). This may create inconsistencies in defining Indigenous Peoples based on OP/BP 4.10. SESA recommends using UN's definition of Indigenous Peoples in UNDRIP, IFC's definition and formal recognition to define the indigenous peoples in East Kalimantan;
- Risk of access restriction. Although involuntary resettlement (OP/BP 4.12) is not foreseen in the ERP implementation in East Kalimantan, SESA identifies that access restriction (due to improved protection of forest areas) may occur. Strategic options from SESA include mapping of access and tenurial rights in the proposed ERP areas. This is to be followed by proper FPIC procedures prior to implementing the ERP to ensure a "clean-and-clear" status of ERP intervention areas. Additionally, SESA also provides suggestion for integrated FGRM mechanism (to be hosted in Provincial Secretariat – SEKDA) to allow conflict resolution mechanism across different sectors (mining, forestry and plantations); and
- Potential conflict of interest in licensing regimes. SESA identified that license revocation may cause loss of income for people working in the sectors, as well as decreased or loss of productivity of the companies/concessions holders within forestry, mining and plantation sectors. The ERP aims for improving the policies related to overlapping licenses, and strategic options from SESA include recommendation for strengthening policies and strategies to address loss of income and loss of productivity. This may include sustainable livelihood scenario for the employees; and

- Licensing revocation on mining concession may reduce provincial revenues from mining sector. SESA rcommends ERP to highlight the potential benefit from ERP's performance-based payment to offset reduced provincial revenue (GDP) due to reduced mining production.

8.5. CAPACITY BUILDING NEEDS AND ENGAGEMENT STRATEGIES

To properly implement the ERP, capacity building of local communities, district and provincial governments is clearly required. Such capacity building program will ensure readiness of all related parties to undertake key activities outlined in the ERP. Identification of capacity building program need to be clearly stated in the SESA document as follows:

- Community training related to management and business development for non-timber forest products;
- Community training/capacity development for small holders and private sectors as well as government institutions related to sustainable crop farming and on ESMF;
- Community training/capacity development related to access to finance and sustainable agriculture programs (especially on post harvesting technology for inflicting added value);
- Capacity building for FMUs (provincial government) and relevant government institutions on ESMF; and
- Capacity building for government and private sector related to dispute/conflict resolution and handling of complaints, as well as environmental and social management and monitoring programs (ESMF and ESMP).

Engagement strategies recommended to strengthen ERP implementation are:

- Enforcement and strengthening of the existing safeguards including ESMF for relevant stakeholders (especially private sectors as well as government institutions). This will be done through provincial and district governments;
- Strengthening FGRM for the project level and link to the national FGRM (under the MoEF, DG of PSKL). DGCC, P3SEKPI and DDPI are key stakeholders for strengthening of the FGRM;
- Provide transparent information on the licensing process to enable effective monitoring of permit and concession boundary violations. This is done with local communities and FMUs through socialisation and FPIC consultations; and
- Development of IPPF with clear definition of Indigenous Peoples. This will be done with relevant customary bodies/councils in East Kalimantan Province.

8.6. FINANCIAL REQUIREMENTS AND RESOURCES (INDICATIVE)

Indicative financial requirements and resources were identified based on the environmental and social risks, as well the institutional capacity assessment provided in Appendix A3 of this report. Chapter 7.7.0 has identified 11 environmental and social risks that need to be mitigated using safeguards principles within SES REDD+ Kaltim. Furthermore, Chapter 6.6.0, sub-chapter Chapter 6.4 provides

recommendations fot addressing the gaps for mitigating the abovementioned environmental and social risks.

8.6.1. Resources

Technical resources for mitigating environmental and social risks include:

- Assessment of nature and scale of impacts of ERP. This assessment needs to complement the existing AMDAL and/or UKL-UPL;
- Formulation of environmental codes of practices (ECOP);
- Setting up integrated FGRM to address cross-sectoreal grievances. Provincial Secretariat (SEKDA) of East Kalimantan is working towards integrating conflict resolution mechanism for plantation, forestry and mining sectors;
- Inclusion of strategies to avoid the use of harmful pesticides and encourage the use of organic pesticides through Integrated Pest Management (IPM) techniques. This needs to be built upon the capacity to produce organic pesticides, and introduce its use to farmers and existing plantations;
- Application of sustainable forest management principles including (but not limited to) HCV and RIL;
- Protection of natural resources in designated areas (e.g., protected forest, nature reserves, game reserves and national parks); and
- Formulation of access restriction and resettlement plans.

Institutions[73] and relevant resources to ensure ERP implementation and undertake safeguard measures include:

- Government institutions involved at central, provincial and district levels (BPSKL, Forestry Agency, Social Forestry Working Group);
- Resources required for ESMF training are Provincial Environmental Agency;
- Partners for implementing the ERP are DDPI, NGOs and donor agencies;
- There is a potential involvement of Communication and Information Agency (INFOKOM) as a hub for the FGRM mechanism;
- DGCC and P3SEKPI as the authorities for the ERP, and the Forestry Agency as the monitoring agency;
- Involvement of Unmul and local NGOs for establishing biodiversity management framework or HCV, and to facilitate its implementation; and
- The provincial environment agency will be required to provide resources for training on enforcement of regulations, ESMF, FGRM, IPPF, GAP, and the Biodiversity Management Framework.

[73] Details are described in Appendix A3 on institutional capacity assessment

8.6.2. Indicative Financial Requirements

The following are indicative financial requirements relevant for mitigating the environmental and social risks of the ERP:

- Various assessments and screening processes may include a total of 30 assessments (three for each district/cities), @ 3,000 USD per assessment = 90,000 USD;
- Formulation of ECOP and its inclusion into provincial and district development plans in ten districts/cities, @ 6,300 USD per formulation = 63,000 USD;
- Setting up integrated FGRM (equipments and infrastructure) @ 12.000 USD; and
- Protection of Natural Resources and operation of FMU (patrol in 24 FMUs) ; @ 19,600 USD per FMU per year = 470,400 USD.

Indicative financial requirements for capacity building may include:

- Training and capacity building program for private sectors in East Kalimantan (e.g. on HCV and RIL): three batches of training in the Province, @ USD 15,000 x 3 training courses = USD 45,000;
- Training and capacity building program for private sectors in East Kalimantan related to RPF, FGRM, and IPPF: three batches of training in the Province, @ USD 15,000 x 3 training sessions = USD 45,000;
- Training and capacity building program for smallholder plantations and large plantation companies in East Kalimantan related to ESMF, RPF, FGRM, and IPPF: four batches of training in the Province, @ USD 20,000 x 4 training sessions = USD 80,000;
- Development of ECOP. The work will be sub-contracted to third parties (university, consultants) at an estimated cost of USD 200,000. The scope will include: baseline data collection, identification of sensitive habitats, workshop on biodiversity program, and development of BAP;
- Personnel and operational costs for safeguards (i.e. expert recruitment and facilitators), FGRM operationalization and budget, FMU capacity building, etc. should be part of the financial requirements. These personnel will be financed from state budget (APBN), and will cost approximately USD 1,950 to 7,150 annually (depending on the grades). Capacity building is estimated at USD 80,000. FGRM operationalisation in SEKDA is estimated at USD 5,150 per year; and
- Training on Non-Timber Forest Product business development plan: USD 15,000 each in 10-11 districts (at the community level).

9. SUMMARY OF CONSULTATIONS

Consultation plan was formulated to include the following:

- Initial engagement with Provincial Government in East Kalimantan. This is primarily to discuss the potential for sustainable estate crop (palm oil), and provincial commitment to reducing greenhouse gas emission (provincial action plan for emission reduction);

- Preparation for ERP that includes consultation in readiness phase to develop the Program Idea Note (PIN);
- Introductioon of Carbon Fund, and the development of the ER Program Document (upon acceptance of the PIN);
- Self-assessment at the end of the readiness phase;
- Consultation on preparation of SESA, ESMF (IPPF, RPF, and PF) and FGRM;
- Consultation on the results of SESA, ESMF (IPPF, RPF, and PF) and FGRM (key issues at provincial level);
- Consultation on the result of SESA, ESMF (IPPF, RPF, and PF) and FGRM (verification of key issues at district level); and
- FPIC tryout (consultation with sample communities (topics on ERPD and Safeguards).

Schedule for the consultation plan will be adjusted with the schedules of DDPI and stakeholders in East Kalimantan. As discussed in Section 2.5, various consultations were done to develop the ERPD, program design, SESA and ESMF. A summary of consultations is provided in Table 41.

Table 41 Summary of consultations on the ERP.

Topic	What is the Issue	Relevance to REDD+	Recommendations
Stakeholder identification and institution for ERP	▪ Common understanding among stakeholders at national as well as regional levels ▪ Information on core emissions reduction programs of each district and/or KPH. ▪ Types of support needed for research and development	MRV, Safeguards, Registry System and FGRM	Align with the national mechanism
ER program design	▪ ERP based on the analysis of the development plan ▪ ERP based on SESA analysis	As national approach sub-national implementation	Development of program design with inputs from stakeholders
Capacity building	Training on FREL	FREL as part of the MRV in performance-based payment system	The MRV team can calculate reference emission levels in support of emissions reduction programs
Public consultation on ERPIN	Development of ERPIN with inputs from stakeholders	Historical methods for REL; Target for total emissions reduction per year, which can be reduced by only 7.4	Development of ERPD based on the target for emissions reduction

Topic	What is the Issue	Relevance to REDD+	Recommendations
		million tons of CO_2e per year.	
Socialization of the FCPF Carbon Fund Program	The Carbon Fund (CF) was developed from the progress achieved from the readiness process facilitated by the FCPF	FCPF-CF contributes to NDC	Develop an incentive scheme. Carbon accounting needs to be robust (strong and accountable.
Meeting for the preparation of ERPD and plans for mainstreaming	MoEF will provide support for ERPD formulation. DDPI will form a team of stakeholders to support ERPD development.	ERPD is part of readiness process	Facilitate districts to form REDD+ working group: *kukar, kutim, ppu, paser, samarinda*.
Mainstreaming FCPF Carbon Fund Program at district	Common understanding among stakeholders in the process of reducing emissions and deforestation and degradation.	Design for ERP implementation at district level	Formulation of district level strategy in integrating the REDD+ program in the RPJMD
Meeting to Discuss Permanent Sample Plots (PSP) for FCPF Carbon Fund Programs	Establishment of permanent sample plots	Permanent sample plots will demonstrate result from REDD+ initiatives	▪ Development of PSP's in four selected districts. ▪ Carbon pools estimation of each PSP. ▪ Derive data on carbon stock. ▪ Incorporate into the FCPF database.
Self-assessment of readiness for the implementation of REDD+ Indonesia	▪ Information on the self-assessment of the readiness for the implementation of REDD+ Indonesia activities ▪ Updates on progress of REDD+ readiness in Indonesia ▪ Methodology for measuring the readiness of REDD+ in Indonesia.	▪ Part of the REDD+ readiness process. ▪ Updates on progress of REDD+ readiness up to 2016. ▪ Options on methodology to gauge relative REDD+ in Indonesia ▪ Draft results of the self-assessment on readiness	Conduct self-assessment of readiness to implement REDD+ in Indonesia.
MRV meeting with the MoEF	▪ Agreement on MRV methodology ▪ Identify drivers of deforestation and degradation	Part of the ERP	▪ Present the temporary findings of the GIS and MRV teams. ▪ Activities of the four areas of the PCPF proposal.

