



STRATEGIC ENVIRONMENTAL AND SOCIAL ASSESSMENT (SESA)

JAMBI SUSTAINABLE LANDSCAPE MANAGEMENT PROGRAM (J-SLMP) - INDONESIA

BioCarbon Fund Initiative for Sustainable Forest Landscapes

October 2022, Updated Version

**Directorate of Climate Change Mitigation
Directorate General of Climate Change
Ministry of Environment and Forestry
Republic of Indonesia**

Disclaimer: a final draft of the Strategic Environmental and Social Assessment (SESA) will be disclosed prior to the appraisal of the Jambi Emission Reduction Program (ERP) and concluded prior to signing of an Emission Reductions Payment Agreement (ERPA).

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E. LIST OF ACRONYMS

AFOLU	<i>Agriculture, Forestry and Other Land Use</i>
AMAN	<i>Aliansi Masyarakat Adat Nusantara</i> (Indigenous Peoples' Alliance of the Archipelago)
AMDAL	<i>Analisis Mengenai Dampak Lingkungan</i> (Environmental Impact Assessment)
APBD	<i>Anggaran Pendapatan Belanja Daerah</i> (Regional Government Budget)
APBN	<i>Anggaran Pendapatan Belanja Nasional</i> (State Budget)
APL	<i>Area Penggunaan Lain</i> (non-forest areas)
ATR/BPN	<i>Kementerian Agraria dan Tata Ruang/Badan Pertanahan Nasional</i> (Ministry of Agrarian Affairs and Spatial Planning/National Land Agency)
Bank	The World Bank
BAU	Business as Usual
BI	Bank Indonesia
BKSDA	Balai Konservasi Sumber Daya Alam (Regional Office for Natural Resources Conservation)
BLU	<i>Badan Layanan Umum</i> (Public Service Agency)
BMP	Best Management Practice
BP	Bank Policy (of the World Bank on environmental and social safeguards)
BPDASHL	<i>Balai Pengelolaan Daerah Aliran Sungai dan Hutan Lindung</i> (Regional Office of Watershed and Protected Forest Management, under MoEF)
BPSKL	<i>Balai Perhutanan Sosial dan Kemitraan Lingkungan</i> (Regional Office on Social Forestry and Environmental Partnership)
BRGM	<i>Badan Restorasi Gambut dan Mangrove</i> (Peatland and Mangrove Restoration Agency)
BSM	Benefit Sharing Mechanism
CBFMMS	Community-Based Fire Management and Monitoring System
CO ₂	Carbon Dioxide
CO ₂ e	Carbon Dioxide Equivalent
COP13	Thirteenth Session of the Conference of the Parties (of the United Nations Framework Convention on Climate Change)
CSF	Center for Social Forestry
CSO	Civil Society Organization
DG	Directorate General
DG PPI	<i>DG Pengendalian Perubahan Iklim</i> (DG of Climate Change)
DNS	Debt for Nature Swap
DPMD	<i>Dinas Pemberdayaan Masyarakat dan Desa</i> (Office for Community Empowerment and Village)
DPMPD	<i>Dinas Pemberdayaan Masyarakat dan Pemerintahan Desa</i> (Office for Community Empowerment and Village Government)
DPMPSTP	<i>Dinas Penanaman Modal dan Pelayanan Terpadu Satu Pintu</i> (Office of Investment and Integrated One-stop Service)
EbA	Ecosystem-based Approach
ER	Emissions Reductions
ERP	Emissions Reduction Program

ERPD	Emission Reduction Program Document
ERPIN	Emission Reduction Program Idea Note
ESMF	Environmental and Social Management Framework
FCPF	Forest Carbon Partnership Facility
FGD	Focus Group Discussion
FGRM	Feedback and Grievance Redress Mechanism
FMT	Facility Management Team
FMU	Forest Management Unit
FORDIA	Forestry Research, Development, and Innovation Agency
FORCLIME	Forests and Climate Change Programme
FPIC	Free, Prior and Informed Consent
F-REL	Forest Reference Emission Level
GCF	Governor's Climate and Forests Task Force
GFW	Global Forest Watch
GGGI	Global Green Growth Institute
GHG	Greenhouse gas
Gol	Government of Indonesia
GDP	Gross Domestic Product
ha	Hectares
HCV	High Conservation Value
HCVF	High Conservation Value Forest
HGU	<i>Hak Guna Usaha</i> (cultivation rights title)
HKm	<i>Hutan Kemasyarakatan</i> (Community Forest)
HTI	<i>Hutan Tanaman Industri</i> (Industrial Forest)
HTR	<i>Hutan Tanaman Rakyat</i> (Community plantation forest)
IBA	Important Biodiversity Area
IMN	Impartial Moderator Network
INCAS	Indonesia National Carbon Accounting System
IPCC	Intergovernmental Panel on Climate Change
IPM	Integrated Pest Management
IPPF	Indigenous Peoples Planning Framework
ISFL	BioCarbon Initiative for Sustainable Forest Landscape
ISO	International Organisation for Standardization
ISPO	Indonesian Sustainable Palm Oil
IUPHHK-HA	<i>Izin Usaha Pemanfaatan Hasil Hutan Kayu - Hutan Alam</i> (Concession for Natural Forest)
IUPHHK-HT	<i>Izin Usaha Pemanfaatan Hasil Hutan Kayu - Hutan Tanaman</i> (Timber Plantation Concession)
KAT	<i>Komunitas Adat Terpencil</i> (Isolated Indigenous Community)
Kawasan hutan	Forest areas, areas designated as forests by MoEF
KBA	Key Biodiversity Areas
KBK	<i>Kawasan Budidaya Kehutanan</i> (forest area for non-protection purposes)

KCFP	Kalimantan Climate and Forest Partnership
KLHS	<i>Kajian Lingkungan Hidup Strategis</i> (Strategic Environmental Assessment)
KPH	<i>Kesatuan Pengelolaan Hutan</i> (Forest Management Unit)
MAR	Monitoring, Analysis and Reporting
MHA	<i>Masyarakat Hukum Adat</i> (Customary Community)
MoEF	Ministry of Environment and Forestry
MoF	Ministry of Finance
MOLA	Multi Objective Land Allocation
mt	Metric Tonnes
NDC	Nationally Determined Contribution
NEK	<i>Nilai Ekonomi Karbon</i>
NFMS	National Forest Monitoring System
NGO	Non-Governmental Organization
NTFP	Non-Timber Forest Product
OP	Operational Policies
P3SEKPI	<i>Pusat Penelitian dan Pengembangan Sosial, Ekonomi, Kebijakan dan Perubahan Iklim</i> (Research Center for Social Affairs, Economics, Policy and Climate Change)
PAD	<i>Pendapatan Asli Daerah</i> (Provincial/District Revenue)
PDO	Project Development Objective
Perpres	Peraturan Presiden (<i>Presidential Regulation</i>)
PF	Process Framework
PHL	<i>Pengelolaan Hutan Lestari</i> (Sustainable Forest Management)
PIAPS	<i>Peta Indikatif Alokasi Perhutanan Sosial</i> (Indicative Map on Allocated Areas for Social Forestry)
PIPPIB	<i>Peta Indikatif Penghentian Pemberian Izin Baru Hutan Alam Primer Dan Lahan Gambut</i> (Indicative Map of Licensing Moratorium)
PMP	Pest Management Plan
PP	<i>Peraturan Pemerintah</i> (Government Regulation)
Program	Emission Reduction Program
PSKL	<i>Perhutanan Sosial dan Kemitraan Lingkungan</i> (Social Forestry and Environmental Partnership)
PSP	Permanent Sample Plot
PTSL	<i>Pendaftaran Tanah Sistematis Lengkap</i> (Complete and Systematic Land Registration)
RAD GRK	<i>Rencana Aksi Daerah-Gas Rumah Kaca</i> /Greenhouse Gas Emission Reduction Action Plan
REDD+	Reducing Emissions from Deforestation and Forest Degradation
REL	Reference Emission Level
RIL-C	Reduced Impact Logging for Climate Change Mitigation
RKUPS	<i>Rencana Kerja Usaha Perhutanan Sosial</i> (Work Plan for Social Forestry)
RPHJP	<i>Rencana Pengelolaan Hutan Jangka Panjang</i> (Long-term Forest Management Plan)
RPHJ	Short-term Development Plans
RPJMD	<i>Rencana Pembangunan Jangka Menengah Daerah</i> (Medium-term Sub-national Development Plan)
RSPO	Roundtable on Sustainable Palm Oil
RTRW	<i>Rencana Tata Ruang Wilayah</i> (Subnational Spatial Plan)

SEA	Strategic Environmental Assessment
SESA	Strategic Environmental and Social Assessment
SFM	Sustainable Forest Management
SIGAP	<i>Aksi Inspiratif Warga untuk Perubahan</i> (People's Inspirational Action for Change)
SIS	Safeguards Information System
SNI	<i>Standar Nasional Indonesia</i> (Indonesian National Standard)
SOP	Standard Operating Procedures
SRAP	<i>Strategi & Rencana Aksi Provinsi</i> (Provincial Strategy and Action Plan)
STRANAS	<i>Strategi Nasional</i> (National Strategy of Emission Reduction)
TFCA	Tropical Forest Conservation Action
TNC	The Nature Conservancy
ToR	Terms of Reference
TORA	<i>Tanah Obyek Reforma Agraria</i> (land allocated for agrarian reform program)
UN	United Nations
UNDRIP	United Nation Declaration of Rights for Indigenous People
UNTAG	Universitas Tujuh Belas Agustus Samarinda
UPT	<i>Unit Pelaksana Teknis</i> (Technical Implementation Unit)
WHO	World Health Organization
WWF	World Wide Fund for Nature

1. INTRODUCTION

1.1 BACKGROUND

The BioCarbon Fund Initiative for Sustainable Forest Landscapes (BioCF-ISFL) is a multilateral fund, supported by donor governments and managed by the World Bank. It promotes reducing greenhouse gas emissions from the land sector, deforestation and forest degradation in developing countries (REDD+), and sustainable agriculture, as well as smarter land-use planning, policies and practices. The BioCarbon Fund Initiative for Sustainable Forest Landscape (BioCF-ISFL) 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 proposed Emissions Reduction Program (ERP) in Jambi Province 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.

National REDD+ Development: 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 up to 41 percent by 2030 with international assistance (29 percent with its resources). According to Updated Indonesia's Nationally Determined Contribution (NDC), submitted in 2021 under the Paris Climate Agreement, emissions from the forestry sector, including peat fires, made up for 49 percent of national emissions in 2010. For Indonesia to reach its commitment of a 41 percent reduction below business as usual (BAU) emissions in 2030, it will need to decrease emissions by 1,186 million MT CO₂e (metric tons of carbon dioxide equivalent), with 60 percent of this target expected to come from the forestry sector. Indonesia had submitted a new emissions reduction target through Enhanced NDC in September 2022. Indonesia increased emission reduction target from 29% in First NDC and Updated NDC to 31.89% unconditionally and from 41% in the Updated NDC to 43.20% conditionally.

Indonesia has made progress toward national REDD+ readiness. Following COP13, Indonesia has actively participated in REDD+ negotiations and 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 Norway¹. Significant progress has been made in developing the necessary enabling environment for REDD+. Through the resources provided under the FCPF Readiness Fund, since 2010 Indonesia has progressed and effectively engaged with the international community on REDD+.² 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 on 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. It encouraged Indonesia to take important steps towards REDD+ implementation at the sub-national level, which is now under final preparation for Jambi Sub National Emission Reduction Program. This includes strengthening the framework to mitigate potential

¹ Indonesia terminated the Letter of Intent (LoI) in September 2021 due to unresolved issues regarding the use of the performance payment, showing the failure of the first bilateral REDD+ agreement.

² The World Bank signed two grant agreements to support Indonesia's REDD+ readiness. The first grant (US\$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 (US\$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.

environmental and social risks 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 the 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 Jambi Sub National (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 the coordination of district-level activities, while providing a sufficiently large accounting area with sizable potential emissions reductions.

Building on this experience, including preparing an ER Program with the FCPF Carbon Fund, the GOI requested support in replicating these approaches in another province and with other sectors.

Jambi Green Growth Plan (GGP): Jambi GGP was issued in 2019 and outlines a vision for low-carbon development, centered around increased land productivity and protecting forests and peatlands. The Jambi GGP includes 37 interventions, with indicators, desired outcomes, and enabling regulations across three key areas: (1) land-use, land restoration, and sustainable increase in land productivity; (2) increased access to livelihood capital and environmental services; and (3) connectivity and sustainable value chains. Implementing the activities outlined in the Jambi GGP is projected to reduce deforestation by 97 percent and GHG emissions intensity by 34 percent by 2045 (as compared with 2019), and at the same time increase Gross Regional Domestic Product by 14 percent in Jambi.

Jambi Sustainable Landscape Management Program (J-SLMP): the GOI has proposed a sub-national emission reduction program in Jambi Province that will adopt that a jurisdictional landscape approach covering the entire Jambi Province. At the national level, this program, when implemented, will complement another ERP initiative in East Kalimantan through funding support from the FCPF³ and together will contribute to the Nationally Determined Contributions (NDCs)⁴. National Statistics Agency (BPS), forest cover in Jambi contributed 1.4% of total forest cover in Indonesia. Therefore, the ER Program will prioritize nine Forest Management Units, five conservation areas (four National Parks and one natural resource conservation park) as well as areas in their proximity, including villages bordering forest estates.

Jambi is currently being proposed for financing under the BioCarbon Fund through its Initiative for Sustainable Forest Landscapes (BioCF-ISFL)⁵. The ERP builds on the substantial commitments of the GOI and the Government of the Province of Jambi to reducing emissions from deforestation and forest degradation.

The ERP aims to reduce deforestation and forest degradation in areas that include forest areas (*Kawasan Hutan*), forested areas (forest cover outside areas or *Area Penggunaan Lain/APL*), and peatland areas. Around half of the forest areas in Jambi are covered by tropical forests, which are home to a wealth of globally significant biodiversity (including endangered species such as tigers, elephants,

³ The World Bank has been supporting the GOI in the development of a sister FCPF Jambi Sub National ER Program in East Kalimantan to pilot activities to generate ER benefits consistent with its NDC and access results-based REDD+ financing.

⁴ The Government of Indonesia (GoI) has made significant commitments to reduce the country's GHG emissions. Through its Nationally Determined Contribution (NDC) as part of the Paris Agreement, the GoI pledged to reduce its GHG emissions by 41 percent by 2030 with international assistance, and 29 percent with its own resources. In 2022, Indonesia committed to transforming the Forest and Other Land Use (FOLU) sector into a net carbon sink by 2030 (FOLU Net Sink 2030 commitment) through activities including forest and land rehabilitation, management of peatlands, and biodiversity conservation.

⁵ 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 Jambi Sub National for BioCarbon ISFL.

and orangutans) and support numerous indigenous and other local communities. More than 20 percent of Jambi's remaining forest was lost from 1990 to 2015. This was mainly caused by the expansion of palm oil plantations, forestry plantations, timber plantations, and mining, as well as by other drivers⁶. Besides the loss of habitat and other key ecosystem services, deforestation and degradation have led to emissions of CO₂ averaging 48⁷ million MT per year. A Business as Usual (BAU) scenario predicts an increase to 53 million mt per year by 2030.

The ERP will address deforestation by addressing underlying governance issues through policy reforms, engaging with palm oil and forestry companies, and engaging with local communities. The ERP is expected to support emission reductions up to 3 million TCO₂ /year over the five-year ERPA - period from 2022-2026 from both mineral and peat soils. Around 60-70 percent of ERP effort is directed towards implementing sustainable land management (including forest fire prevention).

The ERP was developed through a consultative process involving all relevant stakeholders (see Table 2.). Stakeholders in Jambi helped identify the local drivers of deforestation, which are the basis of the ER activities proposed by this program, together with the information from GIS analysis done by BioCF. The proposed ERP is also closely linked to Indonesia's and Jambi's REDD+ plans (*Strategi dan Rencana Aksi Provinsi/SRAP*) 2012-2032. Consequently, the ERP will be the outcome of a comprehensive consultation process.

The activities of the ERP are aligned with the Jambi's MANTAP Vision and GGP, which outlines the vision for low-carbon development in the province. The GGP contains three strategies. The first strategy relates to improving Land use governance, restoring degraded lands, and increasing the productivity of land management. The second strategy seeks to increase the capacity of community resources by improving accessibility to various livelihood capitals and utilizing existing environmental services. The third strategy is improving regional connectivity and sustainable value chains through system improvements. The overall cost of the program is expected to be US\$85 million, consisting of a US\$1.5 million technical assistance grant; US\$13.5 million implementation grant (proposed for strengthening policy institutions and implementing sustainable land management); and up to US\$70 million for Jambi Emission Reduction Results Project or hereafter JERR which is a performance-based payment operation. Priority non-carbon benefits of the ERP include the protection of biodiversity and other ecosystem services, livelihood benefits to local communities, reduced conflict over land, and improved recognition of indigenous land claims.

The ERP will scale up the activities currently being implemented under the on-going Jambi Sustainable Landscape Management Project. The World Bank's BioCarbon Fund Initiative for Sustainable Forest Landscapes (BioCF ISFL) has supported the GOI to implement a Jambi Sub National ERP in Jambi by providing phased financing. First, US\$1.5 million in preparation funding was provided to the GOI to prepare a Project to improve the enabling environment for reducing emissions in Jambi. Second, an initial pre-investment grant (US\$13.5 million), namely Jambi Sustainable Landscape Management Project (J-SLMP), is currently being prepared to support improvements to the enabling environment of the future results-based payments for verified ERs. The BioCF ISFL has further committed to purchasing emission reductions (ERs) from Jambi through a forthcoming Emission Reductions Purchase Agreement (ERPA) with a contract value of up to US\$70 million.

Included as part of the pre-investment grant under J-SLMP, financial and technical supports include cross-sectoral coordination, testing land use approaches to reduce emissions in Jambi and

⁶ Data from GIS analysis done by KKI-WARSI

⁷ Consisting of peatland and land-based emissions based on Data from 2005 stated in *Strategi dan Rencana Aksi Provinsi (SRAP) REDD+ Jambi 2012-2032*.

development of an ER framework to meet technical requirements of the BioCF ISFL, including safeguards and benefit sharing. Further detailed description of this pre-investment grant can be found in Chapter 4. In order to achieve ERs at scale, the Project will need to leverage resources from complementary programs in Jambi. The private sector, in particular, has an essential role to play in land management in Jambi, especially considering plantations alone cover almost one-third of the land area in the province.

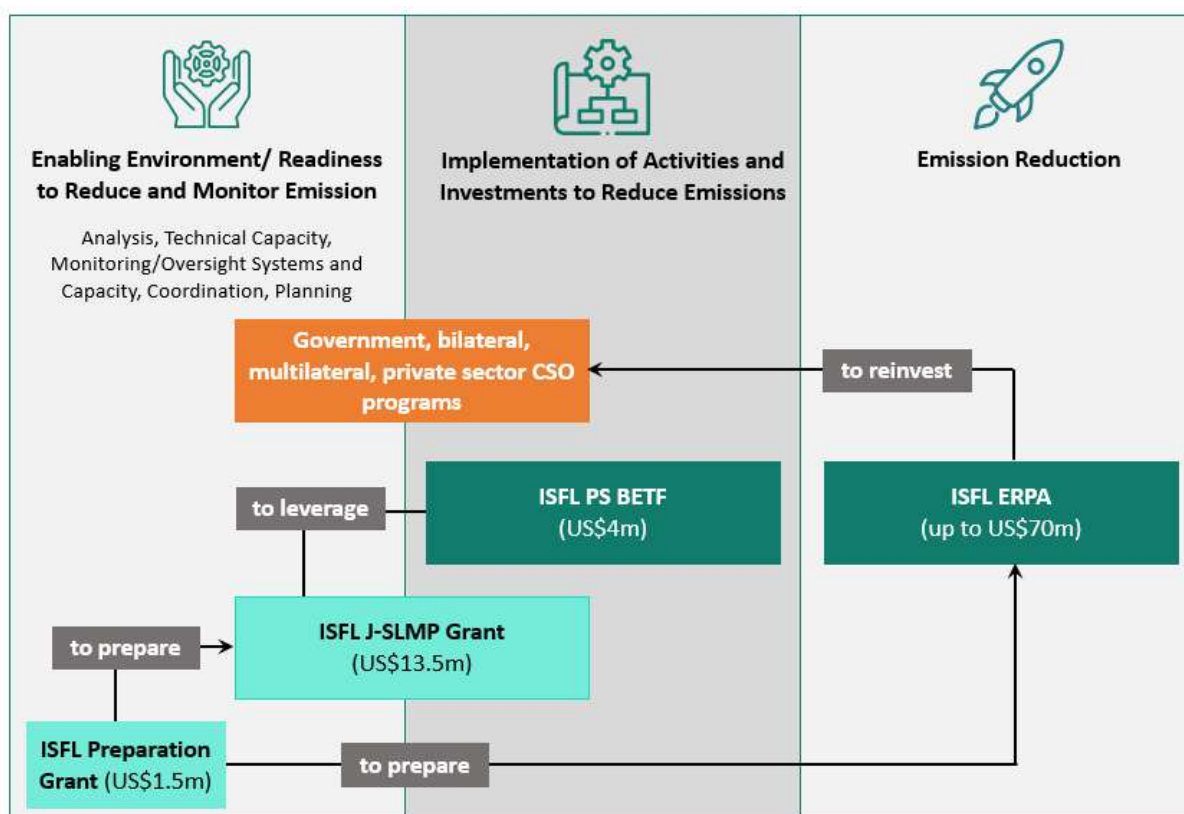


Figure TBD: BioCF-ISFL Operations in Jambi

A Strategic Environmental and Social Assessment (SESA) is being commissioned to assess the potential downstream risks and impacts and strategic environmental and social opportunities from preparing an ERP at scale in Jambi. The SESA serves as a platform to enhance decision-making processes around the design of the ERP, including formulation of program alternatives and mitigation strategies. The SESA is deemed an adequate tool for this purpose as it offers a platform for consultation 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.

The SESA process consists of a staged approach, starting from early preparation of a Jambi sub-national ERP, building on activities funded under the pre-investment grant financing. In line with the purpose of the SESA, the process has continued as a part of the overall development of the ERP. The SESA is expected to be concluded prior to the appraisal of Jambi's ERPA. The SESA serves as a tool to ensure that environmental and social considerations are integrated in the selection of key underlying activities towards emission reductions in the final Emission Reduction Program Document (ERPD). This will also include understanding of relevant risks along with recommended measures to mitigate potential adverse impacts and leverage positive benefits that may accrue from the proposed activities.

The SESA informs the overall approach for the environmental and social management of the ERP, which builds upon the existing Environmental and Social Management Framework (ESMF) along with

its associated instruments, including the Indigenous Peoples Planning Framework (IPPF), Resettlement Planning Framework (RPF) and Process Framework (PF) and Feedback and Grievance Redress Mechanism (FGRM), which have been prepared for the activities funded by the ISFL J-SLMP pre-investment grant. Implementation of these environmental and social instruments, together with relevant capacity building measures have been assessed as part of the stakeholder consultations during the SESA preparation. On the basis of which, additional resources and environmental and social measures have been proposed in the ESMF.

1.2 OBJECTIVE

The REDD+ readiness process, herewith referred to as the preparation stage, should ensure that implementation of REDD+ programs and activities will seek to avoid potential adverse social and environmental impacts, while striving to enhance benefits for local communities and the environment. All countries participating in the FCPF/IFSL 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 a strategic 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 Jambi has been selected as a pilot province for the implementation of a jurisdictional ERP through the BioCF IFSL support, the SESA outcomes are expected to reflect:

- Environmental and social risks and concerns, and the extent to which such risks and concerns have been considered as part of the policy development and implementation processes of REDD+ and the design of the ERP.
- Consultations and engagement with relevant stakeholders, including target communities, 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 operational mechanisms and institutional capacity to manage environmental and social impacts/risks associated with activities under the ERP; and
- Measures to leverage positive benefits that may accrue from the proposed activities under the ERP, including but not limited to activities funded by the Benefit Sharing Plan (BSP).

The SESA forms the basis of an integrated Environmental and Social Management Framework (ESMF), which will guide potential investments in the proposed emission reduction programs toward compliance with World Bank Environmental and Social Standards (ESSs). 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 and ERP preparation at both national and sub-national levels and is intended to ensure that environmental and social concerns are integrated into the decision-making process and the design of the ERP.

As guided by the Terms of Reference (ToR – see Appendix A3), the SESA was developed to address the following aspects:

- Analysis of strategic context of REDD+. This was done through identification and shortlisting of issues to determine the drivers and root causes of deforestation. As mentioned that deforestation has been identified as the largest emission in Jambi Province, the program will mainly focus to protect the remaining forested area and encourage sustainable land management, in addition to increasing forest carbon stock reserves through forest enrichment and rehabilitation.
- Analysis of environmental and socio-cultural characteristics in priority emission reduction locations in Jambi Province. This was carried out by analyzing secondary data (from reports, lessons learned, and publications) relevant to the REDD+ preparation to date and verified through a series of public consultations, including public consultations that have been conducted with District Government and Community at village level.
- Stakeholder analysis through interviews and focus group discussions with key stakeholders, including community representatives in Jambi Province. An initial grouping of stakeholders is as follows:
 - Central government agencies
 - Regional (provincial and district) governments
 - Academics and regional climate change council (*Dewan Daerah Perubahan Iklim-DDPI*)
 - Non-government organizations and civil society organizations
 - Private companies and associations; 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 with the environmental and social requirements under the ERP.
- A scenario analysis in sample priority areas; and
- Policy implications and proposed recommendations, based on the 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.

The SESA was carried out in two phases. For the SESA Phase 1, the focus is on REDD+ readiness at the national level and in Jambi Province, which informed the development of the on-going J-SLMP pre-investment grant. Phase two builds on earlier work under Phase one and has been prepared as a tool to integrate environmental and social aspects and stakeholders' inputs under the ERP. This final SESA report reflects findings of both phases of the SESA process.

2. APPROACH

The overall framework of SESA development for Jambi Province is aligned with the existing Government Regulation (*Peraturan Pemerintah/PP*) No. 46 of 2016 on the conduct of Strategic Environmental Assessments (SEAs), the recent Strategic Environment Assessment (KLHS), Jambi Province, and Jambi Green Growth Plan. The Jambi KLHS has provided strategic issues relevant to SESA, including basic service infrastructure, environment quality, and good governance. These three issues need to be assessed further in SESA. For instance, poor basic service infrastructure in land use causes tenurial conflicts. The massive plantation extensification impacts on water scarcity, deforestation, and forest fires. The KLHS also captures the urgency to improve law enforcement to minimize encroachment, forest fires, and illegal mining. However, indigenous people discussion is largely unexplored in KLHS. Hence, SESA adds this issue in the assessment. The Jambi Green Growth plan has covered similar issues such as implementing appropriate land allocation, resolving conflict, and reducing overlapping claims. The GGP also analyses potential risks and mitigation for intervention in three areas: land use, human resource and institutional capacity, and connectivity and sustainability chains. Unfortunately, this document has not given proportional attention to indigenous people's issues. The SESA document aims to fill the gap of these missing strategic issues and assesses the potential risks and impacts. Although there is no one-way or single method to conduct the SESA, it has been agreed that under the ERP, the overall SESA process should include the following elements:

- Iterative diagnostic and consultative processes and analytics on socio-economic, environmental and governance aspects of REDD+ readiness, including assessing existing capacities and gaps to address potential environmental and social issues, both direct, indirect and downstream.
- 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 environmental and social risks and enhance opportunities.

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), distribution of questionnaires and semi-structured interviews with stakeholders' representatives conducted during the J-SLMP project preparation. Additionally, the primary data, as well as key assumptions and findings from the FGDs and interviews, were verified through a series of public consultations, which also involved community representatives. A record of these consultations is appended in Appendix A2.

Secondary data were collected from desktop review of various literature, research and assessments, as well as from previous consultations and analyses provided by the Jambi working group on REDD+. Both primary and secondary data analyses were used to inform the screening and scoping processes of the SESA.

The data used in the Jambi'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. Some valuable data are also obtained from the GGP document such as greenhouse gas emission projections in the business-as-usual (BAU) and the green growth scenario (GGP). This document also provides risk potential assessment based on GGP intervention activities. This analysis can be the basis to enrich the SESA document. In addition to that, the SESA document refers to KLHS document to obtain conflict data, such as conflict data in 2019 occurred in 11 regencies and cities. The In accordance with these issues, data were collected from the following sample districts:

- Merangin District. This district represents mineral forest with challenges consisting of unsustainable practices of forest plantations, palm oil, and agriculture/plantation in transmigration areas; illegal activities such as artisanal gold mining, and encroachment into a national park by migrants from other provinces. These migrants, consisting of approximately 60,000 households, sometimes involved in conflicts with local people, including Indigenous Peoples, as well as managers of production forests, and palm oil plantations. High dependency of indigenous peoples and local communities on forest resources and expanding agricultural lands that may have created pressures on the remaining forests due to deforestation and forest degradation.
- Tanjung Jabung Timur District. This district hosts peatlands with the following challenges: fire due to draining of peatland for agriculture; overlapping forest plantation and palm oil concessions; massive land-use change (due to palm oil plantation), infrastructure development, and illegal logging. In addition, forest encroachments, high dependency of indigenous peoples and local communities on forest resources and expanding agricultural lands that may have caused deforestation and degradation.

Secondary data sources consist of:

- Existing and applicable laws and regulations related to forestry, social, and environmental management in Indonesia.
- Capacity for performing environmental and social management (institutional analysis based on secondary data and primary data).
- Data and information used in developing the ERP Document (ERPD).
- Spatial data provided by the provincial government of Jambi; 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

Following the selection of Jambi Province as a pilot province for emission reduction program, qualitative data on the drivers of deforestation and forest degradation, as well as key issues were collected through analysis of provincial documents (spatial plans, medium term development plans, green growth plan, Strategic Environmental Assessments, Resources Permit Map at Provincial Level, etc.) and national documents (from the MoEF: forest cover and New Permit Postponement Indicative Map) along with a series of consultative meetings with stakeholders between February 2019 and April 2019 (Section 3.5 and Chapter 9 on Consultation Process, and Appendix A2). Additional consultations continued in 2022 as part of the ERP development.

2.2.1 Formulation of Drivers of Deforestation and Forest Degradation

Consultation process and review of provincial strategic plan on emission reduction identified that the major contributions of GHG emissions come from Land Cover and Land Use Change in Agriculture, Forestry (AFOLU) sectors, including in peatlands, with approximately 85 percent of total emissions in Jambi Province⁸.

Peatland Emissions originate from two sources namely fire (66 percent) and peatland decomposition (36 percent). Underlying causes of peatland emission are:

- Fire from human activities (anthropogenic), and lack of capacity to prevent such occurrences; and
- Conversion of peatland into agriculture, palm oil plantation and plantation forest concessions.

Land Use, Land-Use Change and Forestry (LULUCF) emission is caused by:

- Degradation of production forests and national park.
- Loss of large biomass due to encroachment, illegal logging and unsustainable timber harvest. Such loss is replaced by plantation and/or forest commodities with smaller biomass.
- Land Use change on *Area Penggunaan Lain/APL* from forested area to plantation or mining industries.

Spatial analysis and stakeholder consultation suggest that palm oil plantations, plantation forests, transmigration settlements, activities in APL, and production forest areas have the highest rate of deforestation⁹. Considering the source of emissions and their respective underlying causes, the drivers of deforestation and degradation in Jambi can be clustered as:

- Land clearing in forest areas by migrants and local communities
- Illegal logging, plantation, and mining activities
- Forest and peatland fires
- Unsustainable agricultural practices in APL,
- Land degradation and ecological imbalance due to threats to wildlife and their habitats (Map of IUCN Red List Species is provided in Appendix A2)
- Indigenous peoples' activities beyond the control of customary laws
- Weak forest governance.

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. Based on the above analysis, planned actions and interventions to address the identified drivers as well as underlying causes in the forms of key issues were proposed and shortlisted in Chapter 3.

In summary, shortlisting was done using the following qualitative variables:

⁸ Various research cited in Strategi dan Rencana Aksi Provinsi (SRAP) REDD+ Jambi Province 2012-2032

⁹ GIS analysis by KKI-WARSI

- Deliberative process to put emphasis on specific issues
- Relevance with the drivers of deforestation; and
- Relevance with the components of the Project Design for ERP.

By 2002, the allocation of palm oil plantations (including areas released from forest areas) was 344,932 ha. By 2012, this area increased to 515,300 ha, and by 2017 the plantation allocation had increased to 716,638 ha, but the actual concession areas were 826,428 ha. Increasing allocation for plantations (palm oil) is considered as a driver of deforestation in Jambi. Additionally, the contribution of the plantation sector to the provincial GDP may encourage further expansion of plantation areas. At the same time, forest encroachment (national parks and production forest) for coffee plantations increased with an average rate of 7% per year, mostly taking place in Merangin and Kerinci Districts.

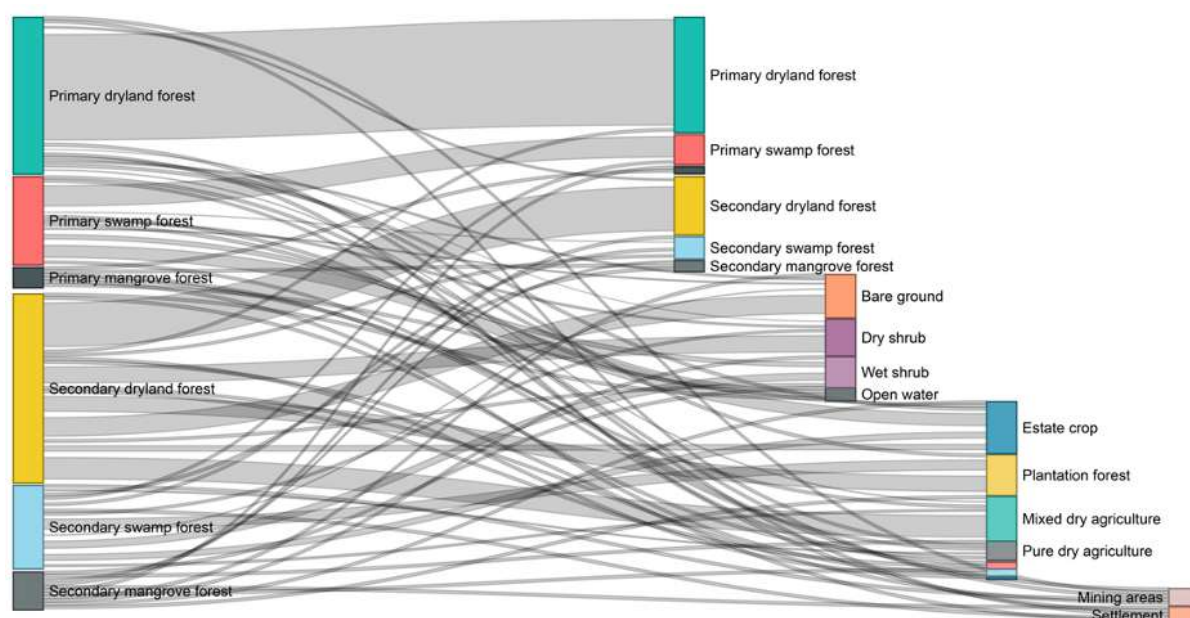
Forest fires are showing a trend of decrease from 2,102 hotspots in 2013 to 614 hotspots in 2018. However, fire is still considered as a driver of deforestation, due to the combination of drought and the widespread application of burning methods in preparing plantation areas.

Activity of indigenous peoples refers to the specific claims of indigenous communities over land within conservation, protected, or production forest. This is particularly crucial for Marga Serampas who has received formal recognition and has claimed approximately 54,000 ha of Kerinci Seblat National Park as an indigenous/customary land right. The indigenous people are potential stakeholders to preserve the forest and can help sustainable forest management. However, in some cases, indigenous people might also be the drivers of the deforestation.

Claims over specific land within forest areas could lead to forest unsustainability management by the indigenous people, and land use changes from forest cover to other use of land, such as coffee or cinnamon plantation within protected areas, are often found. This case may be caused by the needs of indigenous people of livelihood and other migrant communities, which establish settlements side-by-side in the forest concessions. This social and economic factor can drive massive encroachment to the forest that may lead to high deforestation and forest degradations.

Below is a chart showing the quantitative analysis of deforestation in Jambi by using GIS, comparing forest and land use change in 2006 and those of 2018.

Figure 1. Result of Quantitative Analysis of Forest Change in Jambi 2006-2018



Source: BioCF FREL and MAR analysis

Table 1. Land Cover Change from Forest to Non-Forest in Jambi 2006-2017

Land Use/Land Cover after Deforestation	Other Land Use (APL)	Conservation Areas			FMU Areas				Total	%
		Nature Preserve (CA)	National Park (TN)	Forest Park (TAHURA)	Permanent Production Forest (HP)	Limited Production Forest (HPT)	Convertible Production Forest (HPK)	Protection Forest (HL)		
Bare ground	55,020	542	11,093	8,938	169,567	32,095	190	9,642	287,087	32.69
Mixed dry agriculture	61,182	236	11,546	10,632	57,305	21,042	125	3,626	165,693	18.87
Plantation forest	6,627	0	0	0	131,059	2,752	6	41	140,485	16.00
Wet shrub	44,306	12	5,079	7,339	28,057	11,708	192	11,743	108,436	12.35
Estate crop	65,285	31	34	0	7,252	13,446	1,958	5,859	93,864	10.69
Dry shrub	11,111	5	8,191	0	31,328	13,815	113	3,893	68,455	7.80
Pure dry agriculture	5,842	30	326	0	4,918	4	1	1,489	12,611	1.44
Mining areas	91	0	39	0	560	0	0	0	690	0.08
Open water	1	0	25	0	276	2	0	0	304	0.03
Fish pond/aquaculture	216	0	0	0	0	0	0	0	216	0.02
Settlement	147	1	0	0	17	0	0	0	166	0.02
Paddy field	114	0	0	0	0	0	0	0	114	0.01
Total	249,942	857	36,331	26,909	430,338	94,864	2,586	36,293	878,121	100

Source: BioCF FREL and MAR analysis

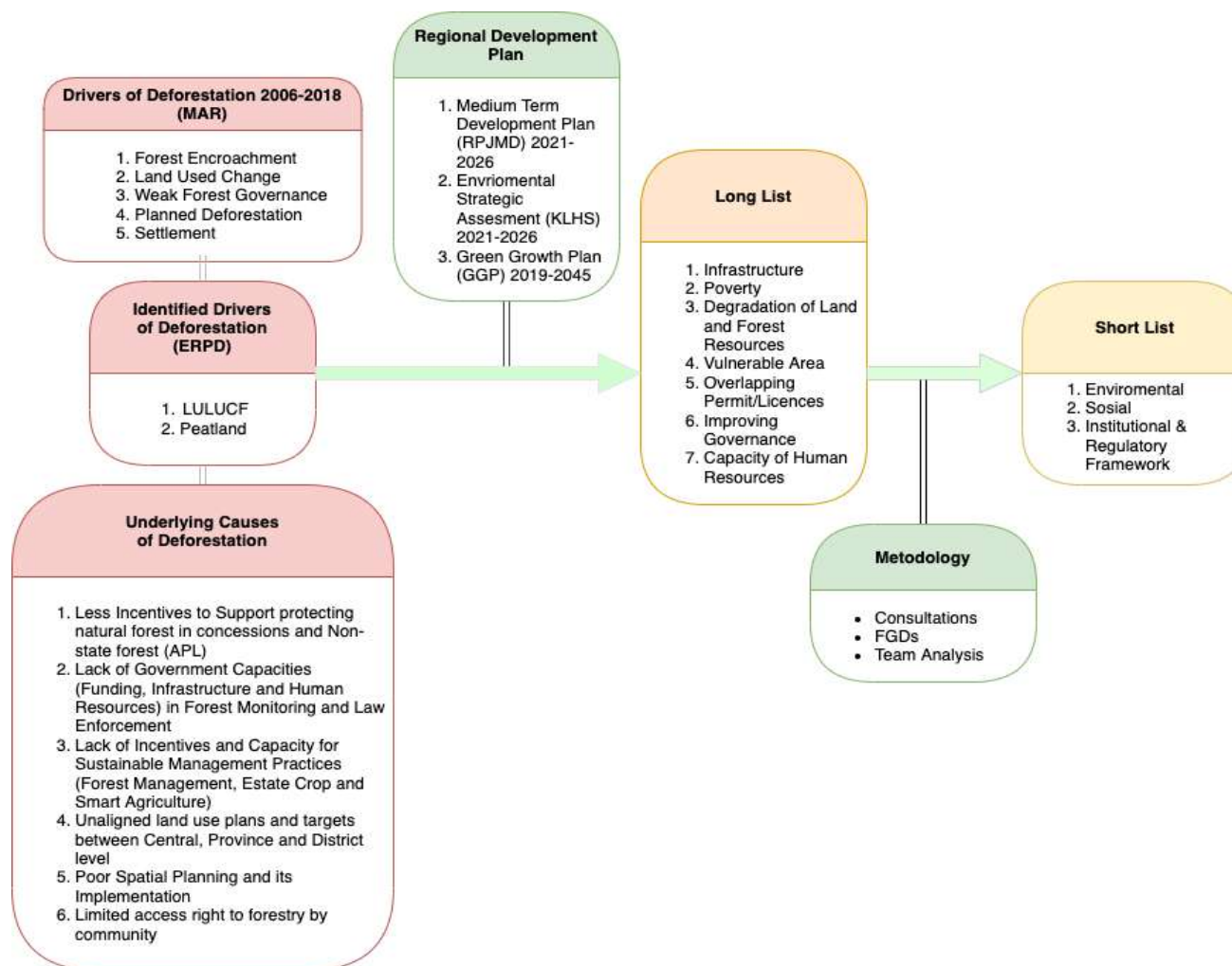
Figure 1 and Table 1 show a quantitative land use change, mostly from forest to non-forest areas including plantation, open area, agriculture, settlement, etc. Although this analysis has not incorporated the source of deforestation qualitatively but based on discussion with the MAR consultant producing this analysis and also local stakeholders in Jambi, the change was mainly caused by expansion of plantation, plantation forest, encroachment, illegal logging, mining, and fires. Most of the changes are in line with the qualitative analysis above.

2.2.2 Identification of Environmental and Social Issues under the ERP

The ER Program Document for the Jambi Emission Reduction Program (ERPD) envisages the components for the future Emission Reduction Program (ERP). Therefore, identification of

environmental and social issues was done based on this document. 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 (based on the ERPD) to generate a final list of environmental and social issues that will be addressed through the ESMF. The key themes during the identification of key issues are presented in the following figure. Additionally, the need for increased capacity for REDD+ implementation (i.e., safeguards for addressing environmental and social risks) were previously identified during the discussions on mainstreaming the BioCarbon Fund (2017), the evaluation of readiness (2018), and through consultations and discussions that were conducted between 2020 to 2022 as preparation for and updating of the Environmental and Social Documents for the ERP. The results of recent FGDs and interviews in Jambi have also been incorporated into the analysis below, while the summary of the consultation process is provided in Section 3.5.

Figure 2. Summary of Themes in Identification of Key Issues



In the deliberative process involving analysis of development policies (Strategic Environmental Assessment for Medium-term development plan/RPJMD 2016-2021 and Spatial Plan 2011-2031) at the scoping stage, a long list of issues is described below:

- Availability and quality of infrastructure related to transportation, energy, market, and telecommunication.
- Poverty and welfare related to poverty of farmers, service of basic needs, food availability, gender equality, diminishing local/indigenous wisdom.
- Degradation of land and forest resources, consisting of land degradation, land conversion in forest area, exploitation of natural resources, conservation of biodiversity, habitat and wildlife, endangered species, land disputes, and pollution.

Considering the analysis on drivers of deforestation and components of the ERP, the scoping finalization process stipulates that poverty¹⁰ (and welfare) and the degradation of land and forest resources are two strategic issues to be discussed further in SESA. Further screening process on the medium list resulted in the following short list of key issues:

1. Forest encroachment.
2. Unauthorized activities (logging, mining & plantations).
3. Peatland and forest fire.
4. Tenurial conflicts.
5. Social conflict potentials.
6. Lack of community participation; and
7. Activity of indigenous rights.

Matrix of analysis leading to the identification of key issues is provided in Appendix A1, where all available information from existing development documents of Jambi has been incorporated and has led to the above issues.

2.3 STAKEHOLDER ANALYSIS

2.3.1 Stakeholder Identification

The project identified stakeholder groups at different levels to inform the development of appropriate and accessible communication and engagement methods throughout the project implementation process and the benefits distribution. In general, the stakeholder identification can be categorized as key government agencies, affected communities, vulnerable groups, and interested parties: This project will involve a variety of key government agencies across levels, including the national governments, sub-national governments (provincial and district agencies as well as village governments); The affected stakeholders includes those likely to be affected by the project because of actual impacts or potential risks to their physical environment, health, security, cultural practices, well-being, or livelihoods. These stakeholders may include individuals or groups, including local communities. They

¹⁰ Deforestation is also caused by greed, but the PDO focuses on poverty issues. Poverty issues are more realistic to address compared to greed.

are the individuals or households most likely to observe changes from environmental and social impacts of the project; (3) Vulnerable/marginalized communities can be described as groups who may be disproportionately impacted or further disadvantaged by the project(s) as compared with any other groups due to their vulnerable status, and that may require special engagement efforts to ensure their equal representation in the consultation and decision-making process associated with the project; (4) Other interested parties refers to individuals, groups, or organizations with an interest in the project, which may be because of the project location, its characteristics, its impacts, or matters related to public interest

Table 2. Stakeholder Identification of the ER Program

Component	Key Government Actors	Affected Stakeholders	Vulnerable Groups/Individuals	Interested Groups and Development Partners
Component 1: Strengthening Policy and Institutions	At the national level: - MoEF At the sub-national level, including: - Bappeda - Provincial Environmental Agency - Provincial Civil Works and Housing Agency - Provincial Forestry Agency - Provincial Land Agency and District Land Agency, - DPRD - District governments	- The private sectors such as forest concessions, oil palm, plantation companies - The four Forest Management Units (FMU), including Merangin, Bungo, Tanjung Jabung Barat, Hilir Sarolangun - Ten district governments	- Indigenous people (MHA) will be directly affected by the facilitation of indigenous people's areas and indigenous people though local regulations - Poor households, including those forest-dependent, landless households dependent on forest or peatland resources, may be indirectly affected through policy and regulatory changes and enforcement, affecting livelihoods, access to land use and natural resources, etc. - Local migrant communities - Transmigrant communities	- Regional adat bodies or associations - Development partners - NGOs/CSOs related to indigenous people's rights, land-use, and land tenure rights, - Academia/think tank groups - Media
Component 2: Implementing Sustainable Land Management	At national level, including: - KSDAE At sub-national level including: - Bappeda - Provincial Forestry Agency - Environmental Agency	- Forest concessions companies - Forest Management Units (FMU) - Smallholder farmers - Forest farmers - Smallholder oil palm farmers - Social Forestry Enterprise Groups (Kelompok Usaha	Low-income households, including forest-dependent and landless farmers or households, people with disability whose income sources may be affected by the project activities.	- Indonesian Chamber of Commerce and Industry (KADIN) - Indonesian Oil Palm Association (GAPKI) - Business associations, - Local business and/or enterprises

Component	Key Government Actors	Affected Stakeholders	Vulnerable Groups/Individuals	Interested Groups and Development Partners
	- Provincial and District Estate Crops Agency - Provincial and District Agriculture Agency, - Forest Management Units - Food Crops, Horticulture, and Animal Husbandry Agency - Plantation Agency - Provincial Culture and Tourism Agency - Natural Resources Conservation Agency (BKSDA) of Jambi Province	Perhutanan Sosial, KUPS) Oil palm companies	- Enclave communities - Women who utilize forest areas for livelihoods - Indigenous people - Transmigrant communities	- Development partners, - NGOs/CSOs advocating environmental protection, land/tenure rights, and facilitating SMEs for ISPO/RSPO - Academia and think-tank groups - Media
Component 3: Project Management and Monitoring and Evaluation	At National Level: - Ministry Of Information - Ditjen GAKUM - Ditjen PSKL - DGCC - DGLE - DGSFEP - National Secretariat Of REDD+ - National PMU - Ministry Of Finance - BAPPENAS - Ministry Of Agriculture - Indonesia Environmental Fund (IEF Or BPD LH) - Ministry of Village - Directorate General of Sub-National Finance of MoHA At Sub-National Level: - Sub-national REDD+ Management Institution	Local/Village communities Provincial, district, and village government Social forestry groups Farmer groups BUMD NGOs/CSOs and universities who are eligible as beneficiaries Private companies such as logging, timber plantation, plantation, etc. Small-holder companies, such as timber, rubber, plantation, oil palm, etc Intermediary agency (LP)	Low-income, landless, forest-dependent households affected by the project Women who utilize forest areas for livelihoods Enclave communities Forest-fringe communities Indigenous people Migrant communities Transmigrant communities	Development partners NGOs/CSOs who have interest and/or concerns on community development, carbon benefits, etc. Academia and think tank groups Association of private companies such as forestry concession, plantation, oil palm, etc Regional adat council/body

Component	Key Government Actors	Affected Stakeholders	Vulnerable Groups/Individuals	Interested Groups and Development Partners
	- Provincial Secretary of Jambi - Provincial Environmental Agency - SN-PMU - Bappeda - SEKDA - District/municipality governments - Forest Management Units (FMUs) - National Park Authorities - Conservation Agency (BKSDA) - Forestry Agency - Environmental Agency - Estate Plantation Agency - Food Crops, Horticulture, and Animal Husbandry Agency - Community Empowerment and Village Government Agency - Communication and Information Agency of Jambi Province Media - Sub-district government At local level: - Village government - Village councils - BUMDes			

Approaches to reach local stakeholders, including vulnerable groups, involve coordinating with local government agencies and non-governmental organizations (NGOs) which provide services to these groups and then several Consultations have been conducted to obtain input from these stakeholders, regarding the preparations and readiness of the Emission Reduction Program (ERP) in Jambi Province. 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 have been identified as part of the development of the ERP Document. On this basis, further analysis of stakeholders was conducted to refine analyses of environmental and social aspects and their influence. This was carried out as part of the SESA, through a mapping process described in Figure 3. This stakeholder mapping informed the development of the ERP Stakeholder Engagement Plan (SEP) which guides relevant engagement activities with relevant stakeholders, including consultations and outreach to the target communities.

Figure 3. Stakeholder Mapping for the SESA Process



These stakeholders are categorized into:

- Stakeholders who influence the implementation of the ERP. These stakeholders are further categorized 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.
- Stakeholders who may be impacted by the ERP implementation. These stakeholders are further categorized 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 required for identifying drivers of deforestation and degradations were also engaged. These include those who were involved in identifying environmental and social risks relevant to the ERP.

It is important to note that such stakeholder categorization is fluid due to various possible factors that may affect perceptions, the nature of impacts, and the level of interest and support. This stakeholder analysis will continue to be revisited as the ERP is being finalized and a stakeholder engagement strategy will be developed as part of the SEP for 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 Stakeholders Influencing ERP Implementation

Stakeholder identification is an iterative process; until it is determined which stakeholders are really involved in the program. If stakeholder restrictions have been set from the start, then stakeholders can indeed be more easily identified, but this carries the risk that some stakeholders will be ignored, and of course, this identification becomes irrelevant. After the stakeholders are identified, the next step is to classify and differentiate between stakeholders. According to Eden and Ackermann (1998) cited by Bryson (2004) and Reed et al. (2009) the analytical method used is to use an influence and interest matrix by classifying stakeholders into key players, context setters, subjects, and crowds. Influence refers to the power that stakeholders have to control the process and outcome of a decision. Importance refers to the needs of stakeholders in achieving outputs and goals. The following are the results of the identification of stakeholders involved in the program.

Government Stakeholders

Government stakeholders relevant to the ERP implementation include:

- **Central Government:** Ministry of Environmental and Forestry (MoEF) as the host for the Project. The main role of MoEF through DGCC (Directorate General of Climate Change/DG PPI) are to coordinate the implementation task of the preparation and readiness to the program, provide technical guidance and administrative support to the Sub-National Government and SN-PMU. As for the Ministry of Finance (MoF) roles are negotiating and establishing the ERP agreement. The 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, DG PPI represents stakeholders who are key to ERP's knowledge management.
- IEF/ BPD LH Carrying out the management of the Environmental Fund in the fields of forestry, energy and mineral resources, carbon trading, environmental services, industry, transportation, marine and fisheries, and other fields related to the environment by the policies stipulated by the Finance and based on ministerial regulations. (*Article 2, BAB 1 Position, Responsibility, and Role BPD LH. PMK No 137/PMK.01/2019 tentang organisasi dan tata kerja BPD LH*).

Other directorate generals under the MoEF include:

- Directorate General for Sustainable Forest Management (PHL) whose main task is to grant and monitor concessions of forest utilization for corporate entities. The

role of this Directorate General is important in the Program since forest concessions are often responsible for deforestation.

- Directorate General for Watershed Management and Protected Forests (PDASHL). The rehabilitation of critical lands within forest areas as an effort to counter forest degradation and deforestation is an important task of this Directorate General related with ERP.
- Directorate General of Natural Resources and Ecosystem Conservation (KSDAE) also plays an important role to manage the protected areas at site level through its technical implementation units such as national park management office (Balai Taman Nasional) and conservation of natural resource agency (*Balai Konservasi Sumber Daya alam/BKSDA*); and
- The Directorate General of Social Forestry and Environmental Partnership (PSKL) is equipped with the capacity for FPIC and conflict resolution. They are also mandated with permitting and strengthening social forestry groups consisting of members of local communities to manage and protect nearby forest areas.

Policy influence at the central government level may also include other ministries, such as the Ministry of Agrarian and Spatial Planning (for land reform and oil palm plantations' land permits), Ministry of Energy and Mineral Resources (mining sector), Ministry Coordinator of Investment and Economy, Ministry of Village and Disadvantage Region (village fund allocation), Ministry of Agriculture (horticulture, food crops and plantation commodities), Ministry of Home Affairs (capacity building and governance aspects), and Ministry of Finance.

Implementation of ERP will also be relevant to the Peatland and Mangrove Restoration Agency (*Badan Restorasi Gambut dan Mangrove/BRGM*).¹¹ As peatland has a high carbon stock, and peatland fire is considered as a main driver of deforestation (peat decomposition may be negligible). With its large peatlands affected by 2015 forest fires, Jambi Province is one of the priority areas of BRGM.

- **Provincial Government:** Jambi Development Planning Board (BAPPEDA), Forestry, Plantation, Environment, Energy and Mineral Resources, and Information Agencies; Office for National Unity and Politics (Kesbangpol); Communication and Information Agency (Diskominfo); Office of Manpower and Transmigration; Food Crops and Horticulture Agency; Provincial Secretary (Sekda)/Governor, and Provincial Office of National Land Agency (Kanwil BPN) for implementation. BAPPEDA through SN-PMU is the key coordinator in this program's implementation, coordinating all agencies to maximize the outcomes of the program. The SN-PMU will provide all relevant information and resources needed by the agencies to enhance the performing agencies activities toward the ERP Implementation. Other than that, the environmental agency in Jambi also provides the safeguards of the ERP based on World Bank's standards and policies to maintain the impact of the program to the beneficiary to minimize the negative impact that the program may occur. Environmental agency also did the consultation process with grass root stakeholders as the beneficiary through the FPIC process within the Jambi Province. The Forestry Agency in Jambi is also coordinating the FMU's at

¹¹ BRGM is a government agency formed by President Joko Widodo through Presidential Regulation No. 1 of 2016 as Badan Restorasi Gambut (BRG) to restore degraded peatlands, particularly in response to the 2015 massive forest fires damaging large areas of peatlands including in Jambi. The agency is later assigned to restore mangroves as well, as stipulated by Presidential Regulation No. 120 of 2020.

each district to manage the forest area within the province, this forest area will provide reserves of carbon stock that are crucial to the program along with the MoEF through National Park. Beside that, the agency's role is also to rehabilitate and restore the critical forest and peatland within the program's area. All of these provincial agencies (with the exceptions of Diskominfo and Kesbangpol) are positive influencers and are essential in ERP implementation. At the stage of the ERP preparation, Diskominfo and Kesbangpol may remain neutral. Still, 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 they determine the political conditions suitable for the ERP implementation.

- District governments: the Environmental services (DLH): responsible for the overall management of environmental issues, including issuance of environmental approvals and oversight. The agency is also responsible to address unsustainable practices associated with illegal mining activities, waste management, use of energy, and grievances and complaints on environmental impacts. DLH will coordinate with the Safeguards team in SN PMU for the environmental and social management and FGRM management, covering activities in the ERP as well as future activities to be financed under the BSP.
- Village Governments: Village governments are proposed to be involved in managing forested areas in APL, prevention forest and peatland fire, 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 Jambi Sub National issues in coordinating, mediating, and intervening in cases occurring in areas without clear designation (forestry, plantation, or mining) due to map discrepancies. The approach used in the program may require interventions by MoEF and ART/BPN simultaneously, which can only be facilitated by having an integrated cross-sectoral conflict resolution mechanism.

Non-Government Stakeholders

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

- Joint Secretariat (SEKBER) of forest resource management (*Pengelolaan Sumber Daya Hutan/PSDH*): This is a multi-stakeholder secretariat initiated by the Jambi Provincial Forestry Office in 2017. Sekber PSDHA was legalized through Decree of the Head of the Jambi Province Forestry Service No. 96/Kota/Dishut-5.3/IV/2017 dated April 3, 2017. The SEKBER is not only filled by regional officials but also there are representatives from private sector and NGOs. SEKBER is strategic as a forum for consolidating and coordinating forest resource management programs in Jambi Province.
- NGOs have an important role in efforts to reduce community-based emissions. National NGOs (*Inisiatif Dagang Hijau/IDH* and *ICRAF*) are supporting the Bappeda in establishing a green growth plan to be part of the provincial development plan. NGOs also carry out activities at the community-level in an effort to minimize deforestation and rehabilitation, and to restore forests and peatlands in Jambi Province. These NGOs include KKI Warsi, Walhi Jambi, Gita Buana, Walestra, Action Partners, Cappa, Setara, Perhimpunan Hijau, Amphal, Jambi Peat Community Network (JMGJ), Lahar, LTB, LTA and Pundi Sumatra.