Topic	What is the Issue	Relevance to REDD+	Recommendations
			▪ Forest fire program from Dinas Kehutanan. ▪ MRV institution and discuss modeling. ▪ Share Action Plan template. ▪ Update MRV institutional process at national – public management levels.
Data management	The organization of data, ownership, ownership for ease and sharing, copyrights and protocol	Part of the ERP that will be linked with SIS REDD+	Addition of classifications of land and recommendations on PSP management within KPHP areas and villages
Evaluation of the readiness of the FCPF Carbon Fund Program in East Kalimantan	▪ Evaluate the readiness of the FCPF Carbon Fund in East Kalimantan, from land conditions, policies, data related to implementation and monitoring. ▪ Maximize the role of investment in plantations, industry, and mining in order to maintain high carbon stock	Part of REDD+ readiness process	Capacity that needs to be improved: Plantation Business Appraisers (reproduced); Assessment of plantation business, HCVF Monitor, and Mediator
SESA training	Training material for the delivery of REDD+ and safeguards, REDD+ implementation, Provincial REDD+ Strategy: Policy, Regulation, and Governance, Development of East Kalimantan REDD+ SES and REDD+ Experience in Jambi	Part of REDD+ readiness process	Proceed with group discussion to fill in the ESMF matrix
Development of ERPD	Completing ERPD based on inputs from stakeholders	Part of REDD+ readiness process	Emission reduction activities in each sector that will be included in the ERPD document, where the activities will also be included in the 2018-2023 RPJMD to receive the budget from the Regional

Topic	What is the Issue	Relevance to REDD+	Recommendations
			Kalimantan Regional Budget (APBD)
Sustainable Estate Crops in East Kalimantan	Introducing emission reduction programs within the plantation sector, and the important role of the plantation sector	Component 3 of the ERP	Commitments agreed upon by the District Government on the target of protecting areas with high carbon stocks on land allocated for plantation development in East Kalimantan
Writing workshop for SESA, ESMF and FGRM	Prepare a draft document on the SESA and the ESMF	Part of REDD+ readiness process	Formulate SESA and ESMF
ERPD public consultations	Emissions calculations, benefit sharing mechanisms, and MRV	Part of REDD+ readiness process	For an indirect emission reduction scheme, enabler conditions still need to be included in ERPD documents
Workshop on sustainable plantations	Identify drivers of deforestation and forest degradation, emissions reduction targets, initial identification of program locations and emission reduction	Part of general description of ERPD	Area allotment of plantations in each Regency that has carbon stocks
Introduction of SESA to DDPI – East Kalimantan	Introducing team and planned SESA process for East Kalimantan	Part of coordination for REDD+ readiness (SESA and ESMF)	Conduct public consultation to disseminate results of SESA and ESMF
Biodiversity Management Framework with UNMUL	Safeguards on biodiversity have not been explicitly addressed	REDD+ prevents degradation, which includes degradation of habitat for endangered species	Implementation of HCV to address requirements for biodiversity conservation
Indigenous Peoples discussion with BIOMA	Definition of Indigenous Peoples, and existing regulations to support Indigenous Peoples (PERDA No. 1/2015)	All REDD+ safeguards address Indigenous Peoples	Refer to PERDA No. 1/205 to develop IPPF. Develop a consensus on benefit sharing mechanism to Indigenous Peoples
NGO support for REDD+	Collaboration between NGO community and local government in developing the ERPD needs to continue in ERP implementation	The ERP is an initiative under REDD+	Continue collaboration and ensure knowledge sharing/transfer of technology from NGOs to provincial and district governments
Discussion of FGRM with Provincial Secretariat	Currently, FGRM mechanism is addressed separately according to the	The ERP requires accessible FGRM	Propose a centralised/one-roof FGRM administration

Topic	What is the Issue	Relevance to REDD+	Recommendations
	sectors (e.g., plantation, forestry)		to support the ERP
Public consultations on SESA, ESMF, FGRM, and IPPF (29 September 2018)	Regulatory frameworks to designate SES REDD *Kaltim* as the safeguard in East Kalimantan	The ERP requires definitive safeguards mechanism	Establish/strengthen regulatory framework for safeguards, as well as for Benefit Sharing Mechanism. Establish plan for district consultation with DDPI.
Public consultations on Safeguards documents (2, 4 and 5 March 2019)	▪ Input related to safeguards prepared for East Kalimantan Province. ▪ Other strategic issues related to safeguards in East Kalimantan to prepare documents for SESA, ESMF, FGRM and IPPF (Indigenous Peoples Planning Framework) in East Kalimantan. ▪ Identify the perceptions and expectations of the parties to mitigate social and environmental impacts/risks in the ERP.	Part of coordination for REDD+ readiness (SESA and ESMF)	Preparing SESA and ESMF for WB review
Regional Public Consultation (Samarinda – 21 May 2019; Balikpapan – 23 May 2019	▪ related to safeguards FCPF-CF ▪ Other strategic issues related to safeguards to improve documents for SESA, ESMF, FGRM and IPPF (Indigenous Peoples Planning Framework)	Part of input for Safeguards	Document improvement
National Public consultations on Safeguards documents (7 August 2019)	▪ Input related to safeguards FCPF-CF ▪ Other strategic issues related to safeguards to improve documents for SESA, ESMF, FGRM and IPPF (Indigenous Peoples Planning Framework)	Part of input for Safeguards	Document Improvement

The above compilation includes meetings and discussions organised by DGCC at national level, and DDPI at East Kalimantan Province (Minutes of meetings are provided in Annex 5.1 and 5.2 of the ERPD). Key points discussed in the consultation sessions covered:

- Potential application of sustainable palm oil in East Kalimantan Province. This was done to introduce FCPF Carbon Fund, and to highlight the importance of plantation (i.e., palm oil) for reducing carbon emission. This discussion resulted in the Declaration of Sustainable Plantation Development by the Regional Secretary of East Kalimantan and Sekda 7 districts to be signed by the Governor and the Bupati;
- Program design that started with the development of program idea note (ERPIN). The process continued with finalisation of the ERPIN and the subsequent ERPD. Discussions on program design included approach for integrating ER with development plan, as well as aligning/mainstreaming the ER with existing East Kalimantan's strategy for emission reduction;
- Capacity aspects consisting of Forest Reference Emission Level (FREL), Monitoring Verification & Reporting (MRV), Data/knowledge management, SESA, and FPIC. These will be the capacities required at provincial and district levels to undertake the ERP;
- Readiness for REDD+ implementation (jurisdictional REDD+) in East Kalimantan consisting of the status of existing capacity, methodology for self assessment, and evaluation of readiness;
- Development of SESA & ESMF as mandatory components to comply with mandates from COP 16. This process included public consultation of SESA & ESMF to key stakeholders at national and provincial levels;
- Benefit sharing mechanism that included emission (carbon) calculation based on spatial data analysis, distribution of benefits at site level, and incentive for related parties based on performance that has succeeded in reducing GHG emission in the FCPF – Carbon Fund program; and
- Building commitment between Indonesian Government and FCPF to achieve the ERPA through various meetings and World Bank's missions.

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Appendix A1

Gaps and Impacts Analysis

Appendix A2

Records of Consultations

No	Documented interventions	Date & Place
1	Discussion of CF13 meeting results	Samarinda, East Kalimantan, 27-28 December 2015
	Participants	DDPI Kaltim, GIZ Forclime. WWF, P3SEKPI, GGGI. Earth Innovation Institute, East Kalimantan Provincial Mining Service, Provincial Environment Agency East Kalimantan, East Kalimantan Provincial Forestry Service, TNC, GIZ GELAMAI, Redd + Kaltim Working Group
	Integration of input in ER	• The aim of the Carbon Fund is to provide incentives for efforts to reduce emissions while protecting forests, conserving biodiversity, and improving the livelihoods of indigenous peoples and local communities • he results of the discussion discussed about responsible institutions, National Focal Point REDD + authorities, strategic context & logical foundation of the PE program, location of emission reduction programs & program duration, description of activities & interventions planned under the proposed PE program, information about the parties, consultation, & participation, operational & financial planning, expected reference levels & emission reductions, forest monitoring systems (potential role of indigenous peoples or local communities in the design or implementation of the proposed PE Program monitoring system)
2	Public Communication The Idea Note (ERPIN) Emision Reduction-Program Compilation Process in the FCPF Carbon Fund Framework	Balikpapan, 19 November 2015
	Participants	B2P2EHD, Borneo Escort, Aman Kaltim, DDPI East Kalimantan, P3E Kalimantan, P3SOSEKJAK PI, P3SEKPI, PUSPIJAK (SOSEKJAK PI), Customary Chief Wehea, BIOMA, KPSHK, Serumpun, Dit. MPI, East Kalimantan Provincial Mining Service, SRAD Paser Working Group, East Kalimantan Public Works Agency, East Kalimantan Provincial Forest Service, IGRK-MPV, GIZ Forclime, PRIMA, BUMI Foundation, GGGI, TKHL Kukar REDD + Working Group, C3S Unmul, Mulawarman University, Redd + Working Group East Kalimantan, GIZ GELAMAI, WWF, TNC, East Kalimantan Province Bappeda, Monitor East Kalimantan, Borneo Magazine, Business Info, Kerima Puri
	Integration of input in ER	• Development of understanding and support of the parties in delivering ER-PINs to CF Participants for the next process • ERPIN Draft; location (must be more specific and measurable), beneficiaries (community), many indigenous people who manage natural resources
3	Workshop on Institution of a Land-Based Program to Reduce Emissions in the Province of East Kalimantan (Lokakarya Kelembagaan Program Pengurangan Emisi Berbasis Lahan di Provinsi Kalimantan Timur)	Samarinda, East Kalimantan, 22-23 December 2015
	Purpose of the workshop	1. To seek common understanding among stakeholders

No	Documented interventions	Date & Place
		at national as well as regional levels on their roles and responsibilities towards reducing emissions at the regional level. 2. To collect information on core emission reduction programs of each Kabupaten and/or KPH (Kesatuan Pengelola Hutan concerning reduction of emissions. 3. To Identify types of support needed for research and development in order to ensure the success of emission reduction programs in East Kalimantan.
	Expected outputs of the workshop	Identification of stakeholders, roles and authorities in appropriate for the institutionalization of MRV, safeguard and benefit sharing. Draft PERDA (Regional Regulation) on the institutionalization of MRV, Safeguard and Benefit Sharing for programs aimed at reducing emissions in the Province of Kalimantan Timur
	Participants	Academicians, representatives of Non-government organizations, SKPDs and the private sector
	Integration of input in ER	• MRV, Safeguards, Registry System and FGRM, were aligned with the national mechanism • Based on the decision of the COP 16 UNFCCC, it must always be respectful knowledge and rights of indigenous peoples and local communities, taking into account national responsibilities, conditions and laws, and remembering that the UN General Assembly has adopted the Declaration on the Rights of Indigenous Peoples
4	Meeting to Design an ER Program (Meeting Design ER Program)	Samarinda, Kalimantan Timur, 13 January 2016
	(the notes record various events not amenable for summarizing)	
	Participants	Provincial and District Government
	Integration of input in ER	• The ER Program based on the analysis of Development plan • The ER Program based on SESA analysis
5	Training on Forest Reference Emission Level (FREL) (Pelatihan Forest Reference Emission Level (FREL)	Samarinda, Kalimantan Timur, 17-18 March 2016
	The notes on the Training document that the event constitute follow on activities to a DDPI Kaltim meeting on MRV which was held on 16 February 2016. The follow-on activities were held on 17 and 18 March 2016. On 18 March 2016 the meeting held discussions on the draft SK for the MRV FCPF Carbon Fund and conducted training on Forest – Reference Emission Level (F-REL)	
	Participants	Provincial Government, NGOs
	Integration of input in ER	the MRV team can calculate reference emission levels in support of emissions reduction programs
6	Public Consultations and Public Discussions on Carbon Fund Processes and Finalization of ER-PIN (Konsultasi Publik dan Diskusi Proses-Proses Carbon Fund dan Finalisasi ER-PIN)	Samarinda, East Kalimantan, 21 April 2016
	The event was opened by the Kepala Badan Litbang dan Inovasi Kementrian LHK (Head of the Reasearch,	

No	Documented interventions	Date & Place
	Development and Inovation agency of the Ministry for the Environment and Forestry) who emphasized the importance of public consultations in the formulation of the ER-PIN, particularly in light of the impending deadline of 29 April 2016. This was followed by a presentation on the process of formulating and improving the ER-PIN document. It was pointed out that developments in the regions could be drawn together to express a unified national and regional voice. Attention was also drawn to the fact that while approaching 2018, the importance of preparing the Readiness of the Carbon Fund is rising.	
	Participants	Provincial and District Government, NGOs
	Integration of input in ER	The process of drafting the REL with historical methods, sought deforestation, forest degradation, forest decomposition, forest fires, and selective logging (TPTI). This will be used to form the emission reduction program. By looking at the causes of previous deforestation, we carried out major intervention activities, mining, plantations, land, fires, encroachment, development plans. This activity is assumed, this is a rough number of 25% reductions, with a target of 15% reduction, this number can change in the ER-PD. Total emissions reduction per year, which can be reduced by only 7.4 million tons of CO2e per year. From the calculation, it is assumed to be around 44.4 million tons from 2018-2024, Starting from CF activities from 2018-2024 emissions will be reduced by around 44 million tonCO2e, and from this, 50% will be allocated to domestic interests, so the emissions to be allocated to CF are 22 million tonCO2eq
7	Socializing the FCPF Carbon Fund Program (Sosialisasi FCPF Program Carbon Fund)	Samarinda, East Kalimantan ,02 June 2016
	Integration of input in ER	FCPF-CF contributes to NDC
	The event was opened by an address by the Kepala Dinas Kehutanan of the Province of East Kalimantan.	
	Participants	Government & Companies
	Integration of input in ER	• An incentive scheme for the success of reducing emissions from deforestation and forest degradation and conserving forests, whose main purpose is to improve the welfare of the community while saving natural forests • Carbon Fund (CF) was developed from the progress achieved from the readiness process facilitated by the Forest Carbon Partnership Facility (FCPF) • The size used is the reduction of carbon emission (existing methodologies that are strong and accountable - robust)
8	Meeting for the Preparation of ERPD and Plans for Maintstreaming) (Pertemuan Persiapan ERPD dan Rencana Mainstreaming)	Samarinda, East Kalimantan ,3 June 2016
	Participants	Provincial and District Government
	Integration of input in ER	The Meeting concluded that: The team of the Ministry for the Environment and Forestry will hire a consultant for the formulation of the ERPD. DDPI will form a team to support the consultant Financing by way of on-budget off-treasury arrangements will be sought