- Universities and research institutes: Jambi University and Batanghari University are very instrumental in providing an academic perspective related to emissions reduction projects in Jambi Province. The academics (lecturers and researchers) of the Universities have carried out research related to the forestry, agricultural and legal sectors in the management of environmentally friendly natural resources. The Faculty of Forestry is particularly active in assisting FMUs in the process of providing RPHJP and other forestry planning documents in Jambi Province.
- Private sector: Plantation, forest and mining concession holders are strongly associated with ERPD implementation. Because these three sectors are the biggest drivers of deforestation in Jambi Province. The implementation of ERPD will depend on company collaboration (for example, best management practices, high allocation of conservation values and social/gender inclusion). Several concession holders have been adopting sustainable management practices in their operations. For example, Asia Pulp and Paper (APP Sinar Mas) as the largest forestry concession group in Indonesia has adopted the Forest Conservation Policy (FCP), PT Lestari Asri Jaya is also developing the Wild Conservation Area (WCA) concept, Asian Agri and SMARTGAR have obtained the Roundtable on Sustainable Palm Oil (RSPO) certification for some of the companies within their groups to increase the selling value of CPO products in the global market.
- Local communities: Local communities are key stakeholders that determine the feasibility of ERP implementation. In addition to their involvement in the agriculture and forestry sector, they are also involved in sustainable livelihood scenarios. Therefore, their involvement is very important for ERP implementation, and it must be preceded by FPIC.
- Indigenous Peoples: In SESA context, Indigenous Peoples are local communities that depend their livelihood on the forest. Adopting customary law to manage the forest as main source of livelihood and manage the forest sustainably supports the resilience of the community. In addition, a separate analysis was undertaken on Indigenous Peoples to recognize their unique identity as well as vulnerability. In general, local communities tend to be heterogeneous and have gained relatively good access and services. Local people also tend to have undergone a process of acculturation with immigrant communities so that the values used have tended to be general/formal values, while indigenous people still tend to be homogeneous and hold on to their ancestral/origin values. They tend to have a value of harmony with natural resources. They are considered as vulnerable groups that may be affected in the ERP implementation process. Therefore, the FPIC process determines their influence and their interests as not negatively impacted by the ERP implementation. The main concern in the emission reduction program is community groups and other entities that have management rights in forest areas, both with independent management rights (customary forests, village forests, community forests, community plantation forests and forestry partnerships). Currently, indigenous peoples have tenure in customary forests. In SAD case, they have the right to manage conservation forests together with TNBD, so that legally indigenous peoples can benefit from carbon payments based on determined calculations. This will ensure that the vulnerable indigenous groups of the program will benefit from carbon payments
- Associations: Palm oil associations (Indonesian Palm Oil Association/GAPKI), coal mining associations and worker 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.

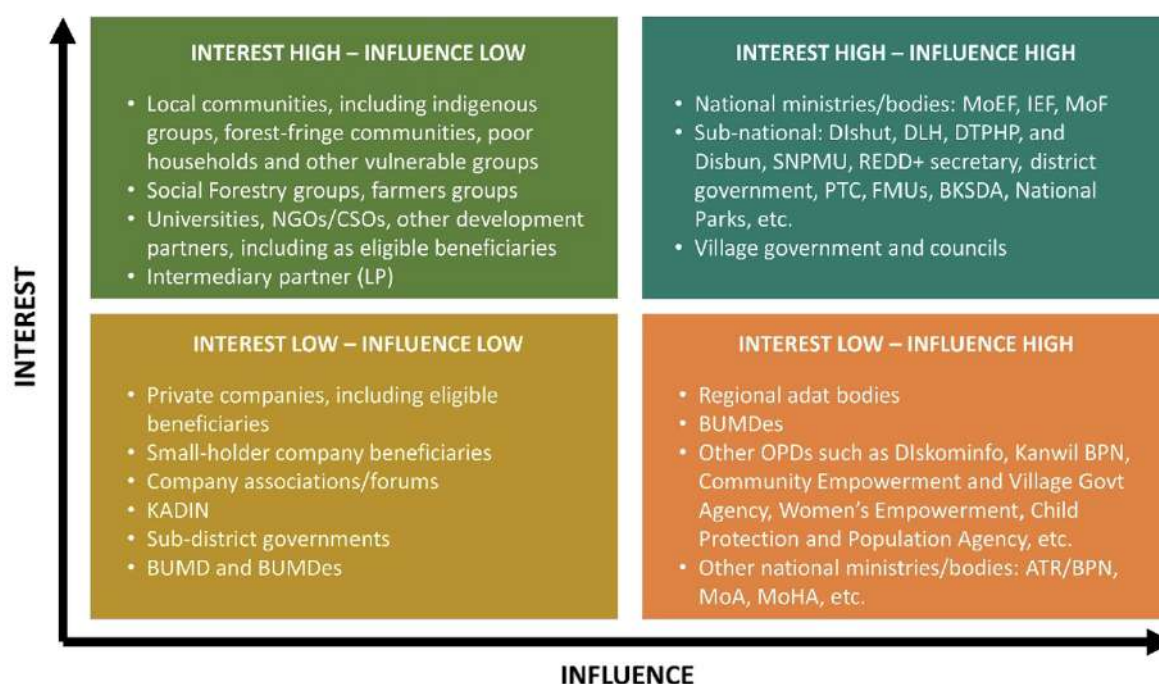
The above stakeholder analysis, factoring in the nature of their potential impact (both positive and negative) and their level of interest in and influence over the ERP, is presented in Figure 4. As the diagram demonstrates, positive influencers tend to be located in the upper portion of the diagram, whereas those who may act as negative influences are located in the bottom left side of the diagram. Impacts of ERP implementation include political economic aspects (discussed in Section 5.5.2) 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 to ensure that their expectations are met, to increase collaboration among stakeholders, and to enable effective ERP implementation.
- Involvement of stakeholders with high interest but low influence. These 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 could influence other stakeholders, as well as influencing the course of the ERP implementation. Engagement is intended to increase (positive) influence over the ERP; and
- Consultation with and information for stakeholders with low interest and low influence. This is done 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 relevant land-based sectors), district governments (BAPPEDA, environment agencies and estate crop agencies), local and international NGOs in Jambi, academics (Universitas Jambi, Universitas Batanghari and IAIN Jambi), and employers' associations (including some forestry and plantation companies). All inputs were compiled, and discussed with the SEKBER, Forestry and Environmental Research Development and Innovation Agency (FORDIA) 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.

Figure 4. Stakeholder Analysis Based on Interest and Influence



2.3.2.2 Stakeholders Impacted by the ERP Implementation

The implementation of the ERP may affect stakeholders differently, which is described as follows.

Government Stakeholders

- Central Government:** The DGCC represents 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 sub-national level). ERP implementation can help the MoEF structure a sustainable forestry sector. The Ministry of Finance received assistance in increasing state revenues from foreign grants. The Ministry of Village, Disadvantaged Areas and Transmigration may receive positive impacts related to lands under APL category, but the ERP might hamper the process of infrastructure development, especially in state forest areas. The BPN and ATR ministries will also have a positive impact on conflict resolution and support for agrarian reform.
- Provincial Government:** Bappeda; Forestry, Plantation, Horticulture, Environment, Mining, and Information Offices; and Office for National Unity and Politics (Kesbangpol), Communication Agency (Infokom), Village Development, and Provincial Land Agency (Kanwil BPN) for implementation. ERP implementation will have a positive impact on Bappeda in terms of support for and strengthening a sustainable planning system. Positive impacts may also be received by the Forestry Agency, as ERP would provide assistance in capacity building, forest management, social forestry, rehabilitation of degraded forest areas, conflict resolution, FMU development, forest security patrols, and forest fire prevention. As for the Plantation Agency, ERP implementation will have an impact on the support of sustainable plantation systems and conflict resolution. ERP implementation will also help the Environmental Agency strengthen the monitoring system of permit issuance, be it for mining, plantations, forestry, residues of

hazardous materials from agriculture, factory waste and households. The Mining Agency will get a positive impact from ERP implementation in terms of strengthening the monitoring of reclamation of mining permit holders, renewable energy development, and possibly, law enforcement against violations committed by mining permit holders. The Land Office will also get a positive impact on conflict resolution efforts, support for the agrarian reform program, and the clarity over forest and non-forest boundaries. The Office of Food Crops and Horticulture can have a positive impact in the form of increasing capacity to develop organic agriculture and intensification of land.

- **District Government:** The ERP will likely benefit 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 Development Agency (DPMD; potential channeling 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.
- **Village Governments:** The Village Government will involve in managing social forestry schemes will receive support for sustainable forest management efforts designed by village-based institutions for *hutan desa* (village forests), HKm (community forest) and HTR (community forest plantation), and customary forest management. In addition, the Village Government managing social forestry has the potential to gain from benefit sharing mechanism¹².

Non-Government Stakeholders

- **Joint Secretariat for Forest Resource Management (PSDH Sekber):** The ERP will support SEKBER's mission to improve forest governance;
- **Non-Government Organizations (NGOs):** NGOs will benefit from the ERP implementation, as long as the communities are actively involved in the process. NGOs may oppose ERP implementation if indigenous peoples' rights are not properly respected;
- **Academics:** Academics/higher education institutions such as Jambi University (UNJA) can get a positive impact from the ERP implementation in the form of involvement in conducting studies, starting from the planning process to the monitoring of the ERP implementation;
- **Private sector:** The ERP implementation may resolve the issues of unclear boundaries between concessions, which will benefit plantation, forestry, and mining companies. However, the implementation will limit the production process of existing concessions of plantation, forestry, and mining, as their operations are considered as contributors to deforestation. Therefore, compensation for these restrictions (opportunity cost) must be considered in the ERP implementation scenario. Otherwise, the ERP will face rejection from the concession holders. The concession holders must be included in a sustainable management scheme such as Timber Legality Verification System or Forest Steward Council certification for the forestry sector, and RSPO or ISPO certification for the oil palm plantation sector. One interesting model is SMART group and Asian Agri that have received RSPO certificates. Their CPO has been well received in the European market due to sustainable management and harvest;

¹² To be developed and agreed among stakeholders

- **Local communities:** Local communities, especially those involved in social forestry schemes, will receive a positive impact on ERP implementation. Formalization and establishment of social forestry provide schemes for receiving benefits (i.e., facilitations and market support). Social forestry scheme will contribute to emission reduction by addressing the drivers of deforestation. However, there will be potential access limitations to economic activities related to agriculture and plantation. Therefore, efforts to intensify land use (agriculture intensification) and increase the added value of local community products must be considered in the ERP design and implementation;
- **Indigenous peoples:** Indigenous peoples, especially those managing customary forests, will receive positive impacts on the ERP implementation in terms of formalization and establishment of social forestry provide schemes for receiving benefits (i.e., facilitations and market support), if they contribute to reducing emissions. Indigenous people may receive negative impacts due to limited economic activities if the ERP is implemented. Indigenous peoples' access to new land for agriculture and plantations (access restriction) is expected. Therefore, efforts to intensify land use (intensification for agriculture) and increase the added value of indigenous peoples' products must be considered in the ERP design and implementation. Specific attention must be given to the indigenous people in Jambi Province, such as Orang Rimba, Talang Mamak and Batin Sembilan because they are considered as vulnerable groups. Indigenous peoples such as Marga Serampas in Merangin have established a customary area within Kerinci Seblat National Park.

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/indigenous peoples that still practice hunting and gathering of natural resources for subsistence. These communities are known to exist in National Parks, forests and plantation areas. This group influences the outcome of FPIC, tenurial conflicts resolution and benefit sharing mechanism. This group has the interest in maintaining customary land rights (for access and/or use) that may be targeted by the ERP. Areas of engagement may include:
 - Involvement in the ERP socialization and FPIC procedures.
 - Involvement in conflict resolution mechanisms and FGRM;
 - Involvement in legal recognition and
 - Obtaining consent on benefit sharing mechanism.
- Local communities (including some customary communities) 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. Areas of engagement may include:
 - Involvement related to sustainable timber harvesting.
 - Involvement in promoting NTFPs;
 - Involvement in Social Forestry related to sustainable forest landscape management; 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 a sustainable palm oil mechanism. Areas of engagement within the ERP includes (but not limited to);
 - Involvement in sustainable palm oil mechanism (ISPO and RSPO schema) ;
 - 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 of sustainable forest management mechanisms (e.g., HCV and RIL-C). Areas of engagement 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-C (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. Areas of engagement 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 constitutes negative influencers¹³, there may be some vested institutional interests related to the mandate on increasing provincial/district revenue (*Pendapatan Asli Daerah/PAD*). A lion's share of Jambi's PAD originates from plantation and mining sectors, so a decrease in plantation and mining productivity may affect the revenue. Therefore, government agencies such as Forestry Agency, Agriculture and Horticulture Agency, Energy and Mineral Resource Agency, provincial/district tax offices, licensing offices, investment/asset agencies,

¹³ Interview with various stakeholders described in this section shows that none of these stakeholders oppose the BioCF concept and approach. Despite being unfamiliar with the concept, all stakeholders agree that sustainable development and forest management are important agenda for Jambi Province. Therefore, it can be concluded that the risk of stakeholder opposition is low, and none of these stakeholders constitute negative influences.

and provincial/district councils (or even *bupati*) may have vested interest in the ERP implementation. Vested interest may become more prominent during district/provincial elections.

Non-government entities awareness of the program such as the private sector that maintain their portion of HCS and HCV may tend to claim over the benefit as well, this vested interest from non-government entities hold big concessions of plantation and mining may be affected by the volatility of the commodity market and made another alternative source of income as an eligible beneficiaries of the ERP implementation.

2.3.3 Institutional Capacity Assessment

Assessment was done to recognize institutional capacity in managing environmental and social risks identified in sections above. Details of the assessment can be found in Appendix A6 of this report. This assessment was done on stakeholders at national and sub-national levels with the following summary.

- National Level. Strong capacity for coordination between Indonesian government and BioCF-ISFL, as well as between national and sub-national levels, is required, and so are 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. Monitoring the deforestation in Jambi province by using a sophisticated satellite monitoring system established at the national level, the central government could also strengthen the law enforcement in Jambi provinces to stop illegal activities that lead to deforestation. Benefit sharing mechanism needs to be defined and agreed upon to ensure effective flow of Carbon Fund to eligible beneficiaries. Technical aspects for channeling funds need to be prepared such as the nomenclature of RBP in APBD, and JUKLAK of benefit utilization
- Provincial Level requires strong capacity for developing strong regulations (i.e., Perda) to support the Green Growth Plan of Jambi (supported by IDH). This level also requires the capacity for coordinating the ERP implementation (including safeguards mechanism) with technical support from the national government, as well as proper implementation of the benefit sharing mechanism (e.g., through BLU). Technical capacity is needed to ensure optimal operation of FMUs (management of forestry areas and HCV), plantation agency (sustainable estate crop plantation), and environmental agency. Specifically, strong capacity for conflict resolution (FGRM), sustainable palm oil plantation and participatory planning is required. The regulation for implementing HCS and HCV will be encouraged voluntarily prior to the issuance of a provincial level regulation to require HCS and HCV. RSPO requirements will follow existing regulations.
- District Level requires capacity relevant with the recognition of indigenous peoples (District Perda), as well as the application of sustainable plantation, mining, and forestry practices. The capacity at district level will also include recommendations for HGU and HCV for plantation. Such a recommendation needs to consider potential risks such as access restriction and/or involuntary resettlement. District governments should play an active role in monitoring and evaluating of phase on granting and result based payment of BioCF-ISFL activity.
- Village Level requires capacity relevant with the ERP implementation (mainly in APL) and taking part in administering FGRM. Participatory planning such as Participatory Rural Appraisal (PRA) and Village Land-Use Planning (VLUP) need to be implemented at this level to allow social and gender inclusion in development planning. The village government must be able to distribute

the benefit of the ERP's result-based payment to those who are entitled and have contributed to the emission reduction program.

- Private sectors need to increase the capacity for engaging with local communities and local government, as well as for mitigating environmental and social risks. Private sectors also need the capacity for sustainable forest management practices, such as wildlife corridor and HCV, dispute resolution and the implementation of relevant safeguard mechanisms. Encouraging the private sector to carry out HCV calculations to obtain licenses such as ISPO and RSPO and to find out how significant the private sector's role is in emission reduction programs.

2.4 DATA ANALYSIS

Upon establishing a shortlist of environmental and social (key) issues under Section 2.2.2, a follow-up analysis was carried out to understand specific environmental and social risks associated with the ERP's components and subcomponents¹⁴, which covers:

- **Component 1: Strengthening Policy Institution.** The ER Program will focus on main key aspects that support improved land governance. Component 1 consists of the following sub-components:
 - Sub-component 1.1: Improving policies and regulations to support implementation of the ERP;

In addition to leading to significant emissions reductions, this Component is expected to provide capacity improvements to local stakeholders at provincial and district levels, as well as to Forest Management Units throughout Jambi.

- **Component 2: Implementing Sustainable Land Management.** The ER Program will facilitate the development of a long-term management plan of 12 Forest Management Units. This component will also encourage stakeholders' participation (including local communities) in forest management and fire prevention. Additionally, incentives for local communities are included within this component to ensure sustainability. Component 2 consists of the following sub-components:
 - Sub-component 2.1: Promoting Sustainable Forest Management, Conservation and Restoration.
 - Sub-component 2.2: Promoting sustainable estate crops
 - Sub-Component 2.3: Promoting Climate smart agriculture and alternative livelihood for generating incomes of communities
 - Sub-Component 2.4: Providing alternative livelihood for generating incomes of communities.
- **Component 3: Program Management and Coordination t.** Component 3 aims for the implementation of J-SLMP and future emission reduction program (ERP). This component will focus on program management, and Monitoring-Evaluation of the overall program implementation. Component 3 consists of the following sub-components:

¹⁴ A slightly new ERP component and sub-components have been developed and discussed. Since the new ERP component and sub-components are not yet finalized, this report uses the existing ones.

- Sub-component 3.1: Ensuring implementation of Safeguards in place
- Sub-Component 3.2: Ensuring implementation of MAR in place
- Sub-Component 3.3: Ensuring Benefit disbursed and channeled to the beneficiaries
- Sub-component 3.4: Knowledge sharing management.

Identification of key risks under these ERP's components and subcomponents 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 J-SLMP and followed by ERP. A risk and impact analysis were carried out as a deliberative exercise based on stakeholder consultations and formulation of strategic issues as described above. 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 assessment of secondary data (medium-term plan and spatial plan of Jambi Province) and a series of stakeholder consultations (village, district, and provincial levels) in Jambi with the purpose of:

- Verifying key issues;
- 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 judgment.

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

- Direct contribution can be seen from beneficiaries' efforts in reducing emissions directly, such as rehabilitation, avoiding illegal logging, etc.
- Indirect contributions, for instance, can be seen in reduced social and tenure conflicts, the development of environmentally sound non-timber forest products, and others. In addition, the involvement of civil society organizations (CSOs) in facilitating forest-fringe communities and universities or research institutions for developing emissions reduction-related research and studies can also be seen as a form of indirect contribution.

- The main criteria to access benefits are role and contribution direct and indirect, in reducing emissions within their territory or working area, except for private sectors with additional criteria such as certificate HCV, ISPO, and RSPO
- 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 ESS that can potentially be triggered. These ESSs consist of:

- ESS 1 Assessment and Management of Environmental and Social Risks and Impacts
- ESS2 Labor and Working Conditions
- ESS3 Resource Efficiency and Pollution Prevention and Management
- ESS4: Community Health and Safety
- ESS5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement
- ESS6: Biodiversity Conservation and Sustainable Management of Living Natural Resources
- ESS7: Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities
- ESS8: Cultural Heritage
- ESS 9: Intermediate Financial Institution
- ESS10: Stakeholder Engagement and Information Disclosure

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

2.4.2 Gap Analysis

A preliminary gap analysis was performed as part of the interim SESA and further analyzed as part of the SESA finalization. The analysis investigates the current system readiness and capacity pertaining to environmental and social management against applicable requirements under the World Bank Environmental and Social Standards (ESSs). Relevant system strengthening, including additional measures introduced in the ERP's Environmental and Social Management Framework (ESMF), and Stakeholder Engagement Plan (SEP) have been introduced as part of the overall environmental and social management system under the Program.

This analysis aims to assess the relevance of the existing national regulations and safeguards instruments (e.g., SIS REDD+) and which areas warrant further strengthening.

2.5 PUBLIC CONSULTATION

Public consultation is done to ensure input and subsequent buy-ins from relevant stakeholders. These 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.
- BioCF-ISFL activity was designed already as a means to provide the community with a sense of ownership of the project and thus earn broad community support for the project or operation.
- They should be aimed at collecting and interpreting community feedback and effectively reflecting this into project design and implementation BioCF-ISFL.
- In order to maximize their success and impact, public consultations should not be viewed as an event but as the initiation of a process. Consultation should lead to long-term community engagement to maintain public trust and buy-in throughout the project cycle BioCF-ISFL.

2.6 LIMITATIONS

SESA and the ESMF were first developed during the initial phase of ERPD development in Jambi. Due to the lack of the ERPD document, SESA was done mainly based on the PDO. Data collection was limited to key geographical areas as samples to represent mineral forests and peatland sites. The analysis was based on sample villages and districts that may not be able to reflect the overall environmental and social conditions in Jambi Province. Further consultations with sample districts (Merangin and Tanjung Jabung Timur to represent mineral and peatland areas, respectively) were conducted to enrich the analysis. Additional consultations were postponed to 2022 due to COVID-19 pandemic, the consultations will provide more information needed from the grass root stakeholders. .

3. 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 Jambi Province;
- REDD+ consultation process; and
- Lessons learned from previous REDD+ implementations.

3.1 KEY PROCESSES OF REDD+ READINESS¹⁵

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 percent through its own efforts and by up to 41 percent with international support, below the business-as-usual (BAU) scenario by 2020. Later in 2015 (at COP 21 in Paris) Indonesia committed to reduce 29 percent of its emissions through its own efforts, and up to 41 percent with international support, below the BAU scenario by 2030, through the submission of the Nationally Determined Contribution (NDC) in 2015 and the updated NDC in 2021.

Indonesia has made significant progress toward developing national REDD+ architecture and is at a point where a Jambi Sub National 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 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. At the national level, the ERP is placed under the responsibility of the MoEF.

Funding from ISFL, 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 ISFL and FCPF Participants Committee. Readiness process has provided the Indonesian government with exposure to safeguard mechanisms required by the UNFCCC, as well as hands-on experience in developing the safeguard mechanisms suited for the Indonesian national and sub-national contexts. Additionally, the 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 and its evaluation for some relevant provinces including Jambi, improvement on capacity for implementing and monitoring of safeguards, and quality assurance to ensure proper safeguard implementations are needed to ensure the

¹⁵ Source: Emission Reduction Program Document (ERPD) Jambi Province

robustness to address environmental and social aspects throughout REDD+ initiatives at national and sub-national levels. Key progress in terms of REDD+ readiness is summarized in Table 3.

Table 3. 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, Directorate General for Climate Change (DGCC). At the sub-national level, DGCC has five 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. In addition, the Indonesian Government launched the carbon pricing (Nilai Ekonomi Karbon or NEK) policy in October 2021 under Presidential Regulation Number 98 the Year 2021. The NEK becomes the Government's instrument in reducing emissions through mitigation and adaptation actions. This regulation serves as the basis for RBP implementation, which will be regulated under the MoEF regulations. The MoEF needs to establish general guidelines that include the implementation of RBP, procedures of RBP disbursement to the beneficiaries, and monitoring, evaluation, and assistance.	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. The Safeguard Information System (SIS) REDD+ was developed in 2013 and is operational in three provinces (Jambi, and West Kalimantan).	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
	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 2017 (Ministerial Regulation No. 70/2017) and sub-national FRELs for several provinces have been established (including Jambi Province). Indonesia's REDD+ MAR 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 six 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 PRISAI, 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 secondary 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.	Participation by the private sector in REDD+ financing needs to be enhanced. The funding scheme needs a stronger legal basis.

Components	Progress	Key Gaps
	Presidential Regulation on Environmental Economic Instrument (as an umbrella for the General Services Agency) has been enacted (Presidential Regulation No. 46/2017).	The benefit sharing mechanism needs to be finalized and adopted at the national and sub-national levels. Special assistance is needed for communities with unrecognized land rights to ensure they can access the benefits. Implementing agencies in the field, such as FMU, the Environment Agency officials, the Forestry Agency officials, and the village heads, need to get capacity building programs to enable them to assist communities with unrecognized rights. The communities should also be informed what their rights are.
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. FREL for sub-national has been formalized through The Decree of DG Climate Change (SK Dirjen PPI) No. 8/2019. The ER program in Jambi has also developed a meaningful and suitable MAR system to be used for calculating emission reduction during the ERP implementation.	Jambi Sub National boundaries used by the national and sub-national systems are not fully aligned. Measurement time frames across various schemes need to be harmonized. Lack of capacity on the part of the provincial government (in tgs case, Jambi Provincial Government) is being addressed by the BioCf-ISFL through capacity building and institutional strengthening activities.
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. Parallel process is also used in Jambi for developing MAR process.	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. At least two comprehensive implementations of SIS-REDD+ have been completed, West Kalimantan and Jambi.	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.

Components	Progress	Key Gaps
		Capacity of institutions at the sub-national level to operate the SIS REDD+ needs strengthening. Community involvement in the SIS needs to be improved.

The Concept Note for BioCF Jambi was developed on March 18, 2017. 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 Concept Note by the World Bank, Jambi was selected for ER implementation in 2017 (entry into IFSL pipeline). The Concept Note was to be developed into ERPD for Jambi Sub National REDD+ implementation in Jambi.

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. Previous REDD+ implementation included support from UNDP to establish a baseline and cadastral map of Jambi Province. The project was to coordinate the collection and assessment of data relevant to the requirement of REDD+ projects. The project was part of the Indonesian Government program to reduce CO₂ emissions through a REDD+ mechanism.

Jambi Province was selected as a project site due to the state and threats of its forests, availability of local and traditional community groups, and presence of other initiatives being implemented by local, national and International NGOs. The proposed J-SLMP and ERP will cover the entire province of Jambi which includes diverse forest and land types, including coastal forests, lowland forests, and upland forests, and peatland which have been a significant source of national emissions. By 2020, Jambi's annual emissions from deforestation, forest degradation, and peat degradation are predicted to reach more than 52 million MT CO₂e/yr (or +/- 8 percent of the equivalent emissions at the national level). Over the ERPA period (2022 to 2026) the ERP is estimated to contribute a significant emission reduction target in Jambi. It is estimated to reduce 48 percent and 38 percent from peatland and LULUCF respectively.

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 Jambi REDD+ Strategy and Action Plan (SRAP REDD+), the Jambi Greenhouse Gas Emission Reduction Action Plan (RAD GRK), and the Jambi Environmentally Sustainable Development Strategy (part of Jambi TUNTAS Vision). Jambi has been served by a new governor since July 2021. Hence, the development of the province-level REDD+ has also been engaged with Jambi MANTAP Vision and the Green Growth Plan launched in 2021. Forestry Agency of Jambi Province established a Joint Secretariat for Management of Forestry Resources through the Decree of Forestry Agency No. 96//2017. The SEKBER is a multi-stakeholder platform consisting of government, NGO and business representatives.

The SEKBER in Jambi has been closely involved with the development of the Jambi Environmentally Sustainable Development Strategy, and the SRAP (2012-2032). Selected members of SEKBER participated in SESA and ESMF exercises conducted in Kutai Kartanegara District, East Kalimantan Province. The exercise provided insights for the proposed ER activities that might have environmental and social impacts. Such exercise also emphasizes the needs to mitigate those impacts, and to consult with relevant stakeholders at the district level.

In Jambi, the REDD+ consultation series started with identification of stakeholders, defining the roles and authorities, as well as the institutionalization of J-SLMP and ERP and benefit sharing. There is a legal basis for the emission reduction strategy (Governor's Regulation – *Peraturan Gubernur* No. 36/2012 on Provincial Strategy of Emission Reduction) used as the baseline framework to legitimize ERP in Jambi. To further support the implementation of the J-SLMP, Governor of Jambi Regulation No. 687/2020 was issued in late 2020 governing the Sub National Project Implementation Unit (SN-PMU) and sections responsible for implementing the J-SLMP, including the Safeguards Section under the leadership of the Provincial Environment Service (DLH).

This program will be a performance-based payment system, and financing by way of on-budget on-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 by using the on-granting system. It was envisioned that implementation of a Carbon Fund at the site level will involve Forest Management Unit (Production and Protection Forest), National Park and Natural Resource Conservation Unit, and village administration. Additionally, sustainable palm oil and forest plantations will be part of the BioCarbon Fund ERP program. 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.

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. On 20 November 2017, a focus group discussion was conducted to kick-off program preparation within Jambi. Drivers of degradation and deforestation, ERP activities, and the benefit sharing mechanism were discussed with the key stakeholders in Jambi in a series of discussions from November 2017 until April 2018.

Past activities included the establishment of the Regional Commission (*Komisi Daerah/Komda*) REDD+ working groups in Jambi. The aim was to ensure implementation of provincial strategy for emission reduction. Under BioCF, the same function will be done by a Provincial Task Force who will be responsible for guidance and decision-making on provincial-level policy and for program issues in Jambi 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 the district's RPJMD.

By 2014, demonstration activities (DA) for REDD+ in Jambi included Berbak and Bukit Tigapuluh National Parks, Harapan Rainforest, and Durian Rambun Village Forest (Rio Kemunyang) in Merangin District. Activities consisted of Monitoring, Analysis, and Reporting (MAR), as well as Forest Reference Emission Level (FREL). In regard to technical aspects, method for FREL measurement was also tested in Grand Forest Park (*Taman Hutan Raya/Tahura*) Orang Kayo Hitam in Muaro Jambi and Tanjung Jabung timur district in 2017. This measurement indicated that the Tahura releases 7,883,439.85 CO₂e between 2009 and 2015¹⁶. The methodology needs to be replicated in more sites, in order to obtain reliable FREL measurements that represent conditions in Jambi. Capacity for FREL measurement needs to be included as parameter for self-assessment on readiness to implement REDD+ in Indonesia.

Implementation of the BioCarbon Fund as a performance-based payment system now needs to be formalized through a MoU between MoEF and the Governor of Jambi. Such an MoU will need to regulate the organization of data, as well as identify the data custodian/s. Data management should allow access by , DGPI, P3SEKPI, and SEKBER, 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 or 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

¹⁶ Source: Febriani, I. 2017. Analisis Forest Reference Emission Level (FREL) berdasarkan deforestasi tidak terencana di Taman Hutan Raya Sekitar Tanjung. Institut Pertanian Bogor, [Master's Thesis]

PRISAI, a safeguard mechanism adjusted to the Indonesian context. PRISAI was established through a series of consultations that took place between January and February 2012. These consultations consisted of ten FGDs at national and provincial levels, followed by public consultations at national and provincial levels.

In parallel, the GOI set up a system to register the safeguard implementations. This Safeguard Information System (SIS REDD+) was developed between 2011 and 2013 by analyzing 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 analyze 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

3.2 STRATEGIC RATIONALE

Participation in REDD+ initiatives are highly relevant to Indonesia's commitment to reduce emission levels by 41 percent 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 Jambi's path toward a green economy.

Jambi has produced a provincial strategy for emission reduction (*Strategi dan Rencana Aksi Provinsi/SRAP*) derived from the STRANAS. Moreover, Jambi has received support for several REDD+ initiatives such as the Berbak Carbon Initiative Project, Danish International Development Agency (DANIDA) Support for Harapan Rainforest, Community Forest Ecosystem Services Indonesia, and UNDP Cadastral that provided Jambi with exposure to REDD+ initiatives. These previous interventions have provided the province with enabling conditions, documentation, and lessons learned on REDD+ initiatives. As a consequence of this past work, Jambi Province is seen as a strategic platform for continuing and scaling up REDD+.

Jambi Sub National approach was selected as the best strategy for the ERP, as it allows integration of REDD+ into development planning and licensing¹⁷. 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 and Paris Agreement), political commitment at the national level is reflected in the establishment of the:

- Directorate General of Climate Change (DG CC) as the national institution to manage and coordinate REDD+ implementation in Indonesia.
- Technical Management Unit of Climate Change to facilitate REDD+ implementation at the province level.

¹⁷ Lessons on Jambi Sub National REDD+ from Berau District, Jambi. The Nature Conservancy

- Peat Restoration Agency (*Badan Restorasi Gambut/BRG*), established through Perpres No. 1/2016, to develop a national peatland map, then restore and rehabilitate the degraded peatland; 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.

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

- Completion of Jambi Green Growth Plan (GGP) in 2020 that outlined a low carbon development plan for Jambi Province from 2019 to 2045. The Jambi Province has included Green Growth Plan in the RPJMD (2021-2026) and budget allocation (APBD) documents. The emission reduction strategies of the Jambi Province, such as how to reduce deforestation and land degradation can be found in the RPJMD document. The GGP has three main strategies. First, it addresses land-use planning that can balance the allocation and restoration of lands as well as increase land productivity sustainably. Second, it improves the enabling conditions and increases the capacity of smallholder communities to participate actively in achieving green growth. Third, it focuses on the connectivity of producers and consumers through the development of connecting infrastructure and value chains as well as processing industries for the main commodities. The Jambi Province Government claims that the GGP with 37 interventions can reduce 34% emission intensity compared to BAU.
- Provincial Vision (Jambi MANTAP) that includes climate change mitigation as one of development priorities. Under the GGP policy and Jambi MANTAP, the Jambi Province is projected to reduce 5.1 million ton CO₂ Eq in average for each year;
- Appointment of a provincial REDD+ Task Force/Regional Commission (Komda), to undertake REDD+ pilot projects (based on provincial strategy for emission reduction/SRAP) and to embrace a Governor's priority policy for a transition to a low carbon economy.
- Sustainable peatland management (15,000 ha) that aims for fire prevention, community development programs, and involvement of local communities. The Jambi Province has formed Regional Peatland Restoration Team (*Tim Restorasi Gambut Daerah/TRGD*) under the Gubernatorial Decree 148/KEP-KDK/DISHUT-TP/VII/2021

Reflections of political commitment at the regency level can be found in Sarolangun, and Tanjung Jabung Regencies. In 2016, Sarolangun agreed to participate in the operationalization of SIS-REDD+. In the same year, the National Forest Berbak became one of the pilot projects to provide information about safeguards implementation at the grassroots level. This participation was expected to be implemented in another regency. Based on the SIS-REDD+ website established by the MoEF, there are five REDD+ projects that are listed in the website and participated in providing safeguards information. Four projects are implemented at the regency level, including forest management project in Bukit Dua Belas National Forest, Batang Hari Regency; the community forest ecosystem services in Rio Kemunyang Forest Village, Merangin Regency; REDD+ preparation in Tanjung Jabung Timur and Muaro Jambi Regencies; and Carbon Value Initiative in Berbak National Forest, Tanjung Jabung. Despite the previous exposure to and political commitment on REDD+ at the sub-national level, there remains a need to increase the capacity of provincial and district stakeholders in the overall environmental and social management (i.e., implementation of safeguard mechanisms). For instance, these REDD+ projects are listed in the SIS-REDD+ website, the update and the information about the safeguards implementation are limited.

Transparency of the safeguards implementation becomes the main challenge. Institutional capacity is needed to ensure the SIS-REDD+ website works well. The provincial and district stakeholders should have sufficient capacities to implement safeguards and report it through the system established by the MoEF.

The needs for capacity building within FMUs (forest management at the provincial level), plantation agencies (sustainable palm oil), and for management of forest cover in APLs emerged during the discussion on the project document output. This is discussed further in Section 8.2. 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 guaranteed, since this will largely depend on the ER performance and there may be risks where benefits may not be equitably distributed at a grassroots level (e.g., village administration, Indigenous People, or social forestry groups). This creates some degree of skepticism 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, BioCarbon Fund). The former is often used as a mean 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.
- Result Based Payment (RBPs), such as the ERP, depends on the donors' willingness to contribute which leaves limited room for negotiations to ensure that payment amount sufficiently compensates operational costs and rewards performance. Implementing emissions reduction programs typically require high transaction costs due to involvement of multiple stakeholders across levels which usually result in limited funding that directly reach communities¹⁸.
- REDD+ initiatives, especially performance-based payments, require technical capacity on carbon accounting that relies on carbon stock assessment, defining FREL and MAR. 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, which may likely be residual in nature due to poor implementation. Hence, it is critical to formulate measures to prevent or mitigate the negative impacts using environmental and social management framework (ESMF).
- A jurisdictional ERP, being one-off payments and limited to certain jurisdictions may create reversal and leakage risks. Big questions remain how to ensure commitments and sustainability of the ER activities in the long term and measures to address the potential emission leakages in other jurisdictions.
- Determining beneficiaries and distributing payments can be complex, acknowledging that benefit allocation and distribution will rely on a robust system for monitoring, reporting and verification of ERs. At this stage, the current system readiness in Indonesia to implement large-scale ERP is yet to be tested, with the first ER payments for East Kalimantan in 2023.

¹⁸ For FCPF in East Kalimantan the cost is estimated at about USD 93 million, or equivalent to 85 percent of the total committed RBP of USD 110 million (at USD 5 per ton CO₂ reduced), leaving barely 15 percent benefit that could be distributed to stakeholders

Considering the above risks, REDD+ initiatives such as the BioCarbon Fund require conducive political conditions, adequate economic support for preparation, and strong political buy-in from stakeholders at national and sub-national levels. In Indonesia, political buy-in at the national level was formalized by establishing the BP REDD+ agency. Upon the dissolution of this agency, Indonesia's commitment to REDD+ initiatives were transferred to the MoEF, DG of Climate Change (DGPPI). At the provincial level, commitments to REDD+ and emission reductions are reflected in the commitment to protect areas with high carbon value. Jambi's strategy and action plan for emission reduction target 1.6 million hectares of forest cover (approximately 33 percent of total province area), in addition to 15,000 ha peatland as a protected forest under FMU management. However, despite intensive NGO activities, in 2018 Jambi was only able to retain 920,000 ha, or 18 percent of total province area¹⁹ if no significant efforts are added (business as usual scenario).

Forest cover in Jambi is below the threshold of 30% forest cover for ecosystem balance (Article 18 of Forestry Law No. 41/1999). The estate crop sector dominates the existing land use with 1.8 million ha (36 percent of province area) being allocated to concessions. In 2020, oil palm plantation areas of private estates were 291,342 ha. The smallholders cover bigger areas with 771.997 ha (BPS 2021). Meanwhile forestry sector consists of timber plantation with 776,652 ha, and logging concession with 67,140 ha or 16 percent and 1.3 percent of total province area respectively²⁰. The strategic rationale for REDD+ in Jambi lies in private sector engagement. Such engagement encourages sustainable private sector investment and partnership. This engagement has strategic value, as the private sector is the dominant stakeholder in estate crop and forestry concessions. There were two meetings involving private sector in 2021. The first one was an online discussion on "Labor and Working Conditions, Community Health and Safety and Land Acquisition, Restrictions on the Land Use and Resettlement in the Implementation of the Jambi Sustainable Landscape Management Project." The second one was a workshop on "Synergy among the Remaining Natural Forest Protection Programs by the Parties into the Design of the Jambi Province Jurisdiction-Based GHG Emission Reduction Program Through BioCF-ISFL." Two communication activities have been prepared to engage further with the private sector. First, the private sector will be invited to coordination meetings. Second, they will also be invited to information sharing sessions such as workshops. Additionally, empowerment of provincial government agencies (e.g., FMU) and the national parks would promote better forest and peatland management practices. The FMUs have eight roles, such as:

1. implementing the Sustainable Forest Management;
2. contributing to reducing emission through forest protection and production;
3. developing ER activity plans in its territory;
4. identifying forest-fringe communities who do not have legal rights;
5. consulting with potential beneficiaries;
6. submitting the identification result to SNRS;
7. supervising the benefit-sharing contract implementation by the community groups in their territories; and
8. managing the complaints and grievances related to the ER Program within their jurisdiction area or at site level

The national parks authorities have four main roles in the ERP, including:

1. To manage ERP activities within the jurisdiction of the national parks;

¹⁹ source: Jambi Independent, December 18, 2018:

²⁰ Data from KKI WARSI

2. To identify forest-fringe and/or enclave communities who do not have legal rights but are potential to be beneficiaries and facilitate them to have legal connection to the lands;
3. To consult with potential beneficiaries – local communities using FPIC;
4. To manage the complaints and grievances related to the ER Program within their jurisdiction area or at site level.

Engaging with the private sector and empowering provincial government agencies such as the FMUs and the National Parks Authorities will be strategic measures to make the ERP a success.

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 Jambi will rely on protected forest, national parks, production forests (including private concessions), nature tourism park and *Taman Hutan Raya* or Tahura. These areas are the five largest components of the Implementation Area of the ERP in Jambi Province (map of Implementation Area is shown in Appendix A2). This suggests capacity needs among FMUs (protected and production forests), national park authorities, BKSDA and Provincial Forestry Agency. Capacities needed for the BioCarbon 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., institutionalizing ESMF).

The ERP in Jambi will target to reduce emissions 19 MtCO₂e. The costs of implementing the proposed program actions and interventions are estimated to reach USD 40.9 million. The program has obtained secured financing from BioCF-ISLF World Bank as Pre-Investment Fund for planned actions and interventions estimated at USD 13.5 million. The remaining costs of 27.4 million will be financed from government budget (ABPN, Provincial Budget, and District Budgets), private companies, development partners, and revenues or incentives from result-based payment of emission reductions. The provincial government of Jambi has allocated USD 44.9 million for the five-year development program (2022-2025) related to land-based activities to support the implementation of GGP (Table 11).

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 SAFEGUARDS INITIATIVES IN INDONESIA

Implementation of ER activities are expected to be beneficial for the environment and the people. However, there may be residual risks associated with poor implementation of activities, conflicts, livelihoods impacts as a result of access restrictions, etc. Hence, it is critical to ensure that there is a system and capacity at the ER Program level to manage potential environmental and social risks and impacts. The environmental and social instruments established under the ERP, notably the Environmental and Social Management Framework (ESMF), builds on various past and on-going safeguards initiatives in Indonesia, with the most recent being the safeguards instruments under the J-SLMP pre-investment project. Each of these initiatives is summarized as follows:

3.3.1 SIS-REDD+ Indonesia

The Conference of Parties (COP) 16 in Cancun, Mexico resulted in the agreement to formulate safeguards mechanisms for future REDD+ implementation. This translates to formulation and contextualization of the seven safeguards principles formulated in COP 16 (i.e., Cancun Safeguards) and

development of a transparent Safeguard Information System (SIS-REDD) as a web-based platform to monitor safeguards performance across program interventions.

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 (DG of CC) 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 institutionalization of the system under DG CC, MoEF. SIS-REDD+ Indonesia contains seven safeguard principles. Those seven principles are:

1. Legal compliance and consistency with national forest programs.
2. Transparency and effectiveness of national forest governance.
3. Rights of indigenous and local communities (*masyarakat adat dan lokal*).
4. Effectiveness of stakeholder participation.
5. Conservation of biodiversity, social and environmental services.
6. Reducing risk of reversals.
7. Reduction of emissions displacement.

These principles are also reflected in the Safeguards documents such as the ESMF, ESCP, SESA and SEP documents. These documents should be made available on the SIS-REDD+ website, including the summary for each document. This measure enables all stakeholders to access the Safeguards documents and understand the key safeguard points. APPS (*Alat Penilai Pelaksanaan Safeguards*) or the Safeguards Implementation Assessment Tool is established to assess safeguards implementation in Indonesia. Preliminary assessment using SIS REDD+ principles has been completed by BioCF-ISFL for Jambi to look at the implementation of criteria and indicators outlined in the SIS-REDD+.

3.3.2 Safeguards Formulation

3.3.2.1 National Level

In compliance with the Cancun Safeguards, the Indonesian Government formulated PRISAI that outlines 10 principles (translated from Cancun Safeguards), 27 criteria and 99 indicators. PRISAI was initially designed as a framework to filter, monitor and evaluate REDD+ activities at the project and Jambi Sub National levels. In 2017, PRISAI was tested in Bukit Panjang–Rantau Bayur landscape in Jambi²¹ (Bungo District) and was mainstreamed into the SIS-REDD+. PRISAI does not explicitly address the sustainable palm oil approach. Therefore, PRISAI needs to be supported by other safeguards instruments adjusted to the local context in Jambi Province.

3.3.2.2 Jambi Province

At the province level there were several measures taken under the pre-investment grants. First, the pre-investment grant was allocated to support ERP design and systems strengthening to build government capacity to access and utilize performance-based incentives for reduced deforestation, degradation and land use change, including safeguards. Second, the ESMF document and its associated frameworks, including the Indigenous Peoples Planning Framework (IPPF), Resettlement Planning Framework (RPF) and Process Framework (PF), and Feedback and Grievance Redress Mechanism (FGRM) were

²¹ Source: <https://forestsnews.cifor.org/51023/community-participation-as-redd-safeguard-what-matters?fnl=en>

prepared to address specific investments under the pre-investment grant. Third, the SESA process was completed and served as a tool to guide potential investments in the future ER Program towards compliance with the World Bank's safeguards policies. Additionally, the Forest Information Center from MoEF provided support for organization and infrastructure related to information technology. This support is essential for building a system for collecting safeguards data from the field. Similar initiative on a forestry information system was done by WARSI and Berbak National Park. This system can potentially be aligned with SIS-REDD+ system. Challenges identified from these exercises include limited funding, limited authority and lack of attention and participation from various stakeholders.

There is a need to ensure that the local context of Jambi is accommodated in the safeguard information system. There is also a need to ensure consistency of information on safeguard implementation at provincial level with the structure and requirements at national level, as mandated by COP 16 agreement.

3.4 SELECTION OF JAMBI PROVINCE

Earlier at the Emission Reduction Program Idea Note (ERPIN) stage, the GOI proposed a Jambi Sub National approach to ER with two provinces participating in the ERP²². 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 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 concerning 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.

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 Jambi will be valuable in finalizing the design of the national REDD+ framework, including the national MAR system, safeguards approaches, benefit sharing and ER registration.

In 2016, the GOI justified the involvement of Jambi Province for ERP with support from ISFL (BioCF initiative). Such justification was based on the following considerations:

- The enabling environment was reflected through political goodwill, support and stability of the local government.

²² These districts include Merangin and Bungo in Jambi Province; Kapuas in Central Kalimantan Province; Berau and Kutai Barat in Jambi Province; and Tolitoli and Donggala in Central Sulawesi Province. Together these districts encompass 12.5 million hectares, or roughly 9 percent of Indonesia's total land area, and are home to around 1.5 million people.

- Agricultural drivers of land use change are relevant with conditions in Jambi where encroachment for planting commodities (e.g., coffee, horticulture, and cinnamon) occurs throughout the province.
- 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 (Jambi TUNTAS vision and now replaced by Jambi MANTAP vision). This readiness has been supported by key documents on strategy and planning on low carbon development (Jambi Green Development Strategy, and Provincial Strategy and Action Plan for REDD+ implementation, legalized through Governor's Decree No. 352/2013).
- Support from local and international NGOs and/or CSOs working in Jambi.
- Presence of other complementary investments, including existing bilateral donor supported programs; and
- Significant potential of verifiable emissions reduction based on the Indonesian National Carbon Accounting System (INCAS) calculation. Jambi was also part of the socialization process of the Paris Agreement.

This justification was in line with the commitment of Jambi Province and Merangin, Muaro Jambi and Tebo districts to support REDD+ implementation dated June 21, 2013. This commitment predates ISFL/BioCF commitment for readiness and pre-investment phase from 2020 to 2025.

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 commitments²³; and will support Jambi's path toward a green economy.

3.5 REDD+ CONSULTATION PROCESSES

Various consultation processes were held at national, sub-national, and district 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. Prior to the introduction of BioCarbon Fund, there have been several consultation processes such as:

- Several meetings on developing the FPIC design and methodology for BioCF followed by the institution set-up at the provincial level. Unfortunately, after rigorous team preparation for site visits to 100 villages, the visits were canceled due to the surge of COVID-19 pandemic in Jambi in Mid-2021 and afterward;
- Development of Strategy and Action Plan for REDD+ Jambi Province 2012-2032 (2013). This process produced a document (formalized by Governor's Decree No. 352/2013);
- Focus Group Discussion on strengthening the economic sector (estate crop plantation) to support low emission development, biodiversity conservation, and sustainable development (November 9, 2012). Discussion on estate crops commodities such as rubber and palm oil, and timber plantation/logging business;

²³ Under the NDC, the GOI has committed to a reduction of 29 percent of its emissions through its own efforts, and up to 41 percent with international support, by 2030,

- Joint agreement among Jambi Province, Merangin, Muaro Jambi and Tebo districts (2013). This agreement set the landmark for acceptance of REDD+ implementation in Jambi Province;
- Cadastral mapping and institutionalization of spatial data to support REDD+ (2013-2014). This was a technical assistance and capacity building on remote sensing, spatial analysis and knowledge / database management;
- Focus Group Discussion on the development and operationalization of SIS REDD+ (13-14 May 2014). This is the initial communication to link REDD+ and safeguards principles with instruments and personnel at provincial level. Integration with local context includes alignment with national forestry targets; transparent and effective forest governance; respect for the rights of indigenous peoples; stakeholders' participation; consistent with forest conservation; avoiding the risk of reversals; and actions for emission reduction;
- REDD+ to improve forest governance and peatland to reduce greenhouse gas emission (2014). This consultation process resulted in the agreement of governors from 11 provinces (including Jambi) to implement REDD+;
- Socialization on Paris Agreement on climate Change and Indonesian carbon emission reduction target (2016). This consultation process discussed the implication of Paris Agreement on provincial development, and the needs for Strategic Environmental Assessment (SEA) to support low emission development; and
- Strengthening the legitimization of indigenous peoples (April 2016). This process resulted in the formal recognition of the Serampas community in Merangin Sub-district as a distinct customary group.

Stakeholders from these consultation sessions were recorded in the stakeholder registry (developed by UNDP through the Cadastral Mapping project in 2013). This was used for identifying relevant stakeholders to BioCF.

The process continued with a stakeholders engagement and consultation process to identify key issues based on issues listed in the strategic environmental assessment, medium-term development plan and spatial plan of Jambi Province. Stakeholder consultation also needs to be 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).

3.5.1 Consultation Process

Records from the 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., Indigenous peoples, plantation companies). However, mining companies that will be impacted by ERP are not adequately represented.

Consultation process was done through FGDs, interviews and presentation of ideas and concepts. This allowed the dissemination of ideas. Furthermore, the process was done to encourage clarifications, questions, and in-depth discussions to put more weights in analyzing the key issues. Brainstorming sessions within the consultation process allowed concerns from participants (representing each of the stakeholders) 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 environmental and social risks.

However, further consultations are needed to ensure that FPIC and formulation of the benefit sharing mechanism are implemented well. Consultation process in Jambi Province consisted of:

- Kick-off meeting/joint preparation mission World Bank, FCPF and DGCC (September 25-27, 2018). This meeting discussed the grant agreement process, formulation of ERPD (from PDO as the basis), social and environmental safeguards, and development of pre-investment activities. Representatives from central government (the MoEF), provincial governments, NGOs and private sectors were present during this meeting. Customary (*adat*) representative was not present but was scheduled for consultation in the upcoming stakeholder mapping exercise. The results of this meeting were:
 - Identification of stakeholders (including plan for consultation with *Adat* communities), and roles and authorities appropriate for the institutionalization of ERPD development, MAR, safeguards and benefit sharing;
 - A Draft Project document Output was developed based on input from the stakeholders' representatives. The PDO will be developed further into the ERP design; and
 - Alignment of MAR, Safeguards, Registry System and FGRM, with the provincial mechanism and capacities.
- World Bank Mission (19-21 March 2019). This meeting was designed to gather input for indicative SESA, and to gain consensus on the data requirements. Provincial agencies and technical implementing units of MoEF agreed to provide data for developing SESA and ERPD;
- Focus Group Discussion (FGD) to identify areas for REDD+ implementation using Implementation Areas as reference (4-5 April 2019). This meeting was designed to gather inputs on potential impacts and issues faced by provincial and national authorities in Jambi. Inputs from stakeholders were compiled in matrix to identify potential REDD+ areas (See Appendix A3);
- Interviews with FMUs, district BAPPEDA (Merangin, Bungo, Kerinci, Sarolangun and Tanjung Jabung Timur districts), Kerinci District Environmental Agency, and Kerinci Seblat National Park authority (March-April 2019). This interview was intended to capture perception and expectations of the respondents (government officials) on BioCarbon Fund, drivers of deforestation, and capacity needs assessment to address these drivers;
- Focus Group Discussion in sample villages (19-20 April 2019). This FGD was done to verify key environmental and social issues described in Section 2.2.2. The FGD was also done to identify stakeholders at grass root level, and to identify risk of conflicts; and
- Focus Group Discussion with Orang Rimba and Marga Serampas to represent indigenous peoples (20 April 2019). This FGD was done to verify key environmental and social issues described in Section 2.2.2. The FGD was also done to identify stakeholders at grass root level, and to identify risk of conflicts and issues related to customary rights.
- Two public consultations were done at the district levels, namely District of Tanjung Jabung Timur in May and District Merangin in June 2019. In these meetings, the draft of safeguards documents was presented to the public, in this case, various government offices at the district level, related FMUs, National Park Authorities, local NGOs, heads of sub-district and some heads of villages, and WB staff. Besides presenting the draft safeguard report, discussions were also held to

capture inputs and further analysis of environmental and social impacts as well as capacity to deal with the impacts (especially in Merangin District);

- One big public consultation on safeguards was conducted at the provincial level in early July 2019 attended by various stakeholders, including government officials from Jambi and Jakarta, FMUs and National Park Authorities from district level, NGOs, and academics, discussing drivers of deforestation, environmental and social impacts of BioCF intervention during the pre-investment period, and capacity at the provincial and district levels to deal with these impacts.
- Two more consultation processes were conducted in late July 2019 in Jambi on the issue of risks of reversal and risks of displacement, involving national park authorities, FMUs, Provincial Government Offices, and NGOs.
- Another major Safeguards Public Consultation took place in December 2019 to get inputs for the draft safeguards documents involving various stakeholders from national, provincial, and district level representatives in Jambi.
- Several workshops and public consultations at the district level in Muara Sabak, Tanjung Jabung Timur, and Bangko, Merangin in 2019. The workshops and public consultations organised by Hatfield Indonesia focused on Safeguard of BioCF ISFL (SESA and EMSF).
- In 2021, there were 18 consultations organized at the national level and eight at the sub-national level. At the national level, several consultations have been implemented, such as discussions on the BSP, socialization of the BSP, technical meetings for the ERPD, coordination meetings, discussion on Labor and Working Conditions, training for the SN-PMU technical team, and capacity building training. At the sub-national level, there were several FGDs on the BSP, socialization of the ERPD document, preparation of the FGRM, discussion of Risk of Displacement and Risk of Reversal in BioCF-ISFL Management, FPIC, public consultations on Jambi Province Emission Reduction Program, and capacity building for GHG Accounting. Several consultation processes were conducted online, considering the COVID-19 cases. However, no consultation process was performed at the district level in 2021, according to the SEP document.
- In 2022, there were three consultations at the national level, seven consultations at the sub-national level, and only one consultation at the district level. At the national level, the consultations covered several issues, such as the Joint Implementation Mission (the GOI and the World Bank Jambi), the improvement of the Jambi Province Emission Reduction Program Document, and technical consultation with the WB Senior Expert regarding the ERPD Improvement. The consultations discussed several issues at the national level, including Masyarakat Hukum Adat, SESA, FPIC, SIS-REDD+, and FGRM. At the district level, the only consultation was conducted in Kerinci, discussing the update of the BSP document. Most of the consultation processes were conducted hybrid.

Records from each consultation session can be found in Appendix A3.