No	Documented interventions	Date & Place
		The Costa Rica document will be shared with East Kalimantan Reduction of emissions will be the goal of various FCPF CF programs Considerations will be made as to which program(s) are operational and their results measurable. Further Activities: Facilitate Kabupatens to form WG REdd+: kukar, kutim, ppu, paser, samarinda. Other kabupatens? Kabupatens will suggest other considerations in due course.
9	Mainstreaming FCPF Carbon Fund Program (Mainstreaming FCPF Program Carbon Fund)	Kabupaten Kutai Kartanegarna, 21 Juni 2016
	Participants	Provincial and District Government, Academics
	Integration of input in ER	The aim of the activity was to socialize/mainstream emissions reduction programs within the framework of the FCPF Carbon Fund in all Kabupatens/Kotas of the Province of Kalimantan Timur. The expected outputs were: The production of a report on raising common understanding among stakeholders in the process of reducing emissions and deforestation and degradation through public consultations in Kabupaten Kukar. Formulation of a Kabupaten level strategy in integrating the REDD+ program in the RPJMD.
10	Meeting to Discuss Permanent Sample Plots (PSP) for FCPF Carbon Fund Programs (Pertemuan Pembahasan Plot Sample Permanent (PSP) untuk FCPF Program Carbon Fund)	Samarinda, East Kalimantan, 22 June 2016
	Participants	Provincial and District Government
	Integration of input in ER	It was explained that the purposes of Permanent Sample Plots (Permanent Sample Plots) in Kalimantan Timur were to: 1 Conduct development of PSPs in four selected Kabupatens 2. Conduct measurement of data in five carbon pools of each PSP 3. Analyse the results of the data measurement to derive data on carbon stock 4. Incorporate the results of carbon stock measurement into the FCPF data base
11	Meeting to Discuss Additional Funds (Pertemuan Pembahasan Additional Fund)	Samarinda, East Kalimantan, 15 August 2016
	Participants	Provincial and District Government, WB
12	Group Discussion on the Formulation of a Methodology on Self-Assessment of Readiness for the Implementation of Redd+ Indonesia Penyusunan Metodology Penilaian Mandiri (Self Assessment) Kesiapan Implementasi REDD+ Indonesia	Hotel Menara Peninsula, Jakarta, 1 September 2016

No	Documented interventions	Date & Place
	The aims of the Focus Group Discussion were to: Provide the public with information on the Self-Assessment of the Readiness for the implementation of REDD+ Indonesia activities Produce updates on progress of REDD+ readiness in Indonesia Agree on a methodology for implementation of self assessment and criteria to be applied for measuring the readiness of REDD+ in Indonesia. Conduct Self Assessment of readiness to implement REDD+ in Indonesia. The expected Outputs of the Focus Group Discussion were Updates on progress of REDD+ readiness up to 2016. Availability of options on methodology to gauge relative REDD+ in Indonesia Draft results of the self-assessment on readiness to implement REDD+ in Indonesia	
13	FGD I ERPD Consultant – 16 September 2016 (FGD I Konsultan ERPD – 16 September 2016)	Samarinda, East Kalimantan,16 September 2016
	The document related to the event merely records words/statements by the participants without clear indications of the topic being discuses.	
14	MRV Meeting with the Ministry for the Environment and Forestry (Pertemuan MRV dengan Kementrian Lingkungan Hidup dan Kehutanan)	Jakarta, 05 Oktober 2016
	The aims of the meeting were to: 1. Reach agreement on MRV Methodology 2. Establish factors that lead to deforestation and degradation as well as activities that reduce emission in the FCPF-Carbon Fund. The meeting also identified the following Action Points: Convene a meeting to present the temporary findings of the GIS and MRV teams. Convene a meeting to detail the activities of the four areas of the PCPF Proposal. Collect LHP of all HPH from 1998, collect forest fire program from Dinas Kehutanan Convene meeting on MRV institution with wwf team to discuss modeling Share Action Plan template Update MRV institutional process at national – public management levels	
	Participants	DDPI, BLH, TNC, WWF, GIZ, GGGI, ERPD FCPF Support Study Team Carbon Fund Program (Carbon Accounting Team, MRV System Team, Public Management Team and Spatial Planning Team and GIS)
	Integration of input in ER	• DDPI asked KLHK / Baplan to reach an agreement in the year the data was made since 1998. • What was agreed upon was included in the FCPF calculation: D, D, mangrove soil, selective logging • Peat fire is not counted (not included in FCPF) • Collect: Check institutions that collect HCVF data and reclamation data • The economic resource forest team will calculate how much it will cost for the 6 years of FCFP implementation. • Data activity refers to KLHK by adding information on improving the quality of KLHK data (including mangroves).

No	Documented interventions	Date & Place
		• Emission factors only in 6 classes using East Kalimantan figures
15	Readiness Package REDD+	Samarinda, East Kalimantan, 07 October 2016
	The aims of the meeting were to: Conduct a REDD + readiness self assessment at the provincial level of East Kalimantan. The election of East Kalimantan Province is the location for REDD + readiness assessment at the sub-national level because the province is in addition to being a pilot province for the Carbon Fund program of the FCPF. In drafting the national REL, East Kalimantan Province is also one of the provinces of 11 other provinces in Indonesia that are part of the national REL.	
	Participants	Provincial and District Government
	Integration of input in ER	• Up to date information on the progress of REDD + readiness at the provincial level of East Kalimantan • Documentation of the REDD + readiness self assessment process at the provincial level of East Kalimantan. • It was described at the closing of the event that the results of the sub-national workshop would contribute to the self-evaluation of the R-Package. It was also mentioned that a validation workshop will be held in Jakarta. This event will constitute the final workshop and will validate the results of the FGD at the subnational level as well as the earlier national level FDG.
16	Mainstreaming the Carbon Fund in Kabupaten Penajam Paser Utara (Mainstreaming Carbon Fund di Kabupaten Penajam Paser Utara)	Penajam Paser Utara, 7 November 2016
	The purpose of the activity was to socialize/mainstream a programme to reduce emissions within the framework of the FCPF Carbon Fund in a number of kabupatens/kotas in the Province of Kalimantan Timur, one of which was Kabupaten Penajam Paser Utara (PPU). The activity also aimed at conducting a needs assessment so that the Kabupaten's regional programs operate in line with national as well as provincial level programs. The activity had two expected outputs: Development of common understanding among stakeholders on processes to reduce emission, from deforestation and degradation through socializing mainstreaming of the Carbon Fund in Kabupaten PPU. Identification of the needs of regional governments to strengthen Institutional capacity and development of a strategy to integrate the REDD+ program into the RPJMD	
	Participants	Provincial and District Government, NGOs, Companies, Academics
	Integration of input in ER	• The establishment of a common understanding of stakeholders in the processes of reducing emissions from deforestation and degradation through the mainstreaming of the Carbon Fund Program in PPU Regency, • Identification of regional government needs in efforts to strengthen institutional capacity, Compilation of district strategies in integrating REDD + programs in the RPJMD.
17	Public Consultations on the Emission Reduction Program Document(ERPD) within the framework of the activities of the	Samarinda, 9-10 November 2016

No	Documented interventions	Date & Place
	FCPF Carbon Fund Program (Konsultasi Publik Emission Reduction Program Document (ERPD) Dalam Kerangka Kegiatan FCPF Program Carbon Fund]	
	The purpose of the Public Consultations were to facilitate the meeting of various parties at provincial level to enabling them to communicate and discuss the activities of the program to decrease levels of emission as outlined in ERPD document.	
	Participants	Provincial and District Government, NGOs, Companies, Academics
	Integration of input in ER	Delivery of the Program of Activities to reduce emission in Kalimantan Timur to all parties. Receipt of inputs from various parties on the Program of Activities to reduce emissions incorporated in the ERPD document.
18	Coordination Meeting on the Implementation of the Carbon Fund and Biocarbon ISFL (Rapat Koordinasi Pelaksanaan Carbon Fund dan Biocarbon ISFL)	Hotel Neo Sentul, 16 Desember 2016
	The minutes of the meeting took the form of very brief notes of topics and issues discussed. These notes rather take the form of key words and are not possible to summarize.	
19	Data Management PSP-PCPF	Samarinda, 21 December 2016
	Conclusions of the Meeting Agreement reached that an MOU between KLKH and the Governor of Kalimantan Timur will be drawn up. Once the MOU in effect, a PKS between BLI and DPPI to arrange the organization of data, ownership, ownership for ease and sharing, copyrights and protocol It was suggested that after the establishmPent of PKS, DPI will initiate the MOU between the governor and the regional stakeholders. DDPI suggested the addition of classifications of land and recommendation on PSP management within KPHP areas and villages In January a meeting will be convened to finalize the protocol with UnMul as the host to facilitate the recommendations stakeholders of stakeholders. There are two major issues within the PSP: security of location and data. P3SEKPI handed over to B2P2EHD protocol of use of data.	
20	Discussion on PSP Data Sharing (Pembahasan Data Sharing PSP)	Samarinda 21 December 2016
	Participants	National, Provincial and District Government
	Integration of input in ER	Upon signature of at MOU between KLHK and the Province of East Kalimantan concerning the PCPF CF Program an agreement will be drawn up between Balai Litbang Inovasi (BLI/P3SEKPI) and DDPI East Kalimantan to Operationalise Data Management. Ownership of the data rests with P3SEKPI and East Kalimantan DDPI (for the purpose of ease of managing data sharing, copyright and data protocol. It was suggested that once the cooperation agreement is signed, DDPI Kalimantan Timur would need to convey through a formal letter

No	Documented interventions	Date & Place
21	World Bank Mission: Preparation of the FCPF Carbon Fund Program and Progress in the Formulation of the ERPD (World Bank Mission: Persiapan FCPF Program Carbon Fund dan Progress Penyusunan ERPD)	Samarinda, 13-14 February 2017
	Participants	Provincial and District Government, NGOs, Companies, Academics
22	Evaluation of the Readiness of the FCPF Carbon Fund Program in East Kalimantan (Evaluasi Kesiapan FCPF Program Carbon Fund di Kalimantan Timur)	Samarinda, 16 Februari 2017
	Participants	Provincial and District Government, NGOs, Companies, Academics
	Integration of input in ER	• All parties involved evaluate the readiness of the FCPF Carbon Fund in East Kalimantan, from land conditions, policies, data data related to implementation & monitoring, maximizing the role - investment in plantations, industry, mining in order to maintain high carbon stock • A group discussion was also held with any activity material that caused emission reduction, which area occurred, and how to improve it • Capacity that needs to be improved: Plantation Business Appraisers (reproduced) à LPP Jogja: BIMTEK, Assessment of plantation business, HCVF Monitor, and Mediator
23	World Bank Mission (World Bank Mission)	Samarinda, East Kalimantan, 13 – 14 February 2017
	Participants	WB, Provincial and District Government
	Integration of input in ER	The arrival of the World Bank Mission Team (WB Mission) this time is to prepare for the FCPF Carbon Fund Program, especially for preparing the preparation of the Emission Reduction Program Document (ERPD) document. The WB Mission meeting was held for two days, February 13-14 in Samarinda. On the first day, a percentage of the ERPD Support Study Team was conducted ((1) Institutional Setting Study, (2) Benefit Sharing Study, (3) Forest Resource Economic Study, (4) Public Management Study, (5) MRV System Study, (6) Carbon Accounting Study, (7) Safeguard Study, (8) GIS Study After the presentation is done, the World Bank provides input to the eight studies to be completed in accordance with the Methodological Framework. The next session is that the World Bank presents the presentation regarding preparation of the ERPD preparation, and subsequent processes that must be carried out including the submission of the road map for ERPD drafting activities and presentation. What criteria must be fulfilled, especially for Carbon Accounting.
24	Meeting on Update of Progress Made on Letter of Intent	Samarinda, 13 June 2017

No	Documented interventions	Date & Place
	(Pertemuan Update Progress Letter of Intent)	
	Participants	elements of P3SEKPI KLHK and DDPI East Kalimantan
	Integration of input in ER	• After the discussion was held so that Indonesia's position was very strong, the LoI draft was agreed. In substance there is nothing new that principally changes the LoI. Only certainty (time), if this agreement continues it will not harm Indonesia (East Kalimantan). Compared to other countries, the State of Indonesia and the new East Kalimantan, the funds are already 22 million, not all of Indonesia. • The final draft was agreed by the Minister of KLHK with world banks and Norway. The draft will be brought on May 20 to convey and maintain the LoI position, already agreed and believe 99% will not change again and will be signed soon.
25	SESA Training (Pelatihan SESA)	Samarinda and Desa Muara Siran, 22- 25 August 2017
	Participants	WB, Provincial and District Government, & training participants
	Integration of input in ER	Training material is the delivery of REDD + & safeguards, REDD + Implementation, Provincial REDD + Strategy: Policy, Regulation, and Governance, Development of East Kalimantan REDD + SES and REDD + Experience in Jambi. Then proceed with group discussion to fill in the ESMF matrix
26	MRV System that will be used in the FCPF CF (Sistem MRV yang Akan digunakan di dalam FCPF CF)	Samarinda, 23 June 2016
27	Meeting to Formulate and Write the Emission Reduction Project Document/ERPD Forest Carbon Partnership Facility – Carbon Fund (FCPF-CF)/One on One Meeting (Rapat Penyusunan dan Penulisan Emission Reduction Project Document/ERPD Forest Carbon Partnership Facility – Carbon Fund (FCPF-CF)/One on One Meeting	Samarinda, 10-16 July 2017
	Participants	Provincial and District Government
	Integration of input in ER	From the results of this meeting, there have been emission reduction activities in each sector that will be included in the ERPD document, where the activities will also be included in the 2018-2023 RPJMD document in order to get the budget from the Regional Kalimantan Regional Budget (APBD) . In addition, from the results of the discussion it was also known that in supporting the success of the FCPF, the Carbon Fund Program in the future required policy support both for each sector or cross-sectoral policy, for example regarding safeguards / safeguards
28	High Level Meeting to Develop Sustainable Plantations in East Kalimantan (High Level Meeting Pengembangan	Samarinda - Lamin Etam, 11 September 2017