3.5.2 Summary of the Consultation Outcomes

Based on records obtained during consultation process, the following outcomes are noted:

- Aspects on land conversions were discussed as part of the readiness evaluation. This included review of policies on land ownership and licensing process. Most of the drivers of deforestation are linked with the expansion of palm oil, conversion of natural forest into timber plantation, and encroachment in national parks and production forest;
- Discussion with WARSI defined indigenous peoples, including relevant *adat* claims and tenure. Definition of Indigenous Peoples and existing regulations to support Indigenous Peoples include Perda Merangin District No. 8/2016 on recognition of Marga Serampas Customary community;

- Assessment on the provincial spatial plan identified vulnerable areas, or areas that are prone to disaster, such as landslides. This type of disaster, as well as mining operations, may cause land degradation, thus posing risk of reducing forest cover (i.e., risk of leakage);
- Analysis on spatial data provided by provincial agencies indicate overlapping licenses between production forest and palm oil and mining concessions. Reviews and meticulous examination are required prior to issuing licenses;
- Improved governance (accountability and public services) related with supervision, law enforcement, benefit sharing, coordination across agencies, and vertical coordination with central agencies, as well as with NGOs and private sectors;
- Lack of human resources capacity in forest management, institutional arrangements, and institutional capacity were often mentioned during interviews with FMUs. There was also a need for knowledge management system that will allow shared learning among implementing agencies; and
- Respondents indicated the need for a management model that balances economy, social and environmental aspects. In addition, increasing awareness is also required to complement the economic aspect.
- Public consultation in early July 2019 in Jambi revealed that more than 280,000 hectares of plantation (oil palm, rubber, coffee, and cassia vera mostly belong to smallholders) are already inside the state forest land. The question is how to deal with these issues. One solution is to apply the social forestry approach to make these intruders follow the legal system but at the same time can make their livelihood legalized with conditions, including for oil palm species to stop the activities after the first harvesting period (or 12 years) and change the plantation into forest. On the other side, NGOs in Jambi were also discussing similar issues to link oil palm farmers with processing plants for one harvesting period. To further discuss this issue, coordination between plantation, forestry and other agencies dealing with licensing is badly needed. This should be included one set of activities in the intervention for the pre-investment stage for J-SLMP.
- The safeguards consultation in December 2019 revealed the needs to synchronize SESA and ESMF with that of Indonesia's developed strategic Environmental Assessment known as KLHS, get more consultation with local stakeholders, and take preventive actions to avoid land tenure conflicts.
- The consultation, FGD, and workshops on BSP have produced the final draft of BSP for the emission reduction program in Jambi.
- FPIC socialization targeted in 300 villages has begun in 2022. Based on the meeting notes of the FPIC socialization conducted from 22 to 27 August 2022, local communities and the head of villages welcome the BioCF program. They are also interested in participating in the program and supporting the implementation. The FPIC socialization in August 2022 took place in Bukit Dua Puluh National Forest and several villages near the Suku Anak Dalam areas. In general, the response from Suku Anak Dalam was positive. They would participate in the BioCF program. The FPIC socialization also enabled the Suku Anak Dalam to deliver their aspirations, such as requesting assistances to build footpath, the improvement of education, getting access for scholarship, and building partnership with companies to improve economic activities.

Outcome of the consultation process provides qualitative information to support definition of key issues. The key issues will be quantified and contextualized in Chapter 5 on baseline conditions. Details on the context of the consultation process is provided in Chapter 9.

3.5.3 Next Plan for Consultation and Engagement

Following the series of public consultation and FGDs in Jambi, the plan for consultation and engagement consisted of:

- The project will be further informed by the broader stakeholder engagement approach through i) consultations and community participation during project implementation; ii) transparent feedback and grievance redress mechanisms; iii) communication outreach, public campaigns, and capacity building; and iv) development of risk management processes and engagement required under the World Bank's Environmental and Social Framework (ESF).
- The engagement with stakeholders will be conducted throughout the project life cycle, commencing such engagement as early as possible in the project development process and in a timeframe that enables meaningful consultations with stakeholders on project design. The nature, scope and frequency of stakeholder engagement will be proportionate to the nature and scale of the project and its potential risks and impacts.
- Meaningful consultations are warranted with all stakeholders. Implementing agencies will provide stakeholders with timely, relevant, understandable, and accessible information, and consult with them in a culturally appropriate manner, which is free of manipulation, interference, coercion, discrimination and intimidation.
- Engagement activity will consider public health risks, particularly in the context of COVID-19. COVID-19 remains a public health risk in Indonesia and will present threats to workers and prospective stakeholders, including communities. Under the project, engagement will uphold safety and public health measures as defined in the project's ESMF Safety principle means that adjustment to engagement plan should be considered carefully, including preference over virtual means whenever possible and strict adherence to the Infection Prevention Control (IPC) measures as detailed in the ESMF, which are in line with the GoI's regulations and other international good practices, including the World Health Organization's (WHO) guidelines.
- The following public consultation and socialization plan will be organized in an inclusive, participatory, and transparent manner, which may include choice of engagement modalities, information production and dissemination, use of FGRMs, and affirmative measures to vulnerable groups.
- Different methods of communication will be adopted to: i) ensure accessible, transparent, direct, open, and interactive communication with all stakeholders, including project affected communities and individuals; and ii) obtain feedback in the project preparation and implementation phase. At the district, sub-district, and village levels, separate meetings may be warranted to accommodate participation of vulnerable groups. Further, relevant information shall be presented in an accessible manner to diverse groups. For the broader public, project progress reports, including their executive summaries, must be publicly disclosed, and disseminated to relevant stakeholders (e.g., meetings, official correspondence, and website of the government offices in respective cities and districts).

- Different communications approaches will be applied to a different set of audiences, which include the national and sub-national government, CSOs, development partners, recipients of benefits/coastal communities and the wider public (including media). The communications activities will aim to improve stakeholders' awareness and support for the ER Program, increase public knowledge on mangroves and the importance of emission reduction, as well as mitigate the reputational risk that might arise before and during the outreach on activities under the ER Program.
- The communication shall be organized in an inclusive, safe, participatory, and transparent manner. The potential approaches will vary depending on the audience, and their interest as well as contexts and community preference. Hence, any choice of means of communication shall be assessed in light of such considerations.
- socialization

3.6 LESSONS LEARNED FROM PREVIOUS ER PILOT ACTIVITIES

Jambi 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 and potential impacts identified in the consultation process, the following sections summarize the lessons learned that will be applicable for the ERP.

Before discussing in more detail in the sub chapter below, it is worth mentioning the practical experience related to REDD+ that Jambi has already experienced called: Voluntary carbon scheme (e.g., Plan Vivo in Durian Rambun and Bujang Raba landscapes) Durian Rambun²⁴.

FFI supported a social forestry group in Durian Rambun Village (Merangin District) to be registered in the voluntary carbon market Plan Vivo to obtain carbon benefit for protecting the forest. The project has *Hutan Desa* status securing land tenure and community rights for local communities. The overall size of the *Hutan Desa* is 3,616 ha, with 2,516 ha protection zone and 1,100 ha rehabilitation zone. Estimated carbon benefits are 6,618 tCO₂e per annum. Project activities include enrichment planting, tree planting, agroforestry improvement, and the protection of the natural regeneration of native species. The communities are involved through forest patrolling activities and sustainable forest management. This includes the establishment of sustainable enterprises focusing on improving coffee production and onsite processing.

The project aims to protect the habitat of many of the local fauna and flora while at the same time improving the soil quality of the forest. Through deforestation prevention and better forest protection, soil fertility is likely to improve whilst reducing the risk of soil erosion. Moreover, through sustainable forest management, ecosystems will become more resilient, improve water quality for local communities and minimize risk of flooding or drought.

The project has been key in securing rights for participating communities. It also intends to open up diverse income streams for local communities through sale of non-timber forest products, which will be sustainably managed by local communities. Other project activities include several agroforestry interventions aimed at strengthening local agriculture that will lead to increased food security, better nutrition and health for project participants.

²⁴ Source: <http://www.planvivo.org/project-network/durian-rambun-indonesia/>

The program in Bukit Panjang Rantau Bayur (Bujang Raba)²⁵, Bungo District, was initiated by KKI-WARSI with the main theme of Payment for Environmental Services (PES) through a voluntary carbon market. The area is managed by communities under a '*Hutan Desa*' program which recognizes and secures land tenure and allows community members to sustainably manage the forest. Moreover, by engaging local communities in protecting their local forest, the project actively plays a part in reducing forest fires, illegal poaching and unsustainable harvesting of timber and non-timber forest products.

Over 5,339 ha of primary forest will be protected by the participating communities, leading to a net carbon benefit of approximately 40,000 tCO₂ per year. The Bujang Raba project site is rich in biodiversity and is home to threatened species and other species of high conservation value. These species include the Malayan Tapir (*Tapirus indicus*), Sun Bear (*Helarctos malayanus*), and the critically endangered Sumatran tiger (*Panthera tigris sumatrae*).

The project has also initiated a number of activities to diversify income for participating communities by introducing high value crops such as cardamom, cocoa and other NTFPs that can be integrated into smallholder agroforestry plots. The project will also work with community members to build bamboo and rattan processing capacities to provide other income streams.

3.6.1 Policies to Protect Natural and Forest Resources

Loft et al (2017)²⁶ 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 since 2013 when the Master Plan for Acceleration and Expansion of Indonesia's Economic Development (Presidential Decree No. 88/2011) or MP3EI threatened Indonesia's remaining forests. This contradicts Government's Emissions Reduction Plan (26 percent without foreign support and 41 percent with foreign supports) from the forest sector²⁷.

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+ objectives) is lacking. Consequently, there is a need to establish policies on carbon accounting, forest reference emission levels, and decision-making processes²⁸. Policies are also needed to strengthen existing methodologies for reducing emission from the forestry sector. This may include strict licensing procedure or moratorium to halt conversion of natural forest into monoculture/plantation forests. Provincial government has the regulatory instrument to support REDD+ in the form of the Governor's Regulations on provincial emission reduction strategy. However, the legal framework for development (RPJMD) is supported by provincial regulation (Perda) that overpowers the governor's regulation. Therefore, the legal basis for REDD+ needs to be upgraded in order to gain the same legal strength as the development policies.

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 relevant for ERP in Jambi. A study done by an HCV assessment team at Mulawarman University East Kalimantan indicated that policies on nature and forest

²⁵ Source: <http://www.planvivo.org/project-network/bujang-raba/>

²⁶ 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

²⁷ Source: <https://redd-monitor.org/2013/12/20/redd-fails-to-address-the-drivers-of-deforestation-in-indonesia/>

²⁸ Berau Forest Carbon Program

protection could 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.

In other cases, the Government has stricter law enforcement to protect the forest. In 2012, the national REDD+ task force identified forest related crimes consisting of overlapping plantation licenses in forest areas and moratorium areas, as well as using a burning method for preparing plantation estates. In Jambi there are 52 plantation cases and 31 mining cases relevant to these categories. The national REDD+ task force coordinated with relevant law enforcement agencies to process these violations. It was estimated that the country lost 7.62 billion rupiahs due to these violations in Jambi.

An example of conflict settlement is done under Forest Programme II (REDD+ initiatives on biodiversity and integrated watershed management) in Kerinci Seblat National Park. The Park approach includes working with local communities in Giri Mulyo and Kebun Baru Villages (Kerinci District) and Nilo Dingin Village (Merangin District). Communities in Kerinci District encroach the Park for potato plantation, while communities in Merangin District encroach the Park for coffee plantation. Conflict settlement is started with partnership agreement (*Perjanjian Kerja Sama*/PKS) between NP authorities with farmers' groups within these communities.

Conflict settlement strategy was instructed by the DG of KSDAE and was implemented as "Role Model" Program for settlement of tenurial conflict. Settlement strategy involved creating partnership that urges encroachers to reduce their area of encroachment, and to help the Park restore the damaged ecosystem. While these people are currently still allowed to continue their agriculture activities inside the Park, long-term partnership with local communities is designed to gradually reduce the area of encroachment and increase forest cover through replanting activities (ecosystem restoration) conducted by the local communities. Such partnership is in compliance with Regulation from DG KSDAE (Perdirjen No. 6/2018 on partnership with local communities for ecosystem restoration and community empowerment within conservation area).

Contextual Lessons Learned

Various cases show that Jambi Province has the experience in implementing REDD+ initiatives, as well as carbon market mechanisms. Lessons learned provided in this report suggest the following:

- Implementation of REDD+ initiatives at provincial level involves provincial agencies (UNDP REDD+ cadastral mapping in 2012), as well as central government (i.e., the MoEF) in Forest Programme II;
- Funding mechanisms and financing agreements for these REDD+ initiatives consist of on-budget and on-treasury – the MoEF's DIPA allocation; off-budget and off-treasury – UNDP's grant; direct grant in voluntary carbon mechanism – Plan Vivo; as well as low carbon development support from MCA-I; and Synchronization of low emission development with provincial policies (e.g., RAD-GRK and SRAP REDD+ integration into RPJMD).

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/*Musyawarah 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/Musrenbangdes) 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 the community addresses common needs and ensures 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 sketches from this exercise can be regarded as a step toward village spatial plan. Validation of the village spatial plan by the village government formalized the village spatial planning process. In line with the participatory process, 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 the United Nation Declaration of Rights for Indigenous People (UNDRIP). This declaration recognizes 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 evaluated²⁹.

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 5). 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 FPIC³⁰, so that they can conduct proper FPIC independently within the ERP.

3.6.3 Government Capacity to Protect and Supervise Forest Areas

Forest areas fall under the Jambi Sub National of FMUs (*Kesatuan Pengelolaan Hutan/KPH*) for production and protection of forest while conservation forests are under the authority of National Parks (NPs) and BKSDA (for nature reserve). Efforts to strengthen the FMUs and NPs have been done through various programs, such as GIZ-FORCLIME 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 areas³¹. Spatial analysis showed the following:

- More than 20 percent of the Implementation Area are licensed concessions;
- These management licenses are not monitored and evaluated optimally. Violations are seldom properly prosecuted due to the lack of law enforcement capacity (now under the Jambi Sub National of Directorate General for Law Enforcement, whose office is located in Medan, North Sumatra Province); and
- Tenurial conflicts (i.e., encroachment) occur, primarily in the forest concession of PT Lestari Astri Jaya and Wira Karya Sakti (Timber plantation), and PT Alam Bukit Tigapuluh (Ecosystem

²⁹ FAO (2016). Free Prior and Informed Consent: An Indigenous Peoples' right and a good practice for local communities.

³⁰ Implementation of FPIC by UN-REDD (2012)

³¹ 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.

Restoration). Elephants are also using the same area, so human-wildlife conflict cases are inevitable.

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. This should also include the BKSDA as an authority responsible for wildlife management. The capacity of the FMU (as a decentralized structure for forest management), specifically related to on-the-ground operational experience with multi-stakeholder forest management needs to be built³². This will strengthen the government's capacity to protect and supervise forest areas.

Efforts for increasing the government's capacity to protect and supervise forest areas are also seen in the implementation of Forest Investment Program (FIP) 2. 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.

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. Based on the abovementioned challenges, FIP 2 contains the following components:

- Component 1: Strengthening Legislation, Policy, and Institutional Capacity in Decentralized Forest Management
 - Sub-component 1.1: Forest policy and legislation development, revision and amendment
 - Sub-component 1.2: Institutional development and capacity building
- Component 2: Developing the Knowledge Platform
 - Sub-component 2.1: Knowledge Management and Information System
 - Sub-component 2.2: Capacity-building and knowledge exchange
- Component 3: Improving Forest Management Practices
 - Sub-component 3.1: Advance FMU operationalization
 - Sub-component 3.2: Community empowerment in up to 10 FMUs
 - Sub-component 3.3: FMU-based knowledge exchange centers.
- Component 4: Management

Specific approach for institutional capacity building is contained in Sub-component 1.2, while community empowerment is addressed in Sub-component 3.2. FIP 2 ensures that all project activities conducted by FMUs and relevant implementers under the FIP 2 Project include consideration of potential adverse

³² Mid-term progress report on the REDD+ readiness in Indonesia (2013).

environmental and social impacts. Environmental and social safeguards are developed to mitigate potential effects. Grievance Redress Mechanism is also developed to respond to grievances from stakeholders at community/district level. Additionally, FPI 2 supports the development of Knowledge Management and Information System (KMIS) to support Component 2 (knowledge management) and Component 4 (Management). The KMIS aims for:

- Establishing information management system that allows sharing of information among government and World Bank; and
- Developing a communication strategy for outreach, targeting appropriate audiences and communication channels, to facilitate the needs for FPIC, and minimize potential grievances.

The KMIS in this activity does not explicitly correspond with the PDO. However, knowledge management is relevant for FGRM and benefit sharing mechanisms to ensure transparency of information.

3.6.4 Incentives and Capacity for Sustainable Forest and Plantation Management

The main constraint of REDD+ implementation for forestry and plantation companies is the high opportunity cost associated with deforestation. Opportunity costs for reducing global deforestation by 2030 would reach USD 17-33 billion per year³³. Therefore, it is imperative that the incentives for sustainable forest and plantation management offset the opportunity cost.

The implementation of previous REDD+ and carbon trading might provide useful information that the BioCF program in Jambi can learn from. One of REDD+ implementations conducted in Jambi was Berbak Carbon Initiative. The Berbak Carbon Initiative (BCI) started in 2008 with the total project area amounted to 250,000 ha, located in the districts of Muaro Jambi and Tanjung Jabung Timur (Hein, Faust, Kuns, and Mardiana 2018). The BCI focused on three aspects in enhancing the capacity of the stakeholders, including improving background knowledge on what REDD is, technical skill for project monitoring, and technical skills for emissions avoidance implementation. The skills for emission avoidance implementation are forest protection management, reduced impact logging technique, and reforestation technique. The fund was allocated for several activities to bring benefits to the environment and local communities, such as improving wildlife protection, improving community support unit training, and reducing forest fires. The BCI had provided facilities needed for Berbak National Park (BNP) to implement sustainable forest management, including a field station, a generator, camp equipment, uniform, and computer room. These facilities and infrastructure ensured the continuity of BCI. In addition to that, the BCI project established biodiversity/carbon/community baselines that would support sustainable forest management for BNP. Financial incentives obtained from REDD+ carbon credit were utilized to address the drivers of deforestation and degradation. However, there was an overlapping problem in the implementation of BCI. The designated area for conservation in the Berbak landscape overlapped with a transmigration settlement project. The district and village governments neglect the conservation boundary and challenges the Berbak Carbon Initiative project (Hein, Faust, Kuns, and Mardiana 2018). The forest reserve also overlapped with land claimed as customary land (Tanah Adat). The indigenous people traditionally utilized the forests designated for forest reserve area for timber harvesting, hunting, and for the collection of non-timber forest products. The involvement of indigenous people and the local communities surrounding the BNP was crucial factor to avoid disassociation between communities and BNP.

There are several lessons from the BCI implementation that will be valuable for the ERP in Jambi province. First, the ERP in Jambi Province has considered customary communities in the BSP document.

³³ The Eliasch Review (2008)

However, they are categorized as local communities together with farmer groups, social forestry groups, CSOs, research institutions, and universities. Moreover, there are some eligibility criteria that the indigenous people should meet to be considered eligible, such as recognized by the authority. Learning from the BCI implementation, the disassociation between communities and the FMUs is a potential risk that should be mitigated. Second, the BCI has a plan to enable the program to be sustainable, such as planning the REDD+ credit to be allocated to address the drivers of deforestation. The BSP of ERP in Jambi Province should establish a plan after the RBP, hence the program will not stop after the beneficiaries receiving ER payments. Third, the implementation of the ERP in Jambi Province should consider other regional or national development plans that might be overlapped with the ERP implementation.

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

Policy analyses³⁴ 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 a strategy that targets smallholder farmers in the plantation sector. High opportunity costs may render REDD+ financing unappealing to large companies, so the offset for the high opportunity cost for the forestry and plantation sector needs to be addressed by benefit mechanisms to generate buy-ins from private companies. Private companies can be linked with the carbon market through a rent system described in Section 3.6.4 to offset high opportunity costs. Smallholder farmers and private companies are identified as stakeholders in Jambi Sub National REDD+ activities proposed in the PDO.

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:

- The size of the area tends to be larger than 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 Jambi have stronger legality compared to the households. Therefore, management authority under communal title (i.e., customary groups) allows stronger protection of the land areas.

If communal titles do not exist, they can be substituted by forest tenure through social forestry mechanisms (community groups). This strengthens the notion that the future ERP at the grass root level needs to be based on villages or community groups, rather than individual 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 management³⁵. Therefore, REDD+ initiatives need to

³⁴ 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.

³⁵ Marin & Kuriakose. (2017). *Gender and Sustainable Forest Management: Entry Points for Design and Implementation*. Climate Investment Funds

ensure that gender consideration is 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+ program³⁶.

An example of a REDD+ livelihood program can be seen in the Kalimantan Forests and Climate Partnership (KFCP), Central Kalimantan³⁷. 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 program. Compensation and incentive mechanisms can be further developed in a benefit sharing mechanism under the ERP.

REDD+ initiatives beyond Jambi have shown examples of climate-smart agriculture to increase productivity. The following climate-smart agriculture³⁸ approaches may be applicable to the ERP (primarily Component 2 of the PDO [implementing sustainable land management]):

- 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). Transfer of knowledge and introduction to technology were done during REDD+/Forest Program II implementation in Jambi through *Sekolah Lapang* (Field School) programs that introduced knowledge and technology for producing organic fertilizers to improve agriculture productivity.

³⁶ 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.

³⁷ CIFOR (2014) REDD+ on the ground

³⁸ REDD Net (2011). REDD+ and agriculture: A cross-sectoral approach to REDD+ and implications for the poor.

The REDD+ readiness phase in Indonesia already involves large and growing public funding and private investment³⁹. Examples of financing approaches include Primary Cooperative Credit, where a contract is signed between a company, smallholder cooperatives and banks, under the supervision of the government. Through this approach, farmers entrust their land to the company, which plants, manages and harvests the crops. The landowners are paid a percentage of the harvest revenue after deduction of plantation establishment and management costs⁴⁰. In palm oil plantations, a similar mechanism known as *Plasma-Inti* is commonly practiced. This system offers financial access to local communities/smallholders farmers, while ensuring better agriculture management (assuming the participating companies complies with sustainable agriculture practices).

3.6.6 Lessons Learned on Conflict and Dispute Resolution

Tenurial Conflicts are commonly found on FMU and national parks in Jambi. Process for conflict and dispute resolution started with the identification of Objects of conflict (i.e., forest area under FMU or national park Jambi Sub National); stakeholders/actors involved in the conflict; and conflict style. Results 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 mediate and resolve conflicts between local communities and forest authorities (FMU or national park), or between local communities and concession holders;
- To establish partnership with local communities using social forestry or conservation partnership in forest or national park areas, respectively; and
- At national level to resolve conflicts between concession holders.

President Jokowi has put agrarian reform agenda as one of the government's top priorities. However, the agrarian reform were criticized due to too focus on lands certification instead of solving tenurial conflicts between local communities with giant corporations or state owned enterprises. Indeed, tenurial conflicts in Jambi Province are still dominated between local communities and corporations. Based on the consultation process during the SESA workshop in April 2022, the Jambi Estate Agency shared tenurial conflict data showing that conflicts between communities and corporations dominated tenurial conflicts. In quartile I of 2021, there were 38 conflicts involving corporations. In quartiles 2, 3, and 4 of 2021, there were 32, 29, and 29 conflicts, respectively. From the consultation process in May 2022, the Jambi Forestry Agency updated the conflict resolution data. From the data shared by the Jambi Forestry Agency, 40 conflicts were in conflict mediation processes covering areas of 70,231 ha in total. For the progress of conflict resolutions, 50 conflicts covering 22,544 ha were solved through MoUs signing.

³⁹ Dermawan, A., Petkova, E., Sinaga, A., Muhajir, M. and Indriatmoko, Y. 2011. Preventing the risks of corruption in REDD+ in Indonesia. Summary report. United Nations Office on Drugs and Crime and CIFOR, Jakarta and Bogor, Indonesia.

⁴⁰ GIZ. Agriculture and REDD+ The main driver of deforestation and a key sector for successful implementation of REDD+

4. DESCRIPTION OF THE ERP⁴¹

Jambi has articulated its vision for low-carbon development in the Green Growth Plan (GGP) through six intervention areas that the J-SLMP and forthcoming ER Program are consistent with. The J-SLMP and ER Program form a critical part of the GGP given that they are a strategic umbrella for multi-sector, multi-stakeholder interventions across land uses in Jambi. Together, they will contribute to a transformation in how landscapes are managed in Jambi to deliver multiple benefits such as climate change mitigation, improved livelihoods, and environmental services, and strengthened coordination and partnerships with key stakeholders. The ER Program will be a part of the Green Growth Plan (GGP) implementation by the Jambi Provincial Government, which will be issued as a Provincial Regulation (PERDA).

The ER program's interventions will be implemented in the entire Jambi area. It covers all FMUs (11 FMUs), thirteen (13) conservation areas (National Park, Nature Reserve Areas, Nature Park/TWA), and buffer zones of these areas for estate crops and small holders' activities. It consists of three main objectives, including: (1) protecting the remaining natural forests and peatlands; (2) improving forest and land cover including restoration of peatlands; and (3) strengthening forest and land management. The objectives are achieved through unlocking bottlenecks through improved forest and land governance (policies, spatial plans, accountable monitoring) and strengthening the involvement of the private sector and the community in sustainable landscape management. These strategies are realized through both policy and institutional approaches and field level approaches.

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, 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.

The ER program aimed to address the drivers and the underlying causes of the deforestation, peat decomposition and vegetation degradation. The Program is organized into three main components as follow:

4.1 COMPONENT 1: STRENGTHENING POLICY AND INSTITUTIONS

This component will address issues concerning the lack of institutional capacity to ensure good forest and land-use governance and is aimed at improving the regulatory and institutional frameworks in AFOLU as well as strengthening the institutions and instruments for enforcing such policies. Component 1 is expected to resolve underlying causes related to policies and institutions to improve forest and land governance, establishing the enabling environment for the ER program such as MAR and BS mechanism and institution, to prevent deforestation, forest degradation, and peat decomposition, through and improve the collaborative work between stakeholders. This component is also expected to support the preparation of long-term policies such as midterm and long-term development plans of Jambi Province to address the issues and to ensure that the ER Program will be managed continuously and become the main issues in the future development of Jambi Province.

⁴¹ Since there is no final ERPD for the ERP program yet, it is envisaged that the ERPD will be a scaling up of the J-SLMP with some variations in project activities.

4.1.1 Improving Policies and Regulations to Support Implementation of ER Program

Strong institutional and coordinating mechanisms are important in ensuring the achievement of emission reduction programs. The Jambi Provincial Government has formed a Joint Secretariat, which will be strengthened as a REDD+ Implementing Agency at the sub-national level. In addition, coordination mechanisms between sectors and between government levels (national, provincial, district/city), as well as private, communities and other organizations (NGOs and academics), must be agreed between stakeholders. Institutional strengthening is also accompanied by capacity building within and between institutions as coordinators and implementers of the program, including strengthening the capacity to integrate emission reduction programs into regional development planning, spatial plans, and activity at the site level including at village and community group level. This sub-component is also aimed at supporting the implementation of the Green Growth Plan (GGP) of Jambi province which has been approved the governor to be the roadmap for Jambi Long Term Development Plan, where the Emission Reduction will become the main objective for the year of 2020-2045. Specifically, institutional strengthening will mainly target forestry, plantation, and agriculture sectors, as these sectors are associated with drivers of deforestation from AFOLU in Jambi.

Institutional strengthening will also encourage clear institutional mechanisms to allow and improve collaboration among government, private sector, and civil societies including capacity building for non-carbon benefits. Collaborations will also be strengthened between Forest Management Units, national parks authorities and the surrounding communities to promote sustainable forest and land management in order to generate the Provincial ER targets.

This component also will address the continuation of support to the Indigenous people in Jambi. The ER program will facilitate recognition of indigenous people's area (*wilayah adat*) and their customary institution (*kelembagaan adat*) so that it will strengthen and legalize the role of indigenous people to protect and restore their customary forests (*Hutan Adat*). Up to 2022, two indigenous people (MHA) have been recognized through local regulations, and nine MHAs are in progress, whereas the other 18 MHAs are yet to be facilitated to obtain the recognition from local governments.

This Sub-component is designed to assist the sub-national government in establishing new policies and regulations to ensure effective implementation of the ER Program in Jambi. Such policies will include improvement of the regulation framework of fire management in Jambi. The stakeholder consultation process has identified that timber plantations, plantation, and peatland fires contribute to the deforestation from AFOLU. Evaluation of the moratorium for new timber plantation licenses will be done to define the contribution of this policy towards protection of the remaining natural forest and peatlands. Evaluation will also be done to identify socio-political implications of this moratorium. At least 600,000ha of peatlands need to be restored.

Evaluation of policy and regulation will also be done in the context for supporting multi-stakeholder collaboration on sustainable forest management systems. Additional context will include evaluation of policies and regulations to ensure institutional capacity to support biodiversity protection as non-carbon benefits and enhancing private sector participation in generating ER benefits.

Under the jurisdictional ERP, this Sub-component also will support the development of Provincial Forestry Master Plan (RKTP 2022 – 2041), the establishment of one map policy and low carbon development (Green Growth Plan), the next Jambi midterm Development Plan (RPJM) 2021 – 2024

and Jambi Long Term Development Plan 2026-2050. Review and improve the Environment Strategic Study (KLHS) and Jambi Next Spatial Plan (2021 – 2031).

The expected results under this Sub-component are as follows:

- a. At least four regulation/policy reforms in forest and land use are issued (such as RKTP 2022 – 2041, RPJM 2021 – 2024, RPJP 2026 – 2050, KLHS Province and 10 District KLHS, and Jambi Spatial Plan (2021 – 2031))
- b. Sixteen (16) conflict cases are resolved by utilizing harmonized maps
- c. At least 18 groups of indigenous people will be facilitated for their recognition by local governments
- d. Peatland moratorium policy to restore at least 600,000ha is issued

4.2 COMPONENT 2: IMPLEMENTING SUSTAINABLE LAND MANAGEMENT

Component 2 addresses the lack of sustainable practices in land management, fire and tenurial conflict. These issues were raised during stakeholder consultation. This issue is relevant with the drivers of deforestation and degradation from both AFOLU and peatland. The approach in this component is implementation at the field level, both by FMU, the private sector, and by the community. Promotion for sustainable land management practice will be carried out. The development of landscape-based management models, which combine various sectors, actors and commodities, is expected to have a long-term impact on sustainability.

4.2.1 Sub-component 2.1: Promoting Sustainable Forest Management, Conservation, and Restoration

Promotion of Sustainable Forest Management, Conservation, and Restoration practices is carried out through an integrated approach between sectors and actors, including Government, FMU, forestry companies, and community groups (including indigenous peoples and smallholders).

The proposed activities will include as follows:

- a. Facilitating and monitoring implementation of sustainable forest management in active forest concessions. The facilitation and monitoring will cover two active forest concessions (56,064ha), twenty timber plantation concessions (598,663ha), and two ecosystem restoration concessions (85,050ha).
- b. Supporting implementation of ASAP GITAL Program to prevent Forest and Land fire. The ASAP GITAL was initiated by the Forest and Land Fire Prevention Task Force (SATGAS KARHUTLA) which proved to effectively reduce Forest and fire incidents during 2020.
- c. Facilitating 17 FMUs in completing and implementing Long-Term Management Plan (RPHJP) and Business Plan
- d. Identifying remaining natural forests and peatlands inside 17 forest management units. It is expected that at least 70% out of 1,038,981 ha forested areas will be restored as high carbon stock (natural forests).
- e. Facilitating capacity building and tools for governments in forest protection and fire management
- f. Increasing awareness on clearing Forest without Burning through providing seedlings, tools, and supporting replanting, etc.

- g. Increasing community awareness on the risk of fires in dry seasons on peatlands and forests. In 2019, there was 56,593ha of burned land. It is expected that 80% of the land will not be burned in the next five years.
- h. Strengthening law enforcements, patrolling, and facilitating conflict resolutions. In the last five years, 10 to 13 conflicts were solved every year. It is expected that 67 conflicts will be resolved by 2025. The patrolling will be conducted 232 times for five years.
- i. Facilitating market and financial access for farmers to increase the sale of timber and non-timber forest products
- j. Supporting and facilitating communities (including indigenous people and smallholders) in conservation areas through conservation partnerships, in production and protected forest areas, through social forestry programs. Currently 415 of social forestry licenses have been issued by the MoEF. It is expected that there will be another hundreds of SF licenses to be facilitated under this program.

The expected outputs for this Sub-component are as follows:

- a. The burned area (56,593ha in 2019) will be reduced by 80%
- b. All forest concessionaires (natural forests and timber plantations) are ensured to implement full SFM principles (PHPL certificates) by 2025
- c. Seventeen FMUs have completed RPHJP and Business Plans in 2025
- d. Seventy percent of forested areas is restored (70% out of 1,038,981ha)
- e. A hundred of SF licenses will be facilitated and issued by the MoEF by 2025

4.2.2 Sub-component 2.2: Promoting sustainable estate crops

This Sub-component focuses on efforts to promote implementation of sustainable estate crops in Jambi by a) protecting remaining natural forests and peatlands, including from fires inside the concessions, and b) promoting sustainable value chain of estate crop products.

By 2019, Warsi claimed that the remaining natural forest in Jambi was about 900.713 ha or 17% out of total size of Jambi province (5 million ha). There was a forest loss of 246.667ha from 2015 to 2019 due to mostly fires⁸. Protecting the remaining forests and peatlands from fires or other activities that cause forest loss is then necessary, particularly inside estate crops concessions. The proposed activities are as follows:

- a. Identifying remaining natural forests and peatlands inside estate crops concession areas.
- b. Promoting private sectors to engage with RSPO/ISPO principles. Currently there are 186 licenses of oil palm issued, whereas 49 of those licenses have been certified ISPO.
- c. Facilitating smallholders to obtain ISPO certificate. Currently 12 farmer groups have been facilitated for ISPO certificates. It is expected that by 2025, sixty farmer groups will be facilitated in order to obtain ISPO certificates.
- d. Facilitating market and financial access for farmers to increase the sale of estate crops products
- e. Identifying potential post-harvest products in order to increase value added incomes for community

The expected result from this Sub-component are as follows:

- a. Area under compliance with relevant sustainability guidelines by smallholders (ha) from 1514 ha in 2019 to 2314 ha in 2025.
- b. Area of remaining natural forests and peatland inside estate crops concession area identified and reserved 2.098.535 ha in 2025.

- c. Number of smallholders obtaining ISPO certificates increased from 12 to 60 farmer groups in 2025.
- d. Number of estate crop companies implementing principles of sustainable estate crops (ISP/RSPO) including HCVF management and land fires prevention increased from 49 to 186 companies.
- e. At least four commercial contracts (MoU) between farmers and entrepreneurs will be facilitated and provided in order to increase market and financial access for the sale of estate crop products

4.2.3 Promoting Climate Smart Agriculture and Alternative Livelihoods for Generating Incomes of Communities

This intervention aims to improve the implementation of productivity-enhancing technology and farming practices. This approach is aimed to promote intensification that would reduce the demands for land expansion. In parallel, sustainable investment and partnership mechanisms will be introduced to encourage green development. This Sub-component will benefit from good governance (Component 1), as it will provide clear information on land use policy, licensing process, and clear demarcation for subsequent GHG inventory. This will also be strengthened through value chain coordination, multi-stakeholder dialogue, and capacity building to encourage sustainable climate smart agriculture practices. The proposed activities under this sub-component are as follows:

- a. Capacity building for governments in identifying potential boost of agricultural productivity and incomes of smallholders. Currently there are seven farmer groups that have been facilitated by the provincial government to enhance their products for domestic and international markets.
- b. Capacity building for farmers in implementation of climate smart agricultural practices.
- c. Facilitating market and financial access for farmers to increase the sale of agricultural products.
- d. Identifying potential post-harvest products in order to increase value added incomes for the community.
- e. Promoting agricultural products less emissions through sustainable agroforestry and intercropping in order to increase productivity by avoiding forest encroachment

The expected results under this sub-component are as follows:

- a. At least sixty-five farmers groups will be improved through training on enhancing their agricultural products for both domestic and international markets by 2024.
- b. At least 1,300 farmers will be trained on climate agriculture practices by 2024.
- c. At least four commercial contracts (MoU) between farmers and entrepreneurs will be facilitated and provided in order to increase market and financial access for the sale of agricultural products.

4.2.4 Providing Alternative Livelihoods for Generating Incomes of Communities

Under this sub-component, the proposed main activities will be improvement of communities' incomes through providing alternative livelihoods with less pressure to natural forests and peatlands. The proposed activities are as follows:

- a. Promoting agroforestry in peatland such as alley cropping, trees along the border, and mix trees and agricultural plants (seasonal trees). The paludi culture technique in peatlands will be introduced. Demonstration plots will be provided in Muara Jambi, Tanjabar, and Tanjatim districts. The defined number of plots will be consulted with the district agriculture services.
- b. Supporting Agroforestry system (social forestry program) in State and non-state forests.

- c. Empowering community through partnership conservation between community and national parks (such as eco-tourism, agriculture, handicrafts, non-timber forest products)
- d. Encouraging farmers for clearing Forest without Burning through providing seedlings, tools, and supporting replanting, etc.

The expected results under this sub-component are as follows:

- a. At least in three districts (Muara Jambi, Tanjabar, and Tanjatim) the paludi culture technique with a number of demonstration plots will be introduced.
- b. Twenty field schools on agroforestry in the State Forest area and twenty-four field schools on agroforestry in the non-State Forest area will be established by 2025.
- c. At least four MoUs of conservation partnerships between community and national parks in either eco-tourism, agriculture, handicrafts, or non-timber forest products).
- d. The target area for clearing forest without burning gradually increased . In 2023, the target area will be 100 ha, 150ha in 2024, 150ha in 2025, and 200ha in 2026.

4.3 COMPONENT 3: PROGRAM MANAGEMENT AND COORDINATION

This component envisages overall management of the ER implementation, including tools for implementing REDD+, such as measurement, analyzing and reporting (MAR), environmental and social safeguards (ESMF, IPPF), and benefit sharing mechanisms (BSM) including non-carbon benefits. The institutional arrangements for MAR, Safeguards and BSM, will be developed and strengthened in the second year of implementation.

4.3.1 Ensuring implementation of Safeguards⁴² in place

In order to ensure the ER program will not produce negative social and environmental impacts, then the implementation of safeguards need to be in place. Thus, proper management, monitoring, and evaluation on safeguards implementation for ER activities need to be carried out by relevant stakeholders. Capacity building, SOPs, and relevant policies related to safeguards need to be improved and strengthened.

The proposed activities to make efficient and effective safeguards implementation are as follows:

- a. Conducting capacity building for safeguards implementation. It is expected that 60 trainings for the safeguards will be conducted in nine districts and one city.
- b. Finalizing SESA-ESMF enhancement.
- c. Establishing and operationalizing FGRM (Policy, instrument, institutional Arrangement, SOP).
- d. Monitoring and Developing Safeguards Implementation Report
- e. Conducting studies related to carbon and non-carbon benefits (such as habitat conservation, ecosystem services, good governance, Indigenous Peoples, etc.) beyond ERPA period.

4.3.2 Ensuring implementation of MAR in place

Program management and subsequent monitoring, evaluation, and reporting will refer to how ERP addresses the drivers of deforestation through program implementation. In respecting the good governance principles, the monitoring and evaluation system needs to be transparent and accessible to all stakeholders. The proposed activities for MAR are as follows:

- a. Establishing institutional arrangements for the MAR system for the province. It is expected that by 2025 the arrangements on data collections for implementation of ER programs at every level (village, sub-district, and district) be in place.

⁴² Refers to environmental and social risk management for the ERP

- b. Strengthening capacity of responsible personnel, infrastructure and institution for analysis and reporting carbon accounting.
- c. Developing ERMR 1 and ERMR 2 (GHG Counting) prepared by provincial government personnel.
- d. Producing Annual Monitoring Reporting on Emission Reduction

4.3.3 Ensuring Benefits disbursed and channeled to beneficiaries

It is important to ensure that benefits from result-based payments are received and used by beneficiaries in order to support implementation of ER programs. The use of benefits needs to be reported to the fund manager/intermediary agency and copied to the sub-national project management unit in Jambi for transparency and accountability purposes. Therefore, capacity building for beneficiaries is required. The proposed activities under this sub-component are as follows:

- a. Conducting capacity building for beneficiaries particularly on developing proposals and reporting for the use of benefits. It is expected that 130 trainings will be conducted within 9 districts and 1 city.
- b. Conducting capacity building for governments/agencies that are in charge for monitoring and evaluation on the use of the benefits. It is expected that 30 trainings for government officials will be conducted within 9 districts and 1 city.
- c. Strengthening Institutional arrangements for BSP at village, district, and provincial level. Facilitation for strengthening institutions will cover 133 sub-districts.
- d. Developing Benefit Sharing Plan Annual Report
- e. Strengthening and supporting the role of local intermediary agencies to disseminate the benefits to the local beneficiaries within the province.
- f. Implementing annual BSP Monitoring, Verification, and Reporting.

4.3.4 Knowledge Sharing Management

Lessons learning from Jambi in reducing emissions will be important for other provinces to duplicate the efforts. Experiences on facing challenges and solving problems will be useful to share with other users not only domestic but also international audiences. The proposed activities under this sub-component will include a) disseminating Jambi ER lessons learned to relevant stakeholders and available online for the public, and b) attending BioCF International Event on the climate issues to other countries.

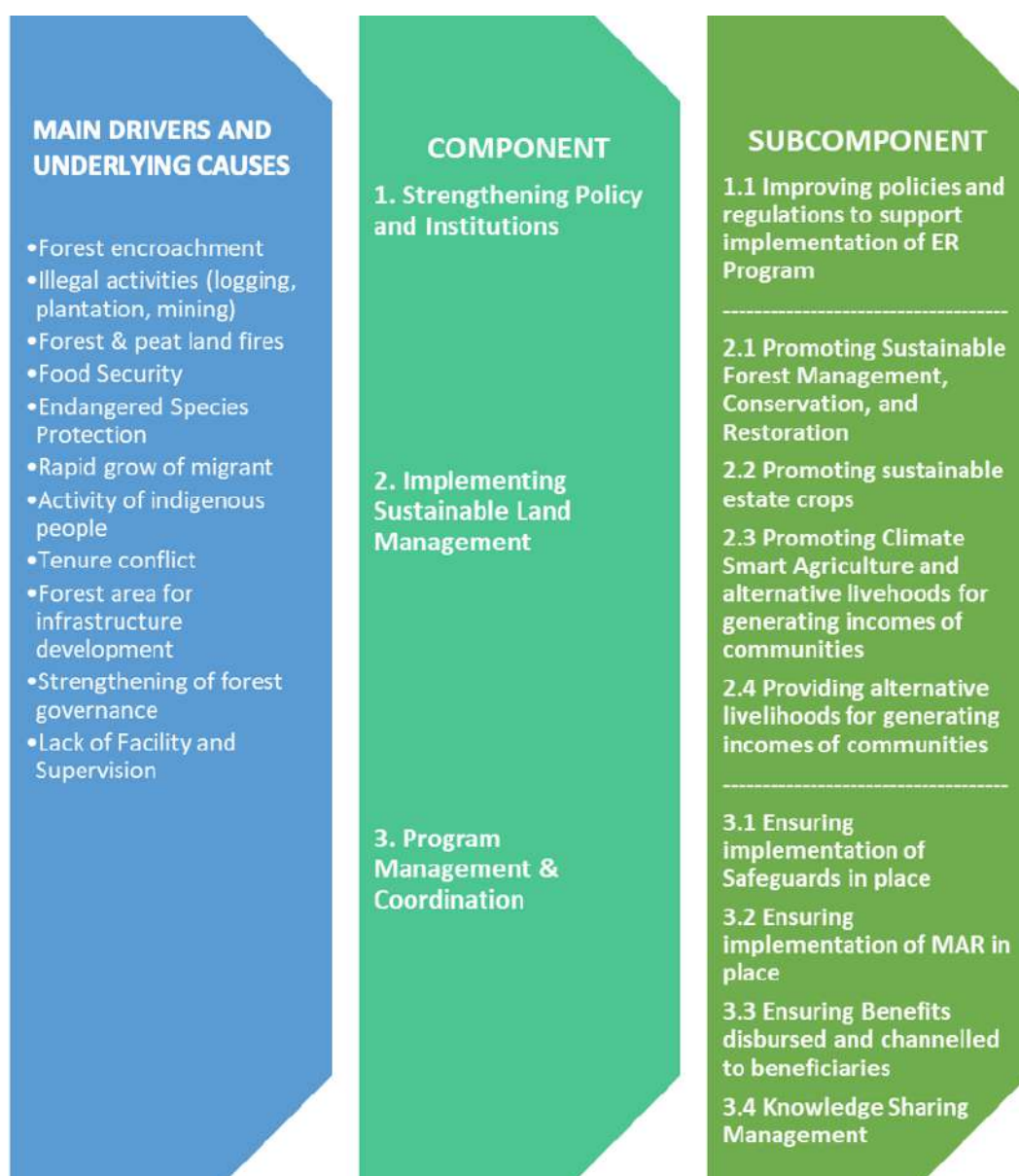


Figure 5. Relationship between main drivers of deforestation and degradations with ERPJ-SLMP components

5. 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.⁴³ 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 consistency, positional accuracy, thematic accuracy, temporal quality and usability elements (Vullings *et al.* 2015).

Indonesia has implemented 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. The Indonesian Government continues its effort by issuing, Perpres No. 23/2021 to revise and replace previous Perpres. This updated Perpres expands the implementation of one map policy to cover 24 Ministries/Agencies, and 34 provinces. In addition to that, this Perpres aims to add 72 new IGT to become 158 thematic maps. 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. All information related to GIS data presented in this report is embedded in the data, and is listed on the maps provided in Appendix A2

Table 4. Quality Assessment of Some Geospatial Data Used for the SESA

Category	Data	Source/Data custodian	Year	Notes
Administrative Boundary (based on provincial Spatial Plan)	Province Boundary	Spatial Plan 2013-2033 (Perda No. 10/2013)	2014	Verification with data from Indonesian Geospatial Information Agency (<i>Badan Informasi Geospasial</i> /BIG) from website http://tanahair.indonesia.go.id/portal-web/inageoportal/#/ , indicated discrepancies and gaps in district boundaries. This resulted in the differences of area size between the map and the legal documents (Perda/Provincial Regulation for provincial spatial plan)
	District Boundary	Spatial Plan 2013-2033 (Perda No. 10/2013)	2014	
	Subdistrict Boundary	Spatial Plan 2013-2033 (Perda No. 10/2013)	2014	
	Village	Bappeda	2017	Only point data are available, as village boundaries are in the process of verification by BIG. There will be revisions of the 2018 village boundaries

⁴³ <http://www.fao.org/3/a-bc395e.pdf>

Category	Data	Source/Data custodian	Year	Notes
Hydrology	Watershed Boundary	MoEF		Updated year is not stated
	River	Spatial Plan 2013-2033 (Perda No. 10/2013)	2011	
	Big River	Spatial Plan 2013-2033 (Perda No. 10/2013)		
Infrastructure	Road	Spatial Plan 2013-2033 (Perda No. 10/2013)	2014	
	Port	BIG	2016	
	Airport	BIG	2016	
Land cover	Land cover	MoEF	2000 2003 2006 2009 2011 2012 2013 2015 2016 2017	
Forest Status	Forest Status	MoEF	2017	
Fire Hotspot	Hotspot	NASA FIRMS	2010-2017	
Mining and Oil & Gas	Mining Concession	Ministry of Energy and Mineral Resources	2016	
	Oil and Gas	Petrominer (digitizing data)	2011	
PalmOil	Palmoil		2015	
Forestry Permit	IUPHHK-HA (Logging Concession)	MoEF	2018	
	IUPHHK-HTI (Timber Plantation)	MoEF	2018	
	HD (Village Forest)	MoEF	2018	
	HA (Customary Forest)	MoEF		
	PIPIB (Moratorium)	MoEF (Decree No. 8599/MENLH K-	Revisio n XV, 2018	

Category	Data	Source/Data custodian	Year	Notes
		PKTL/IPSDH/PLA.1/12/2018)		
	PIPIB (Moratorium)	Presidential Instruction Number 5 Year 2019	2019	
	PIPIB (Moratorium)	MoEF SK. 851/MENLHK - PKTL/IPSDH/PLA.1/2/2020	2020 1st period	
	PIPIB (Moratorium)	MoEF SK. 4945/MENLHK - PKTL/IPSDH/PLA.1/8/2020	2020 2nd period	
	PIPIB (Moratorium)	MoEF SK.666/MENLHK - PKTL/IPSDH/PLA.1/2/2021	2021 1st period	
	PIPIB (Moratorium)	MoEF SK.5446/MENLHK-PKTL/IPSDH/PLA.1/8/2021	2021 2nd period	
	PIPIB (Moratorium)	MoEF SK.1629/MENLHKPKTL/IPSDH/PLA.1/3/2022	2022 1st period	The Ministerial Regulation https://sigap.menlhk.go.id/sigap-trial/files/peta/1648513740883_pippib-tahun-2022-periode-i.pdf The Map https://sigap.menlhk.go.id/sigap/peta-cetak-detail/7
KPH	KPHL KPHP (Production and Protected forests)	MoEF	2016	
IUPHHK - RE	IUPHHK – RE (Ecosystem restoration)	MoEF	2018	
IUPHHK - HTR	IUPHHK – HTR (Community Commodities)	MoEF	2018	
IUPHHK-Hkm	IUPHHK-Hkm (community Forest)	MoEF	2017	

Category	Data	Source/Data custodian	Year	Notes
PIAPS	PIAPS (Social forestry allocations)	MoEF	Revision II, 2018	
PIAPS	PIAPS (Social forestry allocations)	MoEF	Rev VII 2021	Ministerial Decree SK.8878/MENLHK-PKTL/REN/PLA.0/12/2021 Map https://sigap.menlhk.go.id/sigap/peta-cetak-detail/8
MHA (Customary area)	Marga Serampas	WARSI	2018	
MHA (Customary area)	Marga Serampas	WARSI	2019	
TORA	TORA (Agrarian reform)	Digitized from MoEF map	2017	TORA map from MoEF was downloaded from: http://webgis.menlhk.go.id:8080/kemenhut/index.php/id/peta/tora
IBA	IBA (Important Biodiversity Area)	BirdLife	2017	
EBA	EBA (Ecological Biodiversity Area)	BirdLife	2017	
Habitat	Amphibians	IUCN	2018	Data downloaded from https://www.iucnredlist.org/resources/spatial-data-download in shapefile format
	Reptiles	IUCN	2018	
Implementation Area	Implementation Area / Accounting Area	KLHK		

Considering the possible discrepancies between maps, and with the consensus among stakeholders in Jambi, SESA was done based on spatial data provided by the Jambi Province, the MoEF and the BIG. To avoid further discrepancies, ground check/verification on the carbon accounting areas will need to be done once these areas are agreed. Ground check can employ a fit-for-purpose approach based on planned activities on the ground (Free and Prior Informed Consent/FPIC and Village Land Use Planning /VLUP).

Without the One Map Policy, discrepancies are inevitable due to the differences in accuracy and precision of the spatial data. Accuracy refers to the degree of closeness to which the information on a map matches the values in the real world. Therefore, when we refer to accuracy, we are talking about quality of data and about the number of errors contained in a certain dataset. In GIS data, accuracy can refer to a geographic position, but it can also refer to an attribute or conceptual accuracy. Precision refers to how exact the description of data is. Precise data may be inaccurate, because it may be exactly described but inaccurately gathered (possibly the surveyor made a mistake, or the data was recorded incorrectly in the database).⁴⁴ Sources of inaccuracies and imprecisions in Jambi spatial plan may be due to the scale used in spatial analysis, outdated data, data formatting, or other errors generated during the digitizing process.

The implications of such discrepancies will be potential discrepancies in the spatial pattern (*pola ruang*) in the spatial plan. These were also observed in the administrative boundaries between districts. Therefore, it is crucial for the ERP to conduct ground checks and verification to ensure that carbon accounting areas are well defined and delineated. With regards to conflict and dispute potential, consistencies need to be established for mining and plantation concessions (data from ATR/BPN), while for forestry sector, the map needs to refer to forest, and concession maps validated by the MoEF. Discrepancies in district boundaries may create confusion if enforcement of regulations and environmental protection were done at the district level. Therefore, this needs to be done at the provincial level in order to ensure smooth coordination and avoid such confusion.

5.2 LAND COVER AND LAND STATUS IN IMPLEMENTATION AREA

Baseline analysis, as well as analysis of environmental and social risks were done based on the definition of Implementation Area. The implementation area was designated by the MoEF and the characteristics of each land/forest designation were compiled from consultation processes (Appendix A3). This Implementation area covers 2,082,286 ha (approximately almost 40 percent of Jambi Province area). The size of the Implementation Area corresponds with the requirement to maintain at least 30 percent of forest area in the province for ecological balances. This Implementation Area might be proposed as an accounting area in the ERP. Composition of land status within the Implementation Area is described in Table. Map of the Implementation Area is provided in Appendix A2.

⁴⁴ Pascual. 2011. GIS Data: A Look at Accuracy, Precision, and Types of Errors.

Table 5. Composition of land status within the Implementation Area in Jambi

Forest and Land Function	Unit	Unit Management (UPT/UPTD)	Area (ha)	Forested Area (ha)
A. State Forest				
Conservation Areas	f. CA Hutan Bakau Pantai Timur	BKSDA Jambi	2,314	2,024
	g. KSA/KPS Buluh Hitam/Pasir Mayang Danau Bangko			
	h. KSA/KPA Tabir Kejasung/SUngai Bengkal		457	0
	i. Tahura Bukit Sari			
	j. Tahura around Tanjung (Orang Kayo Hitam)			
	k. Tahura Sultan Thaha			
			718	0
			266	266
			18.251	2,011
			15,862	0
	a. TN Berbak	TN Berbak - TN Sembilang	137,076	97,059
	b. TN Bukit Dua Belas		52,584	48,110
	c. TN Bukit Tiga Puluh			
	d. TN Kerinci Seblat		35,742	34,568
	e. TN Sembilang			
			410,551	376,680
			353	345
Total Conservation Areas			672,031	561,074
Protected and Production Forest	Unit I	KPHP Kerinci	15,321	7,254
	Unit II	KPHP Bungo	99,557	63,146
	Unit III			
	Unit IV	KPHP Merangin	158,507	99,429
	Unit V			
	Unit VI			
	Unit VII	KPHP Limau	105,742	91,963

	Unit VIII	KPHP Hilir	69,922	14,385
	Unit IX	Sarolangun	125,559	11,687
	Unit X	KPHP Tebo Barat	92,640	22,669
	Unit XI	KPHP Tebo Timur	77,794	24,592
	Unit XII			
	Unit XIII	KPHP Batang Hari	71,347	30,205
	Unit XIV		41,477	12,325
	Unit XV		112,830	41,861
	Unit XVI	KPHP Muara Jambi		
	Unit XVII	KPHP Tanjung Jabung Tmr		
		KPHP Tanjung Jabung Brt		
Total Protected and Production Forest			970,695	419,517
B. Total Other Land Use/Non-state Forest			434,994	56,847
TOTAL JAMBI PROVINCE (A+B)			2,082,286	1,038,981

This table shows that the Implementation Area consists mainly of national parks, production forests, APL and protected forest. This would require the ERP to be implemented with the involvement of provincial governments (production forests, protected forests and APL/other use areas) and central governments/the MoEF (national park authorities). In APLs, the ERP will address plantation areas (as a driver of deforestation/forest conversion), as well as APLs with relatively good forest cover).

5.2.1 Forestry Sector

As discussed in Section 2.2.2, the driver of deforestation also occurs in land conversion from natural forest into timber plantation in Production Forest. Therefore, the ERP will also address the environmental and social issues in production forest and forest concession areas in Jambi. A compilation of forest designations within the Implementation Area is provided in Table 6. This table shows that 58 percent of the production forest areas are not yet licensed. This suggests that it is equally important for the ERP to work with FMU, and with the private companies (forestry license holders).

Table 6. Forest Designation and Licenses within the Implementation Area (Preliminary)

District	Production Forest (Ha)	Convertible Production Forest (Ha)	Limited Production Forest (Ha)	License Areas Ecosystem Restoration (Ha)	License Areas Timber Plantation (Ha)	License Areas Community Forest (Ha)	Unlicensed Areas (Ha)
Batanghari	17,145.50		26,045.18	24,499.80	13,443.94		5,246.94
Bungo	44,141.90	92.42			27,630.73		16,603.59
Kerinci	7,737.82					0.47	7,737.35
Merangin	54,105.56		25,849.20		16,188.80		63,765.96
Muaro Jambi	19,799.70	1,457.17	56,669.39		14,353.46		63,572.80
Sarolangun	46,091.00		34,591.57	7,084.35	46,806.95		26,791.27
Tanjung Jabung Barat	57,657.53	0.05	26,199.16	0.37	54,801.76		29,054.61
Tanjung Jabung Timur	40,163.50	0.62			32,784.94		7,379.18
Tebo	85,533.27		15,465.84	34942.82	50,248.13	1,766.66	14,041.50
Sungaipenuh	78.33						78.33
Total	372,454.12	1,550.25	184,820.34	66,527.34	256,258.71	1,767.13	234,271.53

Of the 324,553.18 ha of the licensed area, 256,258.71 ha (or 79 percent) are timber plantation concessions. This corresponds with the need to engage with timber plantation companies, as the driver of deforestation is associated with timber plantation operation due to conversion of heterogeneous natural forest into homogeneous plantation forest.

Component 1 (Sub-component 1.1 on institutional strengthening) of the ER addresses the needs for improving land or forest governance. This includes 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 7. 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 Jambi will come from forest concessions in Merangin District (most moratorium area).

Impact of moratorium in Merangin District is associated with the following perspectives:

- Forest cover will not significantly decrease, as the concession areas are few. In 2014, Merangin had the second largest natural forest cover in Jambi with 241,648 ha (the highest is Tanjung Jabung Timur with 263,013 ha). There is an increase by 20,566 ha between 2013 and 2014;
- More areas will be under the responsibilities of FMUs, as the FMUs are mandated with forest management (and protection) in the unlicensed forest areas. This may require capacity improvements within the FMUs;
- Political will to support conservation is expressed by the Head of Bappeda of Merangin District (personal communications). Merangin District has worked with many conservation NGOs (including FFI, GeCinde, Tiga Beradik, and WARSI), and is familiar with conservation strategies in the forestry sector.

Maps of moratorium are provided in Appendix A2.

Table 7. Moratorium areas in Jambi Province

Moratorium Type/District	Area (Ha)
Peatland Moratorium	133,129.21
Merangin	659.54
Muaro Jambi	44,872.14
Sarolangun	4,741.39
Tanjung Jabung Barat	46,486.93
Tanjung Jabung Timur	36,112.38
Jambi City	256.83
Forest Concession	862,533.89
Batanghari	49,681.00
Bungo	59,927.54

Moratorium Type/District	Area (Ha)
Kerinci	196,315.28
Merangin	197,211.73
Muaro Jambi	55,841.49
Sarolangun	65,025.47
Tanjung Jabung Barat	27,061.17
Tanjung Jabung Timur	154,315.17
Tebo	45,231.79
Sungai Penuh City	11,923.24
Primary Forest	30,902.87
Bungo	13,215.94
Kerinci	203.40
Merangin	13,710.90
Sarolangun	3,738.27
Tanjung Jabung Timur	31.87
Sungai Penuh City	2.48
GRAND TOTAL MORATORIUM	1,026,565.97

5.2.2 Plantation Sector

Plantation sector in Jambi is associated with land conversion and driver of deforestation in Jambi. Specifically, palm oil and coffee are the two commodities causing land conversion in APL, and encroachment in national parks respectively.

5.2.2.1 Palm Oil

Most of the palm oil concessions consist of logged forest, agroforest, shrubland and peatland. A study done by Bogor Agriculture University, Jambi University and BPDAS Batanghari⁴⁵ shows that within the last 25 years in Bungo and Merangin districts, 8 percent of palm oil development was done by clearing intact forest. Palm oil concessions were mostly done on logged forest, agroforest and shrub lands. Conversion of intact peat swamp forest to oil palm plantation also occurs in Jambi⁴⁶. This underlines

⁴⁵ Tarigan, SD., Sunarti, Widyaliza, S., 2015. Expansion of oil palm plantations and forest cover changes in Bungo and Merangin Districts, Jambi Province, Indonesia. *Procedia Environmental Sciences* 24 (2015) 199 – 205

⁴⁶ Comeau, L-P., Et. al., 2013. Conversion of intact peat swamp forest to oil palm plantation. Effects on soil CO₂ fluxes in Jambi, Sumatra. Working Paper 110. CIFOR, Bogor, Indonesia

the significance of palm oil plantation as a critical source of carbon emission from peatland. Composition of plantations in the Implementation Area of Jambi Province are summarized in Table (maps in Appendix A2).

Table 8. Areas Allocated for Palm Oil Plantation Permits (HGUs) within the Implementation Area

District / City	Area (ha)
Batanghari	96.407
Bungo	62.212
Merangin	58.247
Muaro Jambi	117.712
Sarolangun	45.803
Tanjung Jabung Barat	84.105
Tanjung Jabung Timur	29.032
Tebo	58.732
Grand Total	552.250

This table shows that Muaro Jambi District has the largest allocation of palm oil plantations within the Implementation Area. Overall, 72 percent of the palm oil plantation in Jambi is productive. The rest are either damaged/old plantation, or new plantation that has not yielded any fruits.

The Ministry of Agriculture conducts Oil Palm Rejuvenation in Ujung Tanjung Village, Sungai Bahar Subdistrict, Muaro Jambi Regency, Jambi Province. These activities are part of maintaining palm oil commodities as national strategic commodities that can remain sustainable. From the data of the Directorate General of Plantations, Ministry of Agriculture, in Jambi there are 789 thousand hectares of oil palm land, 578 thousand hectares of which are people's palm oil.

A study by Jambi University suggests that palm oil plantations in Jambi are managed by three actors consisting of small holder estates (65 percent of the plantations); large private plantations (30 percent), and by state-owned plantation company PT Perkebunan Nusantara (5 percent)⁴⁷. Approach to facilitate smallholder palm oil farmers in Component 1 of the PDO is consistent with this fact in the plantation sector.

The rejuvenation of people's palm oil to encourage productivity, generate foreign exchange and income for farmers. In Muaro Jambi Regency, rejuvenation of 167.75 hectares and those receiving assistance have met criteria including must be members of the Farmers Group, Gapoktan, Cooperatives and other institutions, as well as other criteria that have been determined.

President Joko Widodo, in an effort to accelerate sustainable palm oil, has issued Presidential Regulation (Perpres) No. 44 of 2020 concerning the Indonesian Sustainable Palm Oil Plantation Certification System, commonly known as Indonesian Sustainable Palm Oil or ISPO. Responding to the sustainability of the smallholder palm oil plantation, the Plantation Agency of Jambi has supported

⁴⁷ Erfit. 2017. Analysis of palm oil industry cluster in Jambi Province. Jurnal Perspektif Pembiayaan dan Pembangunan Daerah Vol. 5. No.1, July – September 2017

the farmer groups to get their areas certified under the ISPO system. This is a good case where big companies support smallholders to have a more sustainable production system. However, it needs to be observed and reviewed whether those already receiving the ISPO certification are really practicing sustainability principles as directed by the ISPO system or not and find out what can be done to improve similar processes in the future.

Table 9. ISPO Certified Company and Cooperatives in Jambi Province, 2021.

Company and Cooperatives	
PT. Adimulia Palmo Lestari	PT. Kumala Jambi Prakarsa
PT. Agrindo Indah Persada	PT. Kresna Duta Agroindo
PT. Agro Mitra Madani	PT. Megasawindo Perkasa
PT. Agrowiyana	PT. Perkebunan Nusantara VI
PT. Anekapura Multikerta	PT. Palma Abadi
PT. Angso Duo Sawit	PT. Petaling Mandraguna
PT. Asiatic Persada	PT. Puri Hijau Lestari
PT. Bahari Gembira Ria	PT. Produk Sawitindo Jambi
PT. Brahma Bina Bakti	PT. Ratna Seruni
PT. Bukit Barisan Indah Prima	PT. Ricky Kurniawan Kertapersada
PT. Citra Koperasindo Tani	PT. Rigunas Agri Utama
PT. Cipta Prasasti Lestari	PT. Sari Aditya Loka 1
PT. Dasa Anugrah Sejati	PT. Sari Aditya Loka 2
PT. Dhamasraya Palma Sejahtera	PT. Satya Kisma Usaha
PT. Erasakti Wiraforestama	PT. Sumbertama Nusa Pertiwi
PT. Graha Cipta Bangko Jaya	PT. Sungai Bahar Pasifik Utama
PT. Hazrin Nurdin Nusaphala	PT. Tebo Plasma Inti Lestari
PT. Inti Indo Sawit Subur	PT. Trimitra Lestari
PT. Inti Guna Nabati	PT. Tidar Kerinci Agung
PT. Jamika Raya	PT. Velindo Aneka Tani
Koperasi Karya Mukti	Koperasi Perkasa Nalo Tantan
Koperasi Mutiara Bumi	Gapoktan Catur Manunggal

Source : Plantations Agency of Jambi Province, 2021

Similar trends in oil palm development in Bungo and Merangin are the roles of smallholder farmers in establishing palm oil plantations. Transmigrants in Rimbo Bujang (Bungo District) and local farmers (Merangin District) have different historical backgrounds. Transmigrants were brought in (mainly from Java) and were given the title of 2 ha land for farming (which may include palm oil), whereas local farmers do not necessarily have such titles. Positive trends are that transmigrants do not tend to

increase their plantation, while local farmers still see expansion of plantation as a potential for increasing their production/income.

5.2.2.2 Coffee Plantation

Robusta and Arabica coffee are the prime commodities in the plantation sector in Jambi. In Kerinci Seblat National Park, coffee plantation is causing deforestation of 5,200 ha⁴⁸ national park area in Merangin District. Altogether, due to encroachment (including coffee plantation), Kerinci Seblat National Park shows an average deforestation rate of 7 percent per year based on data from 2010 to 2018.

In the case of coffee farmers, observations in other areas (Central Aceh, well-known area for Arabica coffee plantation; Sindoro-Sumbing highlands in Central Java) have shown that farmers are moving to a higher altitude to find more suitable locations by clearing the land for coffee plantation.

In the case of Kerinci and Sarolangun areas in Jambi (main coffee production areas in Jambi), it has to be found out first what kind of coffee species are mostly planted by farmers. If it is Arabica, then law enforcement measures should be taken to restrict land clearing and at the same time introducing suitable arabica species that can grow best in lower altitude.

If it is Robusta, then the government will need to support intensification by providing incentives/subsidies to maximize the production in the existing land. At the same time, law enforcement measures are taken to prevent the movement to higher altitude, especially if it involves land clearing.

Another potential approach is to use the social forestry scheme to support the agroforestry system by planting coffee in the forest areas without or with limited land clearing. However, this approach will need to be further explored, especially to see the effectiveness and success stories of similar systems at other places, or in Jambi if they exist.

5.2.3 Mining Sector

Mining is associated with the driver of deforestation and is an important sector for the ERP to consider. Concessions within the Implementation Area are listed in Table 10 and are showing that 558,626.65 ha (or 36 percent) of the Implementation Area have mining concessions. This table also shows that Muaro Jambi District has the largest overlap between its WP and the mining concessions (Maps in Appendix A2).

It is interesting to observe that from around 319,000 hectares of licensed mining areas in Jambi, less than 5,000 hectares has been exploited for mining (less than 2 percent)⁴⁹. At the same time, from 45 active mining licenses in Jambi, ten have been revoked due to several issues including no activities in the field and/or do not follow proper legal mining practices. Therefore, with proper approaches, there is considerable space for halting deforestation from mining sectors. Not only that, the mining law requested post mining reclamation to the exploited areas. Up to now, Jambi Province has 250 ha reclamation program from around 5,000 hectares of exploited areas. With regards to the revocation of mining licenses, this aspect may result in displacement risks outside the Implementation Area that will need to be addressed as well.

⁴⁸ Data from Kerinci Seblat National Park 2017

⁴⁹ Information shared by the ESDM staff during public consultation in Jambi, July 4th, 2019.

Table 10. Mining, Oil & Gas Concessions within the Implementation Area (Hectare)

Districts	Hectare
Batanghari	25.256,7
Muaro Jambi	40.824
Bungo	6,182.61*
Merangin	43.234
Sarolangun	64.166,5
Tanjung Jabung Barat	18.315
Tebo	51.686,8
TOTAL	243.483

Source : Energy and Minerals Resources Agency of Jambi Province, 2021

5.3 ENVIRONMENTAL BASELINE

5.3.1 Biodiversity

Environmental baseline data include information on the habitat of Sumatran elephant (*Elephas maximus sumatrensis*), Sumatran tiger (*Panthera tigris sumatrae*) and orangutan (*Pongo abelii*) as the flagship species in Jambi Province. Areas identified as habitat of these key species in Jambi are listed in Table , while the distribution of these flagship species is shown in Figure 6 and 7.

Table 11. Habitat Areas for the Flagship Species

Species	Description	District	Core Area (ha) ⁵⁰
Orangutan	Sumatran orangutans (<i>Pongo abelii</i>), classified as critically endangered, are found in primary tropical lowland forests, including mangrove, swamp forests, and riparian forests. They live almost completely in the trees, building nests in which they nap or sleep for the night. Preferred elevations are 200 to 400 m, the area in which their preferred fruiting trees occur, but Sumatran orangutans can be found at a higher altitude (Rijksen, et al., 2003).	Tebo	144,000
Sumatran Elephants	The Sumatran elephant (<i>Elephas maximus sumatrensis</i>), classified as critically endangered, is a subspecies of Asian elephant and is classified as endangered. The Sumatran elephant is under serious threat from illegal logging and associated habitat loss and fragmentation in Indonesia. The elephant population's long-term viability is jeopardized by rapid forest conversion to commercial plantations.	Tebo	99,700 ⁵¹
Sumatran Tiger	Sumatran tigers (<i>Panthera tigris sumatrae</i>), classified as critically endangered, are the smallest surviving tiger subspecies and are distinguished by heavy black stripes on their orange coats. The last of Indonesia's tigers—less than 400 today—are holding on for survival in	Merangin	32,000 ⁵²

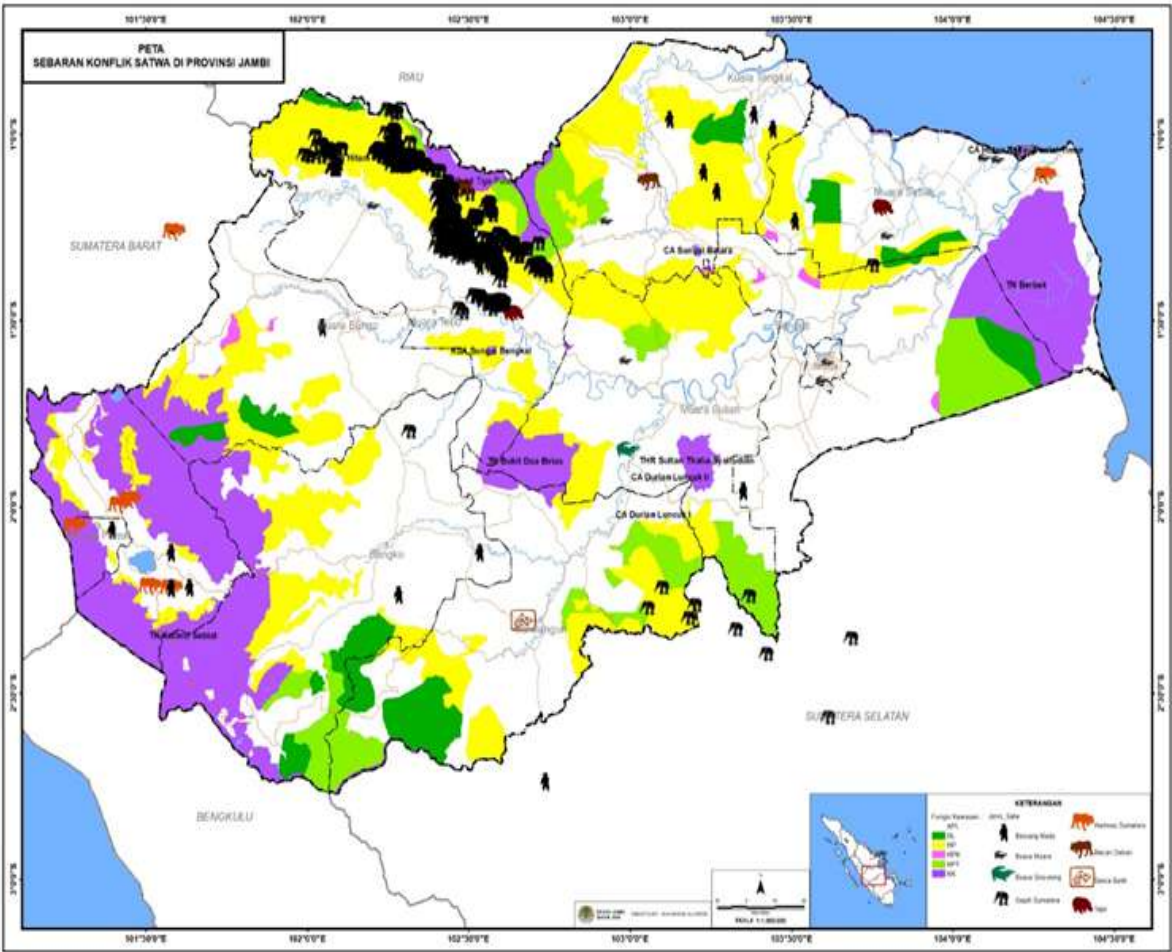
⁵⁰ Defined based on existing surveys by various organizations.

⁵¹ Mossbrucker, AM., Fleming, CH., Imron, MA., 2017. AKDEC homerange size and habitat selection of Sumatran elephants. Wildlife Research 43(7)

⁵² Kerinci Seblat Sumatran Tiger Protection and Conservation. 2017. Fauna & Flora International—Kerinci Seblat National Park

	the remaining patches of forests on the island of Sumatra, including Jambi.		
	Accelerating deforestation and rampant poaching have threatened this species.	Bungo	23,700 ⁵³
		Grand Total	299,400

Environmental baseline data also included areas designated for high conservation value (HCV 1 to 4)⁵⁴, which are presented in Table 12.



Source: BKSDA Office Jambi, 2019.

Figure 6. Distribution of Flagship Species in Jambi

⁵³ Linkie, M., Haidir, IA., Nugroho, A., Dinata, Y., 2008. Conserving tigers *Panthera tigris* in selectively logged Sumatran Forests. *Biological Conservation* 141. 2410-2415.

⁵⁴ 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)..

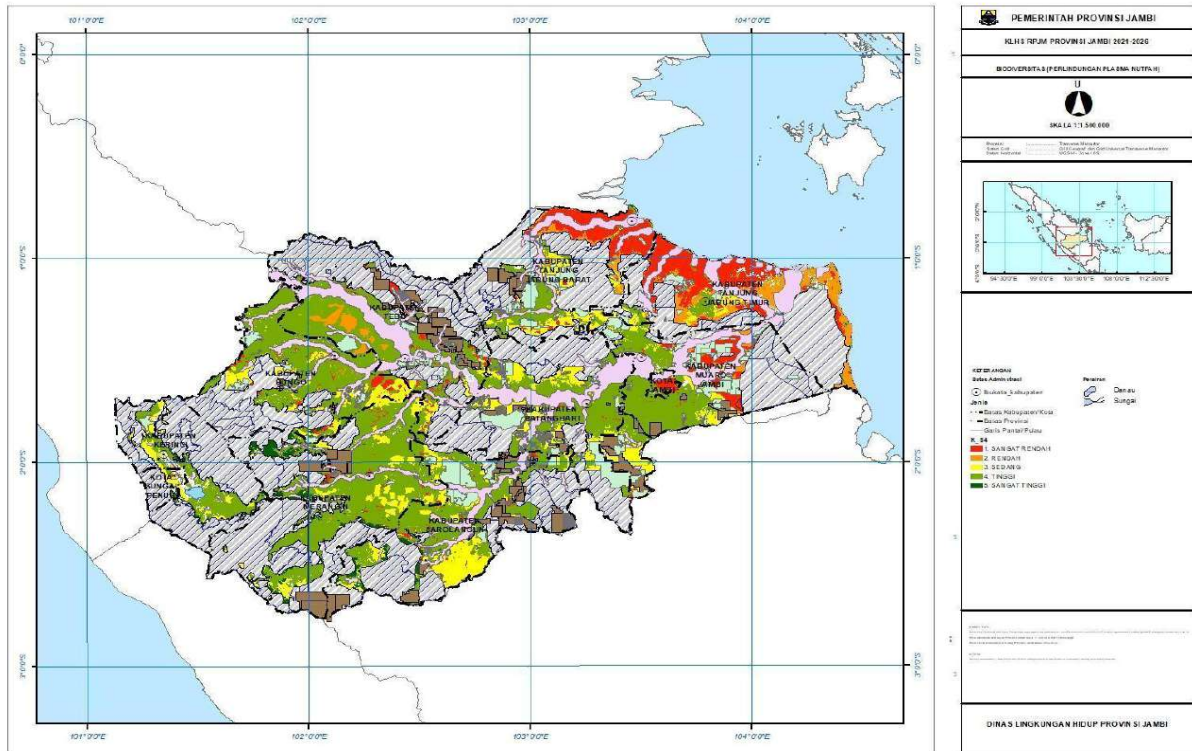


Figure 7. Biodiversity Potential Area of Jambi Province

Table 12. Biodiversity Potential based on HCV in Implementation Area

District	Low (Ha)	Mid (Ha)	High (Ha)	Very High (Ha)	Area (Ha)
Kerinci	88.019,54	19.111,27	8.124,54	791,71	116.047,07
Merangin	150.680,65	60.130,51	10.525,01	2.313,29	223.649,47
Sarolangun	109.046,23	92.365,48	275,54	-	201.687,26
Batang Hari	97.856,29	29.091,25	-	-	126.947,54
Muaro Jambi	16.442,16	129.574,13	10.664,28	-	156.680,57
Bungo	51.275,54	20.246,21	4.324,80	-	75.846,36
Tebo	204.977,03	58.568,27	4.179,83	-	267.725,14
Tanjung Jabung Timur	52.831,17	118.655,28	325,38	-	171.811,84
Tanjung Jabung Barat	26.204,67	129.542,01	-	-	155.746,69
Kota Jambi	-	816,58	-	-	816,58
Kota Sungai Penuh	7.527,13	2.213,91	840,57	200,33	10.781,95
Jambi Province	804.860,44	660.314,92	39.259,76	3.305,34	398.311,01

5.3.2 Critical Land and Watershed Areas

Critical land is the target for forest rehabilitation, and it may contribute to the performance of Jambi Province under the ERP. Rehabilitation of forest cover in APLs falls under the Jambi Sub National of the Watershed and Protected Forest Management Authority (BPDASHL) Batanghari. Watershed areas in Jambi are described in Table 3, which shows the work area of the BPDASHL Batanghari, including the Implementation Area. The table shows that the largest APL is located in Merangin District (364,903.49 ha). This table also shows that 87 percent of the area in Jambi is categorized as critical land.

Table 13. Critical Land Areas in Jambi Watershed (Batanghari)

District	Status	Area (ha)
Batanghari	Production Forest	132,931.03
	Other Use (APL)	258,801.26
	Conservation Forest	23,597.44
	Limited Production Forest	29,189.79
Muaro Jambi	Other Use (APL)	238,096.75
	Conservation Forest	47,475.67
	Production Forest	49,382.39
	Limited Production Forest	55,932.91
	Protected Forest	23,131.34
Tanjung Jabung Barat	Other Use (APL)	235,003.98
	Conservation Forest	11,068.80
	Protected Forest	15,993.61
	Production Forest	186,363.30
	Convertible Production Forest	3,126.68
	Limited Production Forest	42,289.45
Tanjung Jabung Timur	Other Use (APL)	253,508.91
	Conservation Forest	122,988.78
	Production Forest	54,619.52
Tebo	Conservation Forest	30,815.29
	Production Forest	224,212.05
	Limited Production Forest	30,082.87
	Convertible Production Forest	468.61
	Other Use (APL)	292,252.15
	Protected Forest	8,042.55

District	Status	Area (ha)
Bungo	Other Use (APL)	325,350.36
	Conservation Forest	38,531.42
	Protected Forest	13,004.98
	Production Forest	101,980.94
Kerinci	Other Use (APL)	104,431.53
	Conservation Forest	145,652.70
	Production Forest	26,084.86
Merangin	Other Use (APL)	364,903.49
	Conservation Forest	79,025.08
	Protected Forest	29,581.44
	Production Forest	140,105.07
	Limited Production Forest	46,144.64
Sarolangun	Other Use (APL)	321,835.00
	Conservation Forest	13,394.68
	Protected Forest	50,398.40
	Production Forest	87,189.49
	Limited Production Forest	78,331.23
Grand Total		4,335,320.44

5.3.3 Social Forestry

Data related to the social baseline consist of existing social forestry licenses. 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.

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 (Map in Appendix A2). The national social forestry program by MoEF targets 12.7 million hectares of social

forestry licenses throughout the country in 2015-2019. Of this national target, 368,253 ha (2.9%) is located in Jambi province with the composition listed in Table 4.

Table 14. Social Forestry Allocations in Jambi Province (2017)

License type	Area (ha)
Village Forest (<i>Hutan Desa</i>)	83,579
Community Forest (<i>Hutan Kemasyarakatan</i>)	5,461
Community Plantation Forest (<i>Hutan Tanaman Rakyat</i>)	7,771
Partnership Forest (<i>Hutan Kemitraan</i>)	9,211
Licensing in progress	155,684
Unallocated	115,758
Grand Total	368,253

This table shows that most of the social forestry designation is Village Forest (*Hutan Desa*). In addition, 912 hectares (not part of the PIAPS allocation) has been designated as Customary Forest (*Hutan Adat*) in Kerinci and Merangin districts. Marga Serampas community has a customary land tenure within Kerinci Seblat National Park with 22.33 ha and 54,359.63 ha in Kerinci and Merangin districts. These tenurial claims have not been awarded with social forestry licenses, as it is located within a conservation area that prohibits social forestry designations. Social forestry approach is in line with Component 2 (Sub-component 2.1) envisaged in the PDO. Up until 2021, there are 415 social forestry licenses for 204,296.97 ha. The challenges include the process for obtaining the licenses that required facilitation from organizations such as KKI WARSI and FFI. Another challenge includes the limited personnel in the Bureau for Social Forestry and Environmental Partnership in Medan, North Sumatra that must cover the entire Sumatra Island.

Critical analysis of the current social forestry practices in Jambi showed that most of the efforts have been allocated to obtaining the licenses and very little effort allocated to supporting those already obtaining the licenses. This has led to the thinking that the Ministry of Environment and Forestry is only interest in achieving its target to allocate 12.7 million hectares of forest nationally for social forestry activities⁵⁵. Therefore, future efforts should be made to balance between obtaining licenses and supporting silviculture and off farms activities, including NTFP processing and marketing. The BioCF project has the potential to support these efforts so that pressure on the forest can be reduced through working and beneficial social forestry activities. The ERP in Jambi has included capacity building training for farmer groups to support the social forestry development, such as supporting the implementation of agroforestry, and providing alternative livelihoods for the local communities.

5.3.4 Forest Fire

The number of cases of forest fires in Indonesia is primarily due to human factors. The vulnerability of the forest ecosystem to fires causes fires to occur annually in Jambi. 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

⁵⁵ See Jamal M. Gawi, The Paradoxes of Social Forestry Activities in Indonesia, Opinion article, Jakarta Post, 2017. <https://www.thejakartapost.com/academia/2017/10/20/the-paradoxes-of-social-forestry-in-indonesia.html>

followed by a decrease in water surface temperature in some territorial waters of Indonesia. The impact is the occurrence of drought in several 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 Jambi, fire is applied in agriculture and pastoralism practices (man-made fire), while the occurrence of natural wildfires (natural fire regimes) is 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)⁵⁶.

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 Jambi, 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 (timber plantation) 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.

Forest fire (and land fires) are considered drivers of deforestation and may contribute to the risk of reversals. Time series data from 2016 to 2021 shows the number of forest and land fires occurred. Most fires occurred in 2019, but the subsequent years show a significant reduction. These data are summaries in Table 15.

Table 15. Time Series Data of Forest and Land Fires in Jambi

Unit	Numbers Forest Fire Occurred (Ha)						Total
	2016	2017	2018	2019	2020	2021	
Jambi Province	8.281,25	109,71	1.577,75	56.593,00	1.002,00	438,00	68.001,71

Source : Direktorat PKHL, MoEF

Based on the table above, we can see a vast amount of forestland burned in 2019. 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 1,656.25 ha, with substantial variation between years. Thus, in 2016, and 2019 the forest area burned was greater than 4,000 ha, while in 2017, 2018, 2020 and 2021 the area was less than 2,000 ha. Muaro Jambi District experiences the most hotspots in Jambi Province.

⁵⁶ <http://gfmcc.online/intro/About1.html>

5.4 SOCIAL BASELINE

5.4.1 Demographics, Livelihood and Socio-cultural Diversity

5.4.1.1 Demographics

Jambi Province had a population of 3.548.200 in 2021, consisting of ethnic groups such as Javanese, Malay, Bugis, Batak, Sundanese, Minangkabau, and Chinese (table 16). The original inhabitants of Jambi are the Jambi Malay, Inner Kerinci, and Kubu tribes, who are often called the Anak Dalam tribe. Jambi's indigenous ethnic groups are predominantly Muslim (95.08%), Christian (3.87%) where Protestant (3.29%) and Catholic (0.58%) with the largest community group in Jambi City. Indigenous groups or indigenous peoples in Jambi Province continue to carry out activities with their respective local wisdom. The livelihoods of rural communities in Jambi Province are agriculture and plantations, such as rubber and palm oil.

Population density in Jambi Province is 73.32 people/km², and about 277.800 people (7,58%) are classified as poor. The distribution of low welfare levels tends to be in areas downstream from Jambi Province, namely: East Tanjung Jabung Regency and West Tanjung Jabung Regency, namely 10.95% and 10.29%⁵⁷.

Table 16. Ethnic Groups in Jambi as of 2010

Ethnic group	Percentage of the population (2014)
Indigenous groups	43,57%
Javanese	29,10%
Malay	5,3%
Minangkabau	5,33%
Batak	3,46%
Banjarese	3,33%
Bugis	3,13%
Sundanese	2,58%
South Sumatra	1,88%
Chinese	1,21%
Other tribes	1,04%
Total	100%

Source: Census by Central Statistics Agency, 2010

Dominant ethnic migrants in Jambi Province are Javanese who were brought in for tea plantation between 1925 and 1940⁵⁸. Some Javanese migrants were participants of a trans-migration program started in the 1970s in areas such as Rimbo Bujang (Bungo District) and Pemenang (Merangin District).

Ethnic communities (customary groups) include Kerinci that consists of sub-groups such as Lekuk 50 Tumbi Lempur in Gunung Raya Sub-district and Tamiai in Batang Merangin Sub-district. These are

⁵⁷ Bureau of Statistics of Jambi Province, 2021

⁵⁸ Sihotang, EBS., 2018. Perkebunan Teh Kayu Aro di Kerinci 1925 – 1940. Jurnal Prodi Sejarah 3(5)

agricultural communities with commodities mainly consisting of coffee and cinnamon. Other ethnic groups are Marga Serampas that also practices agriculture and Orang Rimba⁵⁹ and Talang Mamak who practices hunting and gathering for livelihood.

Data from the Bureau of Statistics of Jambi Province shows an increase in the population from 3,092.3 thousand people in 2010 to 3,677.8 thousand people in 2020, which identifies a population growth of 1.38% per year. As for the level of community welfare in Jambi Province, there is an increase in the population below the poverty line from 2019 as many as 274.32 thousand people to 277.80 thousand people in 2020, with a percentage value of 7.58% of the total population in 2020.

5.4.1.2 Livelihoods

Based on the contribution of economic sectors to gross domestic product (macro-economy), the economic structure of Jambi Province in 2020 consists of:⁶⁰

Table 17. Jambi Province Economic Structure In 2020

Sector	Percentage
Agriculture, forestry and fisheries	30,85%
Mining and Quarrying	12,21%
Manufacturing	10,83 %
Wholesale and retail trade, repair of automobiles and motorcycles	12,63%
Construction	7,94 %
Public administration and social security	5,25%
Information and communication	4,42%
Education	3,83%
Transportation and Storage	2,71%
Company Services	1,25%
Financial Services	2,61%
Accommodation and food services	1,18%
Other sectors	4,29 %
Total	100%

Source: Bureau of Statistics of Jambi Province, 2021

Based on the data above, the agriculture, forestry, and fisheries sectors that contribute dominantly to the economy in Jambi Province are (30.85%) followed by wholesale and retail trade, car and motorcycle repair (12.63%), and Mining and control (12.21%). The agricultural and mining sectors are associated

⁵⁹ Some members of Orang Rimba or Suku Anak Dalam have embraced modern lifestyle and live in urban areas.

⁶⁰ Based on statistics of Jambi Province 2018.

with deforestation in Jambi Province, but these are the sectors supporting Jambi province's significant economic growth. Discussions related to the context of this sector as a driver of deforestation need to be discussed further in the ERP, as well as its impact on GRDP and livelihoods for people in Jambi province.

On a micro-economic scale, it is assumed that most of the villagers are involved in the Community estate plantation sector (trend of the percentage being involved in the Community estate plantation sector). The Community estate plantation sector is one of the causes of deforestation. In the agricultural economy, it is indicated by the farmers' exchange rate, which reflects the villagers' economic strength. The Terms of Trade are compiled in Table 18.

Table 18. Terms of Trade (Nilai Tukar Petani) within Agriculture Sub-sector

Commodities	Terms of Trade			Changes
	2019	2020	2021	
Food crops	109.97	100.25	96.43	(3.82)
Horticulture	103.78	107.28	96.62	(10.66)
Community estate plantation	106.35	124.27	135.88	11.61
Livestock	111.09	99.59	100.92	1.33
Fisheries	120.22	109.77	112.78	3.01
Catch Fisheries	129.46	113.17	116.90	3.73
Aquaculture	109.88	98.64	99.38	0.74
Cumulative Terms of Trade	107.71	119.48	127.59	8.11

Table 18 shows the trend of farmer exchange rates from 2019 to 2021. Food crops and horticulture showed a decline in that period, while for Community estate plantation, livestock, fisheries, catch fisheries, and aquaculture increased. The reduction will indicate a deficit in farmers' income concerning food crops and horticulture. There is no guarantee that further agricultural exploitation can overcome this deficit because there is a risk of expanding agricultural land that farmers may carry out to expand Community estate plantations. Alternative strategies that farmers must carry out are optimizing income through agricultural intensification strategies. It is necessary to anticipate the dependence on plantation commodities such as coffee, rubber, and palm oil.

Food security is one of the targets of the Jambi Province Medium-Term Development Plan (RPJMD) 2016–2021. Achievements on food security based on parameters in Jambi are presented in Table 19.

Table 19. Targets and Achievements for Food Security in Jambi Province

Target	Annual Target	Achievement (as of 2020)	% of Target Achieved
Numbers of food-independent villages (cumulative)	71	20	28.16%

Expected food pattern ⁶¹ score	95.5	92.3	96.64%
Calorie availability (kcal/capita/day)	2,400	3,047	126.95%
Food security in all villages	1,399	1,266	90.50%
Protein availability (gr/capita/day)	62.50	60.00	96.00%
Terms of Trade	112	107.60	96.07%
Overall Achievements			89.05%

This table shows the overall achievement is slightly below 100 percent on provincial development targets relevant to food security. This suggests that, consistent with the low terms of trade in several agricultural commodities, Jambi Province has yet to improve its food security. Calorie and protein availability are exceeding the targets, but the data suggest that approximately 30 percent of the villages in Jambi are still below sustenance level. This may suggest uneven distribution of food across areas in Jambi Province.

Productivity of prime agricultural commodities suggests that the strength of food security relies on this agricultural aspect. However, the food available in Jambi is dominated by carbohydrates (rice), oils/fat, oily seeds, and sugars. Animal protein, vegetables and fruits are scarce⁶². Some of the members of Orang Rimba and Talang Mamak customary people still rely on traditional ways of hunting and fishing. Therefore, ERP should incorporate 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 term⁶³. REDD+ may offer new agricultural land as part of the co-benefit mechanism, but these customary communities and poor households may not have enough capital to participate and will still be forced to collect forest products for subsistence purposes⁶⁴.

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. The main economic links consist of Jambi-Palembang and Jambi-Padang, as these hubs allow transportation of goods into and from Jambi. In 2017, the total road length is 2,447.83 km or 48.96 km of road/1,000 km² area. This is below the national standard of 115 km road/1000 km² area. This condition is shown by the fact that good road infrastructure is only 56.573 percent of the total length of the road. The implication of this is the high logistics cost for transporting goods to and from some areas of the province, 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. In some cases, (e.g., national parks and protected forest areas) access restrictions may be linked with forest conservation /protection. However, there are still many forests encroachment cases that can be found in Jambi.

⁶¹ Food pattern based on composition, nutritional values, taste, and digestibility. The score is determined by a national survey on socio-economic status . National target for the score is 93.2

⁶² Performance report of Jambi Province, 2015.

⁶³ 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

⁶⁴ Bayrak & Marafa (2016). Ten Years of REDD+: A Critical Review of the Impact of REDD+ on Forest-Dependent Communities. Sustainability, 8, 620.

The forest encroachment cases in Jambi are done by many actors, including local communities, farmers, cukong, companies, and even village government officials. Timber is a commodity the forest supplies, and the price is good in the market. In Kerinci Seblat National Forest, illegal loggers usually cut the trees and bring the timbers using the river. Based on an investigation conducted by Kompas journalists (24 June 2022), illegal loggers can get one million rupiahs for one cubic of timber sold to cukong (a person who provides money for the illegal loggers to prepare the equipment and buys the timber from loggers). The growth of palm oil industries in Jambi is another driver of forest deforestation in Jambi. Many palm oil companies extend their oil palm plantation and often enter forest areas. Around Berbak Sembilang National Forest, some palm oil corporations clear the land around the national park for oil palm plantation and build the canal near the National Park borders. The total cleared land is approximately 500 ha (Tambunan, Kompas, 8 October 2021). There is a risk that without a clear border identification, the plantation might enter the national park area. In Kerinci Seblat National Park, local communities are one of the drivers of forest deforestation. They clear the land and utilize it for farming. The ERP must support the land and resource-intensive livelihood practices to prevent the local communities from clearing the forests.

There are several lands and resource-intensive livelihood practices around the national park's area in Jambi. These success stories should be replicated through the ERP in Jambi. One of the examples is a female farmer group in Muara Madras Village, Merangin. This group utilizes unproductive land around their neighborhood area to grow coffee plants. They also process the beans and sell them under a cooperative. They used to encroach on the Kerinci Seblat National Park and clear lands there. Nowadays, they focus on utilizing critical land and unproductive land around their neighborhood, with good management in growing coffee plants and processing the beans. The cooperative can sell the coffee for a reasonable price. It was around Rp. 50,000 per kg in April 2022. Organic vegetables are other commodities grown by the cooperative as additional income. They do the encroachment no more and preserve the national park instead (Wira and Faridi, CNN, 2022).

In 2017, the numbers of financial institutions (banks) consisted of 62 branches, and 455 sub-branches and cash offices. The composition of financial institutions in Jambi consists mainly of government banks (287), followed by private banks (219) and provincial banks (51). Relevant issues to the ERP may include the lack of credibility and/or collateral 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 summarized 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	Timber harvesting (illegal harvesting) is associated with a company hiring local people to harvest the timber (e.g., four cases of illegal logging in Tebo District – PT Alam Bukit Tigapuluh and Bukit 30 NP) ⁶⁵ ;	The need to increase community involvement in managing forest areas (e.g., social forestry); The need for harvesting technology that does not require cutting (e.g., harvesting the bark) to halt deforestation.	Lack of capacity for best management practices (e.g., HCV, PHPL) among local communities and license holder; Lack of access to technology;

⁶⁵ Antara News, 8 January 2019

Livelihood Source	Summary of Issue	Relevance to ERP	Potential Risk
	Commodities such as cinnamon (<i>Cassiavera sp</i>) need to be cut for harvesting, and the timber is used for other purposes		
NTFPs	Not yet optimized as an income generating mechanism	Potential source of alternative livelihood (Avocado, Macadamia , honey, <i>Pangium edule</i> , <i>Dyera sp</i>).	Cost for production and transport may be higher in remote areas. This would create competitive disadvantages in the market.
Agriculture	Decreased economic capacities among farmers (low terms of trade/ <i>Nilai Tukar Petani</i>)	Agriculture intensification and improving aquaculture to support economic capacities; Diversification of agricultural commodities as a buffer from price fluctuations.	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); Lack of access to innovative agriculture technology (e.g., organic farming technologies).
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 (installments).

5.4.2 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 Jambi can be qualitatively categorized as:

- Settlement areas, housing or residential areas;
- Agriculture/cultivation which normally involves shifting agriculture (*ladangs*);
- Areas for traditional subsistence activities such as hunting for meat and gathering of fruits, seeds (Orang Rimba and Talang Mamak communities);
- Conservation areas such as customary forest and primary forest (Marga Serampas)

Land used specifically by customary/ indigenous people within the Implementation Area is summarized in Table 21 (Map is provided in Appendix A2).

Table 21. Land Use of Customary People within the Implementation Area

Customary Communities	District	Sub-district	Numbers of locations	Forest Designations
Orang Rimba	Batanghari	Bathin XXIV	1	Production Forest
		Maro Sebo Ulu	5	Production Forest
	Merangin	Renah Pemberap	1	Production Forest
		Tabir Barat	1	Production Forest
	Sarolangun	Air Hitam	1	Bukit 12 NP
		Mandiangan	1	Production Forest
		Muaro Limun	1	Production Forest
	Tebo	Muaro Tabir	3	Production Forest
		Serai Serumpun	1	Production Forest
		Sumay	8	Production Forest / Bukit 30 NP
		Tengah Ilir	1	Production Forest
		VII Koto	1	Production Forest
		VII Koto Ilir	2	Production Forest
Talang Mamak	Tebo	Sumay	1	Production Forest/Bukit 30 NP
Marga Serampas	Merangin	Jangkat	1	Kerinci Seblat NP
Batin Sembilan	Kerinci	Gunung Raya	1	Kerinci Seblat NP
	Batanghari	Bajubang		Production Forest, Palm Oil Plantation

The table shows that overlapping areas may trigger tenurial conflict between production forest, national parks, and the customary people. Conflicts have potential to occur in five of the ten districts within the Implementation Area. It is likely that ERP implementation within these districts and/or forest designations will affect the existing land-use by these people and settlements (e.g., access restriction). This underlines the importance of FPIC and subsequent FGRM as part of the safeguards for the ERP in Jambi.

The aggregated rural and urban annual population growth in Jambi Province between 2016 and 2017 is 1.62 percent. The largest growth is observed in Muaro Jambi District (2.64 percent per year). These numbers suggest that growth is small and will not massively impact forest and natural resources. Moreover, subsistence farming conducted by rural communities is still considered the most secure and sustainable livelihood⁶⁶. Largest area of deforestation between 2000 and 2017 is observed in Muaro Jambi with 84,692.33 ha, or approximately 30 percent of the total deforestation in Jambi Province within this period. This may be associated with the presence of palm oil allocation in this district (47 percent

⁶⁶ 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

of the total palm oil allocation found in the Implementation Area). Therefore, palm oil plantation (rather than population growth) needs to be considered as a driver of deforestation to be addressed in the ERP.

Demographic baseline of forest dependent communities shows that Orang rimba (2010 data-BPS) consists of 1,603 males and 1,602 females, or an equal ratio between males and females. As many as 1,484 Orang Rimba or 46 percent of the population are 15 years of age and younger, while 85 people (2.6 percent of the population) are older than 60 years old. This suggests that almost half of the population is below productive age (by normative standard where age 15 to 60 is considered productive). This composition indicates that half of the population (productive age) supports the other half (non-productive age);

Orang Rimba population relies on forest resources for hunting and gathering. However, a portion of Orang Rimba has now adopted a “modernized” livelihood trading. It is assumed that the population in Jangkat Sub-District represents Marga Serampas population in Renah Alai, Pulau Tengah, Tanjung Kasri and Rantau Kermas villages. In 2017 (BPS data), there are 5,000 males and 4,798 females or an almost equal ratio between males and females. Approximately 29 percent of the population is younger than 15 years old, while 6.1 percent is older than 60 years old. This suggests that approximately 65 percent of the population is productive age. Marga Serampas depends on the forest to preserve water supply for agriculture and livelihood. Marga Serampas has customary forest (*Hutan Adat*) to ensure this forest function.

Based on the 2018 Agriculture Census, other community groups depend on forest resources for cultivation of forestry plants (8,522 households in Jambi) and other forestry services (1,419 households). Kerinci District shows the highest forest use with 4,398 households (44 percent of forest dependent households in Jambi), followed by Tebo District and Sungai Penuh City with 1,344 (13.5 percent of forest dependent households) and 1,318 (13.3 percent of forest dependent households) respectively.

Overlap with plantation sector is mainly observed with Orang Rimba in Batanghari (five locations in two sub-districts), Merangin (two locations in two sub-districts), Sarolangun (three locations in three sub-districts), and Tebo districts (16 locations in six sub-districts). No land claim is filed, but this overlap resulted in conflicts between Orang Rimba communities and plantation companies. This data shows that Tebo District has the highest frequency of overlaps.

Mining and extractive industries are not the main economic drivers (main contributors to the provincial economy). However, the 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). This also suggests that risk of deforestation largely occurs in rural areas where agriculture, forestry and plantation are located.

Interventions by WARSI, Forest Programme II (FP II) dan FFI show that promoting forest tenure security through social forestry mechanisms (community forests, customary forest, conservation partnership) can help strengthen management of forest areas (including reforestation and forest rehabilitation). 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. As shown in Durian Rambun (Merangin District) and Bukit Panjang Rantau Bayur (Bungo District), social forestry mechanisms can potentially generate carbon credits.

5.4.3 Land Tenure and Natural Resource Conflicts and Disputes

5.4.3.1 Spatial Plan of Jambi

The ERP targets land-based emissions largely from forestry and plantations in Jambi 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 formalized in Provincial Regulation (*Peraturan Daerah/PERDA*) No.10/2013 on Jambi Spatial Plan 2013-2033. The spatial plan contains the spatial pattern 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 areas⁶⁷ 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 Spatial Plan. 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. Additionally, the Jambi Spatial Plan also aims to improve management of protected areas consisting of protected forest, water catchment areas, peatland, water springs and buffer areas (rivers, lakes, and coast).

Provincial spatial plan and spatial data analysis confirmed the presence of production forests (i.e., timber and forestry plantation concessions) in 102 sub-districts in the Implementation Area. 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 schemes⁶⁸ relevant to Component 2 of the ERP; thus, encouraging positive interactions.

Jambi Spatial Plan 2013-2033 includes programs for protected forest areas such as land rehabilitation and conservation, as well as encouraging community participation in managing protected areas. Additionally, Jambi Province also sets up an incentive mechanism for protected area management. This approach is expected to control utilization of forest resources from protected forest areas. The Spatial Plan also recognizes the significance of national parks and nature tourism parks (managed by central government). The Spatial Plan supports the efforts for national park delineation, optimizing the function of national park zones (rehabilitation, utilization, wilderness, and core zones).

5.4.3.2 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 shown in Table 22.

Table 22. Overlapping Forestry, Plantation and Mining Concessions in the Implementation Area

District/Sub-district	Hectare
Batanghari District	0.45

⁶⁷ Evaluated based on geological, biological, hydrological, climatological, geographical, social, cultural, political, economic, and technology point of views.

⁶⁸ Ministry of Environment and Forestry allocates certain areas within production forest as social forestry allocations (*Peta Indikatif Alokasi Perhutanan Sosial - PIAPS*)

Bathin XXIV Sub-District	0.45
Jabung Barat District	322.85
Batang Asam Sub-District	11.42
Beram Itam Sub-District	165.02
Pengabuan Sub-District	142.11
Tebing Tinggi Sub-District	4.30
Tanjung Jabung Timur District	124.98
Geragai Sub-District	114.71
Mendahara Sub-District	10.27
TOTAL	448.28

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 the Implementation Area is done based on the following categories of tenurial conflicts:

- Potential conflict areas between forestry plantation and palm oil concessions (155.33 ha);
- Potential conflict areas between forestry plantation and mining concessions (143,695.77 ha); and
- Potential conflict areas between forestry plantation, palm oil and mining concessions (448.28 ha).

Overlapping areas may trigger tenurial and natural resource conflicts according to the above categories. Overlapping areas represent land uses by two or more parties at the same geographic locations. The overlap size corresponds to the risk and scale of potential conflict. In addition to the risk of conflicts based on the overlap. Conflicts to date are summarized in Table 23.

Table 23. Summary of Ongoing Conflicts in Jambi Province (Top Priority)

Conflict Parties		Location	Area (ha)	Conflict	Progress
Kelompok Tani Pantang Mundur	PT Wirakarya Sakti	Ds Danau Lamo, Kec. Maro Sebo, Kab. Muaro Jambi	2,610	Tenurial claim	Finalization of draft agreement
Kelompok Tani Hutan Sumber Rezeki	PT Wirakarya Sakti	Ds Rantau Kapas Tuo, Kec. Muara Tembesi, Kab. Batanghari	1,500	Tenurial claim	The KPHP Batanghari working group leads the negotiation process to establish a forestry partnership scheme
Kelompok Panglimo Berambai	5 Koperasi HTR (Koperasi Alam Sumber Sejahtera,	Kec. Mersam, Kab. Batanghari	3,142.29	Tenurial claim	Negotiation process

	Rimbo Karimah Permai, Alam Tumbuh Hijau)				
Kelompok Petani Sekato Jaya	Kelompok Tani dan 1 Perorangan (KT. Pematang Tungkung, KT. Jaya Makmur, KT. Adi Jaya, Daniel Nasution dan KT Sidodadi)	Kel. Teluk Nilau, Kec. Pengabuan, Kab. Tanjab Barat	1,500	The farmers utilized the land before it became a company's territory	Mediation process and socialization of forestry partnership program
Forum Masyarakat Teluk Nilau	4 Kelompok Tani dan 1 Perorangan (KT. Pematang Tungkung, KT. Jaya Makmur, KT. Adi Jaya, Daniel Nasution dan KT Sidodadi)	Kel. Teluk Nilau, Kec. Pengabuan, Kab. Tanjab Barat	1,000	Customary land claim	Mediation process
Kelompok Tani Desa Olak Kemang, Ale Mandiri dan Sumber Jaya Pendamping : Walhi	PT. Limbah Kayu Utama (LKU)	Ds Olak Kemang, Kec. Muara Tabir, Kab. Tebo		Claim object is a customary land since 1930	Mediation process
Kelompok Tani Rimbo Lestari	PT. Samhutani dan PT. Agrindo Panca Tunggal Perkasa (APTP)	Kec. Pauh, Kab. Sarolangun		Tenurial claim	Negotiation of forestry partnership for 13 ha
Kelompok Tani Napal Abadi	PT. Rimba Hutani Mas (RHM)	Ds Suko Awin Jaya, Kec. Sekernan, Kab. Muaro Jambi	494	Tenurial claim	Negotiation process
Kelompok Tani Semantung Bersama	PT. Wirakarya Sakti (WKS)	Ds Sungai Paur, Kec. Renah Mendaluh, Kab. Tanjab Barat	211	Tenurial claim	Socialization of a forestry partnership program and release of forest area
Other 31 conflicts			59,774		
Total 40 conflicts that are in the process of conflict resolution			70,231		

This table shows 40 ongoing conflicts covering 70,231 ha areas in Jambi that need to be mediated. There are 50 conflicts that have been solved covering approximately 22,543.79. This also shows that approximately 75% conflicts are in the process of mediation, pre-mediation, assessment, or desk study.

Forestry Sector

Designation of forest areas is formalized by the Decree (SK) of Ministry of Forestry No. 863/2014 regarding forest areas in Jambi. The forest areas are assigned a license to manage (*Izin Usaha Pemanfaatan Hasil Hutan Kayu/IUPHHK*), logging (*Hutan Alam/HA*) or forestry plantations (*Hutan Tanaman/HT*). 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. Conflicts in forestry sector are mainly space use conflicts due to policy disagreements among actors consisting of government institutions, local communities, and corporations⁶⁹.

An example of a conflict in production forest area in Jambi can be seen in the case of ecosystem restoration concession (ERC)⁷⁰. PT REKI is involved in 11 of the 32 recorded cases, where eight cases are resolved. PT REKI is a license holder for ecosystem restoration concession in Jambi Province. The concession of PT REKI is known as Harapan Rainforest, and spans over a total area of 98,555 ha (46,385 ha is located in Batanghari and Sarolangun district of Jambi Province). The Harapan Rainforest contains rich biodiversity, including endangered species (Sumatran tiger and Sumatran elephant). Additionally, Harapan Rainforest is also used by Batin Sembilan customary communities who still practice slash and burn agriculture. There are 3.201 families living in and around Harapan Rainforest.

The roots of conflict are central and local government policy that prioritizes the company as the manager of the production forest. This creates land tenure inequalities between PT REKI and the local communities. Policy on forest partnership with surrounding oil palm and timber plantations was not successfully implemented/enforced. In the end, there are licensing overlaps between local and customary rights with the Harapan Rainforest. Moreover, there is no strong regulatory instrument to support the recognition of these customary rights.

Due to the lack of strong law enforcement from the government and from PT REKI, Harapan Rainforest begins to suffer from encroachment. Migrants purchased the land from the local elites and started to plant oil palm in the concession area of Harapan Rainforest. Additionally, different perceptions, interests and needs among stakeholders deepen the nature of conflicts in this area. Actors also include NGOs and CSOs that bring various themes such as poverty, land reform, indigenous rights, and environment. The primary stakeholders in this conflict situation are PT REKI, community, the MoEF and local government. The secondary stakeholders are NGOs, local elites, and law enforcers. The primary stakeholders are required in the mediation process, while the secondary stakeholders are involved in the subsequent engagement process.

The nature of the conflict is land acquisition done by local elites and investors in order to increase their wealth (not for subsistence). The commodities planted in the encroached area are palm oil, rubber, rice paddies and agricultural plants. These commodities are suited to this area and generate high income. Conflict resolution needs to be done in a persuasive way consisting of socialization, registration,

⁶⁹ Rustiadi. E, *et al.*, 2018. Chapter 15: Land Use and Spatial Policy Conflicts in a Rich-Biodiversity Rain Forest Region: The Case of Jambi Province, Indonesia. Exploring Sustainable Land Use In Monsoon Asia. Springer Nature, Singapore

⁷⁰ Source: Silalahi. M, Erwin, D., 2015. Collaborative Conflict Management on Ecosystem Restoration Concession: Lessons Learned from Harapan Rainforest Jambi, Indonesia. Forest Resource 4(1)

establishment of a government integrated team, negotiation, and mediation. Considering the nature of the conflict, Harapan Rainforest Management Unit are equipped with strategic options to resolve the conflict consisting of:

- **Milestone A:** Entry to the conflict, supported by independent facilitator or conflict resolution experts. This milestone is achieved through the following steps:
 - Preparing entry;
 - Entering conflict scene; and
 - Analyzing conflict.
- **Milestone B:** Broadening stakeholder engagement to follow up from previous milestones. This process is mediated by independent facilitators. This milestone is achieved through:
 - Broadening stakeholder engagement to help conflicting parties share their respective positions;
 - Assessing the option to produce alternative to resolve the conflicts; and
 - Clarify the object and subject of the conflict.
- **Milestone C:** Negotiation. This step is intended to reach an agreement on the resolution strategy. Facilitators and mediators are implementing the following steps:
 - Preparation for negotiation to set and agree on the ground rules (e.g., no black campaign, no repressive law enforcement measures, etc.);
 - Facilitation of negotiation; and
 - Designing the agreement.
- **Milestone D:** Exit strategy and set up mechanism for monitoring the agreement and preparing for the exit.

These four milestones are achieved through collaborative conflict management (CCM) process. The CCM needs to be adjusted/adapted to the context of each conflict case to allow flexibility and continuous improvement of this method. The roles of Harapan Rainforest Management Unit in identifying strategic options and involving independent facilitator/conflict resolution experts are applicable for Forest Management Unit (FMU) in resolving tenurial conflict.

Examples of unresolved conflict include encroachment in Kerinci Seblat National Park in Merangin District. This encroachment is concentrated mainly in Sipurak Hook consisting of Lembah Masuari and Jangkat sub-districts. Encroachment in this area is coffee plantation that started to increase in 2002 due to arrival of migrants for other provinces (e.g., South Sumatra, Bengkulu and Lampung). By 2012, the encroached areas are 8,169 ha in other use area (1,420.5 ha), production forest (4,209 ha), limited production forest (83.5 ha), and Kerinci Seblat National Park (1,660 ha)⁷¹. By 2018, encroachment in Kerinci Seblat National Park increased by almost ten-fold and reached 11,000 ha⁷². Influx of migrants into this area also created frictions (conflicts) with Marga Serampas, the local/indigenous communities in this area.

⁷¹ Strategi Rencana Aksi Provinsi (SRAP) REDD+ Provinsi Jambi

⁷² Encroachment survey using Drone and spatial analysis, Forest Programme II-Kerinci Seblat NP 2018.

According to World Resource Institute analysis, the driver of encroachment is limited land for farming, hence extensification becoming the only choice for local communities (Ridwan and Bagja, 2019). To prevent the extensification, the ERP can respond by providing an alternative livelihood, such as a land intensification program that is feasible to be done outside the national park area. Besides, the World Resource Institute also mentioned that the vacuum of forest management at the grassroots level causes the forest areas to be left unsupervised. Therefore, the ERP can assist indigenous people and local communities in getting the recognition and rights to manage forests surrounding their villages. Further assistance to manage the forest sustainably is still needed after they get the recognition.

Estate Crop Plantation Sector

Most of the conflicts in this sector are related to land grabbing. This notion is supported by the fact that, in the plantation sector, 84 percent of the reported conflicts (nationally) are categorized as land grabbing⁷³. Land grabbing is a controversial large-scale land acquisition. 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 factors⁷⁴:

- Capital investment of large corporations that allows land acquisition at massive scales;
- Lobbying power of corporations with local governments (governor, *bupati* or 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.

Data from the Ministry of Agriculture showed that palm oil plantation area in Jambi Province reached 1.8 million hectares as of 2019, or 27 percent of the total area of the province⁷⁵. However, only approximately 400,000 ha of this area has licenses for 53 companies, while the remaining are smallholder plantations. The total area for palm oil is already exceeding the one-million-hectare provincial target. Therefore, expansion of palm oil companies is not likely to occur. However, since most of the palm oil plantations are smallholder farmers, expansion of smallholder palm oil plantations is inevitable. With such expansion, land conflicts will tend to be scattered throughout the province.

It is worth noting that conflicts occur between palm oil plantations and local communities. The classic example is conflict between Batin Sembilan customary communities with PT Asiatic Persada in Bungku Village, Batanghari District⁷⁶. This conflict is entering the mediation phase. Another example is between PT Bukit Bintang Sawit (PT BBS) with local communities in Kumpeh Village, Muaro Jambi District.

⁷³ 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

⁷⁴ Sekolah Tinggi Pertanahan Nasional (STPN). 2013. Membaca Ulang Politik dan Kebijakan Agraria

⁷⁵ Berita Satu, 9 april 2019

⁷⁶ Beckert. B, Dittrich. C, Adiwibowo. S., (2014). Contested land: An analysis of multi-layered conflicts in Jambi Province, Sumatra, Indonesia. ASES – Austrian Journal of South-East Asian Studies, 7(1). 75-92.

License for PT BBS was issued by the Environmental Agency of Muaro Jambi District, but the socialization process prior to the licensing was allegedly lacking⁷⁷.

Another example of conflict between FMU and smallholder palm oil farmers occurs in Tanjung Jabung Barat District. Approximately 60 percent of production forest (previously licensed to PT Hatma Hutani) is currently encroached by migrant palm oil farmers (mostly from North Sumatra Province). In Tebo District, production forest under license of PT Alam Bukit Tigapuluh (ABT) is currently encroached by PT Tonton that conducted illegal land transactions and set up palm oil plantations. Government authorities (FMU) and license holders are not capable of resolving this conflict.