No	Documented interventions	Date & Place
	Perkebunan Berkelanjutan Di Kalimantan Timur)	
	Participants	Provincial Secretary, Regional Secretary, Economic and Development Assistant, Head of Bappeda, Head of Plantation Office (Regency), DDPI KALTIM, P3SEKPI KLHK and GGGI.
	Integration of input in ER	• Introducing emission reduction programs within the framework of the Forest Carbon Partnership Facilities-Carbon Fund (FCPF-CF) and the important role of the plantation sector • Introducing the importance of saving areas that have high carbon stocks as a key element in the principles of sustainable palm oil for decision makers from the District Government in East Kalimantan; • Discuss and obtain commitments agreed upon by the District Government on the target of protecting areas with high carbon stocks on land allocated for plantation development in East Kalimantan.
29	Discussion of the Draft ERPD (Pembahasan Draft ERPD)	Samarinda, 12 September 2017
	Participants	DDPI KALTIM, P3SEKPI, East Kalimantan Provincial Government and Development Partners
	Integration of input in ER	Discussion of the draft FCPF CFDF document has been done to complete and refine the documents before the document is submitted to the FCPF CF secretariat and the World Bank
30	Writing Workshop SESA, ESMF and FGRM (Writing Workshop SESA, ESMF dan FGRM)	Samarinda, 14-15 September 2017
	Participants	GGGI, GIZ Forclime, TFCA, Fahutan Unmul, DDPI KALTIM, TNC, P3SEKPI KLHK, B2P2EHD and East Kalimantan Safeguards Team
	Integration of input in ER	The purpose of this activity was to prepare a draft document on the Strategic Environmental and Social Assessment (SESA) and the Environmental and Social Management Framework (ESMF).
31	Writing Workshop # 1 – Synchronising Deforestation Drivers with the ERPD Program Design and Calculating Emission Targets (Writing Workshop #1 – Sinkronisasi Driver Deforestasi dengan Program Design ERPD dan Perhitungan Target Emisi)	13-15 November 2017
32	ERPD Public Consultations (Konsultasi Publik ERPD)	Samarinda, 23 Oktober 2017
	Participants	Provincial and District Government, NGOs, Companies, Academics, WB
	Integration of input in ER	• Emission Calculation Base using Spatial data • Benefit Sharing Mechanism (BSM), not yet completed, there will be a meeting in the near future on this matter. • The Mahakam Delta is a East Kalimantan problem, but there are no concrete steps to resolve it. For the

No	Documented interventions	Date & Place
		strategy it can be the form of the GGC (but it is bigger and needs to involve the central government) • Regarding MRV, the required Candy from the LHK Ministry does not yet exist, so it is recommended that the ERPD Drafting Team make their own estimates first • Explanation about the proposal by the East Kalimantan Provincial Government to the GCF Fund in partnership with WWF, there should be additional records • For the name of the program in the Forestry sector, it is necessary to adjust the nomenclature with the language of the RPJMD • An indirect emission reduction scheme, enabler conditions still need to be included in ERPD documents
33	Discussions on Kaltim (East Kalimantan) Regional Government's MOU with the Ministry of Environment and Forestry for the FCPF Carbon Fund Program (Pembahasan MOU Pemprov Kaltim dengan Kementrian LHK untuk FCPF Program Carbon Fund)	Samarinda, 7 November 2017
34	Acceleration of ERPD for the FCPF Carbon Fund Program (Percepatan ERPD untuk Program FCPF Carbon Fund)	13-28 November 2017
	Participants	Provincial and District Government, NGOs, Companies, Academics, WB
	Integration of input in ER	It was agreed that the EPRD needed to be refined, especially regarding the emission reduction targets for East Kalimantan based on programs designed by the Province. In this regard, the following corrective steps have been taken: • Writing Workshop # 1 Singkchronization Driver Deforestation with the ERPD Design Program and Calculation of Emission targets • WW # 2 Identify FCPF - CF Program Priority and Location Programs • FCPF Program Public Consultation • WW # 3 SESA and ESMF Compilation of the FCPF - CF Program • Consultation with Regional Secretary and SDA Infrastructure Bureau for BSM and FGRM • Consultation with Bappeda, BPKAD and East Kalimantan Provincial Government Public Relations
35	Workshop on Sustainable Plantations (Workshop Perkebunan Berkelanjutan)	Hotel Midtown, 20 December 2017
	Participants	Provincial and District Government, Academics
	Integration of input in ER	• Area Allotment of plantations in each Regency that has carbon stocks • General description of ERPD • Identify drivers of deforestation and forest degradation, emission reduction targets, initial identification of

No	Documented interventions	Date & Place
		program locations and emission reduction programs
36	Technical Meeting on Mechanisms and Reporting formats of REDD + FCPFCarbon Fund in accordance with NDC and RAD GRK reports (Pertemuan Teknis Mekanisme dan Format Pelaporan REDD+ FCPF-Carbon Fund sesuai dengan pelaporan NDC and RAD GRK)	Balikpapan, 8 January 2018
	Participants	• Central Government: P3SEKPI KLHK RI, Regional IV BPKH • East Kalimantan Provincial Government: East Kalimantan Provincial Economic Bureau, DLH East Kalimantan, Disbun Kaltim, East Kalimantan Dishut, ESDM Service • Academics, NGOs, Development Partner
	Integration of input in ER	FCPF-CF contributes to NDC
37	Notes on Meetings – Amendments based on reviews of WB ERPA-FFCPF documents (Catatan Pertemuan - Perbaikan hasil review WB dokumen ERPA-FCPF)	Hotel Santika Gedung Mawar, 14-15 Februari 2018
	Participants	Climate Change Mitigation Directorate Directorate General of PPI, Directorate of Sectoral and Regional Resource Mobilization, Directorate General of PPI, Directorate of GHG Inventory and Monitoring, Reporting and Verification of DGII, Daddy Ruhiyat (Chair of DDPI), Istiko Tauhuid jati (East Kalimantan Setprov Bureau), Fajar Pambudhi (MRV DDPI East Kalimantan Working Group), Reski Udayanti (DDPI East Kalimantan REDD + and LULUF Working Group), Novia Widyaningtyas, Haryo Pambudhi, Belinda A. Margono, Wawan Gunawan (DG PPI, KLHK), Choirul Akhmad, I Wayan Susi Dharmawan, Ari Wibowo, Subarudi, Niken Sakuntaladewi, Deden Djaenudin, Zahrul Muttaqin, Virni Budi Arifanti, (P3SEKPI), Rizaldi Boer (Consultant), Azwar Busra (ESDM Service), Muhammad Fadli (DLH Kaltim), Rini Endah Lestari (Kaltim Forest Service), Henny Herdiyanto (Dinas East Kalimantan Plantation), Mukhransyah (Fisheries and Marine Service), Zahra (WWF), Yohanes Budi Sulistioadi (Fahutan Unmul), Muhammad Fadli (GGGI), Joshua Naibaho, Dzulkifli (DDPI Kaltim)
	Integration of input in ER	Evaluation from various parties about ERPA-FCPF
38	Public Consultation Identification of Issue for SESA, ESMF, FGRM	Balikpapan, 29 October 2018
	Participants	Provincial and District Government, NGOs, Companies, Academics, WB
	Integration of input in ER	• Obtain input related to safeguards prepared for East Kalimantan Province; • Obtain input on other strategic issues related to safeguards in East Kalimantan to prepare documents for SESA, ESMF, FGRM and IPPF (Indigenous People Planning Framework) in East Kalimantan; and

No	Documented interventions	Date & Place
		• Identify the perceptions and expectations of the parties to mitigate social and environmental impacts / risks in the ER program

Public Consultation for Free Prior Informed Consent (FPIC) of the East Kalimantan FCPF-CF Program

Information delivered to participants is:

a) Presentation on the implementation of FPIC

An explanation of what FPIC is, why it is important to be carried out, how the process will be carried out, and how the mechanism for expressing consent.

b) Emission Reduction Program

A description of what is the driver of deforestation and degradation, what are the actions to address them, how the program will be implemented, where the program will be carried out, and who will implement it.

c) Social and Environmental Safeguards

Explain the social and environmental safeguards, standards from the UNFCCC and the World Bank, important issues related to social and environment, impacts that may be caused, how to mitigate impacts, and monitoring frameworks.

d) Benefit Sharing Mechanism

Explain what benefits will be received, who are the beneficiaries, how financial benefits will be distributed, how to obtain financial benefits, as well as the proportion of benefits and how to calculate in general.

e) Measurement, Monitoring and Reporting

Explain how to measure emissions, how monitoring will be carried out, what needs to be reported, and reporting mechanisms and report validation.

f) Feedback Grievance Redress Mechanism (FGRM)

Explain the mechanism for feedback and complaint handling, the FGRM channel, the grievance channel at the village level, and the institution that receives complaints.

Summary of Public Consultation at District Level

Location / Date	Participants	Responses
Kutai	105 participants (90	• To achieve the target, what steps to be taken by the government in East Kalimantan, including

Location / Date	Participants	Responses
Kartanegara and Kutai Timur *Tenggarong*, 18 July 2019	men, 19 women) • Provincial Government: 16 persons • District Government: 8 persons • Village Government: 61 persons • Adat Institutions: 1 person • Development Partners: 11 persons • University: 3 persons • Village Technical Assistance: 4 persons	engaging with district heads who still have the authority to issue permits? • What activities in the emission reduction program which can be implemented at the village level directly? • Participants from villages with mangrove forests mentioned that there are fish ponds that are no longer productive and yet have not been involved in mangrove planting activities. Discussions were around how these ponds can be restored to reduce emissions and create economic benefits for the village • What activities should be budgeted or carried out at the village level using village funds? • What types of collaboration will be supported at both the district and village/site levels to support ERP implementation? • This program is expected to be implemented at the site level and provide benefits to the community in a tangible manner • Clear legal framework is required to enable villages to use village funds
Kutai Barat and Mahakam Ulu *Sendawar, 21 August 2019*	100 participants (86 men, 14 women) • Provincial Government: 15 persons • District Government: 16 persons	• The village is located within forest areas and hence, this ERP is well received. The village has also taken an initiative to issue village regulations related to land clearing procedures, noting the prolonged dry seasons in the area. • There are clear expectations from villages to benefit from this program. • In the distribution of incentives, clarifications on eligibility criteria were requested (i.e. whether only registered villages are eligible, or would the program be more open to also cover non-registered villages?