This fact urges the ERP to consider ATR/BPN and its technical implementation units (province and district plantation agency), as well as village government as key stakeholders. Engaging with these stakeholders needs to be aimed at:

- Thorough examination of recommendations from the *Bupati/Mayor/Governor* on the plantation licenses;
- Ensuring proper environmental and social impact assessment prior to HGU issuance;
- Requiring implementation of environmental and social safeguards, especially in ERP locations; and
- Provision of alternative livelihood and/or intensification of smallholder palm oil plantations .

Conflicts between corporations and local communities are happening in several areas with HGU licenses. Based on a collective grievance made by nine village representatives assisted by WALHI to KOMNASHAM in March 2022, the corporations forced the people to hand over their land using violence. Some of them hired “*preman*” to threaten the villagers. Some people were being criminalized. Legal assistance is needed to monitor their grievances and stop the intimidation.

Mining Sector

As described in Section 5.2.3, mining concession constitutes 24 percent of the Implementation Area. By April 2018, Jambi province issued 159 mining licenses, but only 32 are in operation. Conflict between mining companies and local communities occur in Sarolangun District. Local communities in Gunung Kembang protested PT Karya Bumi Pratama and PT Charitas Energi Indonesia for limiting access/destroying the community plantation. This indicates that mining is associated with social issues. In 2014, Jambi has issued licenses to 138 companies, and totalling in more than 1 million ha of mining areas. Approximately 480,000 ha of this licensed area is located in protected and production forests. Since 2015, Jambi provincial government (i.e., Energy, Mineral Resource Agency) has revoked mining licenses due to the lack of activities and indicative of corruption cases.

The problem with mining includes illegal mining conducted in and around protected areas (e.g., protected forest and national park) in Bungo and Merangin District. Illegal mining activities are also conducted in Sarolangun and Tebo districts. Social issues related to illegal/artisanal mining include loss of life due to unsafe mining practices, as well as environmental issues such as changes in landscape, deterioration in soil and water quality, and deforestation. Artisanal and illegal mining activities are intensive in five sub-districts in Merangin District. These areas consist of 655 ha in

⁷⁷ Mongabay 21 February, 2019

Pangkalan Jambu; 260 ha in Sungai Manau; 2 ha in Renah Pembarap; 125 ha in Tabir Lintas; and 185 ha in Tabir Barat⁷⁸. Currently, there are reported cases of illegal oil drilling activities inside the Grand Forest Park (Taman Hutan Raya/ Tahura) Sultan Thaha Syaifuddin/Senami in Batanghari District⁷⁹.

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

Conflicts in Non-Forest Estates (APL)

Other use area (APL) constitutes 216,420.14 ha, or 7.8 percent of the Implementation Area. Spatial data from year 2000 to 2017 shows a total of 291,524 ha of deforestation in Jambi Province (Table 4). Map of deforestation in APL is provided in Appendix A2. This data indicates the need to manage land-use outside forest areas in order to reduce the rate of deforestation. Consequently, this needs to be placed into consideration in the ERP.

The ability to use land outside forest areas (i.e., in other use areas, *Area Penggunaan Lain/APL*) is administered through the Ministry of Agrarian and Spatial Plan (*Agraria dan Tata Ruang/ATR*). This authority is further mandated to the province (*kantor wilayah* or regional office) and district offices (*kantor pertanahan*) through Presidential Decree (*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/wali kota*, licensing office (*Kantor Perizinan*), 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 the 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 Grievance and Redress Mechanism (FGRM)⁸⁰ is developed to facilitate conflict resolution by sectors (i.e., forestry, plantation, and mining), as well as by Jambi Sub National (forest areas and other use areas). The FGRM mechanism will allow documentation of conflicts and the measures to resolve these conflicts.

⁷⁸ Source: WALHI 2018: <https://www.walhi-jambi.com/2019/01/catatan-akhir-tahun-walhi-jambi-potret.html>

⁷⁹ Source: Tempo.co.id (<https://foto.tempo.co/read/71299/intip-lokasi-pengeboran-minyak-ilegal-di-jambi>).

⁸⁰ Separate document is prepared as part of the Environmental and Social Management Framework (ESMF).

Table 24. Deforestation in APL in Jambi Province 2000-2017

DISTRICT/CITY	YEARS (HECTARES)									TOTAL
	2000-2003	2003-2006	2006-2009	2009-2011	2011-2012	2012-2013	2013-2015	2015-2016	2016-2017	
Batanghari	5,940.86	173.04	17,214.98	2,646.16	768.07	520.03	107.97	740.93	33.31	28,145.37
Bungo	845.06	5,013.85	6,734.98	3,797.14	104.08	2,076.07	179.45	349.21	93.29	19,193.13
Kerinci	187.16	13.83	2.27	137.60	-	95.56	108.06	121.43	812.79	1,478.71
Merangin	475.09	2,527.00	6,769.35	1,189.76	274.50	1,632.94	1,126.92	2,074.79	1,584.16	17,654.53
Muaro Jambi	2,792.25	-	78,403.20	101.79	1,344.36	1,552.55	487.00	11.18	-	84,692.33
Sarolangun	746.47	3,674.84	10,577.19	1,396.32	2,622.03	1,324.48	776.82	1,207.63	1,586.69	23,912.46
Tanjung Jabung Barat	7,631.27	590.26	18,326.58	3,057.87	718.22	249.01	22.95	926.14	345.81	31,868.11
Tanjung Jabung Timur	10.68	5.93	33,629.47	2,141.59	1,997.04	2,104.62	1,486.79	1,146.89	857.46	43,380.48
Tebo	970.07	11,366.87	14,449.20	4,236.57	36.56	6,520.90	907.59	443.02	2,246.32	41,177.11
Jambi City	-	-	-	-	-	-	-	-	-	-
Sungai Penuh City	-	-	-	-	-	-	-	-	22.01	22.01
Total	19,598.90	23,365.61	186,107.24	18,704.81	7,864.87	16,076.17	5,203.56	7,021.23	7,581.84	291,524.25

Table 25. 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 procedures for license issuance; Sub-optimal monitoring and evaluation by license holders.	Rare (approximately 12 percent of the area), mainly overlap between timber plantation and mining concessions.	Provincial and district governments ; License holders.	Forest management to support improvement of land governance
Unclear border of FMUs and national parks	Minimum information on forestry programs/policies	Frequent	FMU, national park authorities	Capacity building on forest management; Boundary delineation;
Conflict between migrant and local communities	Tenurial conflicts (see below)	Rare, but the intensity may be high when it occurs (damages to properties, and potential injuries/loss of life).	Indonesian Farmers' Union (SPI); Local governments (task force); National government (MoEF);	Conflict resolution and FGRM
Tenurial conflicts	Lack of capacity to resolve cross sectoral conflicts (forestry with plantation, or forestry with mining); Migrants encroaching customary forest area for expansion of coffee plantation	Frequent (approximately 9 of 10 districts in the Implementation Area); Concentrated, but rapidly increasing in the past seven years.	FMU, national parks & license holder	Capacity building on forest management; Conflict resolution / FGRM; Rapid and massive deforestation that may become risk of leakage during ERP implementation;

5.4.4 Relevant Gender Aspects in the ER Areas

Legal and regulatory frameworks on gender mainstreaming are provided in the medium-term development plan of Jambi Province. Since 2015, this aspect has been undertaken by the Agency for Women's Empowerment, Child Protection and Population Control. Gender participation and engagement in Jambi is only seen in the composition of provincial government employees that consist of 5,940 males and 6,004 females to accommodate an equal gender representation.

Gender aspects can be defined based on gender development and empowerment indices⁸¹ where:

⁸¹ Ministry of Women Empowerment and Child Protection & Bureau of Statistics. 2016. Pembangunan Manusia Berbasis Gender (Gender-based human development) 2016.

- 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 Jambi in 2015 was 87.88, with development slightly favoring 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 making”, and “income distribution. An index of 100 indicates equal empowerment among genders. The gender empowerment index in Jambi was 61.93 in 2015, suggesting unequal empowerment among genders.

The Jambi Melayu ethnic group used to have a matrilineal kinship system (Villamor et al. 2013). However, the women's roles are shrinking and replaced by the men. The massive expansion of oil palm plantations in Jambi is one of the causes. When local communities in Jambi begin to cultivate oil palm plantations, women's involvement in managing the plantation are limited. Some activities in oil palm plantations, like harvesting the fruit bunches, require men's labor. Hence, the participation of women in the agricultural sector is reducing. The gender analysis report, published by the BPS in 2021, shows that most of the women who work in the agricultural sector are unpaid workers. The income from the agriculture sector is the lowest for the women in Jambi. In addition to this challenge, women are not considered as the head of the household anymore. They could not do the business negotiations. They also lose their land rights due to the shifting of gender norms in Jambi (Chrisendo et al. 2020). According to the study of Peach Brown (2011) the participation of women in discussions on REDD+ is always limited. Women in Sumatra are excluded or rarely invited to participate in the village decision-making processes (Villamor et al. 2013).

5.5 ECONOMIC ASSESSMENTS RELATED TO THE ERP

5.5.1 Economic Situation in Jambi

Nowadays, The Jambi “TUNTAS” vision will be continued with the “MANTAP” vision of Jambi Province includes the target to be a “Green Economy” that provides economic development, while ensuring that development is sustainable and environmentally friendly. The long-term development plan has six overarching goals:

- Improving the overall quality of life in the province to produce competitive advantages;
- Developing a industrialize non-mining commodity as main commodity
- Developing tourism sector throughout the province
- Ensuring the food security and accessibility
- Ensuring safe, peaceful and orderly conditions;
- Ensuring gender equality and justice in the development; and
- Ensuring sustainable development throughout the province.

Political commitment to reducing GHG is formalized through Governor's Decree No. 36/2012, which states that the carbon emissions from forest loss and land degradation are to be reduced by 55 MtCO_{2e} by 2030. 47.3 MtCO_{2e}, or 86 percent will be the contribution from peatland land and LULUCF. Despite

the goal of Jambi's MANTAP vision and the political commitment to reduce GHG emission, Jambi's economy is dependent on agriculture and plantation sectors consisting of rubber and palm oil. Palm oil plantations were identified as the drivers of deforestation and degradation in the ERP.

The Bank Indonesia (BI) recorded economic growth of Jambi Province 1.8 percent in the last quarter of 2020. In terms of production, the Construction business field is forging growth in the same way with a growth rate of 16.21 percent. The low in economic growth due to the coronavirus pandemic (covid-19) caused sluggish economic activity and some businesses contracted. On the other hand, forestry, agriculture, and fisheries (the main contributors of the GDP) show a decreasing trend due to the decrease in rubber and palm oil prices in this period. Economic growth in 2022 and 2023 is predicted to be 4.36 and 4.48 percent due to the improvement of the forestry, agriculture, and fisheries sectors but the mining sector is experiencing inflation due to the occurrence of covid 19 which causes a decrease in mobility and activities. This positive trend indicates that provincial economic growth heavily relies on the palm oil commodity, rather than on rubber.

An analysis of the contribution of Jambi's economic sector to the PDRB shows that the forestry, agriculture, and fisheries sectors are the dominant sectors in 2020. The role of this sector in the provincial economy was further analyzed using input-output analysis. This analysis focuses on multiplier effects (income, factors of production, and output) and interrelationships between sectors. This study shows that the largest revenue comes from the palm oil industry. However, because of the covid 19 mining sector, large trade and retail, transportation and warehousing are much decreased.

The efforts towards green development (i.e., reducing GHG emissions) in Jambi pose a governance risk, as palm oil offers immediate economic benefits (income) 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 Component 2 envisaged in the J-SLMP, which aims to improve forest management and to promote sustainable private sector partnership and investment. However, specific activities are needed to directly address smallholder farmers, for they constitute the largest stakeholders in this sector.

The Agrarian Reform Program aims to restructure the licenses for unproductive production forest and allow for use by local communities. The map of agrarian reform released by KLHS Jambi Province in 2021 indicates the presence of 20,049.18 ha land allocation in Batanghari (1,152.30 ha) Bungo (2,117 ha), Kerinci (2,583.44 ha), Merangin (263.51 ha), Muaro Jambi (3,659.27 ha), Sarolangun (699.63 ha), Tanjung Jabung Barat (7,926.39 ha), Tanjung Jabung Timur (499.41 ha) and Tebo (1,148.23 ha). Map of this allocation is provided in Appendix A2. These data show that the largest allocation is in Muaro Jambi District, where the existing land uses are unproductive Convertible Production Forest; settlements with social and public facilities; and dry land agriculture. These allocations offer opportunities for strengthening the tenurial rights of indigenous people through social forestry mechanisms (Component 2 of the PDO).

Additionally, the restructuring of licenses can also be used to improve land and forest governance (Component 1 of the ERP). To implement the activities outlined 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 as required.

The application of sustainable palm oil principles, such as RSPO, has been initiated in Jambi Province. Asian Agri represents a plantation company that applies RSPO and ISPO certification to its 41,000 ha of palm oil plantation in Jambi. Asian Agri obtained the RSPO certification in 2016, but the company has practiced a zero-burning policy since 1994. This policy avoids fire during land preparation and may contribute to the reduction of fire hotspots in Jambi. Since April 2018, IDH and Jambi government has assisted 30,000 smallholder palm oil farmers in Tanjung Jabung Barat in obtaining ISPO license. This example shows promising relevance that can be achieved by introducing sustainable palm plantations (Component 2 of the PDO).

5.5.2 Political Economy of Jambi

Political economy of Jambi is shaped by the macro-economic profile (Gross Domestic Products, economic growth, inflation rate and export-import) and political commitment of the Governor to support national development targets. Medium-Term Development Plan (*Rencana Pembangunan Jangka Menengah Daerah/RPJMD*) of Jambi Province (2016-2021) was formulated based on 11 strategic issues that include improvement of governance; quality of human resources; strategy to increase investment; management of natural resources; Quality of public infrastructure; economic disparity; optimizing international trade relations; price fluctuation of agriculture and plantation commodities; climate change and reduction of greenhouse gas; Food and energy sovereignty; and strengthening and justifying provincial boundaries.

Jambi Province still relies on plantation and forestry sectors (specifically plantation sub-sectors consisting of palm oil, rubber, cinnamon, and coffee). Of these subsectors, palm oil and coffee commodities are associated with encroachment (deforestation). Rubber is low in price (only Rp. 5,000 per kg sheet) that Jambi relies on palm oil and coffee as primary commodities to support the GRDP. Implementation of BioCF may be associated with high opportunity cost for Jambi Province, as BioCF may aim for the decrease or suspension of palm oil and coffee expansions.

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

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

- Human resource quality and livelihood (Components 1,4,5 and 7);
- Good governance on forest and estate crop (Component 7); and
- Environmental quality by preventing fire, biodiversity loss and encroachment/degradation (Components 1, 2, and 7).

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

support for the forestry, agriculture, and fishery sector (e.g., sustainable land management and effective benefit sharing to buffer the fluctuation of prices of important commodities) may strengthen the role of the ERP in supporting the Jambi development plan.

Interventions to the forestry and estate crop sectors are feasible due to political willingness at national and provincial levels. Implementation of the ERP may gain leverage in the forestry sector from moratorium (*Peta Indikatif Penundaan Pemberian Izin Baru/PIPPIB*). In addition, forest fire prevention is stipulated in Perda no.2/2016 on Prevention and Control of Land and Forest Fire that applies to plantation and forestry sectors

Challenges in implementing ERP in the forestry sector may include aligning licensing mechanisms 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 (*Tanah Objek Reforma Agraria/TORA*). This policy was aimed towards improving community access to “dormant” or mismanaged forestry concessions in production forest. From the ERP’s point of view, this policy may support the welfare of local communities. However, application of TORA will result in changes of land status from forest to other use areas. 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 the ERP target groups from private companies (forestry concession holders) to individual persons or households. Shifting of approach and strategy may need to be anticipated. Benefit sharing mechanism also needs to be considered if such a shift occurs.

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

5.6 SCENARIO ANALYSIS FOR EMISSION REDUCTION

This section analyses the potential environmental and social output based on the drivers of deforestation and degradation addressed by the PDO. Analysis was done using scenario analysis (comparing business as usual and PDO/ERP scenario); identification environmental and social components addressed by the PDO (and the corresponding drivers therein); and establishing environmental and social indicators based on the previous steps; thus, aligning the environmental and social components and their indicators with the drivers of deforestation.

Based on the availability of data and information from the BioCF-ISFL MAR team, three scenarios are created to support the J-SLMP and ERP in Jambi: Baseline Scenario, Pre-investment Scenario, and ERP Scenario. These scenarios are still being developed and therefore subject to change pending new information and other considerations.

5.6.1 Baseline Scenario

Current analysis of historical deforestation in Jambi (2006-2017) showed that the main contributor to GHG emission is deforestation, vegetation degradation and peat decomposition, which reached the total of 307,512,646 Mt CO₂; 204,962.287 MtCO₂; and 196,895,241MtCO₂ respectively. Meanwhile, the total CO₂ emission from agriculture is much lower at around 12,539,740 MtCO₂ within the same period of 2006-2017. Both vegetation and forest growth contribute to significant amounts of CO₂ removal, amounting to 201,553,124 MtCO₂ and 14,913,661 MtCO₂ respectively from 2006-2017 (please see Table 26).

Table 26. Composition of CO2 Emission in Jambi

Categories	Sub-Categories	Total 2006-2017	Baseline 2020	Baseline 2025
LULUCF	Total LULUCF	339,225,165	30,838,651	30,838,651
	Deforestation	307,512,646	27,955,695	27,955,695
	Vegetation degradation	204,962,287	18,632,935	18,632,935
	Vegetation growth	-201,553,124	-18,323,011	-18,323,011
	Forest degradation	43,217,018	3,928,820	3,928,820
	Forest growth	-14,913,661	-1,355,787	-1,355,787
Peat Degradation	Total Peat Degradation	196,895,241	21,798,489	24,069,909
	Peat decomposition	196,895,241	21,798,489	24,069,909
	Peat fires			
Agriculture	Total Agriculture	12,539,740	1,120,235	1,120,235
	Paddy rice cultivation	4,440,320	403,665	403,665
	Fertilizer application	3,944,640	338,862	338,862
	Livestock	3,310,040	300,913	300,913
	Biomass burning	844,740	76,795	76,795
Total		548,660,146	53,757,375	56,028,795

The table also shows that on a yearly basis (baseline for 2020 and 2025), the average emissions are 30,838,651 MtCO₂ for LULUF; between 21,798,489 MtCO₂ and 24,069,909 MtCO₂ for peat decomposition⁸²; and 1,120,235 MtCO₂ for agriculture.

Another close look at deforestation in Jambi in 2017 (see Table 27) shows that forest cover change into shrub, bare land, estate plantation and agriculture have been the main drivers of deforestation in Jambi.

Based on the above data and analysis, future scenarios can be drawn focusing on emission reduction and CO₂ removal which is described in the following section.

⁸² There is a slight increase in peat decomposition emission every year due to the specific calculation of emission for peatland available in the literature.

Table 27. Forest Cover Change and Potential Drivers of Deforestation in Jambi

2017 Land Cover Classes after Deforestation	ha	%	Potential Drivers
Shrubs	193,144	22.78	Logging, fires, encroachments, shifting agriculture
Barelands	172,376	20.33	Coal mining, fires, logging
Timber plantation	162,744	19.19	Accacia or other pulp plantation
Estate crops	162,387	19.15	Mostly oil-palm plantation
Agriculture	155,355	18.32	encroachments, shifting agriculture
Mining	1,324	0.16	Illegal gold mining
Settlements	278	0.03	Encroachment or expansion of existing settlements
Aquaculture	211	0.02	Fish or shrimp ponds development in the coastal mangrove areas
Paddy rice	87	0.01	Development of paddy rice cultivation
Total	847,906		

5.6.2 Scenario for Pre-investment (J-SLMP)

Based on the above analysis of the drivers of deforestation, it is crucial to stop deforestation by protecting the remaining natural forests to reduce emissions from the largest source of emissions. The remaining forests in 2017 were 1.1 million hectares, located in conservation areas (53.4 percent), forest management units (40.9 percent) and other non-forest uses (5.6 percent). The historical deforestation occurred in primary and secondary forests with a percentage of 13 percent and 87 percent, respectively. The largest historical deforestation occurred in production forest and protection forests managed under FMUs, with an average of 54.0 thousand hectares annually. Reducing the annual historical deforestation in the FMUs areas to 10 percent will prevent about 5,400 hectares areas being deforested every year, which is equal to emission reduction of approximately 2.0 MtCO₂ annually. Preventing annual deforestation of 10 percent in areas outside FMUs (conservation areas and APL), however, will create additional emission reduction of about 0.77 MtCO₂ annually (see Figure 1 and Table 22.a.).

Based on the ERP target for Jambi as included in the planned LOI, which is around 14,000,000 MtCO₂ or around 2,300,000 MtCO₂ per year, a simple analysis shows that by only reducing 10 percent of deforestation and forest degradation, which is equal to 2,770,000 MtCO₂, Jambi will be able to surpass the annual target of emission reduction as will be stipulated in the LOI. Further emission reduction targets can be achieved from vegetation and forest growth as shown in Table 22.a.

However, it should be noted that beside forest fire, Jambi forests face potential threats from road network development, including the planned roads crossing the Kerinci Seblat National Park⁸³, and seaport development in the coastal area of the province. The road development will potentially increase deforestation in the area about 3 km from the roads. Forest and peatland fires will be a potential threat during the prolonged dry seasons perpetuated by strong El Nino. Fire management involving

⁸³ <http://www.conservationandsociety.org/article.asp?issn=0972-4923;year=2014;volume=12;issue=3;spage=280;epage=293;aulast=Bettinger>

communities and private sectors are pivotal to reduce the use of fire for land clearing in peatlands and to put out fires when they are still small.

In conclusion and based on the agreements from a number of stakeholder meetings in Jambi, the scenario for J-SLMP and ERP will focus on areas under management units that still have high forest cover⁸⁴, areas with low level of land use conflicts and areas to represent peat soil. Based on this and based on the data from Table 28, four FMUs will be selected for intervention under J-SLMP. These four FMUs make up for 70 percent of the total remaining forest in Jambi. They are KPHP Bungo Unit 11 and III, KPHP Limau Unit VII Sorolangun, KPHP Merangin Unit IV, V, and VI, and KPHP Tanjung Jabung Barat Unit XV, XVI, and KPHL. While the first three represent the mineral soil, the last one represents the peat soil.

Table 28. Forest Cover, Degraded Land, and Agriculture Land within FMUs in Jambi in 2017

FMUs	Agricultural land ⁸⁵ (ha)	Degraded land ⁸⁶ (ha)	Forested area ⁸⁷ (ha)	Total
KPHP Batang Hari Unit XI dan XII	28,634	24,556	24,592	77,782
KPHP Bungo Unti II dan III	4,660	31,751	63,146	99,557
KPHP Kerinci Unit I	5,133	2,934	7,254	15,321
KPHP Limau Unit VII Sorolangun	7,895	5,884	91,963	105,741
KPHP Merangin Unit IV, V, VI	18,509	40,569	99,429	158,507
KPHP Muara Jambi Unit XIII	402	40,740	30,205	71,347
KPHP Tanjung Jabung barat Unit XV, XVI dan KPHL U*	20,608	50,249	41,861	112,717
KPHP Tanjung Jabung Timur Unit XIV	4,451	24,701	12,325	41,477
KPHP Tebo Barat Unit IX	44,469	69,396	11,687	125,552
KPHP Tebo Timur Unit X	30,522	39,449	22,669	92,640
KPHP Unit VIII Hilir Sorolangun	24,322	31,208	14,382	69,912
Total	189,603	361,435	419,512	970,550

Highlighted with yellow are names of selected FMUs.

There are four National Parks that still have high forest cover that fit the above approach: Berbak, Bukit Dua Belas, Bukit Tiga Puluh and Kerinci Seblat as shown in the following table.

⁸⁴ These criteria are in line with the forest transition theory presented in the ERP Emission Scenario (below).

⁸⁵ Agricultural land covered with tree canopy suitable for agroforestry, which include mixed agriculture, dryland agriculture, ponds, and transmigration area

⁸⁶ Degraded land includes bare lands, grasslands, and shrubs.

⁸⁷ Forested areas cover all-natural forests from primary and secondary succession, thus excluding plantation forests.

Table 29. Forest Cover, Degraded Land and Agriculture Land within National Parks in Jambi in 2017

Conservation areas	Agricultural land (ha)	Degraded land (ha)	Forested area (ha)	Total
TN Berbak	42	39,975	97,059	137,076
TN Bukit Dua Belas	1,019	3,455	48,110	52,584
TN Bukit Tiga Puluh	629	545	34,566	35,740
TN Kerinci Seblat	12,799	21,072	376,648	410,518
Total	14,489	65,054	556,729	636,271

Pre-investment phase and the ERP may provide Jambi Province with carbon (and non-carbon) benefits. This may encourage political commitment from the Jambi provincial government to support the ERP scenario.

Consequently, regulatory regime under the J-SLMP's Pre-investment (and the ERP) scenarios will consist of provincial and district PERDA and Governor's decree (and *Bupati's* Decree) to support low carbon development such as RAD-GRK, SRAP REDD+ and future Green Growth Plan for Jambi.

Under the J-SLMP's Pre-investment scenario, institutional capacity will increase to meet the requirements for the ERP implementation as well as safeguard measures. This has already been happening as the preparation phase starts. Many trainings and workshops have been held for stakeholders in Jambi at both provincial and district levels. Training and workshops related to safeguards alone during the preparation face (excluding those conducted by PT. Hatfield as safeguards consultant) have been conducted at least six times, participated by hundreds of stakeholders from provincial and district levels (see Appendix A3 on the number of stakeholders segregated by gender, and the summary of issues discussed).

5.6.3 Scenario for the ERP

Although mostly overlapped with the Pre-investment phase, the emission scenario for the ERP will use forest transition theory as the basis of laying out the playing field in Jambi.⁸⁸ This theory (Mather, 1992) is based on the common transition process. Evolving land use patterns, drivers of deforestation and human-induced changes are characteristic of certain stages of economic development within a country or region. The concept is used to explain the U-shaped evolution from high forest cover to decreasing forest cover to expanding forest cover that has taken place in many developed countries. Similar trend with slower reforestation/forest expansion is also taking place in some developing countries including Indonesia.

⁸⁸ This theory has also been used partly during the design of intervention under pre-investment phase/scenario as described above.

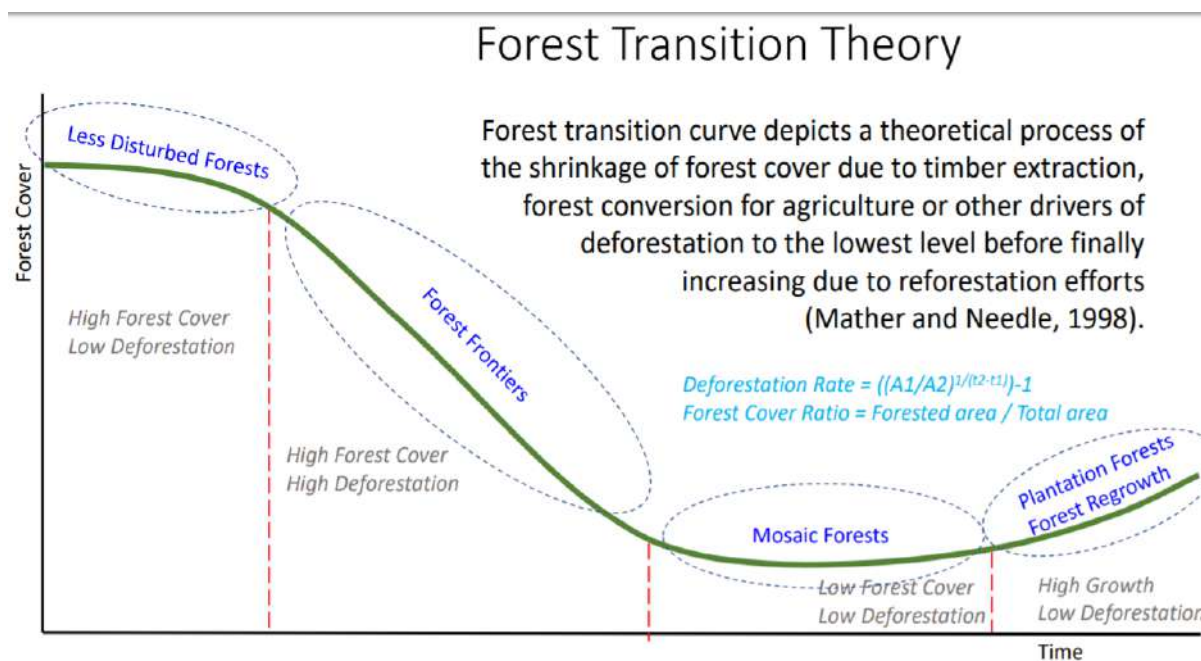


Figure 8. Forest Transition Theory

Based on the above forest transition figure, similar process is used to develop deforestation process in Jambi based on management unit, i.e., FMUs and NPs. Focus of intervention will mainly be in Forest Frontier areas and Less Disturbed Forest Areas, based on the following reasons.

- Forest Frontiers are areas with high forest covers and high deforestation. Therefore, protecting the remaining forest in this area from further deforestation will contribute to reducing significant amounts of CO₂ emission. These areas are mainly under the management of FMUs;
- Less Disturbed Forest is mainly under the management of NPs. It is strictly protected under Indonesian regulation, but encroachment remains on many fronts. Intervention in these areas will provide positive benefits for the NP management to continue efforts to protect the forest.

Using similar logic, the following diagram was drawn based on four quadrants, but intervention will only be prioritized in the first two quadrants. However, this will not close the windows for intervention in the last two quadrants, especially for the existing efforts by management units and when resources are available mainly for reforestation and avoiding further deforestation.

- Quadrant 1, showing areas with high deforestation and high forest cover (primary target for intervention);
- Quadrant 2, showing areas with less deforestation but high forest cover (secondary target for intervention).

In this diagram, the name and location of each management unit are listed to make it easier to select the location of intervention. Further analysis will determine the kinds of intervention to address drivers of deforestation and its underlying causes.

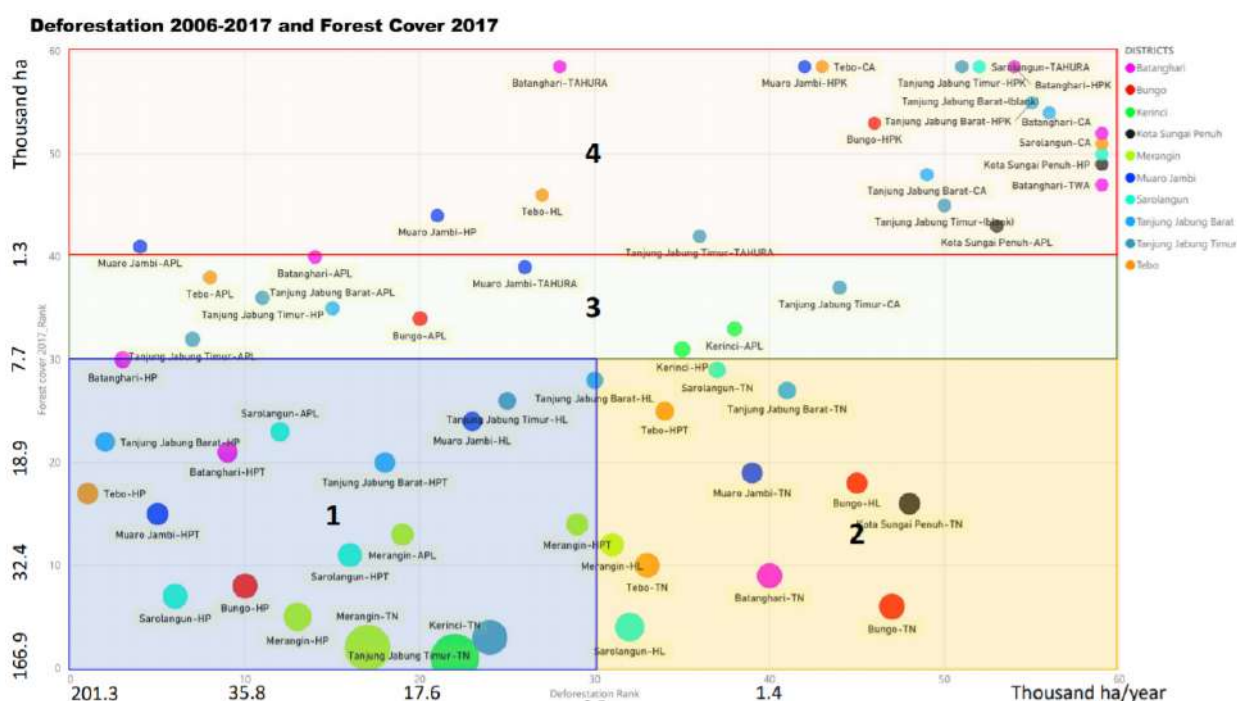


Figure 9. Deforestation and forest cover trend

Further analysis will be done in collaboration with the MAR team during the finalization of the SESA document, expected before the signing of the ERPA in 2022 or during the J-SLMP and ERP implementation.

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 (Baseline Scenario) that cannot be offset by the ERP. Reversal may occur due to deforestation and degradation that occurs after ERP is completed, or due to those occurring outside the Implementation Area. Reducing the risk of fires (plantation sector and peatland) will help reduce the risk of reversals;
- Transboundary FMU between Jambi and South Sumatra (e.g., FMU Batanghari) combined with weak law enforcement may cause deforestation to increase on South Sumatra side;
- Social aspects such as access restrictions and loss of jobs need to be considered when implementing stricter law enforcement. Political economy aspects may need to be considered, as decrease in provincial revenue is anticipated as the result of ERP. However, this is already anticipated by the Provincial Government with the adoption of the New Green Growth Plan for Jambi;
- The implementation of the BioCF activities must provide direct benefits for local communities and indigenous peoples. This reduces the potential for conflicts arising from BioCF activities as well as a clear understanding of the community about BioCF and the benefits to be gained; and
- Providing alternative livelihood sources and recognition of customary lands have important functions for meeting the basic needs of local communities (*adat*) and have important functions for traditional cultural identity of local communities (*adat*).

5.7 ENVIRONMENTAL AND SOCIAL COMPONENTS

Based on the scenario analysis, potential environmental components may include increase in forest cover by also protecting the remaining forest, increase in HCV areas, and decrease in fire hotspot. Additional components may include protection of biodiversity (under HCV and increased habitat protection). Social components may include increased participation of local communities and indigenous peoples in forest management, increase of livelihood quality, participation of smallholder farmers in sustainable plantation/agriculture, and increased institutional capacities for managing environmental and social risks.

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 potential conflicts between migrants and locals in areas with competing claims especially with concessions. Livelihood impacts include 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 (including megalithic artifacts); 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, the ERP implementation needs to consider the following aspects:

- Regulations to support and/or strengthen mitigation of environmental and social risks (e.g., AMDAL, UKL-UPL 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 fertilizers 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 conservation and law enforcement, respectively) may add another layer of bureaucracy 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.

5.8 ENVIRONMENTAL AND SOCIAL INDICATORS

Indicative environmental and social risks that can be analyzed in the SESA are summarized in Table 30. The analysis includes relevant drivers of deforestation identified in Section 2.2.1. These will be discussed further in the social and environmental impact assessment provided in chapter seven.

Table 30. Summary of Relevant Environmental and Social (E&S) Indicators to Monitor/Track Impacts over the Course of J-SLMP and ERP Implementation

E&S Indicators	Summary of Issues	Data Sources	Timeline for Monitoring
Occurrences of conflicts and disputes in forest and non-forest areas (e.g., plantation conflicts, revocation of mining permits, encroachments) Drivers: ▪ Unauthorized /illegal activities; ▪ Tenurial conflict.	▪ Tenurial conflicts between communities and palm oil plantations (e.g., Batin Sembilan communities with PT Asiatic Persada in Batanghari District); ▪ Accumulation of unresolved problems (Palm oil plantation in Production Forest in Tebo and Tanjung Jabung Barat; ▪ Conflicting licenses (Timber plantation, palm oil and mining); ▪ Capacity building for smallholders in implementing sustainable estate crops that will reduce the potential for land disputes.	▪ Plantation Agency ▪ FGRM institution ▪ Environmental Agency ▪ Energy and Mineral Resource Agency ▪ SEKDA/Governor ▪ Web information system from MoEF	Monthly
Cases of Access restriction to land and natural resources Drivers: ▪ Food sustenance ▪ Activities of Indigenous people	▪ Forest and plantation concessions are restricting access to livelihood/cultural activities (e.g., local communities, Orang Rimba & Talang Mamak); ▪ Customary area of Marga Serampas in Kerinci Seblat NP; ▪ Unclear boundaries (FMU, mining and plantations).	▪ FGRM institution ▪ Concession holders ▪ ATR/BPN for plantation HGU ▪ Village administration ▪ FMU	Quarterly
Numbers of cases and intensity of social conflicts	▪ The arrival of migrant workers and subsequent	▪ Kesbangpol ▪ Sub-district records	Annually

E&S Indicators	Summary of Issues	Data Sources	Timeline for Monitoring
Drivers: ▪ Tenurial conflict ▪ Influx of migrants	▪ claim on local people's/ indigenous people's properties; ▪ Competition between migrants and locals over other natural resources.		
Numbers (quantity) and frequency of Impacts received by indigenous peoples Drivers: ▪ Activity of indigenous peoples	▪ Previous and existing uses by local communities and indigenous people (e.g., hunting by Orang Rimba and Talang Mamak); ▪ Customary forests of Marga Serampas and Lekuk 50 Tumbi Lempur); ▪ Indigeneous community is persuaded to conduct illegal logging by companies (e.g. Tebo/Bukit 30).	▪ FMU ▪ NGO Reports	Quarterly or annually
Numbers and intensity of Loss/Damage to physical and cultural resources Driver: ▪ Infrastructure development in forest area	▪ Anticipation of undiscovered cultural resources; ▪ Karst ecosystem in Sarolangun District; ▪ Megaliths artifact in Kerinci District; ▪ Geopark site in Merangin District. ▪ Muaro Jambi Temple Compounds	▪ Education and cultural agency (Province) ▪ Tourism Agency (Province) ▪ Bureau of Archaeology ▪ Academic reports/journals	Annually
Numbers of cases of Community Health & Safety Drivers: ▪ Forest & peatland fire; ▪ Unauthorized /illegal activities	▪ Health and safety aspects in fire control / prevention measures ▪ Artisanal mining practices	▪ Health Agency (Province) ▪ Energy and mineral resources agency	Quarterly

E&S Indicators	Summary of Issues	Data Sources	Timeline for Monitoring
Food sustenance / livelihood (uses of chemicals)			
Lack of awareness, management capacity and participation (qualitative indicators on the presence of capacity building, accessibility, and incentives) Drivers: - Weak forest governance - Tenurial conflict	- Lack of cross-sectoral conflict resolution mechanisms (e.g., plantation, and forestry sectors, environmental disturbances); - Limited capacity for government staff to access alternative livelihood options for local people; - Lack of accessibility for all social strata of the community to be involved in the plantation process; - Lack of incentives in sustainable forest management is expected to facilitate social inclusion; - Lack of agreement on benefit sharing mechanism; - Lack of labor protection in the plantation and forest industries.	- FGRM institutions - DGPPI - Related implementing units	Quarterly
Institutional capacity to manage potential environmental & social risk (qualitative assessment on capacity building and capacity improvements) Drivers: - Weak governance - Limited facility, equipment and resources for effective forest	Capacity building needs for FMU and other implementing unit (TNs, OPDs, BKSDA) officers are needed, especially to implement and monitor the process to manage HCV forests, and to implement RSPO/ISPO standards for	- FMU - Forestry agencies - Plantation agencies - Concession holders	Quarterly

E&S Indicators	Summary of Issues	Data Sources	Timeline for Monitoring
protection and management	companies and smallholders; ▪ Lack of ability to mediate environmental conflicts; ▪ Lack of capacity to implement sustainable palm oil plantation;		
Numbers of cases on Gender and social inclusion Drivers: ▪ Food sustenance ▪ Forest Encroachment	▪ Sub-optimal involvement of women in forest management will help reduce encroachment and deforestation; ▪ Lack of application of gender mainstreaming programs at grassroot level (villages). ▪ Lack of attentions to labor condition and relations	District agencies: BAPPEDA, Women Empowerment	Annually
Areas of Forest Encroachment Drivers: ▪ Forest Encroachment ▪ Lack of effective forest protection and management	▪ Encroachment in Kerinci Seblat National Park in Merangin District (Coffee) and Kerinci District (Horticulture, cinnamon); ▪ Encroachment in KPHsLack of facilities, equipment and personnel to conduct effective forest protection and management.	National Park Authority reports FMU reports	Quarterly
Numbers and locations of Forest fire hotspots Driver: Forest and peatland fire	▪ Burning methods are used by smallholder farmers (majority of palm oil plantation operator); ▪ Coverage of the early warning system is still limited, causing forest fires to	▪ Peatland Restoration and Mangrove agency; ▪ LAPAN ▪ NASA	Quarterly (or monthly during prolonged dry season/ENSO)

E&S Indicators	Summary of Issues	Data Sources	Timeline for Monitoring
	occur in some areas that are not equipped with this system.		
Cases, areas, and severity of Loss of natural habitat and Biodiversity Driver: Threats to species and their habitat	- Overlapping with key biodiversity areas and endangered species population (tiger, elephants, <i>Rafflesia sp</i>, <i>Amorphophalust</i>); - Community-based monitoring efforts are not optimized ; - Lack of clear conservation guidelines;	- FMU - BKSDA - ATR/BPN for plantation HGU - National Parks	Quarterly or annually
Numbers of cases/frequency and severity of contamination and pollution Drivers: - Food sustenance (agriculture) - Infrastructure & regional development in forest area	- Use of pesticides in agriculture and plantation sector; - Small-scale civil/construction works and waste management; - Worker exposures to pollutants	Environmental agency (Province)	Quarterly
Numbers of cases indicating risks of Leakages and reversals Drivers: - Unauthorized /illegal activities - Forest and peatland fire	- Shifting carbon emissions to neighboring provinces; - Lack of participation in fire control/prevention resulting in increased carbon emission.	- Ditjen PPI - Safeguards Committee/DLH - SEKBER	Annually

6. POLICY AND REGULATION FRAMEWORK

6.1. GOI REGULATIONS

Activities under the ERP must apply the principles of sustainable development, including environmental, social, cultural, and economic considerations, and follow applicable government and regional regulations. This document (SESA) is prepared based on Indonesian Government Laws and Regulations. It considers the World Bank's policies on Assessment, Risk Management, Environmental and Social Impacts (ESS1) of Indigenous Peoples (ESS7), and Cultural Resources (ESS8). Specific provisions described in the ESMF (Environmental and Social Management Framework) will overview aspects of the ESS/World Bank Policy that have not been regulated in GoI Regulations. Government and Regional Regulations related to environmental and social aspects related to ERP are as follows:

- Law (UU) No. 7/2012 on Handling Social Conflict. This law discusses the identification of potential conflicts and procedures for resolving social conflicts that occur.
- Law (UU) No.11/2020 concerning Job Creation. This law combines regulations and replaces several articles from previous laws such as aspects of Business Licensing, Environmental Protection, management, etc. This law seeks to create employment opportunities through business facilitation, environmental protection, and community empowerment of cooperatives and small and medium enterprises.
- Law (UU) No.18/2022 concerning Jambi Province
- Government Regulation of the Republic of Indonesia (PP) No.22/2021 concerning the Implementation of Environmental Protection and Management. This PP mandates that provinces and districts develop a Strategic Environmental Assessment (KLHS). This government regulation also requires every development program to implement proper Environmental Protection and Management Implementation, including Environmental Assessment, Management Plan, and Environmental Monitoring Plan.
- Government Regulation of the Republic of Indonesia (PP) No. 23/2021 concerning Forestry Implementation. This PP regulates the Priority for Accelerating the Inauguration of Forest Areas, Forest Areas that must be maintained, Procedures for Changing the Designation and Function of Forest Area, Social Forestry, Forest Utilization, Development and Processing of Forest Products, Collection of PNPB Utilization and Forest Protection.
- Government Regulation of the Republic of Indonesia (PP) No. 2/2015 concerning Technical Guidelines for Social Conflict Resolution allows the local wisdom system to be used as an effort to prevent conflict
- Presidential Regulation (Perpres) No. 98/2021 on the Economic Value of Carbon and trading system for Indonesia.
- Government Regulation (Perpres) No. 88/2017 concerning Settlement of Land Conflicts with Forest Areas (PPTKH);
- Government Regulation (Perpres) No. 86/2018 concerning Land and Agrarian Reform (Land for Agrarian Reform Objects/TORA);
- Regulation of the Minister of Environment and Forestry of the Republic of Indonesia (Permen LHK) No. 3/2021 concerning Standards for Business Activities in the Implementation of Risk-

Based Business Licensing in the Environment and Forestry Sector. This LHK Ministerial Regulation provides ease of business licensing through an electronically integrated business licensing system and does not pass through the rules regulated in Government Regulation no. 5/2021 concerning Implementation of Risk-Based Business Licensing

- Regulation of the Minister of Environment and Forestry of the Republic of Indonesia (Permen LHK) No. 4/2021 concerning List of Businesses or Activities Required to Have an Environmental Impact Analysis (AMDAL), Environmental Management Efforts and Environmental Monitoring Efforts (UKL-UPL), or a Statement of Environmental Management and Monitoring Ability (SPPL). This LHK Ministerial Regulation contains Environmental Document Screening based on KBLI, as well as guidelines for the preparation of AMDAL, UKL-UPL, SPPL
- Regulation of the Minister of Environment and Forestry of the Republic of Indonesia (Permen LHK) No. 5/2021 concerning Procedures for Issuing Technical Approval and Operational Eligibility Letter (SLO) for Environmental Pollution Control. This LHK Ministerial Regulation regulates Guidelines for Issuance of Technical Approval for Wastewater and Air Emissions and procedures for issuing SLO on the approved Technical Approval.
- Regulation of the Minister of Environment and Forestry of the Republic of Indonesia (Permen LHK) No. 6/2021 concerning Procedures and Requirements for the Management of Hazardous and Toxic Waste. This LHK Ministerial Regulation regulates the guidelines for the Storage, Management, and Utilization of Hazardous and Toxic Waste (B3).
- Regulation of the Minister of Environment and Forestry of the Republic of Indonesia (Permen LHK) No. 7/2021 concerning Forestry Planning, Changes in Forest Area Designations and Forest Area Changes, and Use of Forest Areas. This LHK Ministerial Regulation regulates the Technical Guidelines for Submitting Forestry Partnership Approval.
- Regulation of the Minister of Environment and Forestry of the Republic of Indonesia (Permen LHK) No. 8/2021 concerning Forest Management and Preparation of Forest Management Plans and Forest Utilization in Protection Forests and Production Forests. This regulation regulates the Technical Guidelines for Forest Management Planning, Issuance of Business Permits for Forest Utilization, the Legality Assurance System for Forest Products, and administrative matters related to the extensive use of Forests.
- Regulation of the Minister of Environment and Forestry of the Republic of Indonesia (Permen LHK) No. 9/2021 on Social Forestry Management. This regulation regulates the approval of the management of social forestry, the term of community gardening, and the development, supervision, and control of social forestry.
- Regulation of the Minister of Environment and Forestry of the Republic of Indonesia (PermenLHK) No. P.84/Menlhk-Setjen/2015 about tenurial conflict mediation.
- Regulation of the Minister of Environment and Forestry of the Republic of Indonesia (PermenLHK) No. P.70/Menlhk-Setjen/KUM.1/12/2017 about the implementation procedure of Reducing Emission from Deforestation and Forest Degradation, Role of Conservation, Sustainable Management of Forest and Enhancement of Forest Carbon Stocks the implementation procedure of Reducing Emission from Deforestation and Forest Degradation, Role of Conservation, Sustainable Management of Forest and Enhancement of Forest Carbon Stocks.

- Regulation of the Minister of Environment and Forestry of the Republic of Indonesia (PermenLHK) No. P.83/MenLHK/Sekretaris-KUM.1/7/2018 concerning Regulations for the Implementation of Law Enforcement Related to Environment and Forestry at the Regional Level.
- Regulation of the Minister of Environment and Forestry of the Republic of Indonesia (Permen LHK) No. 32/2016 concerning Forest and Land Fire Control and Prevention.
- Regulation of the Minister of Environment and Forestry of the Republic of Indonesia (Permen LHK) No. 83/2018 concerning the Role of the Directorate General of Law Enforcement at the Regional Level.
- Regulation of the Minister of Environment and Forestry of the Republic of Indonesia (Permen LHK) No. P.22/MenLHK/SETJEN/SET.1/2017, concerning procedures for managing complaints of alleged pollution and/or environmental destruction and/or forest destruction.
- Regulation of the Director General of PPI No. 3/2018 concerning the formation and development of MPA.
- Regulation of the Minister of Agrarian Affairs and Spatial Planning (ATR)/National Land Agency (BPN) No. 10/2016 concerning Communal Land Certificates.
- Regulation of the Minister of Agrarian Affairs and Spatial Planning (ATR)/National Land Agency (BPN) No. 6/2018 concerning Systematic and Complete Land Registration (PTSL).
- Instruction of The Minister Of Internal Affairs No. 14/2022 about Implementation of Limitations on Community Activities Level 3, Level 2, Level 1 and optimizing CoronaVirus Disease 2019 Handling At Village and Sub-Districts levels for controlling the spread of CoronaVirus Disease 2019 in Sumatra, Nusa Tenggara, Kalimantan, Sulawesi, Maluku and Papua.
- Regional Regulation of the Jambi Province No. 11/2021 concerning Mid-term regional development plan (RPJMD) 2021-2026.
- Jambi Governor's Decree Number: 294/Dishut/2022 about working group on social forestry acceleration.
- Jambi Governor's Decree Number: 141/Bakesbangpol/2022 about integrated team for conflict resolution in Jambi Province.
- 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 GOL's policy on indigenous peoples includes:

- UUD 1945 (Amendment) Chapter 18, clause #2 and Chapter 281 clause #3;
- Law No. 41 on Forestry (plus Constitutional Court Decision No. 35/PUU-X/2012);
- Presidential Decree (Keppres) No. 111/1999 concerning Development of Isolated Indigenous Community (KAT) that provides a broad definition of indigenous peoples and the need for government assistance;

- Regulation of the Minister of Environment and Forestry of the Republic of Indonesia (Permen LHK) No. 17/2020 on Adat Forest and HAK Forest.
- Ministry of Home Affairs (MOHA) Regulation No. 52/2014 on the Guidelines on the Recognition and Protection of MHA (*Masyarakat Hukum Adat*);
- Regulation of the Minister of Environment and Forestry of the Republic of Indonesia 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.
- Regional Regulation of the Bungo District No. 3/2006 concerning MHA Datuk Sinaro Putih
- Regional Regulation of the Merangin District No. 8/2016 concerning MHA Marga Serampas
- Tebo Governor's Decree Number: 330/2021 about MHA Temenggung Apung
- Tebo Governor's Decree Number: 331/2021 about MHA Temenggung Ahad

These 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, not provoking massive land claims within forest areas.

Baseline data on forest areas (production, protection, and ecosystem restoration) in Section 5.3 show that Jambi Province consists of less than 30 percent forest area. Therefore, according to Presidential Regulation No. 88/2017, resettlement may be the last measure for resolving conflicts over forest areas or increasing forest cover. Consequently, the forest tenurial conflict resolution team must strengthen the social forestry strategy and environmental partnership in production and protected forests. The team may also refer to the Regulation of Director General (Peraturan Dirjen) KSDAE No. 6 /2018, which provides guidelines for establishing partnerships with communities in protected areas such as nature reserves and wildlife reserves national parks. Summary of institutional and regulatory issues are provided in the following table.

Table 31. 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	FGRM and conflict resolution mechanism to ensure “clean-and-clear” conditions prior to implementation	▪ Access restrictions ▪ Overlapping land uses ▪ Loss or restriction of livelihood
Conflict resolution in non-forest areas (Other Use/APL)	Implementation of conflict resolution mechanisms by the	FGRM and conflict resolution mechanism to	▪ Access and/or livelihood restrictions

Regulation/Policy	Issue	Relevance to REDD+	Relevant E&S Risks
	Plantation Agency and Environmental Agency does not allow concerted efforts on conflict resolutions in APL.	ensure “clean-and-clear” conditions prior to the implementation.	- 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) to allow the cross-sectoral grievance mechanism.	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 and execution of Presidential Regulation No. 88/2017 and 86/2018.	Preventing deforestation and degradation triggered by land conversion within forest areas	- Forest conversion for agricultural practices - Land grabbing
MK 35/2012 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 areas	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 DGPPI (MoEF) on emission reduction.	Proper FREL and MAR application as objective measures of GHG emissions

6.2. REGULATORY ENFORCEMENT AND CAPACITY ASSESSMENT

Implementations 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 Jambi Sub National 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/conservation 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 Jambi Sub National of the Ministry of Agrarian and Spatial Planning. Authorities for this ministry are mandated to offices at the provincial level (*Kantor Wilayah/Kanwil*) 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 Jambi Sub National 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 Joint Secretariat for Forest Resource Management (SEKBER) is not a regulatory instrument but is essential in supporting the BAPPEDA and Forestry Agency; thus, playing a crucial role in the implementation of the J-SLMP and future ERP in Jambi Province. Capacity gaps include the lack of capacity for FGRM, conflict resolution, and FREL, MAR, and HCV assessment and management; and

- District level policies: BAPPEDA/SEKDA plays an important role in the recognising 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 channeling 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 body), 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 MAR, 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, considering the new developments, is the need to establish collaboration with NGOs. Such collaboration would allow knowledge sharing between government and non-government organizations. A summary on the capacity assessment of government agencies relevant to ERP is provided in Table 32.

Table 32. Capacity Assessment of Government Agencies Relevant to the ERP

Agency	Relevant Mandate	Relevance to ERP	Capacity Assessment	Key Gaps
DGPPI	Implementation of REDD+ initiatives	▪ Development of documents to support ERPD and subsequent ERPA ▪ FREL, MAR	▪ Technical capacity to develop documents and conduct FREL measurements and MAR	▪ Adequate knowledge, but need support for additional manpower (quantity of human resources)
BAPPEDA (Province)	Synergy of REDD+ initiatives with regional development plan	▪ Lead the ERP implementation with support from SN-PMU and SEKBER ▪ FGRM at provincial level	▪ Coordination capacity ▪ Analysis using multi-objective land allocation to ensure that economic and ecological objectives are accommodated	▪ Requires additional knowledge of REDD+ initiatives

Agency	Relevant Mandate	Relevance to ERP	Capacity Assessment	Key Gaps
			in the spatial planning	
Governor/Provincial Secretary (SEKDA)	Implementing Green Growth Plan/Development in Jambi (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, plantations and environment)	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 conflicts - Lack of conflict resolution regulation for mining sector - Unequal benefit sharing
Provincial Land Office (Kanwil)	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 DGPPI/FCPF) - Capacity for tenurial conflict resolution and/or mediation

Agency	Relevant Mandate	Relevance to ERP	Capacity Assessment	Key Gaps
Plantation 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, social, legal, social, cultural and environmental aspects of the conflicts	- Requires additional knowledge of REDD+ initiatives (possibly from DGPPI/FCPF) - Proper documentation of conflict resolution process as part of the proposed FGRM
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 DGPPI/SEKBER)
BPMPD/K (District)	Synergy of REDD+ implementation with village development and funds channeled to village level.	Implement ERP at sub-district and village levels	Technical capacity for community empowerment	- Requires additional knowledge of REDD+ initiatives (possibly from DGPPI/SEKBER) - Environmental and social risk assessment

Agency	Relevant Mandate	Relevance to ERP	Capacity Assessment	Key Gaps
				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 DGPPI/ SEKBER)

6.3 GAP ANALYSIS ON REGULATORY FRAMEWORK WITH ESS

While national and provincial regulatory frameworks are in place to address potential environmental and social risks and impacts under the ER Program, there are several gaps to the requirements of the World Bank Environmental and Social Standards (ESS) as described in the following table. Gap filling measures are incorporated into the ESMF and associated instruments to meet the requirements of the ESSs.

Table 33. Gap Analysis between Gol regulatory framework and the World Bank ESS

ASPECT	WORLD BANK ESS	INDONESIAN REGULATION	GAP	ESMF ROLE
ESS1 Assessment and Management of Environmental and Social Risks and Impacts				
Scope of assessment	The assessment will be proportionate to the potential risks and impacts of the project, and will assess, in an integrated way, all relevant direct, indirect, and cumulative environmental and social risks and impacts throughout the project life cycle, including those specifically identified in ESS 2–10.	The assessment is also regulated by Based Government Regulation No. 22/2021 concerning the Implementation of Environmental Protection and Management, where each business and/or activity (project) plan mandates an Environmental Permit if an AMDAL or UKL-UPL assessment is required Based on Minister of Environment Regulation No 4/2021, a screening of potential impacts is conducted to determine the type of environmental documents that will be required (AMDAL/UKL- UPL/SPPL) based on criteria described in the regulation. Environmental and social assessments are conducted through the AMDAL process in accordance with the Ministry of Environment Regulation No. 5/2012 on business activities mandatory to have AMDAL.	Direct, indirect, and cumulative impacts are assessed in the national regulatory framework. The assessment includes inter-related and interaction of hypothetically significant impacts. However, assessments on potential impacts from associated facilities are not stipulated. There is no explicit requirement to include a mitigation hierarchy in the environmental and social management plan.	Environmental and social impact assessment follow the ESS1 requirements. An outline of site-specific Environmental and Social Assessment documents acceptable to the Bank is provided in the ESMF. Covered under the outline, site-specific Environmental and Social Assessment and the Cumulative Impacts Assessment documents acceptable to the Bank shall be required and have been reflected in this ESMF. Relevant measures addressing social risks are: i) streamlined to the activity design, particularly on site screening criteria and on livelihoods, prioritizing vulnerable and/or affected communities to participate in the project activities; ii) consensus building with key local stakeholders, including affected communities, as part of Stakeholder Engagement Plan (SEP) agenda and site selection processes; and iii) supplemental measures included as part of the ESMF cover Indigenous People Planning Framework (IPPF), Stakeholder Engagement Plan,

				Sexual Exploitation and Abuse/Sexual Harassment (SEA/SH) mitigation and response action plan, and capacity building activities. Further, awareness rising on gender and SEA/SH along with relevant Codes of Conduct to personnel of the implementing agencies and their service providers and/or contractors shall be required prior to deployment.
Environmental Screening	ESS1 Paragraph 8 states that a screening process is required to determine the scale/scope of the project and the type of environmental assessment required.	Based on Minister of Environment Regulation No 5/2012, Appendix 1, a screening of potential impacts is conducted to determine the type of environmental documents required (AMDAL/UKL-UPL/SPPL) based on criteria described in the regulation.	The screening process of the regulation does not consider social impacts due to land acquisition/involuntary resettlement, including access restrictions, potential impacts on Indigenous Peoples and physical cultural resources. In the context of land acquisition , such screening is undertaken as part of the land acquisition planning processes (under Law 2/2012 on Land Acquisition for Public Interest). There may be lack of capacity for addressing environmental and social risks identified in this screening process	ESMF provides a negative list and preliminary screening process for ER activities that include identification of potential impact towards involuntary resettlement/access restriction, indigenous peoples, and physical cultural resources.
Management of environmental and social impacts	Requirement to prepare Environmental and Social Management Plan (ESMP)	Environmental and social assessments, including preparation of the management and monitoring plans are conducted through the AMDAL process in accordance with the Government Regulation No. 22/2021 on business activities mandatory to have AMDAL. Based on Minister of Environment Regulation No 4/2021, a screening of potential impacts is conducted to determine the type of environmental documents that will be	The management and monitoring plan developed through the AMDAL/UKL-UPL process, in general, supports the Bank requirement although for the management of social aspects which are not sufficiently detailed in the regulations (i.e., livelihoods impacts both direct and	The ESMF strengthens the AMDAL/UKL-UPL system by providing specific Environmental Codes of Practices (ESCOPs) for ER activities such as agroforestry, aquaculture and ecotourism. The ESMF, and its associated frameworks, including IPPF, RPF/PF and FGRM provide

		required (AMDAL/UKL- UPL/SPPL) based on criteria described in the regulation.	indirect, impacts on vulnerable groups). Capacity strengthening for sustainable management of environmental and social impacts is likely needed amongst FMUs, private companies and smallholder farmers (villages). There is no integrated system of conflict resolution across sectors in Jambi.	guidelines for the management of social aspects of the project.
Project area of influence	The project area of influence For Category A projects, ESIA TORs are required, and scoping and consultation is conducted for the preparation of the TORs for the EA report.	Under the Indonesian System, the scoping of EA consists of: (1) Project announcement to the public and inputs received; (2) Preparation of TOR; (3) EA studies; (4) EA review by EA committee; (5) Environmental permit or rejection of EA (no permit).	Environmental approval regulations, covering AMDAL, UKL-UPL and/or SPPL requirements are not required to assess Associated Facilities.	The ESS1 requires the project to cover the Associated Facilities that may present to the project. The environmental and social assessment will identify and assess, to the extent appropriate, the potential environmental and social risks and impacts of Associated Facilities. These include the requirement to address the risk and impact of Associated Facilities in a manner proportionate to its control or influence over the Associated Facilities. Management of Associated Facilities is covered under the ESMF.
Environmental and social monitoring	Environmental and social monitoring are prepared under the Environmental and Social Management Plan (ESMP)	The assessment is also regulated by Based Government Regulation No. 22/2021 concerning the Implementation of Environmental Protection and Management, where each business and/or activity (project) plan mandates an Environmental Permit if an AMDAL or UKL-UPL assessment is required	The country framework, as stipulated in the management plans (RKL-RPL or UKL-UPL) requires follow-up, analysis, use of environmental monitoring data for evaluation	Covered by the outline of site-specific Environmental and Social Assessment documents acceptable to the Bank and reflected in generic ESMPs in this ESMF. Component 4 on Project Management will

		Based on Minister of Environment Regulation No 4/2021, a screening of potential impacts is conducted to determine the type of environmental documents that will be required (AMDAL/UKL- UPL/SPPL) based on criteria described in the regulation.	and continual improvement. However, implementation capacities vary, particularly in the handling and documentation of site-level grievances, OHS and community health and safety practices. Oversight on the management of social aspects is not sufficiently detailed in the regulations (i.e., livelihood impacts both direct and indirect, impacts on vulnerable groups). Capacity strengthening for sustainable management of environmental and social impacts is likely needed amongst FMUs, private companies and smallholder farmers (villages). There is no integrated system of conflict resolution across sectors in Jambi.	provide additional oversight and technical capacity support for environmental and social management to implementing entities.
Capacity development and training	Requirements for capacity development and training are captured under the ESMP.	The regulations regarding capacity building dan training are also regulated by Based Government Regulation No. 22/2021 concerning the Implementation of Environmental Protection and Management.	In case environmental approvals are required, the country framework usually has limited provisions for capacity development and training for ESMP implementation. On civil work packages, the National Competitive Bidding (NCB) for Construction-ESMP (C-ESMP) includes capacity building requirements, however, in practice, budget allocation for capacity development and training for ESMP	Training and capacity building for environmental and social aspects will be included in respective project components with additional support under Component 4 on Project Management.

			implementation is often insufficient.	
Public Consultation	- During the EA process, the Borrower consults the project affected groups and local NGOs about the project's environmental aspects and takes their views into account. - For Category A projects, the Borrower consults these groups at least twice: (a) shortly after environmental screening and before the TORs for the EA are finalized; and (b) once a draft EA report is prepared. In addition, the Borrower consults with such groups throughout project implementation as necessary to address EA-related issues that affect them. For Category B projects at least one public consultation needs to be conducted. - For meaningful consultations, the Borrower provides relevant project documents in a timely manner prior to consultation in a form and language that are understandable and accessible to the group being consulted. - Minutes of the public meetings are included in the reports.	Under Indonesian regulation (Law No. 11/2020 on Job Creation), Government Regulation No. 22/2021 on the Implementation of Environmental Protection and Management. Ministry of Environment Regulation No. 4/2021 and no 5/2021 on Community Involvement in ES and Environmental Permit Process, at least there are three levels of public involvement and consultation processes: (1) Announcement of proposed project/activity in the media or other means before ToR is prepared; (2) Consultation process where the responsible agencies receive inputs from public through one or two ways communication (meeting, interview, etc.); and (3) Public involvement in the EA committee to assess and approve the results of EA studies, usually represented by independent experts from university and representatives of environmental NGO and/or community figures.	By regulation, public consultations for environmental permitting only require the Terms of Reference and AMDAL panel. No operational guidelines on public consultations for land acquisition. In practice, the quality of public consultations varies and at times will need to be improved to enhance their accessibility and inclusiveness.	ESMF will strengthen public consultations especially through the FPIC process. Project activities expected to be implemented during the pre-investment grant, and hence there will be resources for such consultations. RBP will not involve activities under category A of the bank policy on EA or that require full EA under Indonesian Law.

ESS 2 – Labor and Working Conditions				
Grievance mechanism	ESS 2 Labour and Working Conditions	Owing to the enactment of Job Creation Law 11/2021, which amended several provisions on labor and working arrangements, such as on contracting arrangement and overtime working hours	The national regulations provide an avenue to resolve work-related issues. However, in practice implementation of workplace grievances tend to vary and are not clearly established which limit their effectiveness. Sub-contract workers often do not have access to such grievance mechanisms as they are often informally employed by the main contractors.	The project is establishing a Feedback and Grievance Redress Mechanism (FGRM), which is accessible to project workers. When activities are being delivered by service providers and/or contractors, the project will require employers to facilitate safe and accessible FGRM to their workers, including sub-contractors. Relevant channels and procedures will be informed to the workers as part of their induction program and regular toolbox meetings. All submitted grievances will be investigated and resolved fairly and transparently. SEA/SH cases will be handled separately for which a specific mechanism has been prepared under the ESMF.
Terms and conditions of employment	ESS 2 Labor and Working Conditions	Under Indonesian regulation Law No. 11/2020 on Job Creation	Indonesia's Omnibus Law (Law No. 11 of 2020 on Job Creation), on November 2, 2020, brought about some changes in the Labor Law, particularly on aspects related to reduction of termination entitlements, notice of termination procedures which waives Labor Court verdict, additional working hours, elimination of sectoral minimum wages into regional minimum wages.	The project's Labor Management Procedures includes relevant terms and conditions for project workers, including those contracted workers, primary supply workers and community workers to ensure consistency with the ESS5 where gaps are identified in the country system

Community workers	ESS 2 Labor and Working Conditions	Not Indonesian regulations	Not covered in Indonesia legislation system	The labor-management procedure will cover the community workers' arrangements in accordance with the requirements of the ESS
Child labor	ESS 2 Labor and Working Conditions	Indonesian regulation Law No. 11/2020 on Job Creation	In general, an employer is prohibited from employing children under 18 years of age. However, a child between the ages of 13 and 15 years may perform light work, provided that such work does not interfere with his or her physical, mental, or social welfare and development.	Since the project may potentially operate in hard-to-reach areas with limited supervision capacity, it is encouraged for the application of the minimum age as 18 years old and above. Age verification will also be challenging for individuals who are not yet eligible for a national ID. In the event that the decision is made to allow employment amongst individuals over the minimum age of 14 and under the age of 18, specific conditions under ESS2 para. 17-18 shall prevail. These include: A child over the minimum age and under the age of 18 will not be employed or engaged in connection with the project in a manner that is likely to be hazardous or interfere with the child's education or be harmful to the child's health or physical, mental, spiritual, moral or social development. an appropriate risk assessment is conducted prior to the work commencing; and

				The project implementing agencies conduct regular monitoring of health, working conditions, hours of work and the other requirement of this ESS. Additional resources will be made available, including for supervision, communication, and outreach, FGRM, etc. to ensure duly adherence to the ESS2 provisions and the national labour law.
ESS3 Resource Efficiency and Pollution Prevention and Management				
Forming a Fire Care Society (MPA) and a Fire Care Farmers Group (KTPA)	ESS3 Resource Efficiency and Pollution Prevention and Management: - To be involved in the regional development of fire management system - To be involved in community awareness activities - To be encourage to adopt the Climate Smart Agriculture and and/or agroforestry - Participates in the fire management activities at the local level	Regulation of the Minister of Environment and Forestry of the Republic of Indonesia (Permen LHK) No. 32/2016 concerning Forest and Land Fire Control and Prevention. Regulation of the Director General of PPI No. 3/2018 concerning the formation and development of MPA	MPA and KTPA are important in preventing land and forest fires and can support ERP implementation	Environmental and Social Management Framework (ESMF) provides guidelines for forest protection and fire management.
Efficient and sustainable use of raw materials	ESS3 Resource Efficiency and Pollution Prevention and Management	No major gaps are identified. GOI environmental laws and regulations on pollution prevention and management cover airshed management and emissions standards, reduction of greenhouse gas emissions, management of hazardous and	Not specifically covered in the Indonesian legislation system	The project will incorporate into the design requirements for reuse and recycling of materials, and efficient use of water and energy wherever

		non-hazardous wastes, and water quality effluent discharge standards. These regulations consider ambient conditions, and through the engineering designs and ESIA, pollution prevention measures will be sought and built into the project. Enhancements in the sourcing and usage of raw materials can be done for the project		possible. This will be projected in the generic ESMP templates within the ESMF
<i>ESS3 Resource Efficiency and Pollution Prevention and Management</i>				
Possible contamination to soil and water as result of pest management practices	ESS3 avoidance of using harmful pesticides. A preferred solution is to use Integrated Pest Management (IPM) techniques	Laws and regulation are in place on regulating harmful pesticides and their usage.	Formulation and implementation of pest management plans are not specifically required by the law. Additionally, contamination to soil and water is also relevant with artisanal / illegal mining activities.	The ESMF provides guidelines on establishing an integrated pest management plan for the ER activity based on best international practices. .
<i>ESS 4 Community Health and Safety</i>				
Universal design	ESS 4. Community Health and Safety Potential risks and impacts as well as the mitigation measures to the community health and safety are assessed in the ESIA process and covered in the ESIA documents (AMDAL/UKL-UPL/SPPL).	Government Regulation of the Republic of Indonesia (PP) No 22/2021 concerning Implementation of Environmental Protection and Management. Based on Minister of Environment Regulation No 4/2021, a screening of potential impacts is conducted to determine the type of environmental documents that will be required (AMDAL/UKL- UPL/SPPL) based on criteria described in the regulation.	No gaps identified. The concept of universal design has been embodied in various ministerial regulations and technical guidelines of the Ministry of Public Works and Housing (MPWH).	The project will refer to relevant existing regulations and guidelines and relevant universal design requirements will be integrated into facilities intended for public and/or community use, including those that may be constructed with potential impacts on communities' access. Community views will also be sought on matters pertaining to universal access and inclusive design.
Community exposure to health issues	ESS 4. Community Health and Safety Recognizes that Projects	Instruction of The Minister Of Internal Affairs No. 14/2022 about Implementation of Limitations on Community Activities Level 3, Level 2, Level 1 and optimizing Coronavirus Disease 2019	There is no specific regulation mandating to avoid or minimize the potential for community exposure to water-related,	The Project will review site-specific ESMPs (RKL-RPL or UKL-UPL) where applicable.

	Activities might result in potential harm to communities and the team itself.	Handling At Village and Sub-Districts levels for controlling the spread of CoronaVirus Disease 2019 in Sumatra, Nusa Tenggara, Kalimantan, Sulawesi, Maluku and Papua.	communicable, and non-communicable diseases. The recent policies and regulations enforced by the GoI have extensively covered risks relating to the spread of COVID-19 and have adopted measures of social distancing and general hygiene.	Any gaps, when identified, will be addressed through additional mitigation measures to meet the requirements of the ESS. The implementation of the measures will be regularly monitored and reported. COVID-19 Infection Prevention Control (IPC) measures have been prepared under the ESMF to prevent the spread of the disease during project implementation.
Risk of social exploitation and abuse/sexual harassment	ESS 4. Community Health and Safety	Minister of Manpower Regulation No. 1 of 1980 concerning Occupational Safety & Health in Construction of Buildings. Presidential Regulation Number 34 of 2014 concerning Convention Concerning The Promotional Framework For Occupational Safety And Health/convention	The OHS regulations in Indonesia does not incorporate prevention of SEA/SH risks and hence represents a gap	SEA/SH risks will be mitigated through incorporation of SEA/SH prevention measures, including adoption of Code of Conduct for project workers, which also covers respectful behaviour, SEA/SH sensitization, recruitment of a gender specialist who will oversee SEA/SH risk management
ESS5 Land Acquisition, Restrictions on Land Use and Involuntary Resettlement				
Willing-buying and willing-selling mechanism	ESS 5. Land Acquisition, Restrictions on Land Use, and Involuntary Resettlement	Not Indonesian regulations	No specific details covering due processes of willing-buyer and willing-seller mechanism as voluntary transactions fall under civil law which based on bilateral agreements	Specific protocols, including required documentation of negotiations between buyer and seller, are covered under the ESMF. For example, is the application of the land acquisition framework, where its provisions shall apply to the acquisition of land for the purpose of project investments (i.e., nursery, infrastructure, etc.) and where voluntary transaction (willing buyer and

				willing seller) and voluntary land donation are the agreed modalities for such acquisition.
Voluntary land donation	ESS 5. Land Acquisition, Restrictions on Land Use and Involuntary Resettlement	Not Indonesian regulations	No specific regulation governing voluntary land donation	A voluntary land donation protocol has been integrated as part of the ESMF.
Use of eminent domain	ESS 5. Land Acquisition, Restrictions on Land Use, and Involuntary Resettlement	Indonesian regulation Law No. 2/2012 on Land Acquisition for Development in the Public Interest. Indonesian regulation Law No. 11/2020 on Job Creation	Land acquisition in the development of public interest, which allows the state to exercise its rights on the eminent domain is regulated under Law no.2/2012 which was amended under the Omnibus Law.	Involuntary land acquisition is not applicable under the project. In the event land is required, land procurement will adopt a willing-buyer and willing-seller scheme and voluntary land donation as established under the ESMF.
Direct and indirect impacts, including access restrictions	Involuntary Resettlement is triggered in situations involving involuntary taking of land and involuntary restrictions of access to legally designated parks and protected areas. The policy aims to avoid involuntary resettlement to the extent feasible, or to minimize and mitigate its adverse social and economic impacts.	The GOI's framework for handling tenure settlements in Forest Areas (PPTKH) is set out in the Presidential Regulation No. 88/2017. Several measures to address forest occupation and/or encroachments are informed by the functions of the forest estates concerned (i.e., conservation, protection and production). Under the Agrarian Reform Program, the GOI is committed to protecting the rights of the poor, including informal occupants within the forest estates (Kawasan Hutan).	In the context of the ERP, access restrictions may be associated with conservation activities, land tenure conflict settlements and land use zoning. The Gol's framework for handling tenure settlements in Forest Areas (PPTKH) is set out in the Presidential Regulation No. 88/2017. Several measures to address forest occupation and/or encroachments are informed by the functions of the forest estates concerned (i.e., conservation, protection and production). Under the Agrarian Reform Program, the Gol is committed to amicable land tenure conflict settlements and protection of the poor, including informal occupants	Direct and indirect impacts related to access restrictions of land use and natural resources are covered under the ESMF and specifically defined in the Process Framework. Management of livelihoods impacts will be integrated as part of the design of activities supporting alternative livelihoods and BSP. Indirect impacts on livelihoods not associated with land acquisition and access restrictions (if any) will be covered by site-specific Environment and Social Management Plan (ESMP)

			within the forest estates (Kawasan Hutan). The social forestry program is designed to provide forest dependent communities access to land and natural resources for livelihoods. However, there has been limited progress on recognition of customary rights due to overlaps with commercial land use licenses. Social forestry is considered as the GOI's Process Framework to provide forest dependent communities access to land and natural resources for livelihoods. However, there is lack of clearly and formally recognised rights to customary forest areas resulting in the overlap of commercial land use licenses with customary lands, often resulting in conflicts or dispossession, or both.	The ESMF contains an RPF and PF to clearly define the requirements, approach and guideline for addressing potential access restrictions and involuntary resettlement in conjunction with ESS 5 .
Compensation for loss of income sources or means of livelihood	ESS 5. Land Acquisition, Restrictions on Land Use, and Involuntary Resettlement	Not Indonesian regulations	No specific regulation governing management of livelihoods impacts associated with improvements in natural resources.	The Land Acquisition Framework and Process Framework as part of the ESMF includes eligibility and entitlement criteria for potential impact scenario in line with ESS5. Management of potential impacts associated with access restrictions will be performed through community engagement and consensus building as stipulated in the Process Framework. Affected persons and/or communities will be prioritized to participate in alternative livelihoods

				activities particularly those who are considered vulnerable (i.e., women, poor households, the elderly, people with disability, landless households, etc.)
Measures to protect vulnerable groups, including Indigenous Peoples	ESS 5. Land Acquisition, Restrictions on Land Use and Involuntary Resettlement	Indonesian regulation Law No. 2/2012 on Land Acquisition for Development in the Public Interest. Indonesian regulation Law No. 11/2020 on Job Creation	Law 2/2012 as amended in the Omnibus Law does not include specific provisions on the protection of vulnerable groups in the context of land acquisition for the development in the public interest, or access restrictions. No specific regulation governing protection of vulnerable groups associated with improvements in natural resources, including Free, Prior and Informed Consent (FPIC) by Indigenous Peoples.	ESMF and Process Framework includes provisions for protection of vulnerable groups who may be affected because of project activities, particularly those who may experience economic displacement as a result of improved mangrove management. Relevant measures will be developed with participation of affected persons and/or communities and integrated into village mangrove
Disclosure and engagement	ESS 5. Land Acquisition, Restrictions on Land Use, and Involuntary Resettlement	Indonesia regulation Law No. 14/2008 on Public Information	The Public Information Disclosure Law No. 14/2008 (<i>UU Keterbukaan Informasi Publik</i>) also requires government agencies to provide the information required by the public, including planned activities, budget and spending, and other data relevant for public understanding. Previous practices in the sector have incorporated information disclosure and engagement processes, including	The ESMF includes provisions of disclosure of information to project's affected persons and/or communities. Management of potential risks and impacts shall be performed with participation of affected persons and/or communities and relevant procedures will be integrated into the project's design.

			management of access restriction impacts.	
Grievance mechanism	ESS 5. Land Acquisition, Restrictions on Land Use and Involuntary Resettlement	1. Government Regulation No. 2/2015 on Technical Guidelines for Social Conflict Resolution allows the local wisdom system to be used as an effort to prevent conflict. 2. Presidential Regulation Number 88 of 2017 concerning Land Tenure Settlement in Forest Areas 3. Ministry of Environment and Forestry Regulation No. P.83/MenLHK/SEKRETARIS-KUM.1/7/2018 concerning Regulations for the Implementation of Law Enforcement Related to Environment and Forestry at the Regional Level 4. Minister of Environment and Forestry Regulation No.P.22/MenLHK/SETJEN/SET.1/2017, concerning procedures for managing complaints of alleged pollution and/or environmental destruction and/or forest destruction	While there are specific regulation governing protection of vulnerable groups associated with improvements in natural resources, previous practices in the sector have installed FGRM to affected communities.	ESMF has established a Feedback and Grievance Redress Mechanism (FGRM), including documentation requirements. The project will make resources available to strengthen its FGRM mechanism.
<i>ESS6: Biodiversity Conservation and Sustainable Management of Living Natural Resources</i>				
Classification, criteria for Significant conversion (loss) and degradation of Critical and Natural Habitat	ESS6 promotes and supports natural habitat conservation and improved land use by conservation of natural habitats and the maintenance of ecological functions.	Laws and regulations are in place on protection of forests, threatened and endangered species at the national and provincial levels.	This ESS requires a differentiated risk management approach to habitats based on their sensitivity and values. This ESS addresses all habitats, categorized as 'modified habitat', 'natural habitat', and 'critical habitat', along with 'legally protected and internationally and regionally recognized areas of	The ESMF provides guidelines for the development of a management framework for biodiversity through HCV studies developed by FSC to identify and manage natural habitats and key biodiversity areas. The project will support the development of site selection that recognizes government-

			biodiversity value' which may encompass habitat in any or all these categories. The Bank does not support projects that, in the Bank's opinion, involve the significant conversion or degradation of critical habitat.	protected areas and high biodiversity/environmentally sensitive areas, including critical habitats of key species. The ESMF will outline screening procedures for site selection to reflect all requirements in ESS6. This shall also be reflected in environmental and social assessments (ESMPs) along with the identification of direct, indirect, and cumulative impacts on biodiversity and natural habitats.
Differentiated mitigation measures	ESS 6 – Biodiversity Conservation and Sustainable Management of Living Natural Resources	Not Indonesian regulations	GOI regulations do not mention specifically differentiated risk management approaches to habitats based on their sensitivity and value.	The ESMF will require that site-specific ESMPs assess risks and potential development or update of Biodiversity Management Framework to cover differentiated risk management approaches to habitats. This includes impacts on habitats and biodiversity and prepare mitigation plans based on the classification of biodiversity and their ecological values.
Possible contamination to soil and water as result of pest management practices	ESS6 aims to reduce deforestation, enhance the environmental contribution of forested areas, promote afforestation, reduce poverty, and encourage economic development	Laws and regulation are in place on regulating harmful pesticides and their usage.	Formulation and implementation of pest management plans are not specifically required by the law. Additionally, contamination to soil and water is also relevant with artisanal / illegal mining activities.	The ESMF provides guidelines on establishing an integrated pest management plan for the ER activity based on best international practices
<i>ESS7 Indigenous Peoples and Adat Land</i>				
<i>Assessment and</i>	The policy on indigenous peoples underscores the	<i>Masyarakat Hukum Adat</i> is recognised by the constitution (article 18)	Customary communities (<i>Masyarakat Adat</i>) may	ERP supports tenure recognition for Adat

<i>consultation; protection of Adat land tenure, avoidance of adverse impacts; mitigation and development benefits; meaningful consultation tailored to Indigenous Peoples</i>	requirement to identify indigenous peoples, consult with them, ensure that they participate in and benefit from Bank-funded projects in a culturally appropriate way—and, that adverse impacts on them are avoided, or where not feasible, minimized or mitigated	Adat land rights stipulated in Forestry Law No. 41/1999 and Ministry of Home Affairs No. 54/2014. Jambi Government has issued a Provincial Regulation on the Guidelines for the Recognition of <i>Masyarakat Hukum Adat</i> in Jambi (Provincial Regulation No. 1/2015)	potentially face difficulties in obtaining legal recognition of their presence and land claims through government processes. The scope of criteria for the identification of Indigenous Peoples are land-based and hence may exclude those groups without attachment to terrestrial territories. Such risks of exclusion are not relevant under the project since site selection and entitlement criteria under Component 3 are not based on legal recognition. Under the on-going mangrove rehabilitation activities, provisions of meaningful consultations have been incorporated. However, no separate planning arrangements are warranted for communities categorized as Indigenous Peoples.	communities. The ESMF consists of an IPPF to guide engagement and management of risks and impacts on Indigenous Peoples. The project will treat communities possessing characteristics as per ESS7 as Indigenous Peoples regardless of their legal recognition. Identification of these groups based on the identification criteria under ESS7 will continue as part of the screening processes during the project implementation. The Indigenous Peoples Planning Framework (IPPF) will be developed as part of this ESMF to focus on ensuring meaningful consultations and engagement, and application of FPIC in the event of adverse impacts as further elaborated in the Indigenous Peoples Planning Framework (IPPF). The project is not designed to support land tenure recognition for the Indigenous Peoples and hence, matters pertaining to definitional criteria are considered less relevant unless there is a specific activity which pursues such an objective. The IPPF outlines specific measures and scenarios for management of potential impacts and the main intent of these measures is to ensure protection of these groups from potential adverse impacts associated with changes in land use and access to land
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				use and natural resources. The IPPF also incorporates provisions of Free, Prior and Informed Consent (FPIC) in the event that circumstances warranting FPIC are unavoidable. The provisions of the IPPF will be incorporated in the technical planning documents for mangrove rehabilitation and village mangrove rehabilitation plans.
Grievance mechanism	ESS7 Indigenous Peoples	Ministry of Environment and Forestry No. P.83/2018 regarding Guidelines on Working Arrangements for Law Enforcement on Environment and Forestry Aspects at Regional Level. 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.	There is no specific mechanism for managing and resolving grievances related to ER activities.	The ESMF provides a Feedback and Redress Grievance Mechanism (FGRM) for managing and resolving grievances related to implementation of ER activities.
<i>ESS8 Cultural Heritage</i>				
Protection of both tangible and intangible cultural heritage as part of sustainable development, meaningful consultations, and equitable sharing of benefits	ESS8 Physical Cultural Resources. Identify and mitigate potential impact towards physical cultural resources for each sub-project.	Law No. 11/2010 on Cultural Heritage states that cultural heritage needs to be preserved and protected. These sites are recognised by the government through issuance of a decree.	Regulations did not provide requirements to protect intangible cultural heritage and do not elaborate on benefit sharing and meaningful consultations, including with Indigenous Peoples. The law is in accordance with ESS 8, however cultural sites that have not been recognised by the government, but have cultural values need to be preserved by the ERP (e.g., Megalithic artifact in Kerinci and Geopark in Merangin).	M4CR is not expected to cause adverse impacts on both tangible and intangible cultural heritage. Prior to any project activities, as part of site selection criteria, a field assessment will be performed and consultations with local communities will be conducted to identify if there is any tangible and/or intangible cultural heritage in the area. A chance finds procedure has been prepared under the ESMF to guide the management of potential impacts on tangible cultural heritage during construction activities/excavation.

			Before the MoEF can transfer <i>Hutan Adat</i> rights to communities, <i>Masyarakat Hukum Adat</i> need to be recognised by their regional governments, either at the level of district or province	The ESMF provides a framework for preserving and reporting unexpected discovery of physical cultural resources
ESS9 – Financial Intermediaries. Not relevant for M4CR				
ESS 10 – Stakeholder Engagement and Information Disclosure				
Engagement with stakeholders; Information disclosure; Grievance Mechanism	ESS 10 – Stakeholder Engagement and Information Disclosure	1. Indonesia regulation Law No. 14/2008 on Public Information 2. Government Regulation of the Republic of Indonesia (PP) No 22/2021 concerning Implementation of Environmental Protection and Management. 3. Government Regulation (PP) No. 46/2017 concerning Economic Instruments for the Environment. 4. Minister of Environment and Forestry Regulation No.P.22/MenLHK/SETJEN/SET.1/2017, concerning procedures for managing complaints of alleged pollution and/or environmental destruction and/or forest destruction 5. Ministry of Environment and Forestry (Permen LHK) No. 70 of 2017 on Procedures for Implementing REDD+ in Indonesia	Information disclosure is required by the Public Information Disclosure Law, and hence, previous activities under mangrove management implemented by BRGM and MOEF have incorporated requirements for consultations with local communities. However, the changes brought by the Omnibus Law pertaining to environmental approvals have left provisions of such consultation in limbo. Under the new law, the environmental assessment (AMDAL) does not require consultation with local communities prior to its submission to the Ministry of Environment and Forestry. Further, there is further uncertainty of their implications as result of the recent Constitutional Court ruling which deems the law as being unconstitutional for violating the procedural process in law making and hence, are subject	The Project will conduct project consultation at the national and sub-national levels, including with local communities. The Project has prepared a Stakeholder Engagement Plan (SEP) which will be implemented throughout the project cycle. A project-level FGRM has been developed as part of this ESMF and will be implemented accordingly.

			to revisions within two years since the issuance of such a verdict.	
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7. ENVIRONMENTAL AND SOCIAL IMPACT AND RISK ASSESSMENT⁸⁹

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. 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 5.6, social and environmental impact indicators are identified as follow:

Social Indicators

1. Conflicts and disputes in forest and non-forest areas (e.g., plantation conflicts, revocation of mining permits, encroachments);
2. Access restriction to land and natural resources;
3. Social tensions due to influx of migrants;
4. Impacts received by indigenous peoples;
5. Loss/Damage to physical & cultural resources;
6. Community Health & Safety;
7. awareness, management capacity and participation;
8. Institutional capacity to manage potential environmental & social risk;
9. Gender, social inclusion, and labor, child labor, and working conditions;

Environmental Indicators

10. Area of forest encroachment
11. Fire hotspots occurrences;
12. Loss of natural habitat and Biodiversity;
13. Contamination and Pollution; and
14. Leakages and reversals.

The impact assessment for ERP components and subcomponents in this chapter was done by assessing the risk of ERP implementation associated with any of the above categories, as well as with key issues established in Section 2.2.2.

7.1 COMPONENT 1: STRENGTHENING POLICY & INSTITUTIONS

Component 1 consists of one main subcomponent that is improving policies and regulations to support implementation of ER Program. The program activities in this subcomponent consists of three main agenda including, strengthening the REDD+ implementing agencies through capacity building programs, facilitating the recognition of indigenous people including their customary land, and establishing new policies and regulations to ensure effective implementation of the ER Program in Jambi.

⁸⁹ A slightly different and new components and subcomponents are being finalized and will be used in the final SESA document

7.1.1 Sub-component 1.1: Improving policies and regulations to support implementation of ER Program

The output of this component consists of REDD+ readiness in the regulations, institutional framework to justify the proposed emission reduction initiatives in Jambi Province, and stronger implementing agencies at the sub-national level in Jambi Province. The assessment for component 1 can be seen in table 34.

Table 34. Summary of Analysis of Issues Related to Sub-component 1.1

Program Activities	Environmental Impact & Risk Assessment	Social Impact & Risk Assessment
Strengthening the REDD+ implementing agencies through capacity building programs	- The impact of these activities is likely to be positive for the ER programs implementation. The improvement of the implementing agencies' capacity can support the success of ER programs. They can integrate ER programs into regional development planning and policies. However, there is a risk where the potential participants who have been trained can be moved to another position or get the career promotion. The ER programs might not be integrated in the regional development planning and policies anymore. Regeneration of potential officials becomes crucial to ensure the sustainability of the ER program to protect the environment such as the establishment of one map policy and peatland moratorium. (ESS 1 & ESS 5)	- One of the capacity building programs focuses on improving the conflict resolution capacity of the implementing agencies such as FMU officers. This activity poses the same risk of failed regeneration where the potential participants who have been trained can be moved to another position or get the career promotion. This situation might cause many negotiation efforts to be halted and left unresolved. (ESS 1 & ESS 5)
Facilitating the recognition of indigenous people including their customary land	- Indigenous people still need assistance after getting the customary forest rights, such as assistance for establishing sustainable livelihood and implementing sustainable natural forest management. Otherwise, inadequate forest management might cause deforestation and environmental degradation. The indigenous people might also contribute to deforestation/encroachment. 9 (ESS 6 & ESS 7)	- The new Jambi Province Bill states that the <i>Hak Ulayat</i> (land rights) of indigenous people will be evaluated in 10 years, and then every 5 years. There is a possibility that these rights can be revoked through regional regulations. Involuntary resettlement becomes voidable if that happens. (ESS 5 & ESS 7) - The Jambi Bill mentions about native and non-native indigenous people. This differentiation might put non-native indigenous people at risk such as their recognitions are not prioritized. (ESS 7)
Establishing new policies and regulations to ensure	- The moratorium, such as the peatland moratorium, might trigger a spillover of deforestation into neighboring regions,	- In general, the peatland moratorium policy has positive impacts on preventing tenurial

effective implementation of the ER Program in Jambi (peatland moratorium policy)	such as Riau, West Sumatera, Bengkulu, and South Sumatera. Besides, there is no guarantee that the moratorium will stop deforestation. The data from BPS shows that there were 26,109.6 ha and 4,035 ha deforestation in forest areas in 2019 and 2020 respectively. Illegal logging, illegal drilling, and land burning are still happening in Jambi, hence deforestation risks are still high. (ESS 5 & ESS 6)	conflicts. The clearing of peatland for oil palm plantation is the main driver of tenurial conflicts in Jambi. The moratorium will reduce the potential of conflicts. .
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7.2 COMPONENT 2: IMPLEMENTING SUSTAINABLE LAND MANAGEMENT

The component 2 consists of four subcomponents. This component focuses on improving sustainable practices in land management, fire prevention and tenurial conflict. Each subcomponent has proposed activities and been assessed in this section.

7.2.1 SUBCOMPONENT 2.1: Promoting Sustainable Forest Management, Conservation, and Restoration

There are 10 proposed activities for subcomponent 2.1, four proposed activities might result in unintended negative impact and pose risks. Those four activities are assessed below.

Table 35. Summary of Analysis of Issues Related to Sub-component 2.1

Program Activities	Environmental Impact & Risk Assessment	Social Impact & Risk Assessment
Increasing awareness on clearing Forest without Burning through providing seedlings, tools, and supporting replanting, etc.	- The risk of reversal of the “clearing forest without burning” program is low. This program will provide seedlings, tools, supporting replanting, etc. However, when the support is stopped, there is a potential risk where the farmers might return to the burning method since it is cheaper and simpler. (ESS 3 & ESS 6) - The use of seedlings and tools must be utilized efficiently and consider the pollution that might be generated from the replanting activities such as the use of fertilizers, pesticides, and waste. (ESS 3)	- The seedlings, and tools should be distributed equally and not be transferred into private hands. Otherwise, this activity might widen the inequality gap between local people. In addition, if some people in the community are excluded in this activity, people who have followed clearing forest without burning might be influenced and reverse to use burning method again. (ESS 6 & ESS 7)
Strengthening law	- Conflict resolution efforts	- There are some cases where

enforcements, patrolling, and facilitating conflict resolutions. In the last five years, 10 to 13 conflicts were solved every year. It is expected that 67 conflicts will be resolved by 2025. The patrolling will be conducted 232 times for five years.	usually focus on conflicts between humans. There is a risk where human-wildlife conflicts are neglected. Wild and protected animals often become the victims and are killed. This risk threatens the Jambi's important habitats and biodiversity. (ESS 6)	smallholder farmers and indigenous people are put on trials or have been sentenced in prison due to logging activities in protected forest areas, whereas many of them might not understand if they did the logging in a conservation forest area. (ESS 7) - The patrolling activities are likely involving local communities. There is risk where the local communities might be involved in a direct conflict with illegal loggers. (ESS 2 & ESS 4) - The establishment of Masyarakat Peduli Api (Fire Awareness Community) will also put local communities at risk of forest fires. (ESS 4)
Facilitating market and financial access for farmers to increase the sale of timber and non-timber forest products	- The activity to facilitate market and financial access for farmers to increase the sale of timber would be contradictory to the ER programs since it will increase logging activities causing deforestation. (ESS 6)	- The activity to provide financial access might cause some people to get into debt and fail to pay off their debts. (ESS 7 & ESS 9)
Supporting and facilitating communities (including indigenous people and smallholders) in conservation areas through conservation partnerships, in production and protected forest areas, through social forestry programs.	- The map or the borders of the social forestry area might not be clear. Some people might not be aware of the areas Hence, there is a risk of encroachment outside the designated area of social forestry. Socialization for people inside the forestry areas, local communities surrounding the areas, and companies operating near the areas is crucial. (ESS 5 & ESS 6)	- The support should be continued after the local communities or indigenous people get the social forestry recognition. Otherwise, the social forestry status would not bring economic benefits to them, and it only becomes a status on a paper. (ESS 7)

7.2.2 SUBCOMPONENT 2.2: PROMOTING SUSTAINABLE ESTATE CROPS

This Sub-component focuses on efforts to promote implementation of sustainable estate crops in Jambi by a) protecting remaining natural forests and peatlands, including from fires inside the concessions, and b) promoting sustainable value chain of estate crop products. There are five proposed activities for this subcomponent. Each proposed activity in this subcomponent poses unintended impacts and risks that need to be addressed.

Table 36. Summary of Analysis of Issues Related to Sub-component 2.2

Program Activities	Environmental Impact & Risk Assessment	Social Impact & Risk Assessment
Identifying remaining natural forests and peatlands inside estate crops concession areas.	- Many thematic maps are still incomplete. One map could not be completed without completing thematic map first. Therefore, identifying remaining natural forests and peatlands inside estate crops concession areas might be challenging. Some identification might be not accurate and cause larger deforestation. For instance, within concession areas, the companies neglect the HCV areas and extend oil palm plantations there. In addition to that, many maps created by the government institutions are still overlapping. (ESS 6)	
Promoting private sectors to engage with RSPO/ISPO principles.	- The ISPO and RSPO certifications will support the sustainability of the palm oil plantation industry. However, not all companies obey the regulation. Some of them break the regulation such as possessing illegal plantations inside forest areas. Based on the Greenpeace report in 2020, there were almost 100 RSPO certified companies possessing plantations inside forest areas and 131 ISPO certified companies illegally planted in the forest state in Indonesia. Oil palm plantations inside the conservation area were around 3,844 ha in Jambi. Weak surveillance is one factor causing this risk. (ESS 3 & ESS 6)	
Facilitating smallholders to obtain ISPO certificate. It is expected that by 2025, sixty farmer groups will be facilitated in order to obtain ISPO certificates.	In general, positive impacts on the environment in applying sustainable agriculture practices under ISPO..	- ISPO and RSPO certification might widen the inequality gap between farmer groups with certifications and without certifications. The farmer groups with ISPO certification might get a better opportunity to access credit or assistance to improve their oil palm

		plantation production. They might also get assistance for replanting program. In order to get the certification, the smallholder farmers need to meet some requirements. They need funding for that and not all smallholder farmers have the resources to do that. (ESS 4 & ESS 7)
Facilitating market and financial access for farmers to increase the sale of estate crops products	Increased sales of estate crops may lead to potential forest encroachment by farmers and risk to biodiversity when not supported by technical assistance on sustainable agricultural practices in intensifying production from the same land parcel.	- The activity to facilitate financial access for farmers to increase the sale of estate crop products needs to be elaborated further. Not all financial access would benefit farmers. Some farmers can get a loan, but they might fail to pay the debt without sufficient knowledge to manage the loan. The financial access will help the farmers to increase their productivity if the funding is managed well. (ESS 7 & ESS 9))
Identifying potential post-harvest products in order to increase value added incomes for community		- The expected result for this activity is that at least four commercial contracts (MoU) between farmers and entrepreneurs will be facilitated and provided in order to increase market and financial access for the sale of estate crop products. However, there is a risk where the market system becomes a monopoly where only a few are benefitting. The entrepreneurs who pose the capital might have complete control over the supplies of the smallholder farmers. (ESS 7 & ESS 9)

7.2.3 SUBCOMPONENT 2.3: PROMOTING CLIMATE SMART AGRICULTURE AND ALTERNATIVE LIVELIHOODS FOR GENERATING INCOMES OF COMMUNITIES

This subcomponent aims to improve the implementation of productivity-enhancing technology and promote intensification that would reduce the demands for land expansion. This subcomponent consists of five proposed activities. Three activities below pose potential negative impacts and risks that need to be addressed in the ER program implementation.

Table 37. Summary of Analysis of Issues Related to Sub-component 2.3

Program Activities	Environmental Impact & Risk Assessment	Social Impact & Risk Assessment
Capacity building for farmers in implementation of climate smart agricultural practices	- The aim of this smart agricultural practice is to improve land intensification. However, the intensification programs might utilize chemical products such as fertilizers, or technology using fossil fuels as energy sources. Those practices might increase the emissions from the agriculture sector itself. (ESS 3 & ESS 6)	
Facilitating market and financial access for farmers to increase the sale of agricultural products	Increased sales of agricultural products may lead to potential forest encroachment by farmers and risk to biodiversity when not supported by technical assistance on sustainable agricultural practices in intensifying production from the same land parcel.	- The expected result for this activity is that at least four commercial contracts (MoU) between farmers and entrepreneurs will be facilitated and provided in order to increase market and financial access for the sale of estate crop products. However, there is a risk where the market system becomes a monopsony system. The entrepreneurs who pose the capital power might have complete control over the supplies of the smallholder farmers. (ESS 7 & ESS 9)
Identifying potential post-harvest products in order to increase value added incomes for community		- Capacity building to identify potential post-harvest products to increase value-added incomes for the community might exclude some groups and widen the economic gap between local communities. (ESS 7)

7.2.4 SUBCOMPONENT 2.4: PROVIDING ALTERNATIVE LIVELIHOODS FOR GENERATING INCOMES OF COMMUNITIES

Under this sub-component, the proposed main activities will be improvement of communities' incomes through providing alternative livelihoods with less pressure to natural forests and peatlands. This subcomponent will deliver four activities.

Table 38. Summary of Analysis of Issues Related to Sub-component 2.4

Program Activities	Environmental Impact & Risk Assessment	Social Impact & Risk Assessment
Promoting agroforestry in peatland such as alley cropping, trees along the border, and mix trees and agricultural plants (seasonal trees). The paludi culture technique in peatlands will be introduced.	-Promoting agroforestry in peatland has several risks such as the smallholder farmers lack of understanding to keep the peatland wet or they drain the peatland on purpose. Dry peatlands are easy to burn. Hence, the risk of peatland and forest fires are high. Another risk is that the smallholder farmers carry out cultivation in deep peatland areas. Deep peatland areas should not be cultivated. - Risk of loss of important habitats and biodiversity (ESS 6). -Potential risks of contamination and occupational and community health from use of pesticides (ESS 2, 3 and 4)	- The smallholder farmers might change the crops they usually plant in peatland areas in order to follow the principles of sustainable peatland management. For instance, they might change from dryland crops that have high economic value such as coconut, coffee, or cacao to paludi-culture specific species such as candlenut, or water spinach that might have less economic value in their region. This shift will risk their income. In the worst-case scenario this situation might exacerbate the poverty problem. (ESS 7)
Supporting Agroforestry system (social forestry program) in State and non-state forests.	- The success of agroforestry implementation might trigger further encroachment by the farmers who gain profit from agroforestry. In addition to that, the incentive to plant more commercial trees becomes more attractive than preserving the biodiversity of the forest. More commercial trees mean less habitat or forest areas for wild animals and potential loss of biodiversity important species. (ESS 6)	- According to research conducted by Ollinaho and Kröger (2021), better profitability from agroforestry can attract new migrants to the agroforestry areas and begin massive interventions to the forest. Another risk is that it can trigger social conflicts between migrants and natives. (ESS 7)
Empowering community through partnership conservation between community and national parks (such as ecotourism, agriculture, handicrafts, non-timber forest products).	- Ecotourism can bring several negative impacts such as destroying forest and important habitat areas for hotels or lodges, cutting down trees to provide roads for tourists, and increasing pollution or waste from construction to the forest areas. (ESS 3 & ESS 6)	- Indigenous people who have not obtained legal recognition might be excluded from the partnership program with the FMUs or village governments. They might also not be eligible to get the benefit or claim the RBP. (ESS 9)
Encouraging farmers for clearing Forest without Burning	- The risk of reversal of the “clearing forest without	- The seedlings, and tools should be distributed equally

through providing seedlings, tools, and supporting replanting.	burning” program is high. This program will provide seedlings, tools, supporting replanting, etc. However, when the support is stopped, the farmers might return to the burning method since it is cheaper and simpler. (ESS 6)	and not be transferred into private hands. Otherwise, this activity might widen the inequality gap between local people. In addition, if some people in the community are excluded in this activity, people who have followed clearing forest without burning might be influenced and reverse to use burning method again. (ESS 7 & ESS 10)
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7.3 COMPONENT 3: PROGRAM MANAGEMENT AND COORDINATION

Effective and efficient project management will result in tangible benefit for the program and at the same time effective monitoring, evaluation and reporting will provide a strong basis for the emission reduction program and carbon accounting that will provide input to future benefit sharing mechanisms.

Result-based payment is a crucial part of the proposed BioCF in Jambi. The so-called result will be defined as the whole program area in the province of Jambi where any ER activities can take place. This can be in the forested areas or outside forested areas. Component 3 of the ERPD consists of the following sub-components:

- Ensuring implementation of Safeguards in place
- Ensuring implementation of MAR in place
- Ensuring Benefits disbursed and channeled to beneficiaries
- Knowledge Sharing Management

7.3.1 SUBCOMPONENT 3.1: ENSURING IMPLEMENTATION OF SAFEGUARDS IN PLACE

This subcomponent has five proposed activities. The impacts and the risks assessment for these five activities are presented below.

Table 39. Summary of Analysis of Issues Related to Sub-component 3.1

Program Activities	Environmental Impact & Risk Assessment	Social Impact & Risk Assessment
Conducting capacity building for safeguards implementation. It is expected that 60 trainings for the safeguards will be conducted in 9 districts and 1 city.	- There is a risk that capacity building training for safeguards are delivered using unfamiliar technical concepts or words. Therefore, the knowledge and understanding about safeguards might not be transferred effectively to the participants in 9 districts and 1 city. Lack of understanding on environmental and social risk	- There is a risk that capacity building training for safeguards are delivered using unfamiliar technical concepts or words. Therefore, the knowledge and understanding about safeguards might not be transferred effectively to the participants in 9 districts and 1 city. Lack of understanding on safeguards will cause

	management will cause ineffective implementation and environmental risks and impacts for these components might not be addressed properly. (ESS 1)	ineffective implementation of safeguards in Jambi. Negative impacts and social risks for three components might not be addressed properly. (ESS 1) - The training implementations might find challenges to meet the gender balance aspect. - There is a challenge to involve all stakeholders including village governments, local communities, and indigenous people in remote areas. They are vulnerable to be excluded in this safeguards capacity building program. (ESS 10)
Finalizing SESA-ESMF enhancement.		- The finalization of SESA and ESMF might exclude some stakeholders during the public consultation process, hence not inclusive. The finalization needs to ensure all relevant stakeholders are involved through public consultations, not just a socialization of SESA and ESMF. (ESS 10)
Establishing and operationalizing FGRM (Policy, instrument, institutional Arrangement, SOP)		- Relying on a website for FGRM would exclude people in peripheral areas, such as indigenous people who have limited access and knowledge to use a gadget for delivering feedback and reporting grievances. A specific FGRM mechanism should be established to accommodate the local communities and indigenous people. (ESS 7)
Monitoring and Developing Safeguards Implementation Report	- There is a risk of inadequate quality of data resulting from activities in components 1 to 3. To prevent this, capacity building and proper training are required prior to conducting monitoring and evaluation activities. (ESS 1)	- There is a risk of inadequate quality of data resulting from activities in components 1 to 3. To prevent this, capacity building and proper training are required prior to conducting monitoring and evaluation activities. (ESS 1)
Conducting studies related to carbon and non-carbon benefits (such as habitat conservation, ecosystem services, good governance, Indigenous Peoples, etc.)	- There is a risk of inadequate quality of data such as overlapping map data, and lack of geo spatial data analysis. To prevent this, capacity building and proper	- There is a risk of inadequate quality of data such as excluding some stakeholders during data collection. To prevent this, capacity building and proper training are

beyond ERPA period.	training are required prior to conducting. (ESS 1)	required prior to conducting studies. (ESS 1) - There is a risk where these studies exclude indigenous people who have not obtained the legal recognition of their rights. Their status whether they can be the beneficiaries of carbon and non-carbon benefits remains uncertain. The studies conducted should cover this problem. (ESS 7)
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7.3.2 SUBCOMPONENT 3.2: ENSURING IMPLEMENTATION OF MAR IN PLACE

Ensuring implementation of MAR in place will support to achieve environmental and social outcomes consistent with the Environmental and Social Standards (ESSs). The implementation of monitoring and evaluation is predicted to help improve social and environmental governance. Therefore, it is expected to have positive indirect impacts in reducing tenurial conflicts; coping with risk of the governance system; and tackling the lack of participation of officials that might come from constraints in capacity for monitoring and evaluation. However, several activities in this subcomponent still have risks to be addressed. The details of the assessment could be found in the table below.

Table 40. Summary of Analysis of Issues Related to Sub-component 3.2

Program Activities	Environmental Impact & Risk Assessment	Social Impact & Risk Assessment
Establishing institutional arrangements for the MAR system for the province. It is expected that by 2025 the arrangements on data collections for implementation of ER programs at every level (village, sub-district, and district) are in place.	- There are environmental risks of inadequate quality of data resulting from activities in components 1 to 3. To prevent this, capacity building and proper training are required prior to conducting monitoring and evaluation activities. (ESS 1)	- There are social risks of inadequate quality of data resulting from activities in components 1 to 3. To prevent this, capacity building and proper training are required prior to conducting monitoring and evaluation activities. (ESS 1)
Strengthening capacity of responsible personnel, infrastructure and institution for analysis and reporting carbon accounting.	- There is a risk where the potential responsible personnel who have been trained can be moved to another position or get the career promotion. (ESS 1)	- There is a risk where the potential responsible personnel who have been trained can be moved to another position or get the career promotion. (ESS 1)
Developing ERMR 1 on Mid of 2023 and ERMR 2 on mid of 2026 (GHG Counting) prepared by provincial government personnel. The period of monitoring based on Indonesian System monitoring.	- There are environmental risks of inadequate quality of data resulting from activities in components 1 to 3. To prevent this, capacity building and proper training are required prior to conducting monitoring and evaluation activities. (ESS 1)	- There are social risks of inadequate quality of data resulting from activities in components 1 to 3. To prevent this, capacity building and proper training are required prior to conducting monitoring and evaluation activities. (ESS 1)

Producing Annual Monitoring Reporting on Emission Reduction	- There are environmental risks of inadequate quality of data resulting from activities in components 1 to 3. To prevent this, capacity building and proper training are required prior to conducting monitoring and evaluation activities. (ESS 1)	- There are social risks of inadequate quality of data resulting from activities in components 1 to 3. To prevent this, capacity building and proper training are required prior to conducting monitoring and evaluation activities. (ESS 1)
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7.3.3 SUBCOMPONENT 3.3: ENSURING BENEFITS DISBURSED AND CHanneled TO BENEFICIARIES

Result-based payment is a crucial part of the proposed BioCF in Jambi. The so-called result will be defined as the whole program area in the province of Jambi where any ER activities can take place. This can be in the forested areas or outside forested areas. However, the distribution of carbon and non-carbon benefits might be challenging and pose some risks. The details of the assessment are presented in the table below.

Table 41. Summary of Analysis of Issues Related to Sub-component 3.3

Program Activities	Environmental Impact & Risk Assessment	Social Impact & Risk Assessment
Conducting capacity building for beneficiaries particularly on developing proposals and reporting for the use of benefits. It is expected that 130 trainings will be conducted within 9 districts and 1 city.		- The delivery of the training might be difficult for some local people if it uses technical terms that they are not familiar with. Some local communities can fail to write the proposal. Technical and literacy rate issues can hinder and exclude some vulnerable communities to participate in the programs. (ESS 7 & ESS 10)
Conducting capacity building for governments/agencies that are in charge for monitoring and evaluation on the use of the benefits. It is expected that 30 trainings for government officials to be conducted within 9 districts and 1 city.	- No risk	- No risk
Strengthening Institutional arrangements for BSP at village, district, and provincial level. Facilitation for strengthening institutions will cover 133 sub-districts.	- No risk	- No risk

Developing Benefit Sharing Plan Annual Report		- No risk
Strengthening and supporting the role of local intermediary agency to disseminate the benefits to the local beneficiaries within the province		- The role of local intermediary agencies is crucial to disseminate the benefits fairly to the local beneficiaries. They have to check the eligibility of the beneficiaries thoroughly. Failure to implement these roles might cause grievances or conflicts between local communities and the local intermediary agencies (ESS 9). - There is a risk of exclusion of some potential beneficiaries. The indigenous people who have not obtained the legal recognition of their rights are vulnerable to be excluded. Their status whether they can be the beneficiaries of carbon and non-carbon benefits remains uncertain. (ESS 7)
Implementing annual BSP Monitoring, Verification, and Reporting.		- No risk

7.3.4 SUBCOMPONENT 3.4: KNOWLEDGE SHARING MANAGEMENT

This subcomponent of knowledge sharing management has two main proposed activities including disseminating Jambi ER lessons learned to relevant stakeholders and available online for the public and attending BioCF International Events on climate issues. The dissemination of Jambi ER lessons learned will benefit the government institutions, NGOs, companies, academia, and people in Jambi particularly and nationally. Some impacts and risks of these activities are assessed below.

Table 42. Summary of Analysis of Issues Related to Sub-component 3.4

Program Activities	Environmental Impact & Risk Assessment	Social Impact & Risk Assessment
Disseminating Jambi ER lessons learned to relevant stakeholders and available online for the public.		- This dissemination should not exclude any relevant stakeholders. It should not only invite participants from government institutions or stakeholders that are available in Jambi City. Making it available online does not guarantee that local communities and indigenous people can access it. (ESS

		10)
Attending BioCF International Events on climate issues.		No risk

7.4 MANAGEMENT OF INDIRECT RISKS AND IMPACTS RELATED TO LEAKAGES AND REVERSALS

7.4.1 Risks of Displacement

Table 43. Summary Risk of Displacement

DRIVERS OF DEFORESTATION AND FOREST DEGRADATION	RISK OF DISPLACEMENT ⁹⁰	EXPLANATION/JUSTIFICATION OF RISK ASSESSMENT	DISPLACEMENT MITIGATION MEASURES
Conversion of forest to estate crops and timber plantation	Medium for Estate crops and Low for timber plantation	The ER Program aims to reduce deforestation from conversion of forest to oil palm plantations and timber plantation by preventing further allocation of forested land to agricultural purposes and forest plantation. Although this can create demand for new plantation concessions and estate crops elsewhere, if the national and provincial regulations on preventing further estate crops and timber plantation permits in forested lands are enforced in the neighboring provinces, the chance for further deforestation will be minimal. However, the focus of the ER program is on province-wide governance so that the risk of displacement only occurs along the province border. This will be limited sources of carbon emission, mainly from smallholder expansions to neighboring provinces. The dynamic of deforestation (source) and reforestation (sink) will take place inside the timber	Both central government and Jambi local government should be consistent in protecting the conversion of the remaining forest into plantation and state crops: 1. KLHK and Provincial Forestry Service should protect the conversion of forest into the plantation in the state forest land in neighboring provinces 2. Provincial and district governments should protect the remaining forest outside the state forest land. Besides monitoring the deforestation in neighboring provinces by using a sophisticated satellite monitoring system established at the national level, the central government could also strengthen the law enforcement in other provinces to stop illegal activities that lead to deforestation or displacement. Another main approach to dealing with this driver is providing alternative livelihoods such as

⁹⁰

Risk category

Definition

High

The potential of emission displacement to other locations due to ER activities is high or certain

Medium

The potential of emission displacement to other locations due to ER activities is limited or likely

Low

The potential of emission displacement to other locations due to ER activities is low or unlikely

		plantation concession in Jambi where the forest will be converted (deforestation) into plantation forest, while during the process of plantation growth, the removal will take place (from grassland or bare land into trees). It is expected that net emissions will take place during this process. With no further forest land will be allocated for timber plantations outside the existing ones. It is likely that the process will also move to neighboring provinces in the absence of a policy for halting forest conversion. Both above processes (forest conversion to estate crops and new timber plantation permits outside the existing ones) are considered medium and low displacement risks, respectively.	agroforestry, harvesting non-timber forest products, and social forestry. Although this solution might decrease the benefit in the short term but will have livelihood security in the long term.
Encroachment by local and migrants	Low	Encroachment by the locals and migrants in the state forest land and in the forested areas outside the state forest land is a common phenomenon in Indonesia. They converted forests into plantations or mixed agriculture. This is happening due to weak governance and law enforcement effort in the field. Due to project intervention, especially in strengthening the institutions involved in forest governance and law enforcement, namely Forest management Unit (FMUs), National Park Authorities, and BKSDA, it is expected that some encroachment will stop and move to neighboring provinces where forested areas are much open. Ongoing conflicts between local and migrant at a limited scale also the strict law enforcement applied to migrant opening forested land (deforestation) in Jambi Jambi Sub National areas will force some of them to either return home or move to other regions outside Jambi.	National-wide policies to stop forest encroachment should be applied evenly at the neighboring provinces. Simultaneously, livelihood activities away from the forest are deemed important both in Jambi Sub National areas and the neighboring provinces.
Illegal mining (PETI)	Low-Medium	Illegal mining activities in several locations use both community-owned land and state forest land and land for other uses. However, except in some limited cases, the activities are usually exclusive and not yet widespread. However, restrictions due to law enforcement for illegal	There are two ways in dealing in this issue: 1. Prevent any illegal mining in the new location while it is still under control by the government. This has been the standard approach nationally to limit illegal mining in

		mining inside the forested areas may trigger threats from alternative livelihood by opening the forest causing further carbon emission. However, this is considered a low risk of displacement due to a limited number of people involved in these activities. However, it is fair to say that as long as the national governance framework on mining in forested areas remains weak, the risk of displacement is high.	the state forest land, although some activities are still happening here and there due to weak law enforcement in these locations. 2. Improve land governance in the existing illegal mining area by using the existing law, for example, by supporting legal community mining. By doing so, it will bring illegal mining activities under government purview.
Illegal logging	Low	Although the Government of Indonesia has reported the slowdown of illegal logging activities across Indonesia in recent years, some illegal loggings causing forest degradation (source of emission) are still reported in Jambi in 2020, especially in Muaro Jambi District. This district has been targeted by the Law Enforcement Operation Unit under the Ministry of Environment and Forestry in collaboration with the army and Berbak Sembilang National Park Authority. This kind of operation may reduce or stop illegal logging activities in Jambi with the possible risk of displacement to neighboring provinces. However, since the anti-illegal logging operation is applied commonly to other provinces as well, the Risk of Displacement is considered Low.	The Government of Indonesia under the KLHK is very serious in tackling illegal logging activities and if this is consistently done in Jambi and the neighboring province, the issue can be eradicated shortly.
Forest fires and fires in peatlands	Low	Underlying causes of fires tend to be localized, and fires will be addressed mainly through fire prevention and control. There is no apparent risk of these activities leading to increased emissions elsewhere. This is to say that the possible source of emission in the form of forest degradation or deforestation in other places is Low.	Fire prevention should be the primary strategy for dealing with forest fires in the mineral or peat soil by using Information technology and involving local communities.