Location / Date	Participants	Responses
	• Village Government: 57 people • Adat Institutions: 2 persons • Development Partners: 6 persons • Village Technical Assistance: 4 persons	• Discussions on how to engage communities to reduce illegal logging • Rewards and punishment for forest conservation and whether program benefits can be guaranteed under the ERP • Monitoring and reporting of environmental conservation: clear procedures and roles and responsibilities will be required.
Berau *Tanjung Redeb, 27 August 2019*	95 participants (85 men, 10 women) • Provincial Government: 13 persons • District Government: 19 persons • Village Government: 54 people • Adat Institutions: 2 persons • Development Partners: 5 persons • Village Technical	• Criteria and assessments on the selection of 150 Climate Villages and whether conflicts were factored in during the determination process? • What are the criteria for participation in the ERP? • Proportional allocation of ERP benefits and whether this has been consulted with respective districts • The proportion of ERP benefits that are earmarked for communities. The larger allocation will influence communities' interest to participate. • While activities under the ERP are part of the on-going programs, issues arise when forestry permits are issued since this will limit district government interventions in the concession areas. • The program is supported as this will involve the communities. • Incentive mechanisms for villages and how these will be distributed? • Village communities involvement in emission reduction activities and how to promote their participation? • How to engage and encourage partnership with private companies/investors (i.e. there are

Location / Date	Participants	Responses
	Assistance: 2 persons	currently 3 investors in one of the villages consulted) • How can the ERP be in sync with commercial investments to address emission reduction? • Which incentives will be received and when will these be received?
Balikpapan, Penajam Paser Utara, Paser *Tanah Grogot, 30 August 2019*	95 participants (86 men, 14 women) • Provincial Government: 13 persons • District Government: 28 persons • Village Government: 37 people • Adat Institutions: 2 persons • Development Partners: 7 persons • Village Technical Assistance: 3 persons	• The ERP is well received however the program is being prepared only when the forests have been degraded. • There are expectations that the ERP will halt illegal logging activities • Partnership and engagement with Adat communities will be critical to ensure broad participation and buy-in. • Implications on the capital move • The timeline for the incentives since ER activities have been carried out to date. DDPI is expected to assist with data collection. • Whether derivative regulations by district governments be needed to support the ERP? • Incentives for ERP and how these will be consulted. • How will the spatial planning process be undertaken? This requires coordination with the district, provincial and national level governments, acknowledging some of the target areas are in the IUP and APL areas. • What indicators have been agreed for the incentives? • Further meetings and consultations will need to be held at the village level to provide understanding to the village communities as a whole

Appendix A3

Institutional Capacity Assessment and Due Diligence

INSTITUTIONAL CAPACITY ASSESSMENT MATRIX

Sources:

- Laporan Kinerja Pemerintah Provinsi (LKPP) Kalimantan Timur 2017;
- Laporan Kinerja KLHK 2016;
- Permen LHK 18/2015 on organisation and work arrangements of MoEF;
- [P3SEKPI]. 2017. REDD+ Readiness Self-Assessment for Indonesia submitted to the Forest Carbon;
- Partnership Facility (FCPF). Center for Research and Development on Social, Economy, Policy and Climate Change (P3SEKPI), Forestry Research, Development, and Innovation Agency, Ministry of Environment and
- Forestry (FORDIA, MoEF), Republic of Indonesia;
- MoEF.2018. The State of Indonesia's Forets 2018;
- DGCC.2018. Indonesia Report on REDD+ Performance; and
- District Readiness Assessment (DRA) reports in Berau & Mahakam Ulu districts. Hatfield's report for MCA-Indonesia Green Prosperity Project

Institution	Responsibilities (under the ERP)	E&S Risk	Capacity Assessment for E&S	Recommendations
NATIONAL LEVEL				
Secretary General of Ministry of Environment and Forestry (MOEF) Ir. Bambang Hendroyono, MM; Secretary General Banghen_11@yahoo.co.id	• Serve as MOEF Representative; • Submit ERPIN and ERPD; • Serve as a chairman for the ERP Steering Committee	ENV: LOW SOC: LOW	**General capacity assessment** Based on Regulation of Minister of Environment and Forestry No. 18/2015, relevant function and capacity of Secretary General within the ERP are: • Coordinating activities under the MoEF across directorate generals (DG PPI, DG Law Enforcement, DG Social Forestry, etc); • Coordinating formulation of relevant regulations under the MoEF; • Preparation of ratification of international conventions and collaborations (including those on REDD+); • Administration and management support. Capacity of Secretary General is mainly management and policy. Technical capacity within this institution is not required	In serving as MoEF representative, Secretary General needs to ensure strong roles in coordinating: DG PPI, DG Law Enforcement, DG Forest Management, DG FORDIA, Education and Training Center, DG Sustainable Forest Production, and DG of Social Forestry and Environmental Partnership. Secretary General

Institution	Responsibilities (under the ERP)	E&S Risk	Capacity Assessment for E&S	Recommendations
				shall ensure external coordination with: Ministry of Finance and with FCPF Provide administrative support for ERPD submission and subsequent ERP implementations (including safeguards) Provide political supports such as one-map policy and RIL
The Directorate General of Climate Change of MOEF Dr. Ir. Ruandha Agung Sugardiman, M.Sc (DG of Climate Change) ra.sugardiman@gmail.com	• Development of RIL/RIL training module – **component 3, sub-component 3.3;** • Lead management of the National Registry • Lead the development and management of the FREL; • Lead the management of the MMR; • Lead finalization and implementation of safeguards plans; • Lead finalization and implementation of the FGRM; • Provide technical assistance on the preparation and implementation of the Program • Lead finalization of the BSM; • Serve as a member of Steering	ENV: LOW SOC: LOW (BUT HIGH RELEVANCE)	**Capacity assessment indicators:** • Upon the dissolution of BP-REDD+, starting 2015 DGCC is mandated to ensure support for ensuring GoI's commitment of emission reduction. This mandate includes setting up norms, procedures and standards for implementation of emission reduction activities (including safeguard measures based on UNFCC/Cancun Safeguards), as well as the SIS-REDD+. • The agency in question has adequate technical resources to address the identified E&S risks (i.e. human, financial, skills/in-house expertise, system to monitor E&S risks). DGCC consists of 218 officers in national and local offices to lead and supervise REDD+ readiness activities, as well as to provide technical guidance (*Bimtek*).	DGCC needs to strengthen: FGRM and national registry (SIS-REDD+). DGCC also needs to work closely with TNC for developing the RIL/RIL training module DGCC needs to ensure constant improvements of coordination in both national and sub-national levels are expected.

Institution	Responsibilities (under the ERP)	E&S Risk	Capacity Assessment for E&S	Recommendations
	Committee • **Stakeholder that will manage environmental and social risk at high level through SIS-REDD+**		However, more officers are still needed to reach the ideal number of DGCC personnel; 81 officers for national office, and 226 officers for local offices. In addition, there are also 1,755 personnel of Manggala Agni (Fire Rescue team) across Indonesia who support forest fire management. To improve their technical capacities, further capacity building developments are needed. Trainings and exposures to REDD+ initiatives worldwide have been provided to staffs of this agency (e.g., participations in COPs); • DGCC has shown track records in coordinating REDD+ activities within MoEF (cross DG), as well as with external stakeholders (donor agencies, other ministries, provincial government, NGOs, and academics). Additionally, DGCC also shows track record in transparency by establishing an online platform for information and for E&S safeguards registries; • Conflict / dispute resolutions are not explicitly mandated by the Regulation of Ministry of Environment and Forestry No. 18/2015. However, FGRM is part of the norms and standards that need to be provided by this institution. A Spedific FGRM for REDD+ has not been established. • DGCC has been playing central role in coordinating activities, integrating and influencing broader national or sector policy frameworks (e.g. agriculture, natural resources management, infrastructure development and land-use planning).	
Forestry and Environment	• Sign ERPA on behalf of GoI;	ENV: LOW	General capacity assessment	Support Secretary

Institution	Responsibilities (under the ERP)	E&S Risk	Capacity Assessment for E&S	Recommendations
Research, Development and Innovation Agency (FOERDIA) c.q. Center for Research Dr. Agus Justianto, MSc. (DG of FOERDIA) ajustianto@gmail.com Dr. Ir. Syaiful Anwar, M.Sc. (Director of P3SEKPI) Telp. +62 251 8633944 Fax. +62 251 8634924 syaifula09@gmail.com	• Lead the development of the Program Design; • Lead consultations for methodologies (technical assistance); • Facilitate engagement with relevant agencies for field implementation; • Lead consultation and communication with the Facility Management Team; • Serve as a member of Steering Committee • **Stakeholder that will manage environmental and social risk at high level through SIS-REDD+**	SOC: LOW	In relevance with the ERP, FORDIA has the following relevant mandates (PerMenLHK 18/2015): • Coordinating, planning, budgeting and cooperation; • Coordinating data, knowledge management and information sharing; and • General administration and management.	General in representing GoI in signing ERPA Monitoring and evaluation of ERP implementation
The Directorate General of Conservation of Natural Resource and Ecosystem of MOEF Ir. Wiratno, M.Sc (Director General) datakonservasi@gmail.com	• Facilitate conservation partnership in or near conservation areas, which will include support for sustainable livelihoods – **component 4, sub-component 4.2;** • Provide community training in four conservation areas (forest protection and sustainable utilization of areas surrounding conservation areas) – **component 4, sub-component 4.2;** • Facilitate identification of potential sustainable business opportunities – **component 4, sub-component 4.2;**	ENV: LOW SOC: MED	**Capacity assessment indicators:** • The agency has the mandate to manage conservation areas (national parks, wildlife reserves, game reserves and nature tourism parks), including potential asociated E&S risks. • The DG has produced a regulation (Peraturan Dirjen) no. 6/2018 regarding conservation partnership. This is supported by the formation of technical support team for conflict resolution. • This agency has shown extensive track record in managing environmental risks, specifically on biodiversity and natural resource conservation. • Grievance mechanism follows PerMen LHK 84/2015 on conflict resolution, and Perdirjen 6/2018 on conservation partnership. • The DG holds a convening power and credibility to engage with key stakeholders related to biodiversity management.	Integrate E&S safeguards into pratice (conservation areas). The agency needs to improve capacity on socialisation and FPIC (together with DG social forestry) to ensure proper program implementation
MoEF's Forestry Education and Training Center	• Lead development of RIL/RIL training module – **component 3, sub-**	ENV: LOW	General capacity of this agency is to conduct various training and capacity building programs	Collaborate with DG Sustainable

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(Pusdiklat) Ir. Tri Joko Mulyono, MM (Head of Center) (0251) 8313622	**component 3.3;** • Provide training on RIL, SFM, HCV - – **component 3, sub-component 3.3;**	SOC: LOW		Production Forest and DG CC in planning and implementation of RIL, HCV and SFM trainings for FMUs Collaborate with TNC in developing the RIL training modules Collaborate with FORDIA on materials for dissemination
The Directorate General for Sustainable Production Forest Management of Ministry of Environment and Forestry (MOEF) Dr. Ida Bagus Putera Parthama, MSc (Director General)	• Facilitate development of long-term management plans or RPHJP for FMUs **– component 2, sub-component 1.2;** • Facilitate RIL policy and regulatory development (policy review, gap analysis, FGDs, consultations, etc.) – **component 3, sub-component 3.3;** • Facilitate development of RIL/RIL training module – **component 3, sub-component 3.3;** • Lead monitoring of RIL/RIL C – **component 3, sub-component 3.3;**	ENV: MED SOC: MED	**Capacity assessment indicators:** • There is no explicit mandate for dealing with E&S risk, but this institution is mandated to support the development of long-term plan for FMU. Development of FMU under ERP requires capacity for addressing E&S risk (e.g., conflict resolution). • This agency has capacity for sustainable production forest management (PHPL), promoting NTFP and regulating licences and wood certification. • Track record is limited to FMU development and implementation of various wood monitoring/certifications. In East Kalimantan two FMUs (Berau Barat and Kendilo are capable of producing NTFPs according to the business plans. • Conflict / dispute resolution follows the MoEF Regulation No. 84/2015 on conflict resolutions. • Stakeholder engagement is done through FMU. Therefore, FMU will address E&S risks on the ground.	• Facilitate RIL implementation through FMUs • Collaborate with TNC in developing the RIL training modules • Collaborate with DG of Social forestry on conflict resolutions
Ministry of Finance (DG BLU)	• Oversee the BPDLH for Benefit Sharing Mechanism;	ENV: LOW	General capacity assessment Capacity for establishing international collaboration	Benefit sharing mechanism is still

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Putut Hari Satyaka Director of Financing and Regional Capacity putut.satyaka@gmail.com Gedung Frans Seda, Lantai 6 Jl. Wahidin Raya No. 1, JakartaIndonesia 10710 Phone. (6221) 3459616	• Channel funds to the BPDLH and government agencies • Serve as a financial authority	SOC: LOW	agreement. MoF is tasked for regulating international collaborations under *Hibah Terencana* (on-budget, on-treasury mechanism) and *Hibah Langsung* (on-budget, off-treasury). Previous international collaborations with central government authorities are normally done through *Hibah Terencana*, while those for sub-national authorities are done through Hibah Langsung. ERP requires combinations fund flows between national and sub-national authorities that need to be regulated. MoF operates through Kantor Wilayah and local treasury offices (Kantor Perbendaharaan – KPPN) to support activities at sub-national levels.	under development. MoF needs to regulate flow of funds from International donor (i.e., FCPF) to Central Government authorities, as well as fund flows from Central Government agencies to the provincial government (through BLU or otherwise). Additionally, eligibility criteria and proportion within this mechanism needs to be regulated to allow fund disbursement at sub-national level.
The Directorate General for Social Forestry of Ministry of Environment and Forestry (MOEF) Dr. Apik Karnaya (Secretary of Director General) akaryana@yahoo.com	• Accelerate social forestry licenses – **Component 1, sub-component 1.1.** • Technical support for social forestry implementation	ENV: MED SOC: MED	**Capacity assessment indicators:** • The agency has a clear mandate for addressing E&S risk, specifically tenurial conflicts. • The agency has strong capacity for promoting social forestry licenses. Work on the ground is done by the Balai (Technical Implementing Unit) and relevant working group (PokJA *Percepatan Perhutanan Sosial*/PPS-Acceleration of social forestry) • Strong track records in establishing social forestry licenses, but requires stronger concept for post-license activities • Clear mandate for conflict resolution through	This agency needs to develop post-license activities (i.e., production) to generate income for social forest license holders. This could be linked under benefit sharing mechanism of ERP to ensure that carbon

Institution	Responsibilities (under the ERP)	E&S Risk	Capacity Assessment for E&S	Recommendations
			PermenLHK No. 84/2015. • This agency has capacity for socialisation and FPIConsultation required in the safeguards for the ERP.	benefit can be received through social forestry mechanism.
MoEF's Law Enforcement Agency (Gakkum); Rasio Ridho Sani (Director General) rasiosani@yahoo.com	• Facilitate dispute resolution in forest estates **– Component 1, sub-component 1.1**	ENV: LOW SOC: MED	**Capacity assessment indicators:** • Permen LHK 18/2015 describes a clear mandate for this agency to conduct investigations, resolve complaints and conflicts. • The agencies operate through Regional Balai (Technical Implementing Unit). The numbers of the Balai offices and staffs therein are not sufficient to respond to all reports/cases. • The agency has strong track record of investigation and prosecution of environmental/forestry violations • There are systems in place to manage grievances/disputes/conflicts within the agency's mandates/authorities. • The systems are linked with other law enforcement agencies (e.g., police) and judicial system.	Collaboration with DG social forestry on conflict / dispute resolution in forest areas; Collaborate with Environmental Agency for environment-related disputes (e.g., pollution, waste management, etc.) Participation in enforcing timber legality verification to help prevent illegal logging
PROVINCIAL LEVEL				
Provincial Governor Office	• Facilitate and accelerate the signing and approval of the declaration to restore 640,000 ha of natural forests and 50,000 ha of peat land inside estate crop concessions by 2030 by the district governments – **Component 2, sub-component 2.2** • Lead implementation of Article 14 of East Kalimantan Regional Regulation No. 1/2015, which deals with reducing the number of conflicts between adat communities and the state, or	ENV: MED (in Ensuring Green Kaltim vision. Balancing developme nt and environmen t) SOC: MED	**Capacity assessment indicators:** • The agency has the mandate to support the provincial government in endorsing policies to support ERP (conflict resolution and indigenous people recognition). However, understanding of E&S risks may still need to be improved, and needs to be integrated in the Legal Bureau. This agency is potentially involved at policy level. • Track record of provincial governor to support emission reduction is seen in the Green Kaltim Vision. Further, governor's commitment to revoking unclear mining licenses Pergub 1/2018 can be	Building synergy and collaboration with legislative (DPRD) in order to produce stronger regulation (PERDA) to support Green Development vision

Institution	Responsibilities (under the ERP)	E&S Risk	Capacity Assessment for E&S	Recommendations
	companies **– component 1, sub-component 1.3** • **Stakeholder that will manage environmental and social risk at provincial level (policy)**		regarded as part of the track record. • East Kalimantan also promotes transparancy of information, including information on perfromance of provincial government and budget allocation. • System for handling conflict related to disturbances to estate plantation is in place. In general, East Kalimantan governor office supports monitoring and overseeing of corruption through corruption watch program under Inspectorate Division. Additionally, Agency for National & Political Integrity (Kesbangpol) also provides standard operating procedures for handling social conflicts. • This agency holds a convening power and credibility to engage with key stakeholders to manage the identified E&S risks in East Kalimantan Province.	
Provincial Secretary (SEKDA) Istiko Tauhid Jati (Economic Agency on Provincial Secretary) istikotauhidjati@yahoo.co.id	• Responsible for Implementation and achievement of ER Program in the Province • A member of Steering Committee • **Stakeholder that will manage environmental and social risk at provincial level (FGRM)**	ENV: LOW SOC: LOW (BUT HIGH RELEVANCE)	**Capacity assessment indicators:** • This agency has mandate to undertake activities related to governance and local autonomy in East Kalimantan. The legal bureau under the SEKDA is mandated to validate various regulations such as Governor's Decree (Pergub) and PERDA. • Infrastructure and Resources Bureau under SEKDA is responsible for coordinating policies related to energy and mineral resources. This includes responsibilities for ensuring policies fo managing E&S risks associated with mining, plantation and forestry sectors. • Bureau for Development administration will be relevant with planning, controling, and evaluating development activities (including ERP) • This agency may not have the adequate technical resources to address the identified E&S risks. Skills are possibly limited to development planning and monitoring, not to E&S risks specified in the ERP	Ensure capacity building for provincial staffs in E&S risk mitigation and safeguards Coordinate ERP implementations with DDPI across sectors (mining, plantation and forestry) Implement benefit sharing mechanism (as approved by MoF).

Institution	Responsibilities (under the ERP)	E&S Risk	Capacity Assessment for E&S	Recommendations
			safeguards. • This agency has been involved in synchronising provincial workplan and budget with those of provincial agencies, as well as ensuring that human resources are adequate to undertake provincial programs. Additionally, SEKDA also ensures that standard operation procedures for each provincial program are available. SEKDA supports the development of relevant regulations in East Kalimantan. These show examples of SEKDA's contribution to planning, operationalisation and legalising programs. • Although no specifid track record on managing E&S risks, some of the SOPs are relevant for resolving conflicts. • The agency does not hold a convening power and credibility to engage with key stakeholders to manage the identified E&S risks. This is done through governor's office and/or Bappeda.	
Provincial Forestry Service Rini Endah L Rini.endahlestari@gmail.com	• Review licenses, including revocation of non-clear and clear permit – **Component 1, sub-component 1.1.** • Accelerate social forestry licenses – **Component 1, sub-component 1.1.** • Facilitate land dispute resolution and provide mediation – **Component 1, sub-component 1.2** (through Forest Conflict Resolution Desk) • Facilitate assessment and recording of adat claims within the State Forest Area – **Component 1, sub-component 1.3** • Develop guidelines for management of HCV and RIL and capacity building –	ENV: MED SOC: SUBSTANTIAL/ HIGH	**Capacity assessment indicators:** • The agency has mandate to increase forest productivity (*pemasukan negara bukan pajak* – PNBP or non-tax state income). This income is generated from forestry licences and concession operation. Mandates on managing E&S risks may be included in management support for FMUs and Tahura. • Forestry agency possibily has limited resources to address the identified E&S risks (i.e. human, financial, skills/in-house expertise, system to monitor E&S risks). • Track record is seen in optimising revenue from forest concessions. There is an increase of forestry revenue in 2016-2017 from IDR 23 billions to IDR	Maintain intensive communication with MoEF regarding license revocation (moratorium) support Balai PSKL (social forestry) on etablishing social forestry licenses (socialisation & FPIC) through FMU. Provincial Forestry needs to develop post-license activities

Institution	Responsibilities (under the ERP)	E&S Risk	Capacity Assessment for E&S	Recommendations
	Component 1, sub-component 1.4 • Supervise the determination of FMU boundaries and forest utilization blocks – **Component 2, sub-component 1.2** • Support to the signing and approval of a declaration of commitment to sustainable estate crops, including the protection of remaining HCV forest areas **– component 3, sub-component 3.1** • Training on inventories and HCV management, including field guidance **– component 3, sub-component 3.1** • Management of HCV inventory data and monitoring of progress – **component 3, sub-component 3.1;** • Lead monitoring and facilitation of HCV protection in forestry concessions (IUPHHK-HT) – **component 3, sub-component 3.3;** • Provide facilitation and technical support, including capacity building for sustainable livelihoods initiatives, including integration of sustainable practices into village planning (i.e. swidden agriculture, paludiculture, mangrove management, smallholder oil palm cultivation, NTFP, etc.) – **component 4, sub-component 4.1;** • Lead empowerment of village institutions (village forest management agencies) and capacity building of community businesses (70		176 billions (target was IDR 32 billion). It is assumed that such optimisation complies with E&S risk mitigations practised within East Kalimantan Province (supported by NGOs). Provincial Forestry Agency also conducted organisational empowerment for agro-forestry groups. • Conflict resolution mechanism follows PermenLHK 84/2015 • The agency coordinates with central government representatives (BPHP, BPKH, MoEF), as well as with private companies holding the forest concessions and borrow-use licenses. Some E&S risks may be discussed when communicating with these agencies.	for social forestry groups. Provide capacity building for staffs to allow E&S risk mitigation and safeguards implementation Collaborate/link with SEKDA on FGRM

Institution	Responsibilities (under the ERP)	E&S Risk	Capacity Assessment for E&S	Recommendations
	business plans developed by 2024) **– component 4, sub-component 4.2** • Facilitate formulation and facilitation of the community and village program and training (in 50 villages) - **– component 4, sub-component 4.2** • Provide coaching and mentoring for the implementation of work plans and business plans **– component 4, sub-component 4.2** • **Stakeholder that will manage environmental and social risk at provincial level (implementation)**			
FMUs Rini Endah L Rini.endahlestari@gmail.com	• Facilitate the acceleration of social forestry licenses – **Component 1, sub-component 1.1.** • Facilitate assessment and recording of Adat claims within the State Forest Area – **Component 1, sub-component 1.3** • Lead determination of FMU boundaries and forest utilization blocks – **Component 2, sub-component 1.2** • Lead monitoring of RIL/RIL C – **component 3, sub-component 3.3;** • Provide facilitation and technical support, including capacity building for sustainable livelihoods initiatives, including integration of sustainable practices into village planning (i.e. swidden agriculture, paludiculture, mangrove management, smallholder oil palm cultivation, NTFP, etc.) –	ENV: MED SOC: SUBSTANTIAL/ HIGH	**On a sample basis (FMU Berau Barat as a Model FMU)** **Capacity assessment indicators:** • Based on Government Regulation No.6/2007, FMU has clear mandate on forest management, utilisation, protection and conservation. In fulfilling this mandate, FMU will need to address environmental and social risks associated with forest utilisation. FMU is mandated to help resolve conflicts and overlapping claims that threaten forest function. Capacity for addressing E&S risks may need to be improved. • Berau Barat FMU has been involved in REDD+ / emission reduction programs. Its key function supports implementation of MRV and keeping track with the SIS-REDD+ safeguard information system. Additionally, implementation of sustainable production forest and forest conservation has provided contribution for climate change adaptation strategy. Berau Barat FMU was chosen as demonstration activity for REDD+ (Forclime	FMU Berau Barat has been facilitated by TNC, so this experience needs to be optimised for dedicated RIL implementation Collaborate with BPSKL to set up business plans for social forest groups in the vicinity of the FMU area. Collaborations may include socialisation and FPIC for ERP Link with SEKDA and Province Forest Agency on FGRM

Institution	Responsibilities (under the ERP)	E&S Risk	Capacity Assessment for E&S	Recommendations
	component 4, sub-component 4.1; • Lead empowerment of village institutions (village forest management agencies) and capacity building of community businesses (70 business plans developed by 2024) **– component 4, sub-component 4.2** • Facilitate formulation and facilitation of the community and village program and training (in 50 villages) - **– component 4, sub-component 4.2** • Provide coaching and mentoring for the implementation of work plans and business plans **– component 4, sub-component 4.2** • **Stakeholder that will manage environmental and social risk at field level (implementation)**		Program) and Sustainable Production Forest. • Conflict resolution mechanism follows PermenLHK 84/2015 • FMU Berau Barat has convened with BPDAS, BP2HP and local communities to conduct socialisation of social forestry schemes. No records of FPIC done by FMU Berau Barat.	
Provincial Estate Crop Service Ir. Ujang Rachmad, M.Si; Head of Provincial Estate Crops (0541) 736852	• Review licenses, including revocation of non-clear and clear permit – **Component 1, sub-component 1.1.** • Facilitate land dispute resolution and provide mediation – **Component 1, sub-component 1.2** (through an integrated team to resolve plantation conflicts) • Lead consultation process with district governments and with private companies **– component 2, sub-component 2.2** • Provide training on inventories and HCV management, including field guidance **– component 3, sub-component 3.1**	ENV: HIGH SOC: SUBSTANTIAL/ HIGH	**Capacity assessment indicators:** • The agency has the mandate to design and implement programs related to increasing productivity of estate plantations. Such mandate also includes conflict resolution (disturbances to plantation activities). This agency sets up a task force for conflict resolution. • The agency has financial and human resources (task force) to address the identified E&S risks. Limitations may be observed in capacity for HCV, CBFFM and sustainable plantation in general. • In 2017, the agency has implemented programs related to conflict resolutions, emission reduction program, land and water conservation, fire prevention and introduction of bio-pesticides. • This agency has a system for handling and resolving	Collaborate with NGO for HCV, RSPO implementation in estate crop plantation. Increase staff capacity for sustainable palm oil plantation, HCV, RSPO and ISPO Collaborate/link with SEKDA on FGRM

Institution	Responsibilities (under the ERP)	E&S Risk	Capacity Assessment for E&S	Recommendations
	• Facilitate management of HCV inventory data and monitoring of progress – **component 3, sub-component 3.1** • Develop standard operation procedures (SOP) for Community Based Fire Management and Monitoring Systems (CBFMMs), facilitation for capacity building, monitoring during implementation – **component 3, sub-component 3.2;** • Facilitate community capacity building on CBFMMS - **component 3, sub-component 3.2;** • Facilitate partnerships between large estate crop companies and local communities in controlling forest and land fires - **component 3, sub-component 3.2;** • Facilitate the development of community groups for fire prevention - **component 3, sub-component 3.2;** • Provide facilitation and technical support, including capacity building for sustainable livelihoods initiatives, including integration of sustainable practices into village planning (i.e. swidden agriculture, paludiculture, mangrove management, smallholder oil palm cultivation, NTFP, etc.) – **component 4, sub-component 4.1** • **Stakeholder that will manage environmental and social risk at provincial level (FGRM, Sustainable**		conflicts specific for plantation sector • The agency holds a convening power and credibility to engage with key stakeholders consisting of plantation companies and local communities to manage the identified E&S risks.	