7.4.2 Risks of Reversal

7.4.2.1 Assessment of the anthropogenic and natural risk of reversals

Table 44. Summary Risk Anthropogenic

Risk	Description and Mitigation strategies
Anthropogenic	
Expansion of commercial and smallholders' agriculture/plantation into forested land	Given the continued pressures from local people and migrants and weak law enforcement in the field, this issue will be faced again and again in the future. In the case of coffee farmers in the Kerinci and Merangin areas in Jambi (the main coffee production areas in Jambi), it has to be found out first what kind of coffee species are mostly planted by the farmer. If it is Arabica, then this might be caused by global warming. In this case, law enforcement measures should be taken to restrict land clearing at a higher altitude while introducing suitable arabica species that can grow best in lower altitudes. If it is a Robusta species, then the government will need to support intensification by providing incentives/subsidies to maximize the production in the existing land. At the same time, law enforcement measures are taken to prevent the movement toward higher altitudes, especially if it involves land clearing. Another potential approach is to use the social forestry scheme to support the agroforestry system by planting coffee in the forest areas without or with limited land clearing. However, this approach will need to be further explored, especially to see similar systems' effectiveness and success stories at other places. With regards to other crops such as oil palm, rubber, and cassia Vera, the control of further expansion into forested areas could only be done by enforcing the law, for example, by enforcing the moratorium on the utilization of primary natural forest and peatlands, as currently being reenacted in August 2019. However, alternative channels such as social forestry and conservation partnership should be explored for those who have already had plantations inside the forest.
Illegal logging	Illegal logging occurs for several reasons, such as the immediate needs for economic income, social activities by the local population (limited logging), organized logging supported by the capital owner, illegal felling by concession owners, etc. Different treatments to different actors will need to be initiated. In combination with alternative livelihoods, law enforcement has shown some successes in the past in other places. Similar strategies will need to be tried in Jambi. Those that have a stake in the forest must be prioritized for alternative livelihoods. It is expected that at the end of pre-investment and ERPA periods, some combination of law enforcement and community development/alternative livelihoods will help neutralize the illegal logging practices.
Encroachment and opening land by using the burning method	Forest encroachment took place due to many factors such as land grab business by mafia-like actors and agricultural land expansion by local farmers or migrants.

	The easiest way to open land for agriculture expansion is by burning the land. This has been practiced by farmers and companies for quite some time and has recently been accused of causing a lingering forest fire. Although socialization and law enforcement have been implemented, some actors are still using this burning method to save time and resources in opening land. At the pre-investment stage, the effort to socialize the no-burning policy could be intensified by using an innovative method, such as a moral movement involving local-traditional-informal leaders to stop the land burning mentality. Social forestry is commonly used now to deal with encroachment by local people to the forest area. However, it has to be ensured that when a social forestry scheme is introduced, those who participate in the program should follow the procedures set up in the licensing agreement, including no land clearing, avoid monoculture planting, only plant forest trees, etc.
Mining (illegal and legal)	Small scale illegal mining has been practiced widely in Jambi, especially oil drilling from shallow wells scattered around some forested areas, especially in Tahura Sultan Thaha Syaifudin. This is an exclusive activity in terms of area coverage and is limited to one or two areas. However, looking at the magnitude of land destruction and environmental impacts, strong enforcement measures will need to be made while providing alternative livelihoods for the local people involved. In the future, the BioCF could provide training and alternative livelihood supports to those who have lost income due to the cessation of illegal drilling activity. Otherwise, these groups will be tempted to participate in other illegal activities such as illegal logging and forest encroachment creating leakages in other places. Legal coal mining is quite common in Jambi, especially in Sarolangun, Bungo, Muaro Jambi, and Merangin Districts. Although mining areas in these districts are quite extensive (more than 350,000 hectares)⁹¹, only around 5,000 hectares of land are being exploited for coal production. Although the provincial government has strictly enforced the reclamation policy for ex-mining areas, the future mining areas' expansion, especially in the non-forest land (APL), will need to be closely monitored. This has the potential for planned deforestation in the future and therefore will be the potential source of reversal.
Natural	
Forest fires	Forest fires have been reported as frequent events in Jambi during the dry season, especially in the peatland area. So far, Jambi has all the required laws and regulations and institutions to deal with forest fires ranging from the provincial, district, and village and farmer group levels. The BioCF program is also expected to expand forest fire prevention and handling by expanding related officials and farmers' training and organization. Preserving the severity of the forest fire and the Jambi Government's seriousness to deal with it, BioCF will need to support this program during

⁹¹ Based on information presented by the representative from Provincial ESDM Office of Jambi during the safeguards workshop in early July 2019.

	the pre-investment phase focusing on capacity building and institutional support and development at the local level.
Pest outbreak	Agriculture pest problems can usually be seen from the decrease of production and the death of the plant or pest's spreading. Simultaneously, biodiversity reduction in the surrounding forest will also reduce natural enemies that usually control the pest. Decrease of production or the death of crops from pest attacks can lead to the removal of the plant in the Implementation Area. When farmers try to find alternative crops, it can open new plantations inside and outside the Implementation areas, which can involve land clearing (this will need to be verified during field visits). Lack of knowledge from the farmers and local extension workers on pest management causes a slow response from the government. At the same time, the loss of forest from illegal logging and encroachment can lead to increased pest attacks due to the decrease of its natural enemy that mostly lives in the forest. A few strategies to mitigate the above risks are: • Using the natural agent to kill the pest; • Applying the Integrated Pest Management approach in agriculture and plantation system; • Using the cultural innovation in existence inside the communities (for example, the arrangement of plantation pattern and timing); • Using the agroforestry approach or avoiding a monoculture system.

7.4.2.2. Assessment of the level of risk of Reversals

Table 45. Summary Risk of Reversals

<u>Risk Factor A:</u> Lack of long-term effectiveness in addressing underlying key drivers of AFOLU emissions and removals			
Indicators	Analysis	Level of Risk ⁹²	Reversal Set-

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Risk category

Definition

High

The potential of emission reversal after project intervention due to occurrence of measure(s) mentioned in the indicators is high, or certain

Medium

The potential of emission reversal after project intervention due to occurrence of the situation(s) mentioned in the indicators is limited, or likely

Low

The potential of emission reversal after project intervention due to occurrence of measure(s) mentioned in the indicators is low, or unlikely

			Aside Percentage ^{93, 94}
Lack of broad and sustained stakeholder support	The successful implementation of the BioCF-ISFL Emission Reduction program is affected by support from various stakeholders such as government, private sectors, and communities from national, provincial, and district levels. To increase these supports, the BioCF-ISFL program should be well understood by all these stakeholders by engaging them in the project. Based on various meetings conducted with local government, private sectors, technical offices, NGOs at the provincial and district levels, including some FGDs with indigenous people and local villages, there are no negative sentiments toward J-SLMP. However, there was also movement at the provincial level by some activists to challenge the J-SLMP concept, especially if the plantation companies will also benefit from carbon payment. The draft BSP for Jambi has concluded that the private sector will not receive cash benefit from BioCF-ISFL implementation. Although there is strong support by stakeholders at the national and provincial levels, the field's situation could vary depending on the level of understanding about the program and what the program will offer to the local actors. The FPIC that will be conducted in the 100 villages within the accounting area as well as socialization at the provincial and district levels are expected to raise support for BioCF-ISFL. Based on the above analysis, the risk for this indicator is considered Low.	Low	9%
Significant occurrences of conflicts over land and resources in the program area	Current analysis and exposes proved that conflict over natural resources, especially land, is a common and serious issue in Jambi. More than 30 conflicts, 50% of which are active cases and in the process of mediation/resolution, involving government, local communities, and companies, have been recorded in Jambi (SESA, 2019). The government has already had institutional mechanisms in the form of Conflict Resolution Teams set up at the district level by the Head of the District to settle these conflicts. Efforts have been made to do so; some have been resolved, but more need to be done in the future due to the	Low	

⁹³ Please see Annex 1 for percentage definition provided by the ISFL Buffer Requirements, Version 2.0. April 2020

⁹⁴ This is the average percentage from all indicators in each Risk Factor. This is a modification to the rule set out under ISFL Buffer Requirements, Version 2.0 dated April 2020 that assigns a percentage based on which risk appears the highest.

	complexity of the issues. Based on this assessment, conflicts can be considered as a Medium Risk to the project but emission-wise for reversal, it can be considered Low Risk .		
Lack of institutional capacities and/or ineffective vertical/cross-sectoral coordination	One way to improve environmental management is by supporting good governance in forest and peatland management. One component of it is intersectoral coordination. While sectoral efforts under Forestry and Plantation services are important and have been proved to be working (in the case of Fires-Care Farmer under Plantation Service and Forest Fires Brigade under forestry service), various intersectoral efforts have also been tried at provincial and district levels, including different communiques by provincial governments to control forest fires. With the issuance of Ministerial Decree No. 19/2019 (Permen LHK No. 10/2019) on the Management of Peat Dom based on the Hydrological Unit, socialization of this new regulation to the related sites and management units in Jambi will be needed. It could take both vertical and horizontal coordination in Jambi, involving primarily the Peatlands Rehabilitation Agency (BRG). Despite the fact that many signs of progress have been noticed, it is realized that the issue with the cross-sectoral and vertical coordination as currently experienced between Ditjen PPI and provincial government and between related provincial offices (OPD) in Jambi still occurred. The BioCF-ISFL program has anticipated this by putting the Provincial Secretary as part of the National Technical Committee (NTC) and the Head of the Sub-National Project Management Unit as part of the National Project Management Unit (PMU). Therefore, this risk is considered Low.	Low	
Lack of long-term incentives beyond climate finance to decouple deforestation and degradation from increase in agriculture production and other economic activities.	It is clear that the provincial government of Jambi, through its Provincial Medium-term Development Plan (RPJMP), has stressed increasing economic growth through commodity development, but it will be done according to good agriculture practices in which care for the environment will be given priority as well. At the same time, The New Green Growth Plan for Jambi also discussed the strategic intervention to greening Jambi's future development, including the emission reduction strategic plan. This is a good sign	Medium	

	of the positive move of the provincial government to provide long-term incentives for green development in the province. Component 1 of the BioCF's Pre-Investment Plan puts necessary conditions for long-term incentives to harmonize agriculture development and emission reductions and removals. However, this is not always the case. Some sporadic agricultural practices are still targeting the forest land and have been done either illegally or in a way that is not very responsive to the environment. Based on the above assessment, the risk for this section can be considered as Medium.		
Lack of relevant legal and regulatory environment conducive to addressing key drivers of AFOLU emissions and removals and lack of progress in the implementation of that policy and legal framework	As explained in subsection 3.1.4 of ERPD on legal framework analysis, Indonesia has almost all the needed legal basis to address critical drivers of AFOLU emission and removal. The issue is how to enforce the law effectively and consistently. Component 1 of BioCF Pre-Investment plan has emphasized providing the necessary environment for implementing policy and legal framework to control deforestation and forest degradation.	Medium	
Risk Factor B. Exposure and vulnerability to natural disturbances			
Is the Accounting Area vulnerable to fire, storms, droughts, etc?	Most of the peatland areas within the Implementation Area (around 400,000 hectares) are vulnerable to fire and droughts experienced during the El Nino times in 2015 and again in the long drought season in 2019. This area accounts for < 20 %t of the accounting area and will therefore fall under Medium Risk .	Medium	7.5%
Are there capacities and experiences in effectively preventing natural disturbances or mitigating their impacts?	In addition to flooding and pest outbreaks, recurrent forest and peat fires can be considered as key natural disturbances responsible for carbon emission. Jambi has all the necessary means to fight the fire, starting from provincial regulation supported by national policy up to community forces in the form of fire care farmers and fire brigades, as well as the most recent institutional setup under the police force to monitor forest fire in real time called ASAPGITAL. At the same time, the Peatland Restoration Agency is also very active in Jambi, preventing forest fires and restoring the degraded peatland. It has been observed that during droughts as currently experienced in Jambi, efforts to control fire should be intensified. Based on this, it can be considered that in terms of capacity and intuitional setup,	Low	

	Jambi has been prepared to fight land and forest fires and can be rated as Low Risk .		
Total			16.5%

8. POLICY IMPLICATIONS AND PROPOSED RECOMMENDATIONS

8.1 KEY ENVIRONMENTAL AND SOCIAL CONSIDERATIONS

This 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 were the basis for developing the ESMF.

8.1.1 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. Therefore, key environmental considerations for ESMF may include:

- Development of a Biodiversity Management Framework for the Project, or inclusion of biodiversity management under HCV allocations or non-carbon benefits;
- Addressing the risks of access restrictions for Indigenous Peoples and local communities (IPLCs) due to the enforcement of protected area management and HCV allocations;
- Encouraging sustainability certification (ISPO/RSPO) for oil palm smallholders so that there is no more planting of oil palm in forest areas
- Introduction of sustainable management of forest and palm oil to ensure best practices (including optimizing the use of organic and/or biodegradable pesticides);
- Mitigation of potential environmental impacts from small to medium scale construction; and
- The risk of deforestation and degradation due to alternative livelihoods provided in the ERP (e.g., aquaculture).

8.1.2 Social and Political Considerations

The SESA identified the following social considerations:

- 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 by moratorium policy or conservation program) and access restriction due to forest delineation and/or palm oil HGU, such as providing compensation, restoring income, and living standards of the people affected; and
- Establish and formalize an inclusive benefit sharing mechanism and good governance around the distribution of benefits.

At the program level, social considerations may include:

- Community economic development program to substitute the opportunity costs introduced by the restriction to forest resources due to boundary strengthening for private sectors;
- Enforcing FGRM and establishing a project contact person to facilitate 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 allow cross sector FGRM (e.g., plantation, forestry and mining sectors);
- Ensure that all programs implemented are equipped with environmental and social safeguards documents obtained based on the results of the screening

- Establish a social mapping database and regularly update 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 where trees are currently cut from forests. In the ERP, Component 5 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 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;
- Community economic development program to replace restrictions on access to forest resources within the private sector concession areas;
- Running FGRM and facilitating every complaint using existing mechanisms as a conflict resolution platform, including the development of cross-sectoral FGRM mechanisms;
- Develop a social mapping database and regularly update to reflect the dynamics of social problems.

8.1.3 Political Considerations

- The enactment of Law No. 11 of 2020 concerning Job Creation has led to significant policy changes in many sectors, particularly in spatial planning, forestry management (particularly the roles of KPH/FMU), and enterprise development
- Review and revision (if necessary) of the spatial plan. The Jambi spatial plan was formalized in 2013 through Regional Regulation No. 10 of 2013 and was criticized for favoring the mining and palm oil plantation sector. With its 5-year cycle, the spatial plan can be reviewed in 2023. It is recommended that Multi-Objective Land Allocation (MOLA) analysis is done to define optimal land use that can accommodate economic growth, as well as reduce emissions;
- Provide guidelines and/or technical manuals (*Petunjuk Pelaksanaan dan Petunjuk Teknis*) to follow up on 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.

8.1.4 Policy Analysis

Key policy issues consist of the lack of cross-sectoral collaboration, overlapping tenurial and jurisdictional boundaries, dual land administration systems between forest and non-forest management, HCV management within concessions (both forestry and non-forestry concessions), operationalization

of FMUs, empowerment of smallholder farmers (palm oil), addressing tenurial conflicts and disputes, giving a greater role to vulnerable groups including indigenous communities including grievances and access restriction.

8.1.4.1 Strengthening of Existing Policies

Starting from 2010 the Government of Indonesia (GoI) has launched One Map Policy due to the absence of single reference of thematic maps for development planning and the existence of overlapping concessions. Through the issuance of the Presidential Regulation No. 9 of 2016 concerning the Acceleration of One Map Policy, GoI has strived to develop One Map program based on a single geospatial reference, single standard, single database, and single geoportal. Initially, the program compiled, integrated, and synchronized 72 thematic maps, but later it was assigned to cover 158 thematic maps after the enactment of Presidential Regulation No. 23 of 2021. The program is meant, among others, to address the overlapping claims. Most of the original thematic maps have been compiled, but a few thematic maps crucial for Indigenous Peoples and local communities are still absent, particularly on village boundaries and customary lands (*tanah ulayat*).

Responding to the overlapping forest and plantation concessions and high rate of deforestation, GoI has adopted a moratorium on the granting of forestry and plantation concessions (as stipulated by Presidential Instruction No. of 2011 [as amended several times] and Presidential Instruction No. 8 of 2018 respectively). The first moratorium on natural forests and peatlands requires the publication of moratorium maps known as PIPPIB maps. The MoEF is assigned to update the maps and regularly renews the PIPPIB maps, with the latest version issued under Decree of MoEF No. SK.1629/MENLHK-PKTL/IPSDH/PLA.1/3/2022. The second instruction aims to evaluate the conversion of natural forests into oil palm plantations and to promote sustainable practices and productivity improvements.

Taking into account the proposals of the Green Growth Plan and the findings and recommendations of a dedicated Strategic Environmental Assessment (KLHS), the Midterm Development Plan of Jambi (2021-2026), which is enacted as Regional Regulation No. 11 of 2021, adopts a green economy (low carbon development) approach, including the reduction of GHG emissions, promotion of non-mining economic activities, and using green Gross Regional Domestic Product (GRDP) as an indicator. The document. Although not explicitly mentioned, the mid-term planning document implies the implementation of some activities planned under Jambi ERP.

Governor's Regulation No. 36/2012 and Governor's Decree No. 352/2013 validates the Provincial Action Plan, and Provincial Strategy and Action on REDD+ respectively. However, the Medium-Term Development Plan and the Provincial Development Plan have not fully accommodated the principles in these two regulations⁹⁵.

The strength of existing policies also includes Perda No. 2/16 regarding prevention of forest fire, and Regulation of Jambi's Governor No. 31/2016 regarding operational manual for forest fire prevention. Policies conducted by Agency of Energy and Mineral Resources to withhold/postpone mining license issuance due to incomplete requirements. This can be considered as a strength of the policies to support ERP.

Participatory planning may help reduce the risk of conflicts and disputes. Under Perda No. 1/2018, provincial development planning in Jambi must be developed based on participatory process at the village, sub-district, district, and provincial levels through development planning workshop (*Musyawarah Rencana Pembangunan/Musrenbang*). This policy would support the planning and implementation of ERP. Synergy between RDTR, village spatial plan, IAD and RPHJP at the site level.

⁹⁵ Study by Kemitraan on Initiative of Green Development. 2019

8.1.3.2 Improvements to Address Environmental and Social Risks

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

- Strengthening Law No. 4/2009 regarding mining moratorium needs to be done at provincial level (through Decree or Perda). Strengthening shall include the requirements for 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 and gold);
- 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 need to be established to enforce their applications among companies in forestry and plantation sectors; and
- Policies to encourage capacity building among FMU staff and village officials. This should address the gaps in human resource capacity for managing forest and non-forest areas, as well as support the operationalization of FMUs.
- Policies to encourage capacity building to independently prepare environmental documents for all OPD and work units (satker) to ensure all environmental and social risks have been mitigated

8.2 CAPACITY BUILDING NEEDS AND ENGAGEMENT STRATEGIES

Preliminary analysis done for stakeholders in Jambi, consist of National Park Authorities, Forest Management Unit (FMUs), provincial government offices (OPDs), and NGOs showed that most of them have already had the capacity to deal with REDD issues, either through regulation and enforcement (OPDs), capacity to work with local and adat communities and to solve tenurial conflicts (NGOs), and also to deal with environmental issues (Environment Office for general environmental and social issues and Plantation and Agriculture Offices for matters related to pest management). This capacity analysis is provided under appendix A9.

One of the issues is related to coordination between PPI and the Provincial Government in Jambi. Although some improvement has been made, in general there is a need to continue the dialogues between the two groups. The latest development was that there has been a written agreement between the two to work collaboratively, especially with the informal establishment of a special-dedicated team in Jambi to deal with BioCF issues, especially those related to completing the ERPD. These 22 individuals of the Jambi team consist of government officials from related offices, NGOs, National Park Authorities, FMU, and Sekber.

To properly implement the ERP, capacity development will be required to ensure readiness of local communities, and district and provincial governments to undertake key activities outlined in the ERP. The capacity building needs identified in the SESA are:

- Community training related to management and business development for non-timber forest products, as well as technology to support intensification;
- 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 added value);
- Capacity building for FMUs (provincial government) and relevant government institutions on ESMF;
- Capacity building for integrated FGRM to allow cross-sectoral coordination; and

- Capacity building for the government and private sector related to dispute resolution and handling of complaints, as well as environmental and social management and monitoring programs (ESMF and ESMP).
- Capacity building to independently prepare environmental documents for KPHs and National Parks, including in screening programs implemented in their respective fields.

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 linking it to the national FGRM (under the MoEF, DG of PSKL). DGPPI, P3SEKPI and SEKBER are key stakeholders for strengthening of the FGRM;
- Provide transparent information on the social forestry licensing process to enable effective monitoring of permit and concession boundary violations. This is done with local communities and FMUs through socialization and FPIC consultations; and
- Development of IPPF with clear definition of Indigenous Peoples, *masyarakat hukum adat*, and contribution of *adat* in social forestry schemes. This will be done with relevant customary institutions in Jambi Province.

8.3 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 A6 of this report. Chapter 0 has identified 15 environmental and social risks that need to be mitigated using safeguards principles in line with SIS REDD+. Furthermore, Chapter 0, sub-chapter Chapter 6.4 provides recommendations for addressing the gaps for mitigating the abovementioned environmental and social risks.

8.3.1 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, UKL-UPL and SPPL mechanism;
- Screening process to complement existing AMDAL and/or UKL-UPL regulations. This process needs to be strengthened for identifying potential impacts related to involuntary resettlement/access restriction, indigenous peoples, and physical cultural resources;
- Formulation of environmental and social codes of practices (ESCAP), especially for agroforestry, aquaculture and ecotourism activities;
- Setting up integrated FGRM to address cross-sectoral grievances. Provincial Secretariat (SEKDA) of Jambi 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 and plantation management principles including (but not limited to) HCV, ISPO and RSPO;
- Protection of natural resources in designated areas (e.g., protected forest, nature reserves, game reserves and national parks) which includes flora and fauna, as well as abiotic components; and

- Formulation of access restriction and resettlement plans based on procedures for land acquisition for public uses involving findings from land acquisition committees at district and provincial levels.

Institutions⁹⁶ 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, Social Agency);
- Resources required for ESMF training are Provincial Environmental Agency and Forestry Agency;
- Partners for implementing the ERP are SEKBER, DKN, NGOs and donor agencies;
- There is a potential involvement of governor's office or provincial secretariat (SEKDA) as a hub for the FGRM mechanism;
- DGPPI as the authorities for the ERP, and the Forestry Agency as the monitoring agency;
- Involvement of conservation 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.

8.3.2 Indicative Financial Requirements⁹⁷

In ensuring that the ERP works well with proper environmental and social management, these several points need to be considered:

- Organizing capacity building programs and assisting government agencies, particularly in Jambi to adopt national REDD+ strategies, developing reference emission levels (RELs), designing measurement, reporting, and verification (MRV) systems, and setting up environmental and social safeguards. These measures are a fundamental baseline in preparing the readiness of government agencies at the national, regional, and local levels to manage the funding and incentives.
- Improving the capacity of BPDHL and intermediary agencies in Jambi to channel the fund to the beneficiaries. For instance, the intermediary agencies need to be accredited first. The intermediary agencies need capacity building and assistance to meet the requirement of accreditation. They also need capacity building in proposal writing to deliver program plans and management clearly. Another main challenge is budget management capacity. According to the consultation process, intermediary agencies can only manage up to 20 to 30 billion rupiah per year, while the potential budget transferred will reach 300 billion rupiah per year. On top of that, the number of accredited intermediary agencies is limited.
- Improving budgeting capacity for government agencies at the national, regional, and levels. Based on the consultation process, the budgeting plan made by the government agencies mostly focused on infrastructure.
- Establishing mechanism to channeling benefits through village fund. The distribution of the incentives through village funds has been a potential alternative. However, this alternative has not been discussed in detail. Improving the capacity of the village government to manage village fund needs to be done before the distribution of payment.

⁹⁶ Details are described in Appendix A6 on institutional capacity assessment

⁹⁷ This is an indicative cost calculation. Detailed calculation is being provided by the BioCF Finance team that will refer to government cost standards.

- Including indigenous people that have not got their recognition status as potential beneficiaries. According to BPDH Director Regulation No 07/BPDH/2020, six beneficiaries are listed, and MHA is included in the list. However, indigenous people who have not got the recognition might be excluded from accessing the benefits. To be eligible for being a beneficiary, the potential beneficiaries should provide legality status that can be obtained through a license (such as social forestry permit, or forest utilization permit).
- Improving reporting capacity and establishing a monitoring system to ensure the use of finance is reported transparently.

9. SUMMARY OF CONSULTATIONS

A number of consultation events have been taking place during the preparation and updating of the SESA document. Most of the consultations were conducted online during the COVID 19 pandemic in 2020 and 2021. Consultations in 2022 were conducted hybrid to limit the participants number to meet the social distancing requirement. These consultation events have been and will be taking place at four levels:

1. National level: these events were usually used as opportunities to discuss REDD+ related issues and their relationship with all the documents that need to be prepared, especially the safeguards documents. Some of the discussions were general, but some were quite specific such as when discussing the preparation and formulation of FPIC, BSP, ERPD, SEP, ESMF and SESA. These events were usually attended by both stakeholders from the national and sub-national levels.
2. Provincial-level: Most of the consultation events were taking place at the provincial level, including some more comprehensive public consultations on safeguards and other BioCF-ISFL documents. These events were usually attended mainly through stakeholders from the provincial and district levels, with some DG Climate Change Control participation.
3. District level: Some consultations took place at the district level with a more detailed discussion about REDD+ issues faced by stakeholders at the district level. Support from District Bappeda was found to be very useful in managing these events. Since the meetings were also attended by representatives from sub-districts and all related offices and institutions at the district level, the level of discussion could be very detailed and would need intensive facilitation from the project team.
4. Village and community level: During the preparation of the SESA document, many meetings were held with indigenous and local communities to identify issues related to REDD+ in the field that would feed the environment and social analysis in the SESA. A massive FPIC consultation program has been beginning in the mid of 2022 to visit 100 villages and several districts across the program area.

These are several key points obtained from a series of consultation at four levels until August 2022:

- Internal arrangements and coordination between government agencies at the national, province, and district levels and across levels needs to be improved through capacity building and workshops.
- Capacity building for intermediary agencies is needed due to the extensive amount of budget they will manage.
- Data in safeguards documents need to be updated to ensure the documents works efficiently/
- Government agencies at the grassroots level such as FMUs need further capacity building in conducting conflict mediation and resolutions. They find difficulties in mediating conflicts because they are still lacking in mediation or negotiation skills.
- The consultation processes have tried to be inclusive, such as considering gender balance of participants involved. However, in some special cases it is difficult to meet the gender balance requirement. For instance, when the workshop was aimed at inviting the village heads, it was dominated by male participants.
- A systematic and firm FGRM mechanism has not been well established. The FGRM plans to use the SP4N Lapor system. However, it is not specifically established for serving FGRM in Jambi.

Therefore, the follow up and documentation will be difficult to trace. Each government agency has provided FGRM. The challenge remains how to integrate them. Another challenge is to make the FGRM simple and easy to access, even by people in the rural areas. The FGRM also needs to engage with the Jambi Communication and Information Agency.

- The BSP should include indigenous people that have not got their recognition status as potential beneficiaries. The eligibility criteria of the beneficiaries need to be revised and should consider them.
- In general, the initial FPIC socialization in 30 villages got positive responses from the local communities. However, the further FPIC socializations need to be socialized using easier language and presentation that are less technical. The main point is to inform the local communities about the benefits and consequences that might occur caused by the ERP. The explanation of the BSP should not be centered on the payment or monetary benefits.
- Data synchronization is needed for better assessment and implementation of ERP. Government agencies might publish different data for one indicator or issue.
- Stakeholders engagement with companies operating in forest areas in Jambi need to be enhanced since their activities are the main drivers of deforestation and tenurial conflicts.
- MHA needs further assistance for conducting sustainable forest management. It is crucial to prevent them becoming the driver of deforestation.
- Law enforcement in Jambi to prevent encroachment and forest burning is not effective yet.

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 46.

Table 46. Summaries of the consultation process taking place during the preparation of the SESA documents.

Topic	What is the Issue	Relevance to REDD+	Recommendations
Kick-Off Meeting Joint Preparation Mission BioCF ISFL	▪ PDO result-chain ▪ Annual Work Plan ▪ Procurement Plan ▪ Draft Grant Agreement ▪ Aide of Memoire ▪ ToR Individual Consultant ▪ Concept Note	MAR, Safeguards, and initial design of the ERP	The key point discussed were related to the internal arrangement within government of Indonesia especially DJPPI, BAPPENAS and Government of Jambi related to the implementation of BioCF-ISFL, the role of stakeholder in Jambi in anticipating of BioCF ISFL preparation and implementation, commitment from Jambi Government to implementing BioCG-ISFL, the role of Consultants in preparing related documents for BioCF-ISFL, especially on safeguards as strictly followed up by the WB, Grant Agreement preparation and signing for BioCF-ISFL between the World Bank and KLHK. Some of the emerging concerns are related to the readiness of the Government of Jambi to prepare and implement the BioCF-ISFL and the complicated vertical and horizontal coordination as currently experienced in most cases in Indonesia, including in Jambi. From the meeting it was discovered that the Government of Jambi showed positive development toward the preparation and implementation of BioCF-ISFL as shown from the issuance of Government Decree on the Formation of BioCF Team/Taskforce and increased of understanding on the part of the Jambi Government on the role of BioCF-ISFL as a long-term, low carbon, and green development for Jambi; the active participation of key stakeholders in Jambi; finalization of ToR for individual consultants to support the preparation of BioCF-ISFL including the consultant on safeguards. A few follow-ups would be conducted especially in relation to increasing communication between Bappenas and the Ministry of Finance related to the Grant Agreement, better communication between Jakarta and Jambi on the preparation of BioCF-ISFL PDO and other documents, and the widening of stakeholder's involvement in Jambi.
Joint Mission BioCF-ISFL	▪ PPG Procurement, Lol, Financial agreement progress, AWP;	Part of REDD+ readiness process	The mission agreed that continued refinements of the results framework and monitoring arrangement with interactive follow-up sessions and email communication with the M&E specialist would take place in the next four months and would be presented to the next mission.

Topic	What is the Issue	Relevance to REDD+	Recommendations
	▪ ERP Document; ▪ Result chain & pre-investment activities; ▪ Agriculture framework; ▪ Private sector; ▪ ER allocation; ▪ Benefit Sharing Mechanism; ▪ Safeguards.		
Focus group discussion (FGD) of identification of potential locations for deforestation and forest degradation and peat damage (1)	▪ Identification Implementation Area REDD+ ▪ Deforestation and degradation	As a document that supports the preparation of ERP.	▪ The presentation of SEA stated that at this time a program design for Biocarbon Fund ISFL is needed, and how to portray the causes/drivers and strategy for handling it; ▪ The obstacles to the implementation of the Jambi ERP at this time include, procedurally, the issuance of the Decree regarding the involvement of elements from the SKPD (provincial agencies); ▪ Data used for ERP, at least the last 10 years; ▪ The existence of data and maps that are likely to be different, even though the data (both) are sourced from Government agencies; ▪ In KPH/National Park/Tahura/BPHP Units, generally the problems that occur are community forest encroachment expansion, forest fires, illegal logging, unlicensed plantations (oil & rubber), plantation investors (non-local Jambi), forest encroachment for oil palm and rubber, encroachment in the inter-zone buffer zone, lack of implementation of good governance from various relevant stakeholders, tenure conflicts, peat decomposition, illegal mining, land use (mining, gardens, agriculture), unsustainable forest management;

Topic	What is the Issue	Relevance to REDD+	Recommendations
			▪ The agency mapping for data availability is in accordance with the required basic data (attached ppt slide-13), from the basic data they can be developed again in accordance with the progress of deliberative discussion and process; ▪ Pre-identification of the main drivers that cause issues in the forestry sector (attached-xl), will be met again by the audience in accordance with the next plan of follow-up discussion;
Focus group discussion (FGD) of identification of potential locations for deforestation and forest degradation and peat damage (2)	▪ Identification Implementation Area REDD+ ▪ Deforestation and degradation	▪ Verification of Main Drivers & Causes of Deforestation and degradation; ▪ Screening of SESA Issues; ▪ Identification of Social & Environmental Impacts; ▪ PDO and ERP Consolidation; ▪ Identification of the Area of Public Consultation;	▪ Participants to complete information on the main causes and things that underlie Deforestation and Degradation, with supporting data; ▪ Participants deliver information on the social and environmental impacts of the arising issues, along with the required program plan directions, this input can strengthen PDO and the details of its activities program details in participants' slide; ▪ As per initial information from the previous info recap and screening support from spatial data processing, several issues have been addressed; ▪ In the process of ensuring that the issue on the second day was obtained a short list of agreed issues was 7 points; ▪ Based on cluster issues that arise from the participants' discussion, several alternative locations for public consultation areas are proposed, the next screening can be arranged in accordance with the consideration of the basis of spatial data processing and expert judgment.
Interview the perceptions of key stakeholders in the sample districts (Bungo, Merangin, Sarolangun, Kerinci and Tanjung Jabung Timur)	Interview related to the Bio Carbon Fund, drivers of deforestation, related stakeholders, fund management mechanisms,	▪ Verification of Main Drivers & Causes of DD ▪ Screening of SESA Issues	More than half of the respondents stated ignorance of the details of the emission reduction program, its relevance to REDD +, and its role in the implementation process later. However, most stakeholders hope that the program can be applied at the local level at the district level, so that the benefits of the programs and subprograms can be directly felt by the related units in the field in dealing with the dynamics that occur at this time.

Topic	What is the Issue	Relevance to REDD+	Recommendations
	important issues and future expectations		
Focus group discussion (FGD) of six villages (Beringin Tinggi, Guguk, Kandis Dendang, Pandan lagan, Sungai beras, & Rantau kermas) and 1 indigenous people	Know the problems of natural resource management, the root of the problem, the parties involved, and the solutions offered.	SESA & ESMF	Main issues raised were related to forest conversion to oil palm, illegal logging, encroachment, limited alternative livelihood, and the use of chemical agriculture inputs Discussions on measures to address environmental and social issues include: improving access to markets, stabilizing prices for daily needs (<i>sembako</i>), improving skills and technology for added value, identification of NTFP potentials (non-carbon benefit), development of village enterprise (BumDes), improving access for ecotourism, community-based patrol implementation, stopping illegal mining operation, community-based peatland rehabilitation, training on prevention and control of forest fire, peatland rewetting, non-burning method for agriculture, allocation of sustainable agriculture (especially for marginal and isolated communities, including customary communities), production and use of organic fertilizers/pesticides, socialization of social forestry schemes, increasing gender participation in sustainable land use, increasing commitment of companies (inclusion of local communities in companies' business).
Public consultation at district level in Tanjabtim and Merangin (attended by representatives from Tanjung Jabung Timur, Tanjung Jabung Barat, Muaro Jambi, and Batanghari, Kerinci, Sarolangun, Tebo, and Bungo)	- Introduction of BioCF and activities that can be supported at district level; - Update information on existing social forestry, sustainable plantation, and	- SESA & ESMF - Leakages between districts, and between provinces. - Existing regulatory instruments at district level (e.g., Perda No. 18/2013 on land	While the main purpose of these meetings was to get feedback from local stakeholders on the draft safeguard documents being prepared by consultants, the meeting also provides an opportunity to introduce BioCF-ISFL for those that were new to this planned program. Some of the issues raised in Tanjabtim District were related to Community economic development aspects, including supporting non-timber forest product (NTFP) marketing and peatland management. The following were some of the main issues discussed: The future focus of the district in next Medium-Term Development Program 2021-2026 is to manage its peatland sustainably under the icon of "Peatland Friendly District". This is due to the coverage of peatland as

Topic	What is the Issue	Relevance to REDD+	Recommendations
	sustainable agriculture practices; - Challenges in peatland management, including fire prevention; - Additional driver of deforestation (mangrove) outside the Implementation Area; - Illegal oil mining in grand forest park (<i>Taman Hutan Raya/Tahura</i>) under provincial forestry agency	for sustainable agriculture, and 13/2013 on corporate social and environmental responsibilities.	much as 62 percent in this district. FGD will be done to discuss the meaning of “Peatland Friendly District” for Tanjabtim; - Some issues in Tanjabtim including land conservation from agriculture to Oil Palm is quite high; - There is potential for developing Social Forestry (SF) in Tanjabtim (currently there are 8 SF licenses in Tanjabtim, but it should be focused on the whole aspect of social forestry starting from preparation for licencing, forest management, production, marketing, and up to processing of non-timber forest products; - Forest fires are still one of the main deforestation issues in Tanjabtim due to its large peatland coverage. Efforts to prevent and control forest fires were usually intensified during the long dry season or El Nino years; - There is regulation on the protection of prime agricultural land (LP2B), but the implementation is still problematic due to untargeted subsidies from the government. Thorough evaluation of the implementation of this regulation will need to be done to find out best future implementation; - The government has encouraged the communities to plant Jelutong tress, but after the latex is collected by communities, there is no market (note: Jelutong is one of the commodities that is going to be supported by BioCF). In Merangin District, some of the important issues were related encroachment and illegal claims of forest land especially by outside migrant (mostly from South Sumatra, Lampung and Bengkulu leading to further deforestation and social conflicts, the emerging role of indigenous people that need recognition from government, unclear boundary of villages leading to conflicts between villages. - It was expected that with the support from BoCF-ISFL, issues related to the markets for some Non-Timber Forest Products (Jelutong in Tanjabtim) and products from social forestry could be resolved as Bio-CF-ISFL has

Topic	What is the Issue	Relevance to REDD+	Recommendations
			consultants to help with this issue. To deal with forest and social conflicts, beside supporting local institutions to deal with these issues especially on capacity building and budget increase, the role of local communities and local wisdoms and local BGOs should be revitalized in solving some issues related to deforestation and social issues.
Workshop on Complaint Handling Procedure Design and Feedback, Grievance, Redress Mechanism (FGRM) within the Jambi Sustainable Landscape Management Project (J-SLMP) Framework	▪ 1. To provide easy access to the public especially members of the affected community to raise complaints and/or concerns about certain activities or physical investments (sub-projects); ▪ 2. To identify and assess the nature of complaints and/or concerns and agree on solutions as early as possible so that constructive input can be considered in the design of a physical investment activity;	▪ SESA & ESMF ▪	a. Further discussions will be held with the safeguards team and SN-PMU to prepare the FGRM Draft, both the institutional and technical designs (SOP). b. We will discuss further details about the development of the FGRM website as an internet-based complaint channel, technical development, and management in charge c. It is necessary to formalize FGRM in the form of policies at the Jambi Province level, this will be discussed further between the safeguards team and SN_PMU regarding the form of policies that will be made, whether SK. Governor, SK DLH or SK BAPPEDA. d. If possible, a public consultation will be conducted, this will be discussed further with the safeguards team and SN-PMU.

Topic	What is the Issue	Relevance to REDD+	Recommendations
	3. To avoid stalling activities on project investment at a later stage due to ignorance of the submission of complaints, leading to unmanageable and costly conflicts; 4. To get the support of the affected community or in other words the social license for the operation of the project activities and; 5. To enable a feedback loop from the wider public on continuous improvement;		
Discussion and Workshop on Indigenous Peoples/Local	Involvement of the wider community for programs to	SESA and ESMF	Efforts have been made by Jambi's existing institutions to ensure that the development process has fostered full respect for human rights, dignity, aspirations, identity, culture, and natural resource-based livelihoods of the Indigenous People/Indigenous Peoples.

Topic	What is the Issue	Relevance to REDD+	Recommendations
Traditional Communities (ESS 7), Cultural Heritage (ESS 8) and Stakeholder Engagement and Information Disclosure (ESS 10) To Support Jambi Sustainable Landscape Project (JSLMP)	reduce degradation and deforestation		• Efforts have been made by Jambi customary institutions to avoid the adverse impacts of development projects on indigenous peoples/Indigenous Peoples, if they cannot avoid the negative impacts, they must be able to minimize, reduce and or compensate for these impacts. • Efforts that have been made by the government in managing cultural heritage to provide protection and guidance in order to provide continuity in the form of tangible and intangible between the past, present and future. • Any efforts to establish measures designed to protect cultural heritage in the context of development in Jambi Province.
Discussion and Workshop on Resource Efficiency and Pollution Prevention and Management (ESS 3) and Biodiversity Conservation and Sustainable Management of Living Natural Resources (ESS 6) To Support Jambi Sustainable Landscape Project (JSLMP)	▪ Pollution Prevention, Resources Efficiency, and Biodiversity Conservation in Jambi Province	▪ SESA and ESMF	▪ Establishing a Fire Prevention Farmers Group (KTPA) as well as constructing dams and monitoring towers for plantation companies ▪ Promote ISPO certificates to farmer groups, cooperatives, and companies ▪ Companies will not accept products from plantations that do not have an ISPO certificate and are located in a forest area ▪ Implementation of environmental friendly pest control and guiding the community to increase the capacity in pest control and the establishment of organic villages; ▪ For resource efficiency: planting crops, horticulture, and intercropping between coffee plants with areca nut or cinnamon ▪ Pollution and environmental damage prevention are regulated in policies, plans, and programs. For further mandates as required each province need such environment document (KLHS & RPJMD) to analyze possible impacts and mitigation efforts ▪ Spatial planning is the basis for environmental protection efforts at the macro scale such as KLHS and RPJMD. ▪ At the pre-investment and emission reduction stages, only SPPL and UKL-UPL are likely required ▪ The sustainable palm oil development policy follows all applicable regulations in Indonesia, such as ISPO, RSPO, and ISCC.

Topic	What is the Issue	Relevance to REDD+	Recommendations
			▪ The management of HCV and social aspects by PTPN VI is carried out through the installation of HCV warning signs in each river and not planting on the riverbanks ▪ Environmental management System carried out by the company includes to manage the protected areas and monitoring of HCV and HCS, and prevention and control of forest fires. ▪ HCS and HCV monitoring activities at PT WKS are carried out by monitoring priority species, monitoring protected areas, smart patrols, peat management with a plan to restore the peak of the peat dome in the context of reforming the protected function of the peat ecosystem, applying hydrology and revegetation, and carrying out an inventory of flora and fauna. ▪ TNBD Functions as the protection of life support systems, the preservation of biodiversity, the sustainable use of natural resources, and the "Home of Orang Rimba." ▪ The management of the Orang Rimba TNBD will be the subject, not the object. This means that they participate in determining the pattern of leadership and activities carried out by taking into account the sustainability of the ecosystem function of the area ▪ Management strategies and efforts carried out by TNBD have been implemented with a management system that combines customary and state regulations so that the realization of forest conservation in TNBD ▪ TNBD implements customary area-based protection and security (prefers standard rules supported by state regulations) ▪ The causes of deforestation in TNBS are caused by forest fires, logging, and encroachment ▪ Activities carried out by TNBS to reduce logging include partnering with communities around TNBS by providing access to traditional management, increased the economic business (e.g., with support for NTFP

Topic	What is the Issue	Relevance to REDD+	Recommendations
			management and marketing), community involvement in management area, and ecotourism development. - Restoration efforts carried out by Hutan Harapan in collaboration with stakeholders to carry out replanting and HCV activities - As Hutan Harapan's Project Management Goals, forest protection activities are carried out through routine patrols, the formation of a Fire Care Society, and revegetation effort on areas burned. - PT. REKI is carried out with an adaptive management approach to avoid forest and land conflicts. Protection efforts are carried out by using technology as well as collaborative activities with the community and building business cooperation with the community - Protection of essential ecosystem areas (KEE) is an effort to protect KEE through management based on conservation principles or best management practices. - The company can still improve environmental management by referring and implementing environmental and forestry regulations that have changed to improve efficiency and sustainability - Activities that will be carried out by the National Park using BioCF funds still refer to current routine activities such as law enforcement, area monitoring, community involvement, and economic activities and not causing negative impacts on the environment - The Pre-Investment BioCF activity that will be carried out is a survey and analysis of biodiversity in Jambi, which is later expected to accommodate the plan to create a protected forest area.
Discussion on Labor and Working Conditions (ESS 2), Community Health and Safety (ESS 4) and Land Acquisition, Restrictions on Land	Awareness of the importance of job creation and income generation in efforts to reduce	SESA and ESMF	- The scope of supervision of occupational safety and health (K3) in the work environment is as follows: identification and evaluation of hazard factors, identification of hazard sources, identification of objects of supervision - Labor protection efforts are meant to achieve a high level of productivity where there are work safety efforts, including the working environment

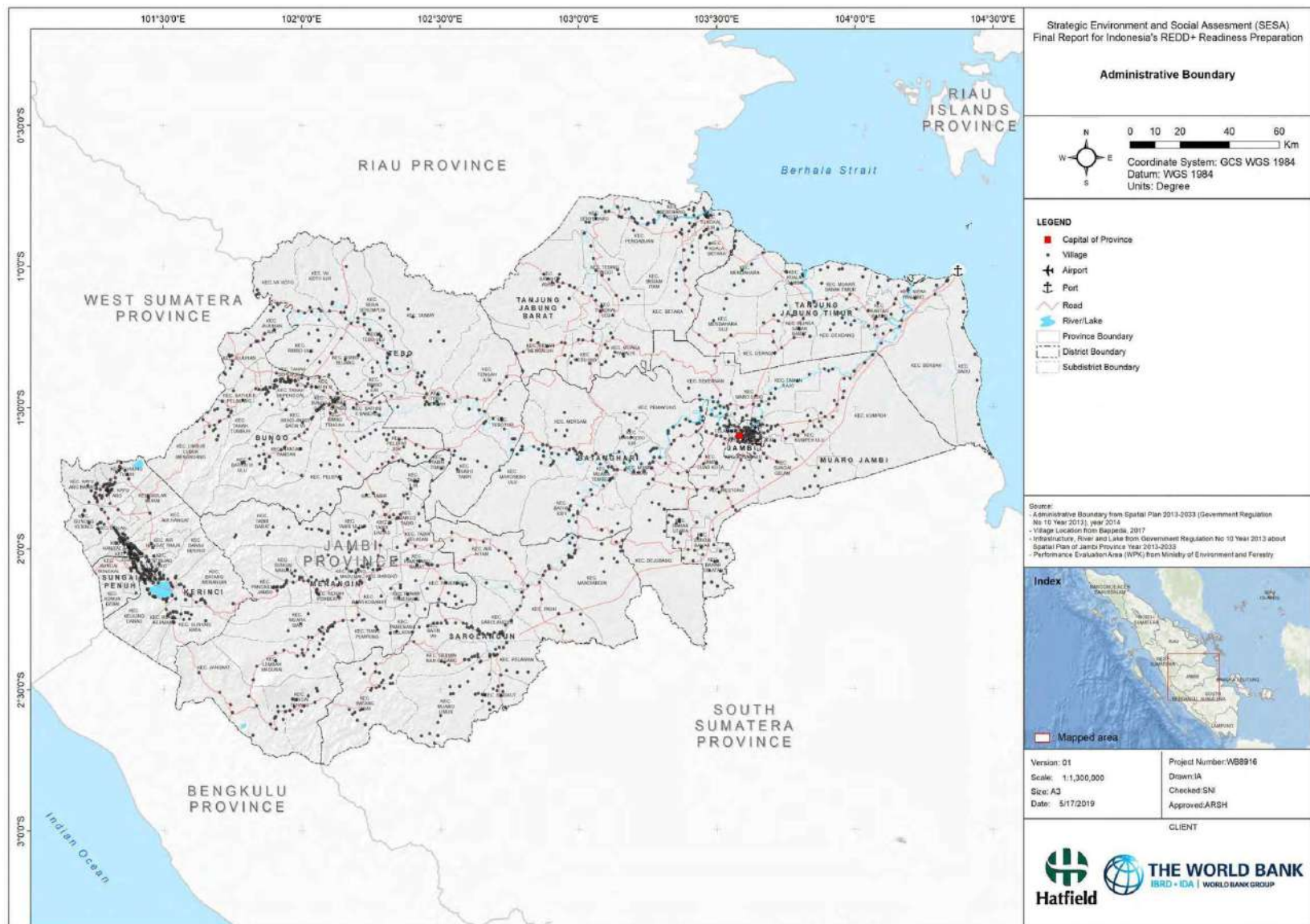
Topic	What is the Issue	Relevance to REDD+	Recommendations
Use, and Involuntary Resettlement (ESS 5) in Implementation of the Jambi Sustainable Landscape Management Project (JSLMP)	poverty and inclusive economic growth in Jambi Province		- Operational Conditions such as healthcare and safety requirements such as controlling physical and chemical factors, controlling biological factors, ergonomics factors, and work psychology factors, providing hygiene facilities and hygiene facilities in Workplace, and providing K3 personnel - Implementation of the K3, required follows measurement and control of the work environment, hygiene, and sanitation. K3 personnel must have competence according to Indonesian national work competency standard - K3 Management System (SMK3) certification is carried out by establishing K3 policies, K3 planning, implementing K3 plans, monitoring and evaluating K3 performance, reviewing and improving SMK3 performance, and continuous improvement outputs related to work safety are obtained. - Non-standard conditions and non-standard actions monitor planned inspections to identify sources of hazards in the Workplace. As for the monitoring and evaluation system, responsibility is given to the foreman, unit assistants, and managers within inspection areas, namely gardens, factories, TPS, Fuel Tanks, WWTPs, Machinery/Equipment, and Electrical Equipment. - Creating Shared Value (CSV) emphasizes the interlinks between achieving the goals of the business entity (business) and achieving the purposes of the local community, labor protection, and collaboration to build sustainability. - DMPA and CSV participatory planning through business chain integration and community objectives through SIA/SDS, HCV-HCS, ISFMP, and RKU-RKT. Monitoring and evaluation focused on community problems and community needs along the business chain in a participatory manner. - CSV products such as Rural Area Superior Products, namely Saprotanbun, IFFPS cultivation products, processed food and beverages, non-food products, product improvement, other services, local institutions, HTR partnerships, and knowledge products - Intensification of DMPA, namely technocratic interventions - development of rural areas, increasing human resource competencies, strengthening

Topic	What is the Issue	Relevance to REDD+	Recommendations
			product development and marketing networks, opportunities for blended financing, digitalization strategies and innovations for landscape conservation, peatlands, and jurisdictional-based GHG/GHG mitigation-adaptation strategies ▪ Palm oil commodities must follow to the 7 principles of ISPO (plantation licensing and management system, application of technical guidelines for oil palm cultivation and management, environmental processing and monitoring, company responsibility for workers, social-community accountability, empowerment of community economic activities, and sustainable business improvement ▪ The problem that often occurs in the Land Procurement process is that the land certificates are not well documented; this causes differences in the calculation of the value of land compensation in the planning document with the actual situation in the field. ▪ Processing time of Land Procurement Objects within forest areas, waqf land, village treasury lands, and assets of BMN/BUMN agencies still a major issue ▪ The forest area in Jambi Province based on Decree of the Forestry Minister No: 863/Menhut-II/2014 is 2,098,535 ha which is divided into 5 forest functions: Nature Reserve Area (KSA) / Nature Conservation Area (KPA), Protected Forest, Limited Production Forest, Permanent Production Forest, and Convertible Production Forest ▪ Conflicts occur in forest areas between the Government and the community, among other Companies or between Company and Community. The typology of forest conflict areas could be Villages in forest areas, customary land, forest encroachment, Forest Land trade, and overlapping permits. As the following conflict occurred within the forest area, the Jambi Provincial Government has formed an Investigation Team, an Integrated Team, and a Jambi Province Working Group to settle things up.

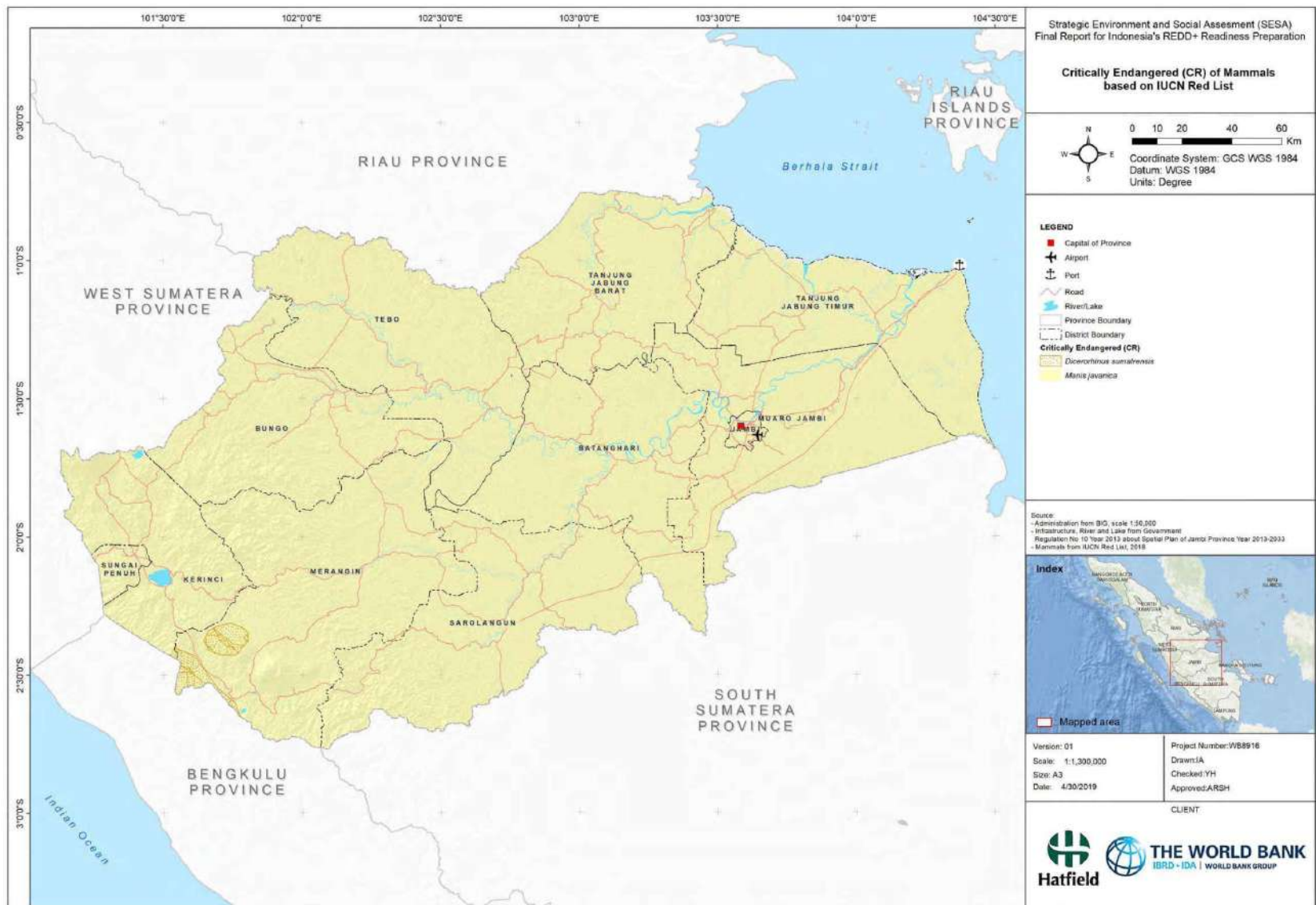
Topic	What is the Issue	Relevance to REDD+	Recommendations
			▪ Partnership scheme with farmers, conducting education and health programs as well as the formation of Community Concerns for Fire (MPA) groups ▪ The character of indigenous people (Orang Rimba / internal tribes) that move around and depend on hunting and gathering for living, ▪ The system for implementing employment and work safety for large-scale or national plantation and forestry companies have been run by regulations. Each company can even meet international standards, as shown by the various certificates held such as RSPO, ISO 1401, IFFC, etc. ▪ Suppose there were Tenurial Conflicts that occurred in the implementation of this J-SLMP activity. In that case, it will refer to Law Number 11 of 2020 concerning Job Creation and Law Number 2 of 2012 concerning Land Acquisition for the public interest and prioritizing deliberation with relevant stakeholders. ▪ Conflicts that occur involve the Company and HGU holders, the conflict resolution process will involve the National Land Agency of Jambi Province with the Agrarian Reform Object Land scheme as stated in Presidential Regulation Number 86 of 2018 ▪ Socialization to companies that are directly adjacent to and utilize forest areas to maintain the ecosystem in the business area to continue to support the lives of all living things that are there and continue to contribute positively to fulfilling commitments and regulations.
SESA Workshop	Indigenous people Tenurial Conflicts BSM		▪ FMUs need capacity building for mediating and conflict resolution. ▪ Human-wildlife conflicts should also be included in the SESA ▪ A regional regulation for MHA needs to be signed as soon as possible. ▪ Capacity building for intermediary agencies is needed due to the extensive amount of budget they will manage.