Institution	Responsibilities (under the ERP)	E&S Risk	Capacity Assessment for E&S	Recommendations
	estate crop)			
Provincial Mine and Energy Service Ir. H. Wahyu Widhi Heranata, MP; dishut.kaltim@gmail.com	• Review licenses, including revocation of non-clear and clear permit – **Component 1, sub-component 1.1.**	ENV: HIGH SOC: HIGH	**Capacity assessment indicators:** • This agency has mandate for revoking non-clean and clear permits. Mandates for addressing environmental risks are included in the monitoring to ensure rehabilitation and revegetation. • The agency has budget allocation (provindial budget) and personnel to carry out the abovementioned mandates. The capacity for addressing social risks may be limited. • In 2017 this agency managed revocation of 80% of non-clean and clear mining permit areas. This agency also shows track record in evaluating environmental and social performace of mining companies (PROPER system) • Systems for resolving grievances/disputes/conflicts within mining concessions are available from Environmental Agency. • The agency holds a convening power and credibility to engage with mining companies / concession holders to manage the identified E&S risks.	Collaborate with Environmental Agency for grievance mechanism and conflict resolution. Collaborate with governor's office and Provincial Investment and Licensing Integrated Service to implement license revocation Collaborate with SEKDA on FGRM
The Provincial Investment and Licensing Integrated Service (DPMPTSP)	• Lead policy review processes to strengthen information management and documentation related to land-use licensing process – **Component 1, sub-component 1.1.**	ENV: LOW SOC: LOW	General capacity assessment This agency has mandate for monitoring and controlling investment in East Kalimanta Province (including mining and plantation licenses).	Support Energy and Mining, Plantation and Environmental agencies in reviewing licences prior to revocations
Provincial Community Empowerment and Village Government Service Surono (secretary of bureau) Surono.kaltim@gmail.com	• Facilitate community training and development of village planning guidelines **– Component 1, sub-component 1.4;** • Provide facilitation and technical support, including capacity building for sustainable livelihoods initiatives,	ENV: LOW SOC: LOW (BUT HIGH RELEVANCE)	**Capacity assessment indicators:** • This agency has mandate for empowering people and village administration. This is relevant with ERP component aiming for establishing alternative livelihood. Such empowerment includes organisational and economic development. • This agency does not indicate adequate resources to	Collaborate with BPSKL (Forestry sector on social forestry) Collaborate with Coastal and Fishery

Institution	Responsibilities (under the ERP)	E&S Risk	Capacity Assessment for E&S	Recommendations
	including integration of sustainable practices into village planning (i.e. swidden agriculture, paludiculture, mangrove management, smallholder oil palm cultivation, NTFP, etc.) – **component 4, sub-component 4.1**		address and monitor the identified E&S risks (i.e. human, financial, skills/in-house expertise, system to monitor E&S risks). Resources are limited to program monitoring and capacity building on community empowerment, facilitation and program implementation. • In 2017 track record of this agency included validation of Standard Operating Procedure (SOP) for community empowerment and capacity building. Focus of intervention of this agency was to ensure strong governance, administration and financial management of village authorities. • This agency encourages implementation of participatory planning where community representatives can convey ideas and concerns during village development planning • The agency holds a convening power and credibility to engage with key stakeholders and to manage the identified E&S risks at village level.	service on aquaculture
Provincial Coastal and Fisheries Service Ir. Riza Indra Riadi, MSi; Head (0541) 7779423,760304, Fax. 7779424, 760303	• Provide facilitation and technical support, including capacity building for sustainable livelihoods initiatives, including integration of sustainable practices into village planning (i.e. swidden agriculture, paludiculture, mangrove management, smallholder oil palm cultivation, NTFP, etc.) – **component 4, sub-component 4.1**	ENV: MED (eflluent from aquaculture practices) SOC: LOW (BUT MAY BE HIGH RELEVANCE)	**Capacity assessment indicators:** • The agency has mandate for improving productivity from fishery, including from aquaculture. However, capacity to manage the identified E&S risks may still be limited. • This agency has implemented programs related to improving aquaculture productivity and provision of fishery seeds. No track record is seen on E&S risk management done by this agency. • The agency does not hold a convening power, except credibility to engage with key stakeholders relevant with fishery sector.	Collaborate with Provincial Community Empowerment and Village Government Service to empower communities for aquaculture Collaborate with NGOs for relevant E&S risk identification and mitigation

Institution	Responsibilities (under the ERP)	E&S Risk	Capacity Assessment for E&S	Recommendations
				Link with Bappeda for inter-agency / cross-sectoral coordination
Working group on social forestry	• Facilitate the acceleration of social forestry licenses – **Component 1, sub-component 1.1.;** • Lead empowerment of village institutions (village forest management agencies) and capacity building of community businesses (70 business plans developed by 2024) **– component 4, sub-component 4.2** • Facilitate formulation and facilitation of the community and village program and training (in 50 villages) - **– component 4, sub-component 4.2** • Provide coaching and mentoring for the implementation of work plans and business plans **– component 4, sub-component 4.2**	ENV: MED SOC: LOW (BUT HIGH RELEVANCE)	**Capacity assessment indicators:** • The agency has no formal mandate, but are involved in addressing E&S risk, specifically tenurial conflicts. • The agency has strong capacity for promoting social forestry licenses. Work on the ground is done under the direction of the Balai (Technical Implementing Unit) and DG Social forestry • Strong track records in establishing social forestry licenses, but requires stronger concept for post-license activities • This institution may adopt conflict resolution justified by PermenLHK No. 84/2015. • This agency has capacity for socialisation and FPIConsultation required in the safeguards for the ERP.	This institution requires resources to conduct capacity building/mentoring for local communities
The Economic Bureau of the Governor's Office Istiko Tauhid Jati (Economic Agency on Provincial Secretary) istikotauhidjati@yahoo.co.id	• Facilitate regulatory development and policy processes for dispute resolution – **Component 1, sub-component 1.1.**	ENV: LOW SOC: MED	**Capacity assessment indicators:** • This agency has mandate for developing regional production and natural resources. Specific mandate is on coordinting economic improvement from forestry and plantation sector. There is no explicit mandate for conflict resolution, but in East Kalimantan this institution is working on a centralised system for dispute resolution (hub for forestry, plantation and mining sectors). Understanding to manage E&S risks will be combination from all three sectors. • Currently, no dedicated resources are available to address the identified E&S risks (i.e. human,	Possibility for coordinating/organising FGRM system across sectors (plantation, forestry and mining/environment agencies)

Institution	Responsibilities (under the ERP)	E&S Risk	Capacity Assessment for E&S	Recommendations
			financial, skills/in-house expertise, system to monitor E&S risks) • This institution is responsible for developing standard operating procedures for program design, implementation and monitoring/evaluation (specifically related to economic development). No specific experience in E&S risk identification and management is observed • There is no grievance system attributed directly to this agency, but sector agencies (forestry, plantation and mining) work in coordination with this agency in the context of conflict / dispute resolution. • The agency holds a convening power and credibility to engage with key stakeholders to manage the identified E&S risks relevant with provincial economy.	
Provincial Environment Service (Dinas Lingkungan Hidup) Ir. Nursigit; Head of Provincial Environment Service (0541) 732443	• Oversee FREL and MMR; • ER Program implementation; • Oversee management of environmental safeguards • **Stakeholder that will manage environmental and social risk at provincial level (plantation and mining sectors)**	ENV: LOW SOC: LOW (BUT HIGH RELEVANCE)	**Capacity assessment indicators:** • The agency has clear mandate and understanding to manage the identified E&S risks, especially those related to natural resource management, emission reduction and pollution control. • The agency has adequate resources to address the identified E&S risks (provincial budget and division for addressing complaints/grievances. • Performance in 2017 shows programs related to waste management & disposal; natural resource protection; sustainable use of natural resourel mangrove information centre; prevention and control of damage to environment; PROPER assesment for forestry, mining and plantation sectors; climate change adaptation and mitigation (including emission reduction and MRV); Strategic Environmental Assessment (SEA); and monitoring of environment quality.	Capacity building on Safeguards and E&S risks management Integrate Safeguards and E&S risks management in PROPER (Gold) Link/collaborate with SEKDA on FGRM

Institution	Responsibilities (under the ERP)	E&S Risk	Capacity Assessment for E&S	Recommendations
			• This agency operates a "Posko" or division for handling and resolving environmental conflicts/disputes • The agency holds a convening power and credibility to engage with key stakeholders (i.e., private companies) to ensure environmental compliance.	
Provincial Planning Board (BAPPEDA) East Kalimantan Province Dr. Ir. H. Zairin Zain, M.Si (Head) +62 541 741044; humasbappedakaltim@gmail.com	• Coordinate all activities performed by OPD (Provincial Agencies) in relation to ER program	ENV: MED SOC: HIGH	General capacity assessments BAPPEDA has the mandate for coordinating development planning process (*Musyawarah Perencanaan Pembangunan* – Musrenbang). Specific aspects relevant for the ERP are natural resource and environmental; improving agriculture sector; and mainstreaming climate change and green economy. The BAPPEDA has convening power to ensure cross-sectoral coordination throughout planning process and subsequent implementation.	Ensuring proper coordination in implementation of ERP as part of the provincial development planning. This include assignment to relevant agencies and ensuring budget allocation to carry out the programs.
The Regional Council on Climate Change (DDPI) Prof. Daddy Ruhiyat, Executive Director daddyruhiyat@yahoo.com daddyrumbia68@gmail.com	• Provide advice and inputs to local government in relation to ER Program • Serve as a Member of Steering Committee • **Stakeholder that will coordinate environmental and social risk management at provincial level**	ENV: LOW SOC: MED	**General capacity assessment** • The council was established through the decree from Governor of East Kalimantan. The mandate is to carry out (lead) interventions for climate change adaptation and mitigation in East Kalimantan. • DDPI's roles include coordinating relevant sectors, academics, NGOs and agencies during implementation of ERP	Active in steering committee and active in coordinating ERPimplementing units
Kantor Wilayah – Provincial Land Agency and Spatial Plan	• Providing recommendation for HGU (estate crop plantation) in other use area; • Contributing to plantation licensing process	ENV: TBD SOC: LOW	General capacity assessment • Provincial land agency / Kantor Wilayah is responsible for ensuring compliance with provincial spatial plan; • Coordination of management and budgeting of district offices (kantor tanah); • Coordinating land surveys and measurements in	Consult with mining and forestry sectors prior to licensing recommendations;

Institution	Responsibilities (under the ERP)	E&S Risk	Capacity Assessment for E&S	Recommendations
			line with land use stated in the spatial plan.	
DISTRICT LEVEL				
District Governments (Bupati's office – tbc)	• Facilitate establishment of Adat Law Communities **– component 1, sub-component 1.3** • Assessment and recording of adat claims within the State Forest Area – **Component 1, sub-component 1.3;** • Support to the signing and approval of a declaration of commitment to sustainable estate crops, including the protection of remaining HCV forest areas **– component 3, sub-component 3.1**	ENV: MED SOC: MED	**On a sample basis (Berau and Mahakam Ulu[74])** Berau District is considered more advanced from political, institutional, regulatory, and social-gender aspects compared to Mahakam Ulu District. This should provide good compilation for institutional analysis. **Capacity assessment indicators:** • The agency has mandate to ensure transparency in the process of development planning (including consultation process required in developing district regulations or Perda). Berau District has strong transparency policies where performance of district government is published from district's official website. There is information on indigenous land rights, but the legitimacy still needs to be strengthened /accommodated in the District regulation (Herbarina & Sina, 2013). In 2013, there is a draft local regulation (RAPERDA) to accommodate customary law, but there is no records of its implementation. Mahakam Ulu District has shown a commitment to transparency, but it has not been well established and it has not been supported by relevant local regulations (PERDA). Mahakam Ulu District government has used indigenous laws and knowledge to resolve conflicts among community members. Customary laws are specifically addressed in the green economy strategic plan 2014. Mahakam Ulu has the potential to develop hutan adat (customary forests) through	Improvement of transparency is needed Policies to support green development (e.g., sustainable plantation, forestry and mining practices) need to be strengthened Support recognition of indigenous people through district's regulation (PERDA)

[74] Based on District Readiness Assessment conducted in 2014

Institution	Responsibilities (under the ERP)	E&S Risk	Capacity Assessment for E&S	Recommendations
			implementation of green economy programs. • Berau and Mahakam Ulu districts follows regulations/safeguards related to environment, social and human health for any development related to natural resources management and community livelihood. In Berau there are at least two local district regulations related to environment, and there is a mechanism for resolving conflicts within the BLHD office. The environmental office also has the capacity to review and approve EIAs for development. In Mahakam Ulu there are no local district regulations related to environmental and social standards. There are proposed guidelines for environmental and livelihood safeguards integrated in action plans for green economy. • In Berau District, previous REDD+ related programs (supported by GIZ/FORCLIME, TNC and TFCA Kalimantan) provide a baseline for green economy development which provides local community and local government officials with exposures to land-use and forestry issues. In Mahakam Ulu, WWF has been actively improving local capacity by providing training on HCVF, carbon stock assessment, Reduced Impact Logging (RIL) and various natural resource assessments.. • Bupati's office holds a convening power and credibility to engage with key stakeholders to manage the identified E&S risks	
District/City Secretary	• Responsible for Implementation and achievement of ER Program in the District and Field Site	ENV: LOW SOC: LOW	**On a sample basis (Berau & Mahakam Ulu)** • In Berau, the district relies heavily on support from donor agencies in implementing low carbon economy in the forestry sector. Therefore, there is a	SEKDA needs to increase and improve its roles in coordinating the implementation of

Institution	Responsibilities (under the ERP)	E&S Risk	Capacity Assessment for E&S	Recommendations
			risk of reversals if donors reduce/eliminate their support for implementation, monitoring and evaluation of the ongoing programs. • Despite the lack of formal development plans, the commitment in Mahakam Ulu District is translated into plans for a green economy through renewable energy development in areas far from the grid. Implementation in the field also indicates that Mahakam Ulu seriously considers renewable energy and natural resources management as a strategic program for sustainable development in the district.	ER program
District BAPPEDA • Ir. M. Gazali, S.IP.MM; Head of BAPPEDA Berau District • Ir.H. Achmad Sofyan, MM ; Head of BAPPEDA District Kutai Barat • Drs. Alimuddin, M.Si; Head of Bappeda Penajam Pasir Utara • Ir. I Gusti Putu Suantara; Head of BAPPEDA Paser • Ir. H. Sumarjana, MP; Head of BAPPEDA Kutai Timur District; • Wiyono, S.IP., M.Si; Head of BAPPEDA Kutai Kartanegara District • Drs. Stephanus Madang, MSi; Head of BAPPEDA	• Coordinate all activities performed by OPD (district agencies) in relation to ER program at District/City level	ENV:MED SOC: LOW	**On a sample basis (Berau & Mahakam Ulu)** • In Berau District, all related organization has their own strategic plan and it is linked with the district midterm and long term development plan. Similar planning process is also implemented at village level in form of RPJMDes (Village medium term development plan). • Although no specific strategic plan is available for the sector agencies in Mahakam Ulu District, collaboration among these sector agencies seem to be working well and seem to be based on mutual understanding.	Formal coordination throughout implementation of ERP will be needed

Institution	Responsibilities (under the ERP)	E&S Risk	Capacity Assessment for E&S	Recommendations
Mahulu District; • Ir. Zulkifli, MS; Head of BAPPEDA Bontang; • Ir. Nining Surtiningsih; Head of BAPPEDA Balikpapan; • Dr. H. Asli Nuryadin; Head of BAPPEDA Samarinda City				
District Community Empowerment and Village Government Service (DPMPD);	• Facilitate community training and development of village planning guidelines **– Component 1, sub-component 1.4;** • Provide facilitation and technical support, including capacity building for sustainable livelihoods initiatives, including integration of sustainable practices into village planning (i.e. swidden agriculture, paludiculture, mangrove management, smallholder oil palm cultivation, NTFP, etc.) – **component 4, sub-component 4.1**	ENV: LOW SOC: MED (BUT HIGH RELEVANCE)	**On a sample basis (Berau & Mahakam Ulu)** **Capacity assessment indicators:** • The agency has mandate to support participatory planning and capacity development process. No explicit mandate to manage the identified E&S risks. • This agency has resources for community development and community planning process. Specific resources to address the identified E&S risks are not observed. • Does the agency in question hold a convening power and credibility to engage with village officials to manage the identified E&S risks.	Increased coordination linking district agencies with village authorities thorughour ERP implementation. Capacity building for village authorities to ensure proper ERP implementation and application of FGRM
District Estate Crops Service	• Facilitate community capacity building on CBFMMS - **component 3, sub-component 3.2;** • Facilitate partnerships between large estate crop companies and local communities in controlling forest and land fires - **component 3, sub-component 3.2;** • Facilitate the development of community groups for fire prevention - **component 3, sub-component 3.2;**	ENV: HIGH SOC: SUBSTANTIAL /HIGH	**On a sample basis** **Capacity assessment indicators:** • The agency has the mandate to implement programs related to increasing productivity of estate plantations. • The agency has limited financial and human resources (task force) to address the identified E&S risks. Limitations may be observed in capacity for HCV, CBFFM and sustainable plantation in general. • Under the green economy scheme, Mahakam Ulu reviewed existing licenses and will developed	Capacity improvements on sustainable plantation and FGRM Close coordination with Land agency and licensing agencies concerning issuance of HGU and plantation permit to encourage

Institution	Responsibilities (under the ERP)	E&S Risk	Capacity Assessment for E&S	Recommendations
	• Provide facilitation and technical support, including capacity building for sustainable livelihoods initiatives, including integration of sustainable practices into village planning (i.e. swidden agriculture, paludiculture, mangrove management, smallholder oil palm cultivation, NTFP, etc.) – **component 4, sub-component 4.1;** • Facilitate supervision and evaluation of ISPO implementation by smallholders – **component 4, sub-component 4.1;** • **Stakeholder that will manage environmental and social risk at district level (FGRM, Sustainable estate crop)**		regulations to ensure sustainability of natural resources when issuing new permits/licenses. This is applied for palm oil, logging, forest plantations and mining companies. • This agency referes to a system for handling and resolving conflicts specific for plantation sector at provincial level • The agency holds a convening power and credibility to engage with key stakeholders consisting of plantation companies and local communities to manage the identified E&S risks.	sustainable plantation
SUB-DISTRICT LEVEL				
Sub-district governments	• Facilitate assessment and recording of adat claims within the State Forest Area – **Component 1, sub-component 1.3**	ENV: LOW SOC: LOW	On a sample basis (Berau and Mahakam Ulu) In Berau District there is an indication of development planning process in some villages used to justify village budget (ADD). The Mahakam Ulu District government is strengthening its institution, including support for low level government offices.	Capacity improvements related to FGRM
Kantor Pertanahan Kabupaten – District Land Agency and Spatial Plan	• Providing recommendation for HGU (estate crop plantation) in other use area; • Contributing to plantation licensing process	ENV: TBD SOC: LOW	General capacity assessment • Provincial land agency / Kantor Wilayah is responsible for ensuring compliance with provincial spatial plan; • Management and budgeting of district offices (kantor tanah); • Conducting land surveys and measurements in line with land use stated in the spatial plan.	• Consult with mining and forestry sectors prior to licensing recommendations; • Consult with

Institution	Responsibilities (under the ERP)	E&S Risk	Capacity Assessment for E&S	Recommendations
				provincial land agency (*Kantor Wilayah*)
VILLAGE LEVEL				
Village governments	• Implement ER activities • Facilitate assessment and recording of adat claims within the State Forest Area – **Component 1, sub-component 1.3** • Lead integration of emission reduction activities into village development plans. which will support communities in integrating REDD+ activities into village spatial and development plans **– Component 1, sub-component 1.4** • Allocate village funds for the implementation of REDD+ activities – **Component 4, sub-component 4.1** • **Stakeholder that will implement social (and environmental) risk management at field/implementation level**	ENV: HIGH SOC: MED	**On a sample basis (Merabu Village in Kelay Sub-District, Berau District)** **Capacity assessment indicators:** • An example is Merabu Village in Kelay Sub-District (population 176) that already shows the process of developing the RPJM Des (Village mid-term development plan). This process is adopted from the same process at district and provincial levels. • Village government have experiences to facilitate the integration of national and provincial government into the village government development plan. In addition, village government have experience to prevent and to mediate the social conflict at the village level. Yet, the capacity is still need to improved particularly related with the ER program and FGRM mechanism. •	Capacity improvements related to ERP implementation, including FGRM
Palm oil smallholder	• Implement ER activities-**Component 3, sub-component 3.2 and Component 4, sub-component 4.1.**	ENV: HIGH SOC: MED	Palm oil smallholders have limited financial, technical and institutional resources not only to implement the sustainable practices but also to deal with the potential Environmental and Social risk.	Training and assistance are needed to enhance the capacity of palm oil smallholders.
NON-GOVERNMENT				
Development partners: • TNC	• Facilitate, community training and development of village planning	ENV: LOW	**Key development partners**	Support and facilitation from

Institution	Responsibilities (under the ERP)	E&S Risk	Capacity Assessment for E&S	Recommendations
Saipul Rahman, Berau Program Senior Manager, +62 811 1637846, srahman@tnc.org • TFCA • WWF Zulfira Warta, REDD+ Project Coordinator, WWF Indonesia, zwarta@wwf.or.id, +628121250127 • GGGI Benjamin Tular benjamin.tular@gggi.org	guidelines **– Component 1, sub-component 1.4** • Provide facilitation and technical support, including capacity building for sustainable livelihoods initiatives, including integration of sustainable practices into village planning (i.e. swidden agriculture, paludiculture, mangrove management, smallholder oil palm cultivation, NTFP, etc.) – **component 4, sub-component 4.1** • **Support for environmental and social risk management**	SOC: LOW	Various programs are implemented by international donors in Berau District, including: • GIZ/FORCLIME (funded by KfW, a German development bank) to support the forestry management (KPH) and REDD taskforce to link with Heart of Borneo (HoB) program. • TNC is supporting the REDD Task Force through Berau forest carbon (karbon hutan berau) using community awareness approach. TNC is also supporting the Department of Forestry through ongoing HCV assessment programs • TFCA Kalimantan is also providing support for Berau forest carbon program administered under KEHATI Foundation in cooperation with TNC and WWF. In Mahakam Ulu, activities conducted by NGOs include: • WWF in green economy development and land sustainability are in line with the focus of ERP. • TFCA Kalimantan has started its involvement in the development of the district (forest carbon). Global Green Growth Institute (GGGI) has provided support for: • Upscaling FMU (business planning and community forestry); and • Preparing sub-national government for emission reduction.	NGOs are needed to ensure effective implementation of ERP at provincial and district levels.
Academics/universities • Prof. Deddy Hadriyanto Centre for Climate Change Studies (C3S) • Dr. Fadjar Pambudhi CSF (Centre for Social	• Training on inventories and HCV management, including field guidance **– component 3, sub-component 3.1** • Provide facilitation and technical support, including capacity building for sustainable livelihoods initiatives, including integration of sustainable practices into village planning (i.e.	ENV: LOW SOC: LOW	Academics have provided support for various studies and assessment (e.g. social forestry, biodiversity and cultural studies). Furthermore, academics have been actively involved in the development of ERPD. Therefore, academics are well versed in all aspects of the ER.	Continuing support from academics needs to be maintained throughout ERP implementation. This can be done through facilitation and

Institution	Responsibilities (under the ERP)	E&S Risk	Capacity Assessment for E&S	Recommendations
Forestry) fadjarpambudhi@yahoo.com	swidden agriculture, paludiculture, mangrove management, smallholder oil palm cultivation, NTFP, etc.) – **component 4, sub-component 4.1** • **Technical support for environmental and social risk management**			coordination from DDPI
Private companies/concession holders Wayan Sujana (APHI) MS. Djafar (GAPKI)	• Facilitate CBFMMS, including monitoring for implementation - **component 3, sub-component 3.2;** • restore 640,000 ha of natural forests and 50,000 ha of peat land inside estate crop concessions – **component 2, sub-component 2.2** • Implement HCV policy and monitor HCV inside concessions - **component 3, sub-component 3.1;** • Facilitate communities in controlling forest and land fires - **component 3, sub-component 3.2;** • Facilitate the development of community groups for fire prevention - **component 3, sub-component 3.2;** • Provide capacity building for the groups (community-based fire management and monitoring system (CBFMMS) - **component 3, sub-component 3.2;** • Provide technical assistance and training for fire prevention and control by smallholders and relevant equipment for smallholders - **component 3, sub-component 3.2;** • Implementation and monitoring of HCV and RIL policies - **component 3,**	ENV: HIGH SOC: SUBSTANTIAL/ HIGH	Key private sector entities to be engaged **Capacity assessment indicators:** • Companies (forestry, plantations and mining) are required to comply with environmental regulations mandated in the environmental permit. Environmental impact assessment and environmental management plan are required prior to the operation of these companies. • Some companies have environmental and corporate social responsibilities departments to address the identified E&S risks. • Private companies such as Berau Coal have implemented their own CSR programs. Berau district has MOUs with those external organizations to more quickly meet its development goals and targets. • These companies normally set up grievances/disputes/conflicts according to the company policy. • The companies do not normally hold a convening power and credibility to engage with key stakeholders to manage the identified E&S risks. The companies may invite relevant government agencies, NGOs and consultants to help managed the said E&S risks.	Capacity improvements and implementation of Sustainable Forest Management, HCV, RIL and other relevant safeguard instruments

Institution	Responsibilities (under the ERP)	E&S Risk	Capacity Assessment for E&S	Recommendations
	sub-component 3.3;			