APPENDICES

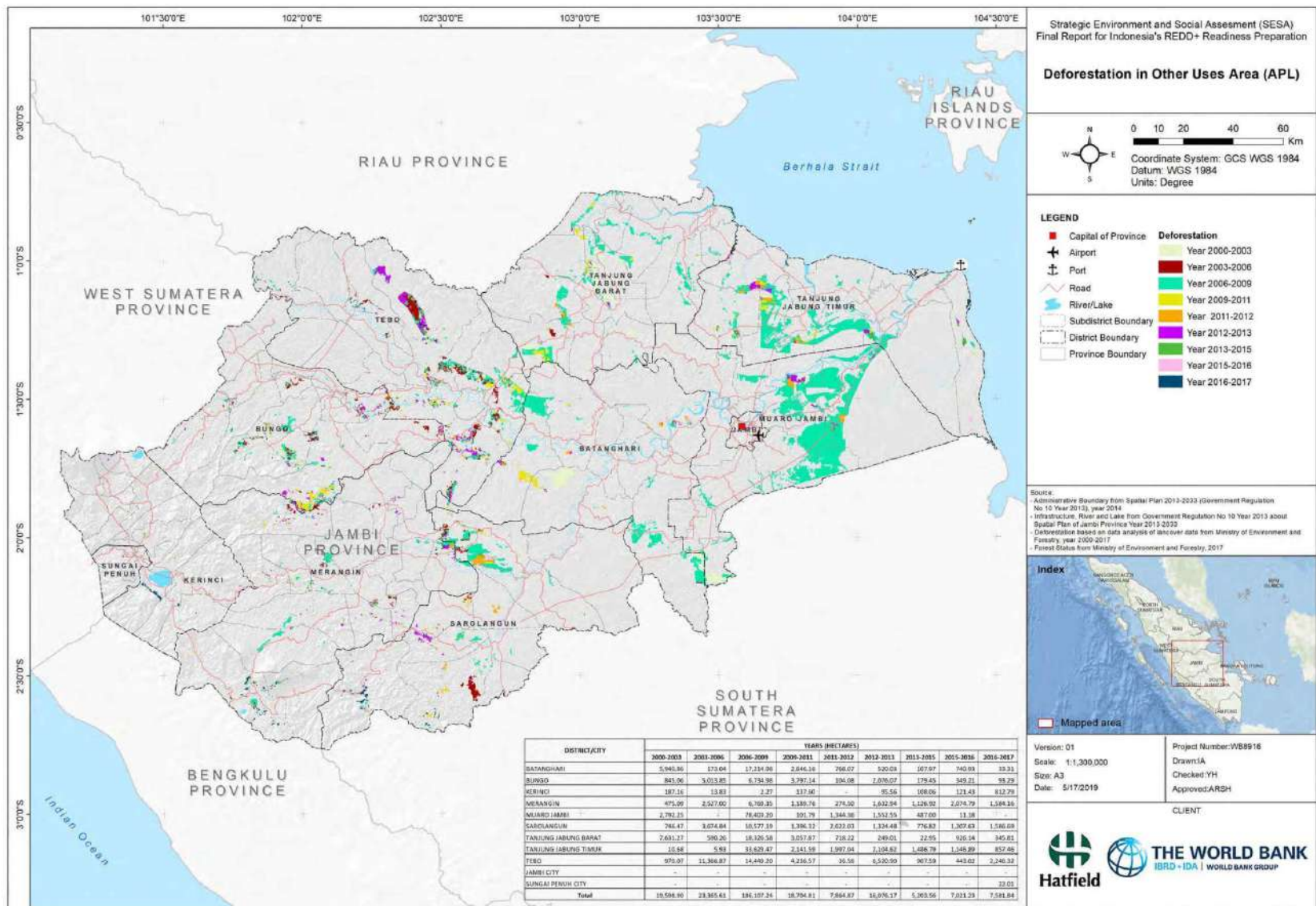
Appendix A1. Spatial Analysis Maps



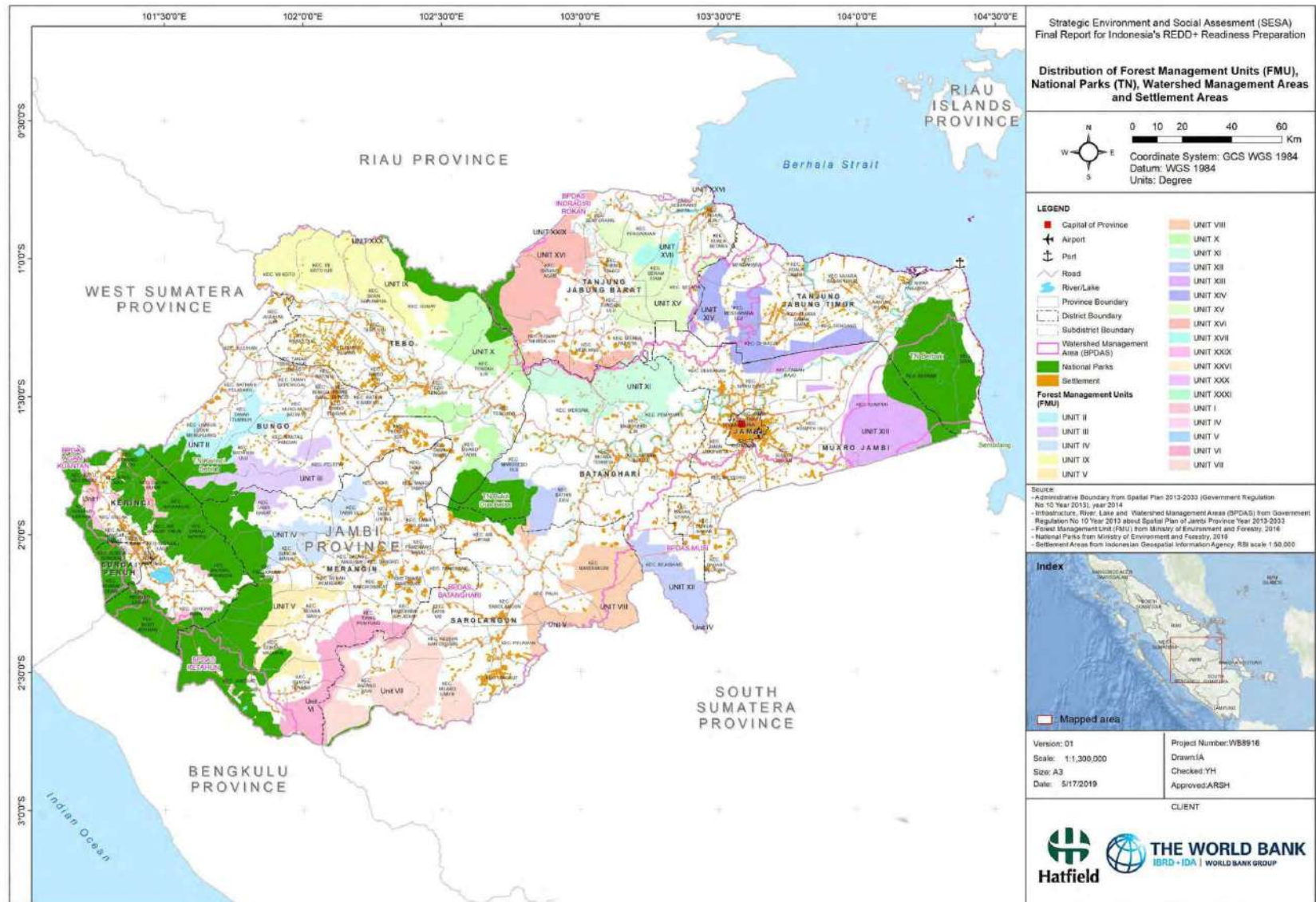
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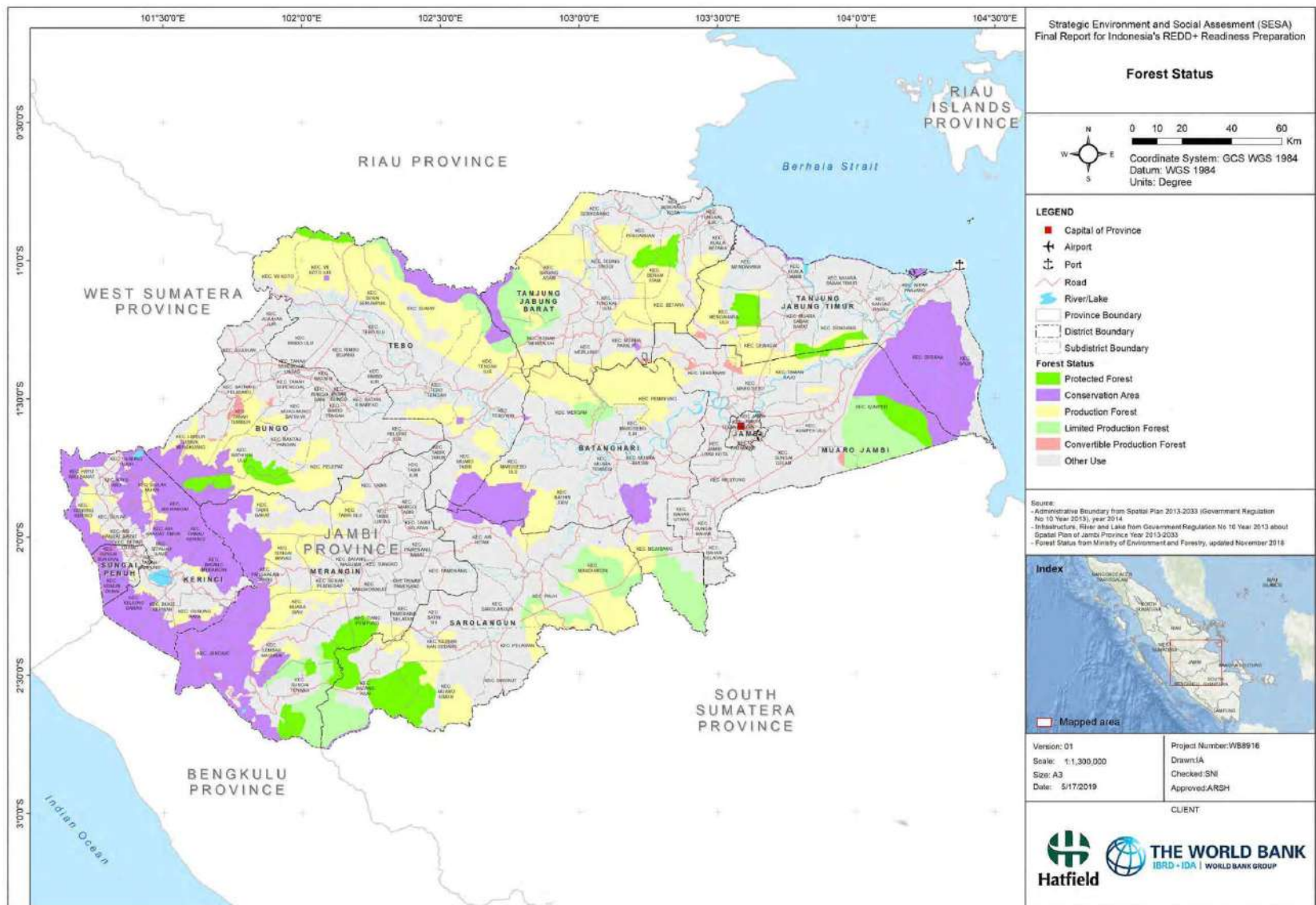
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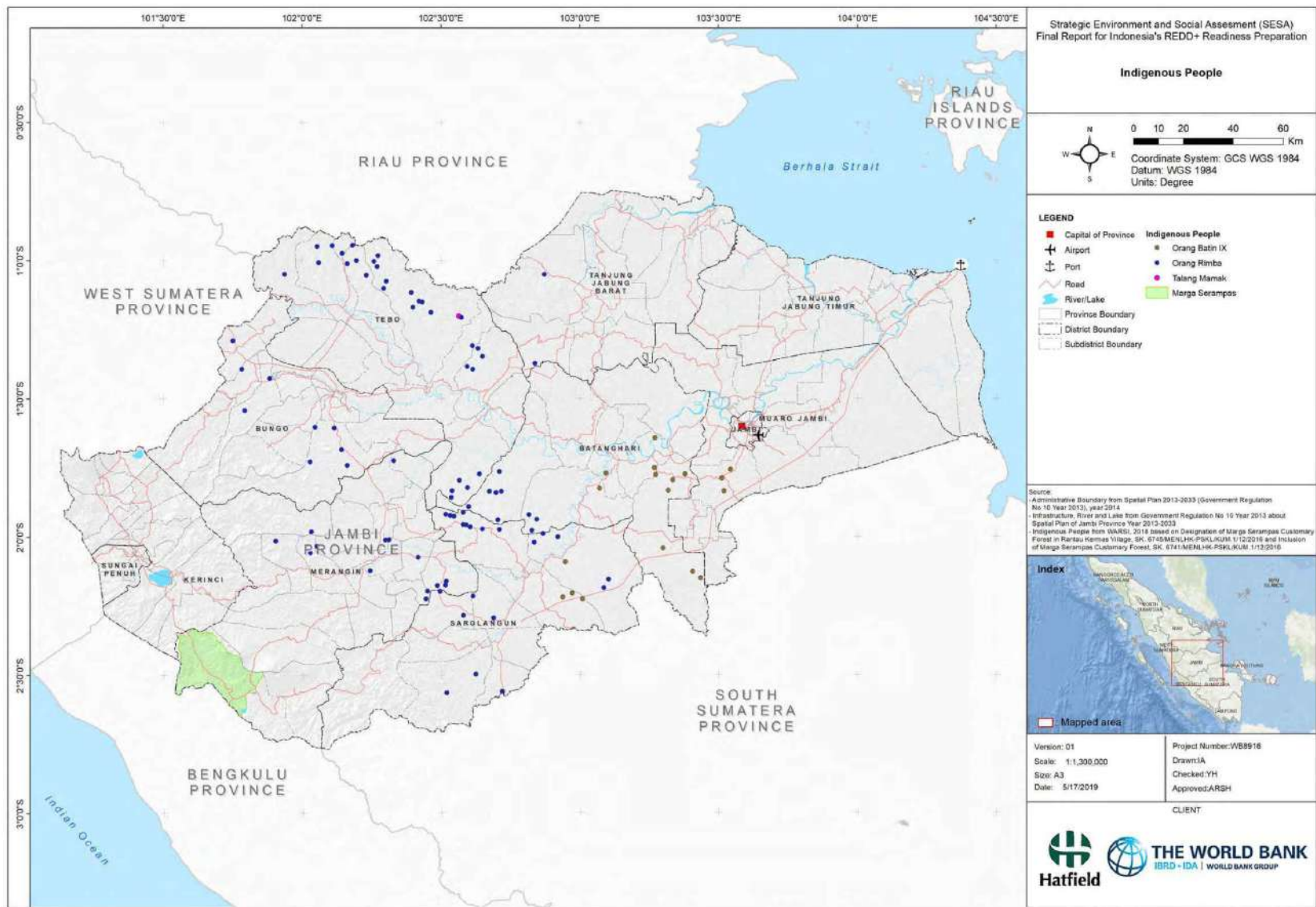


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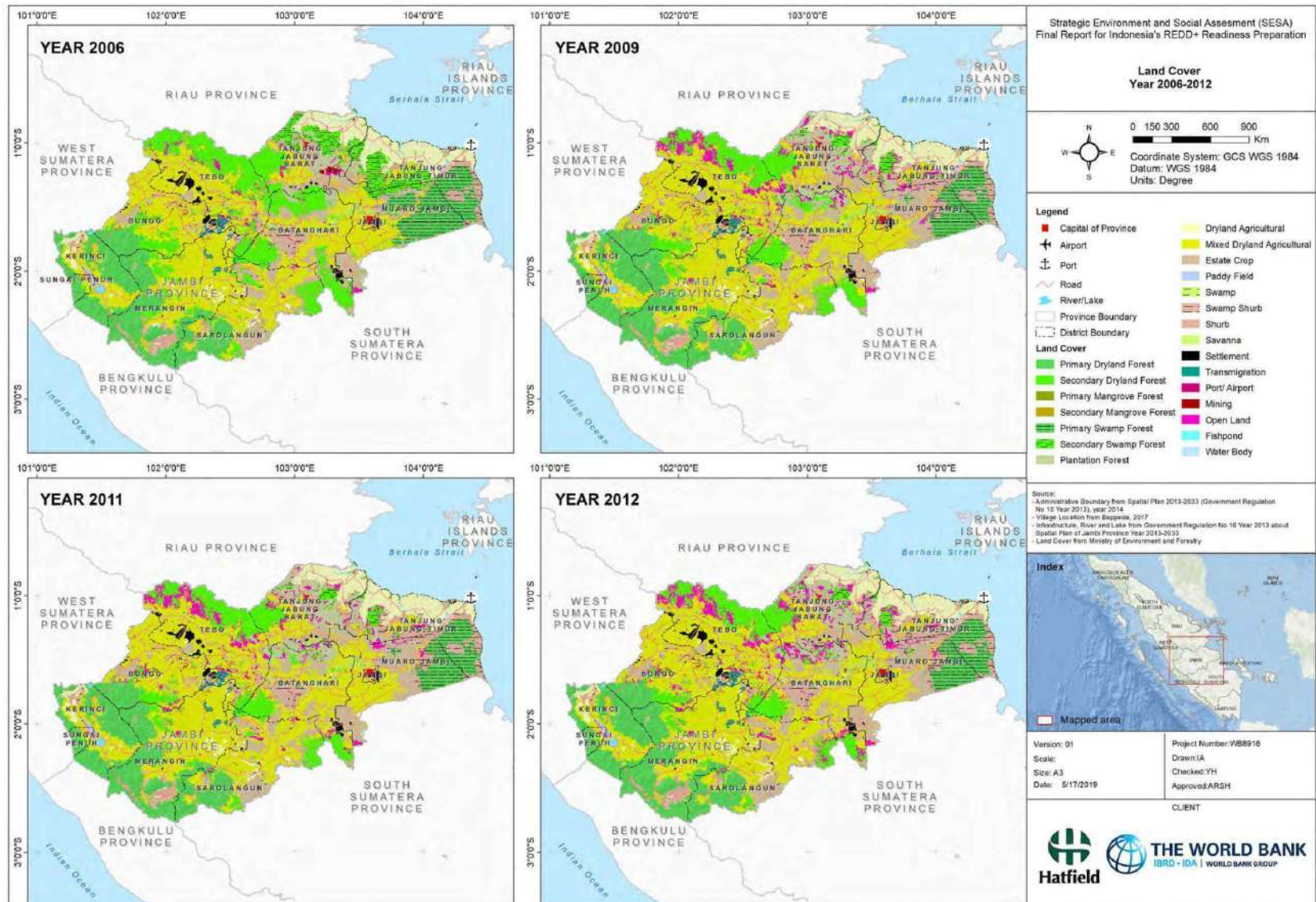


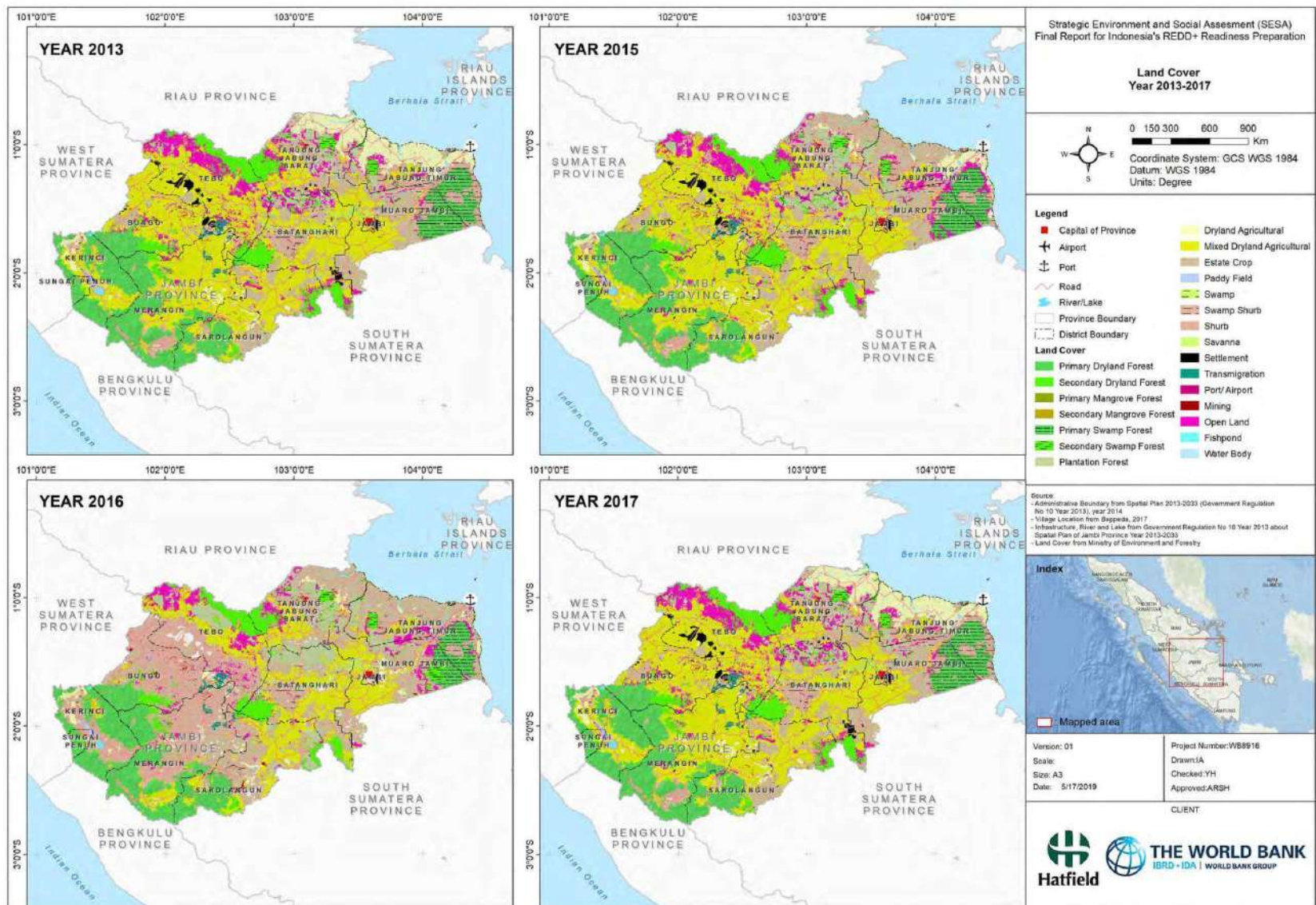
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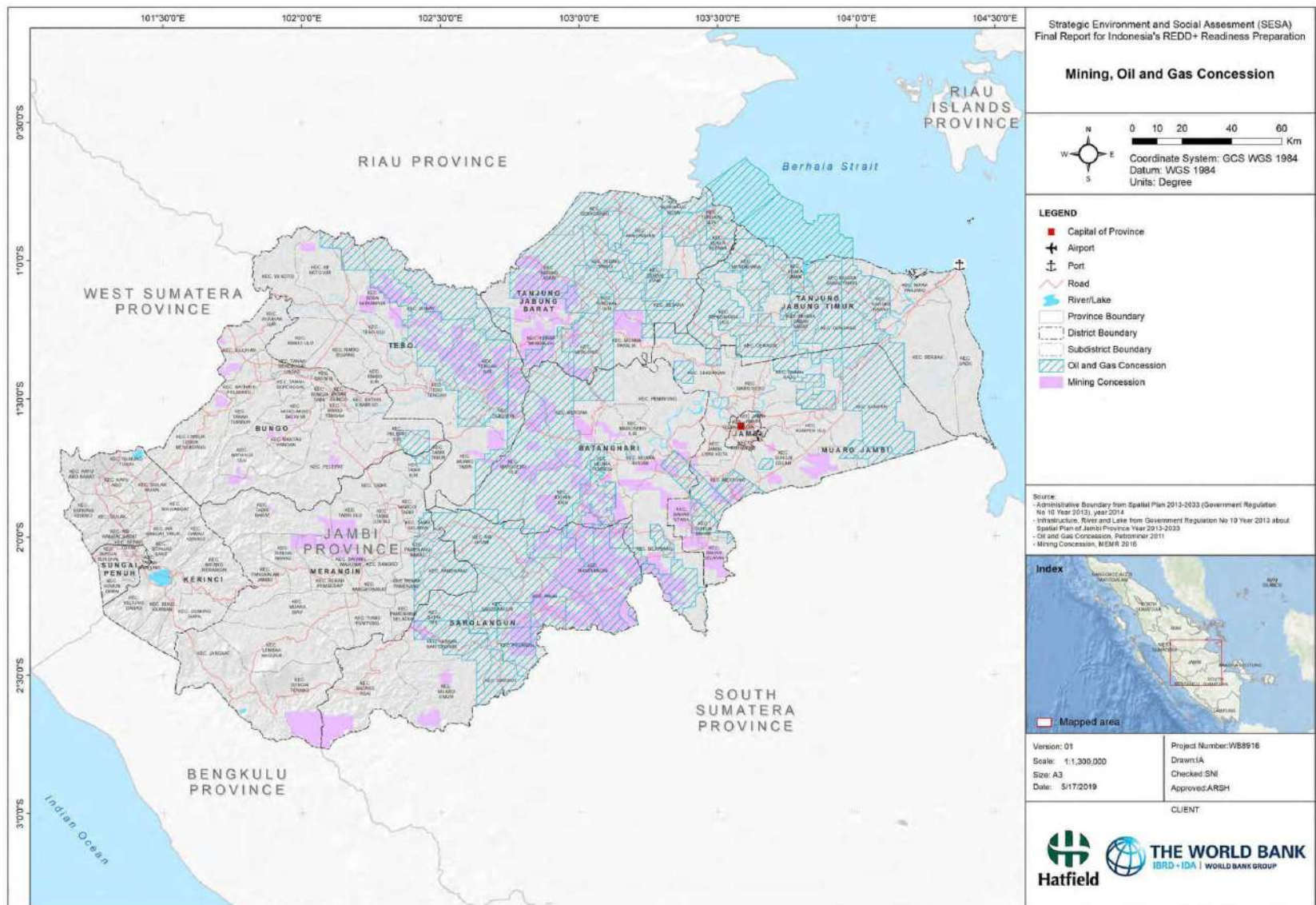




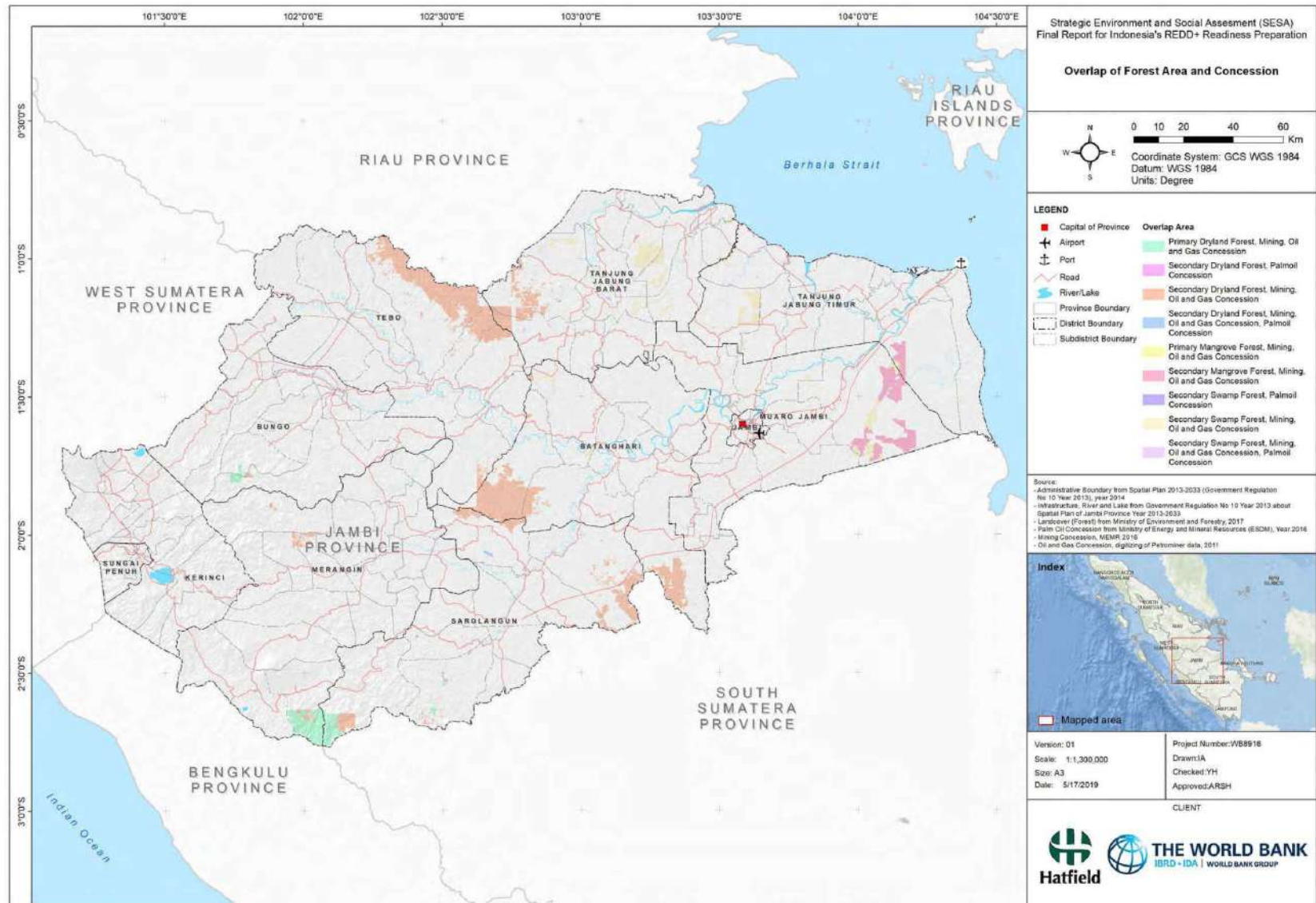
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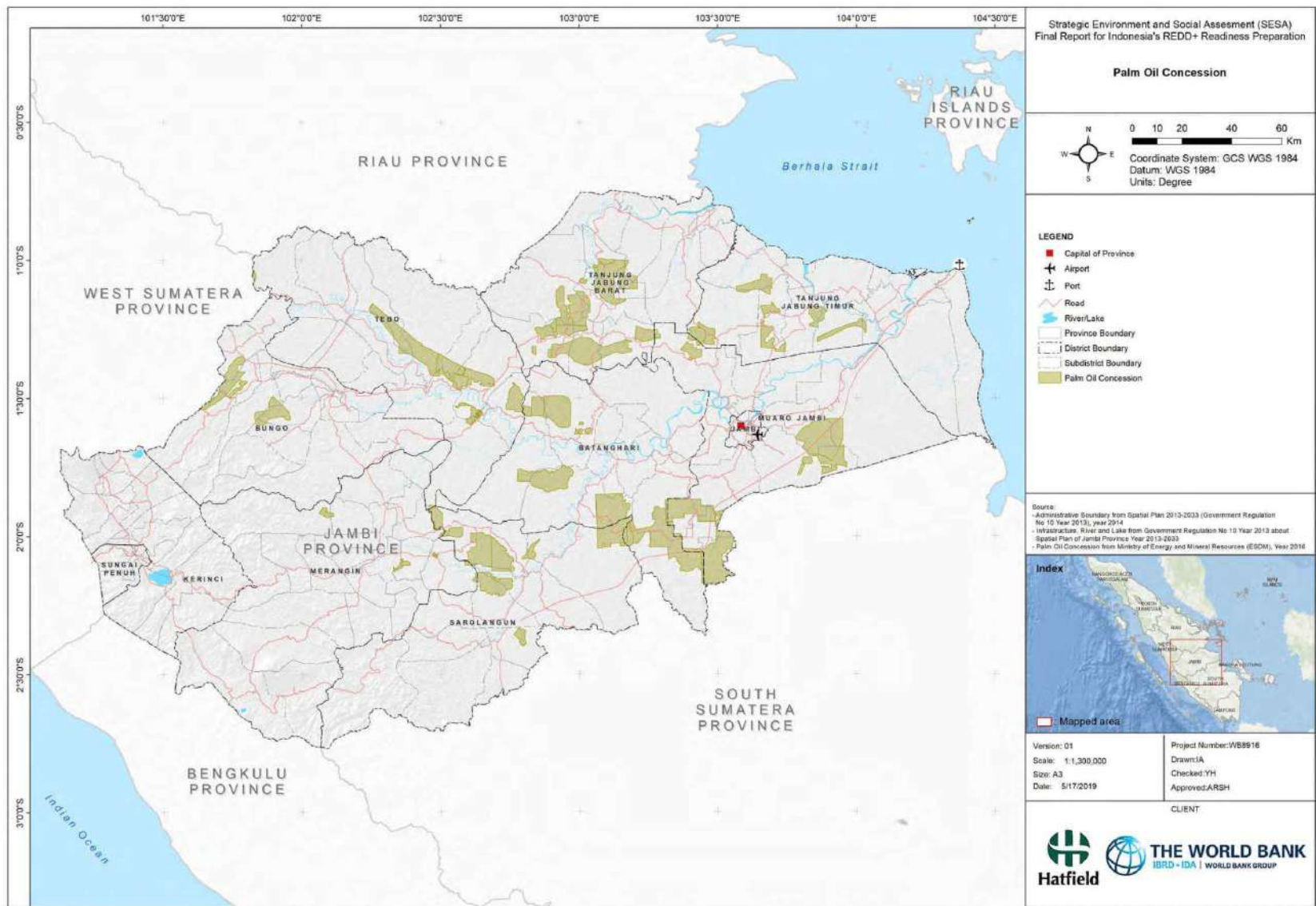


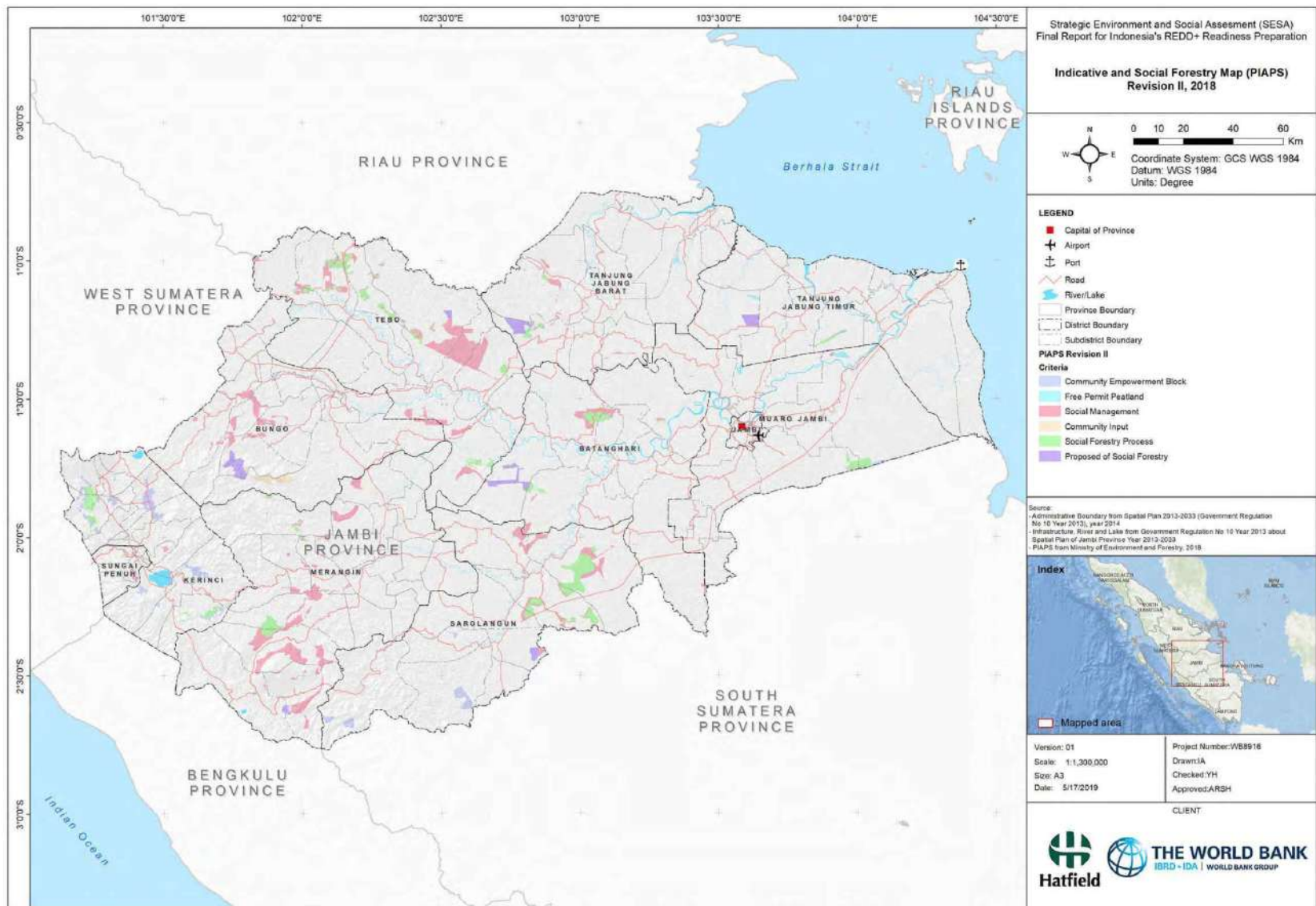


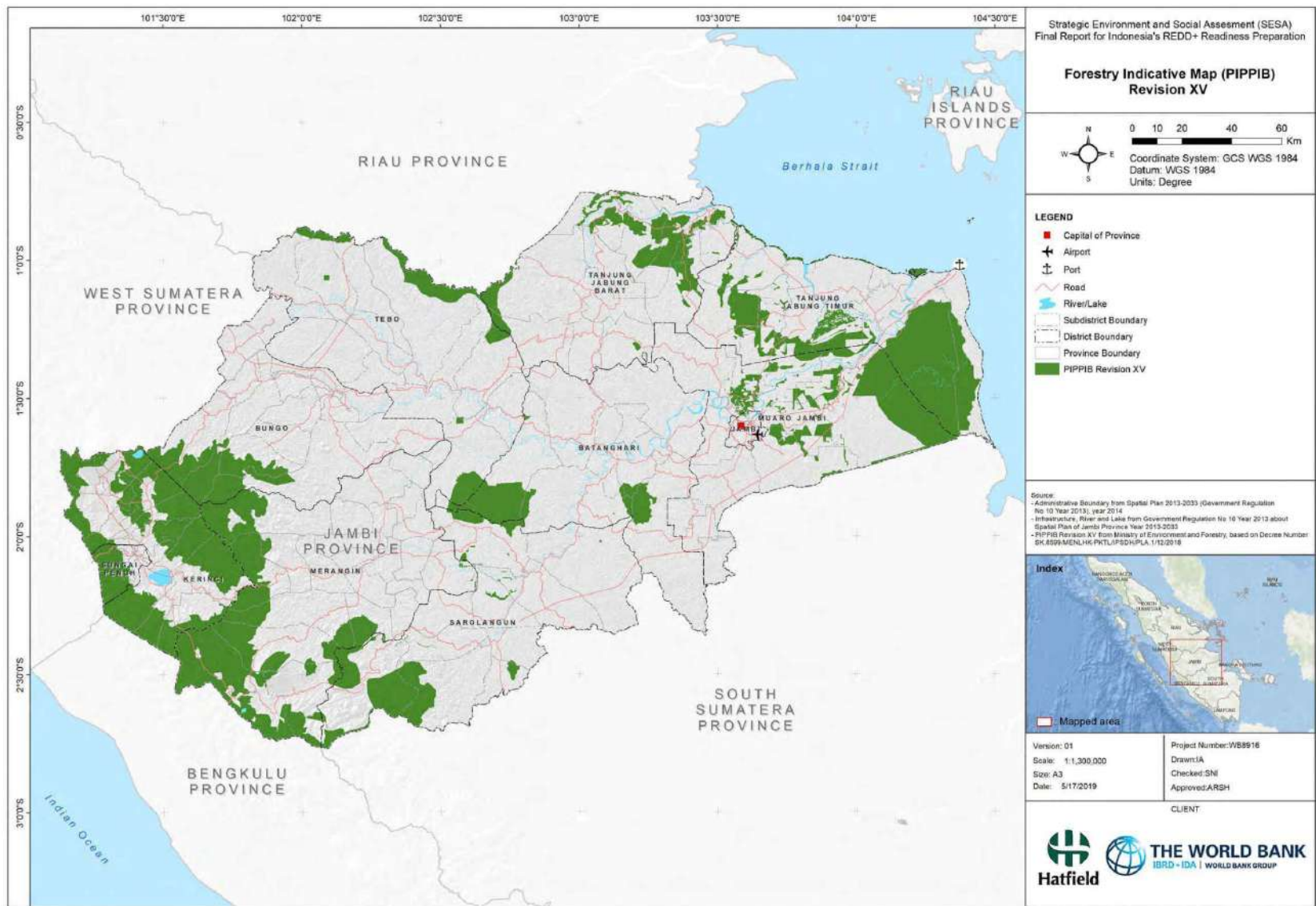
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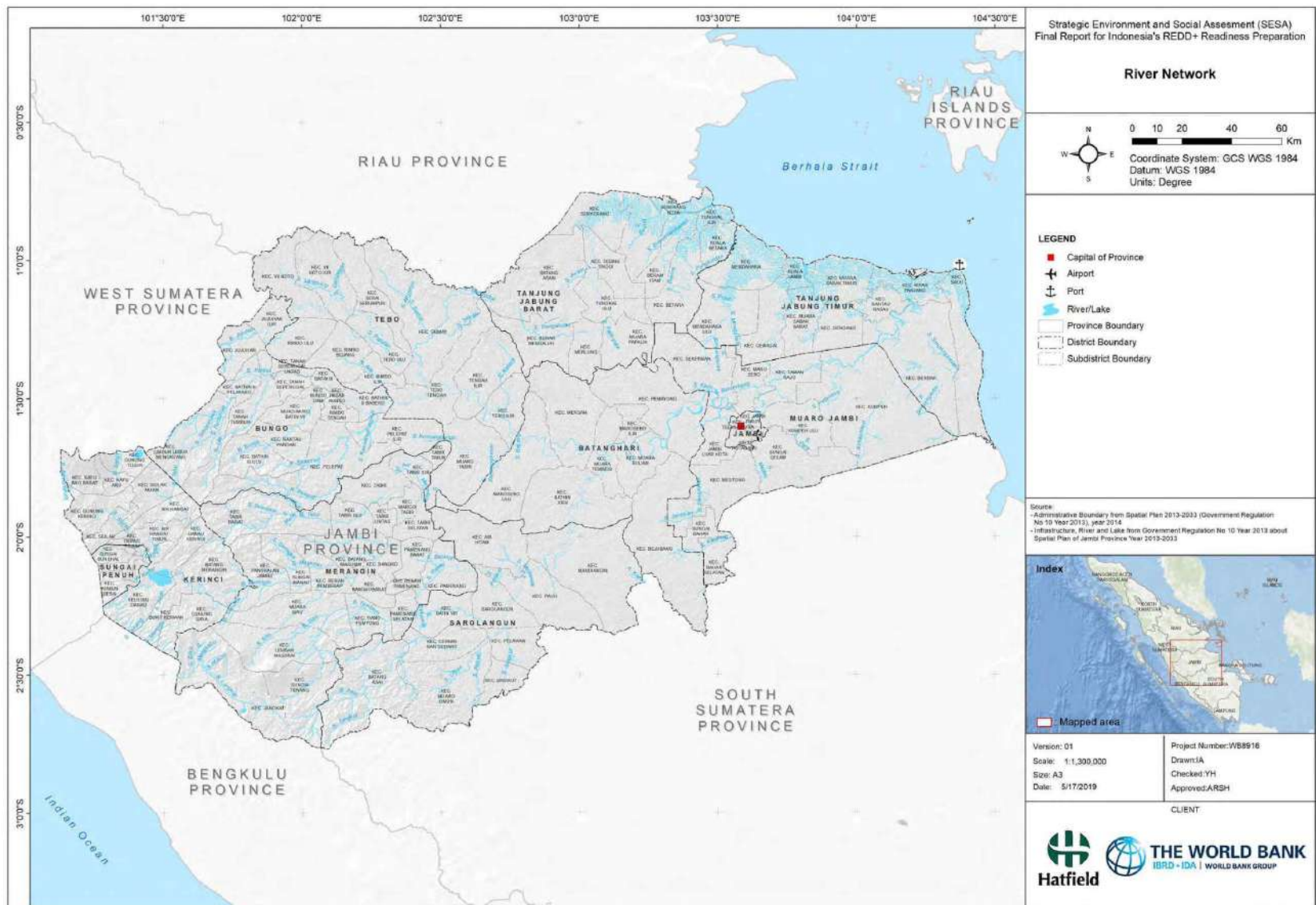
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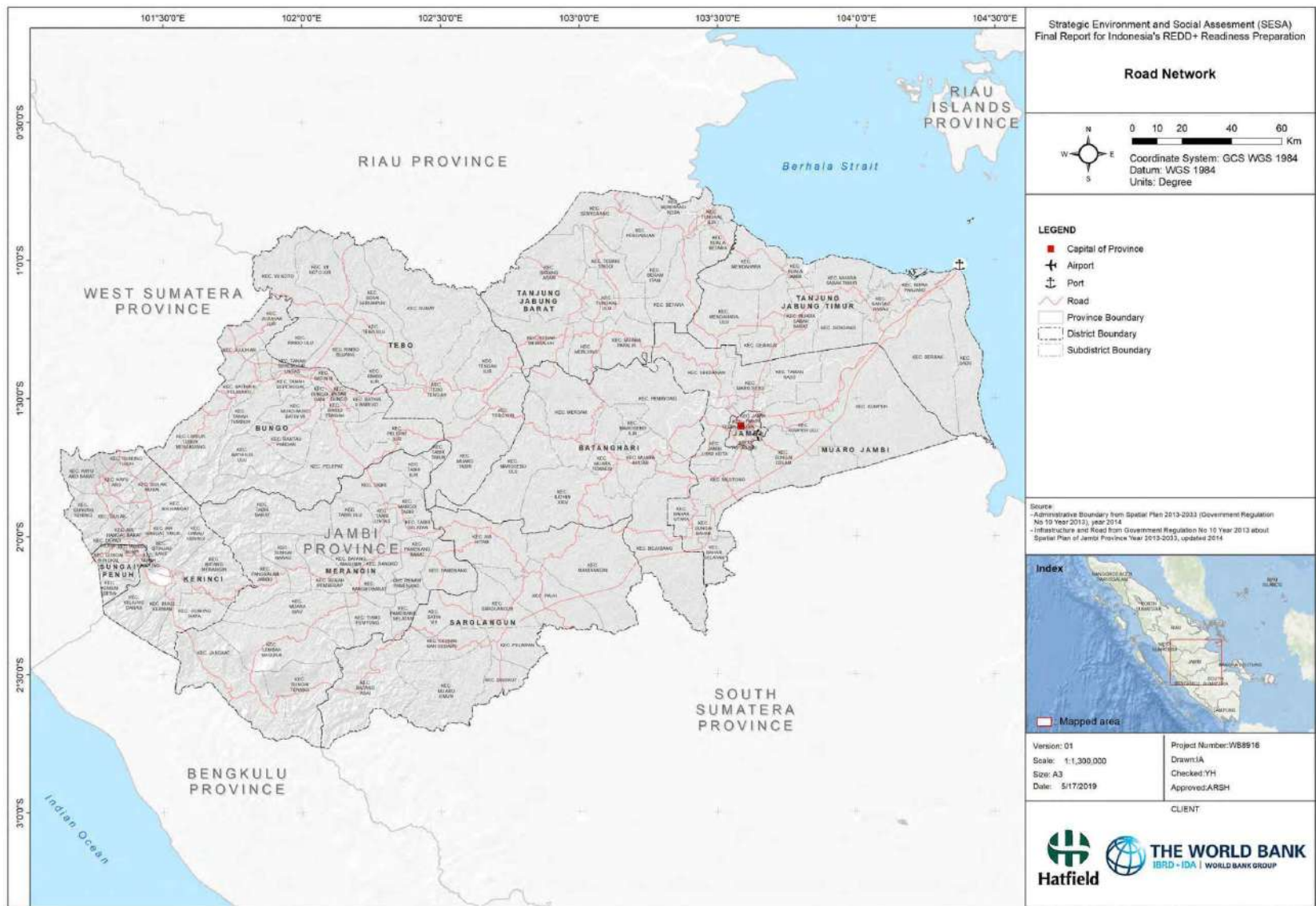


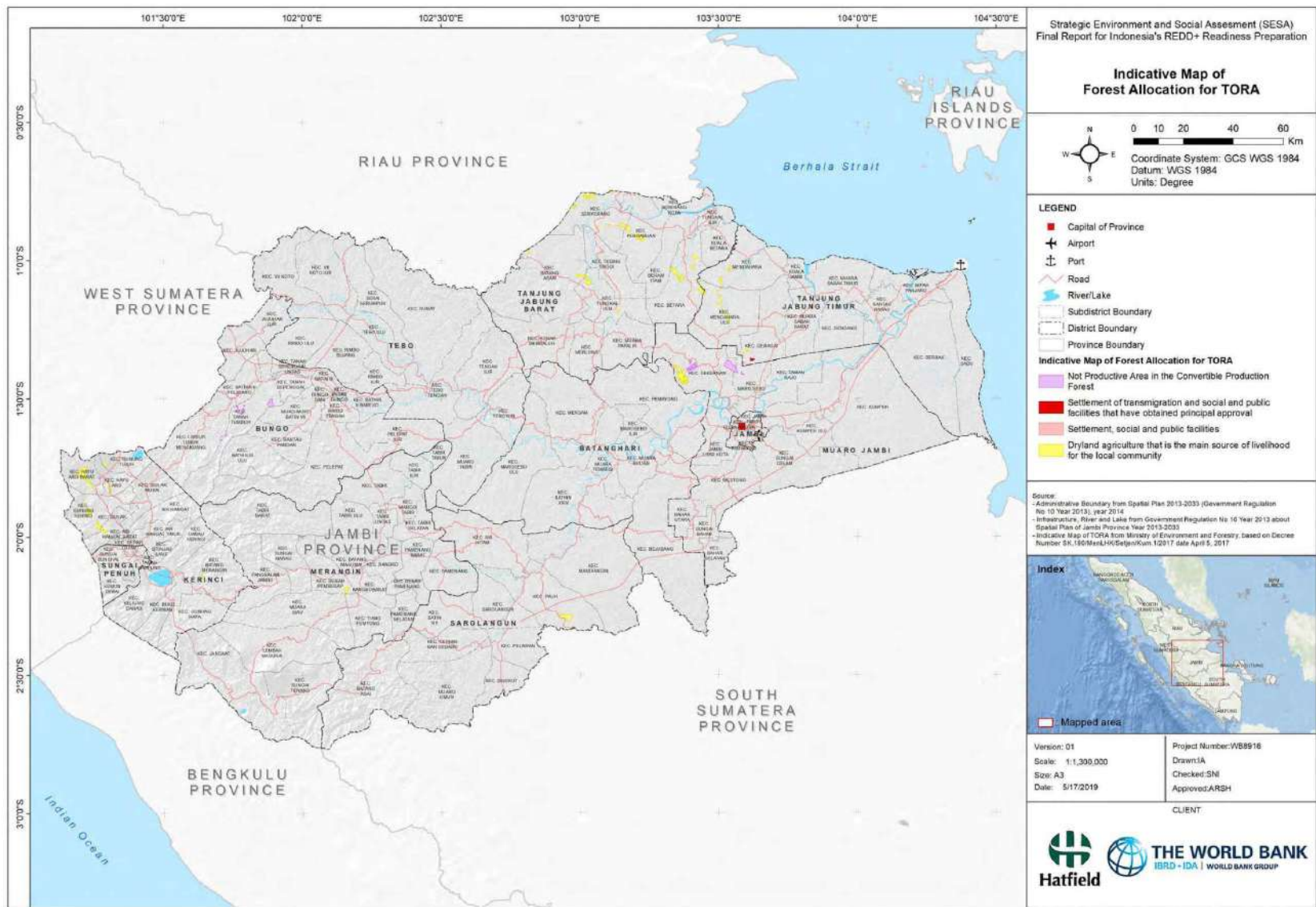


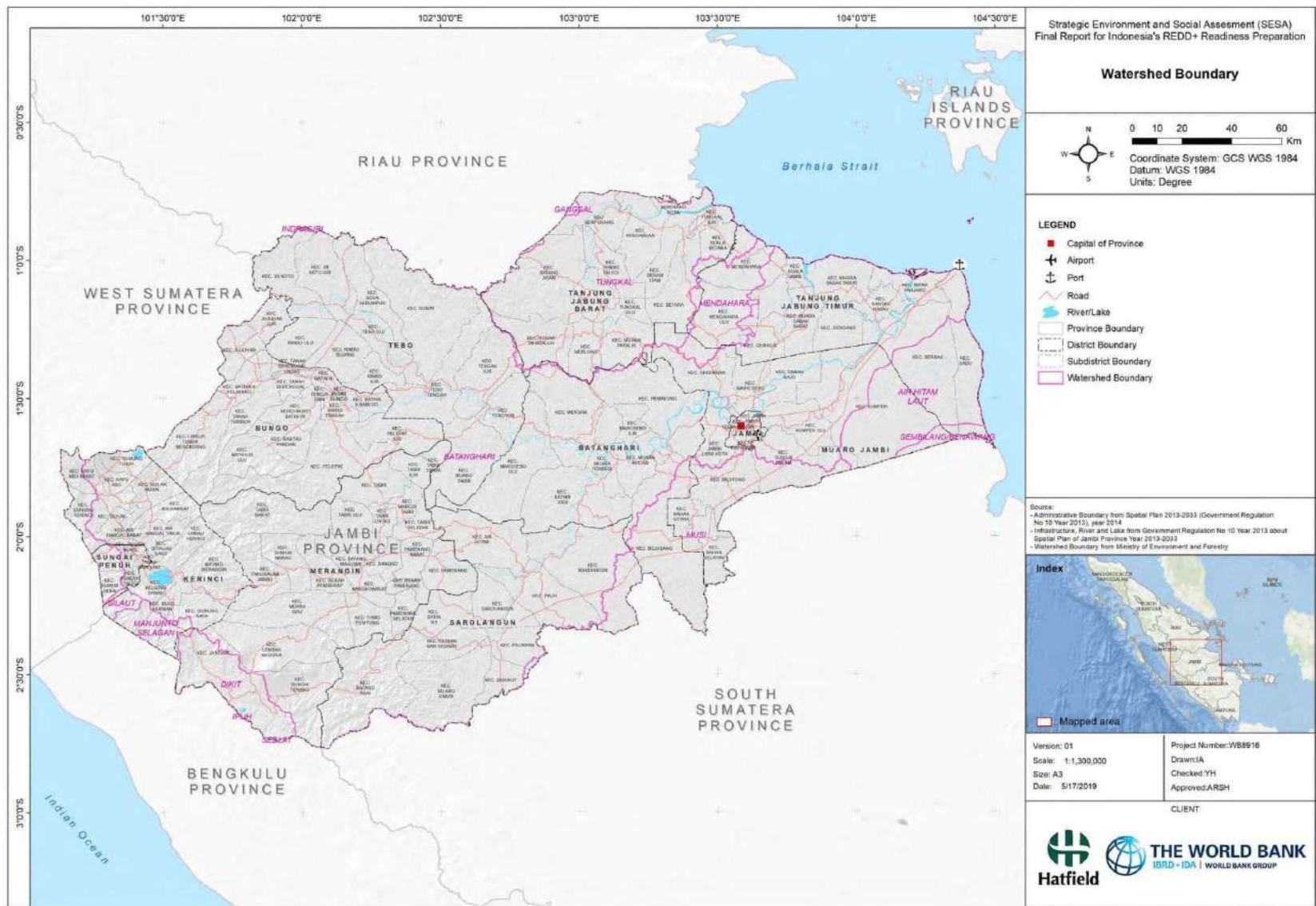


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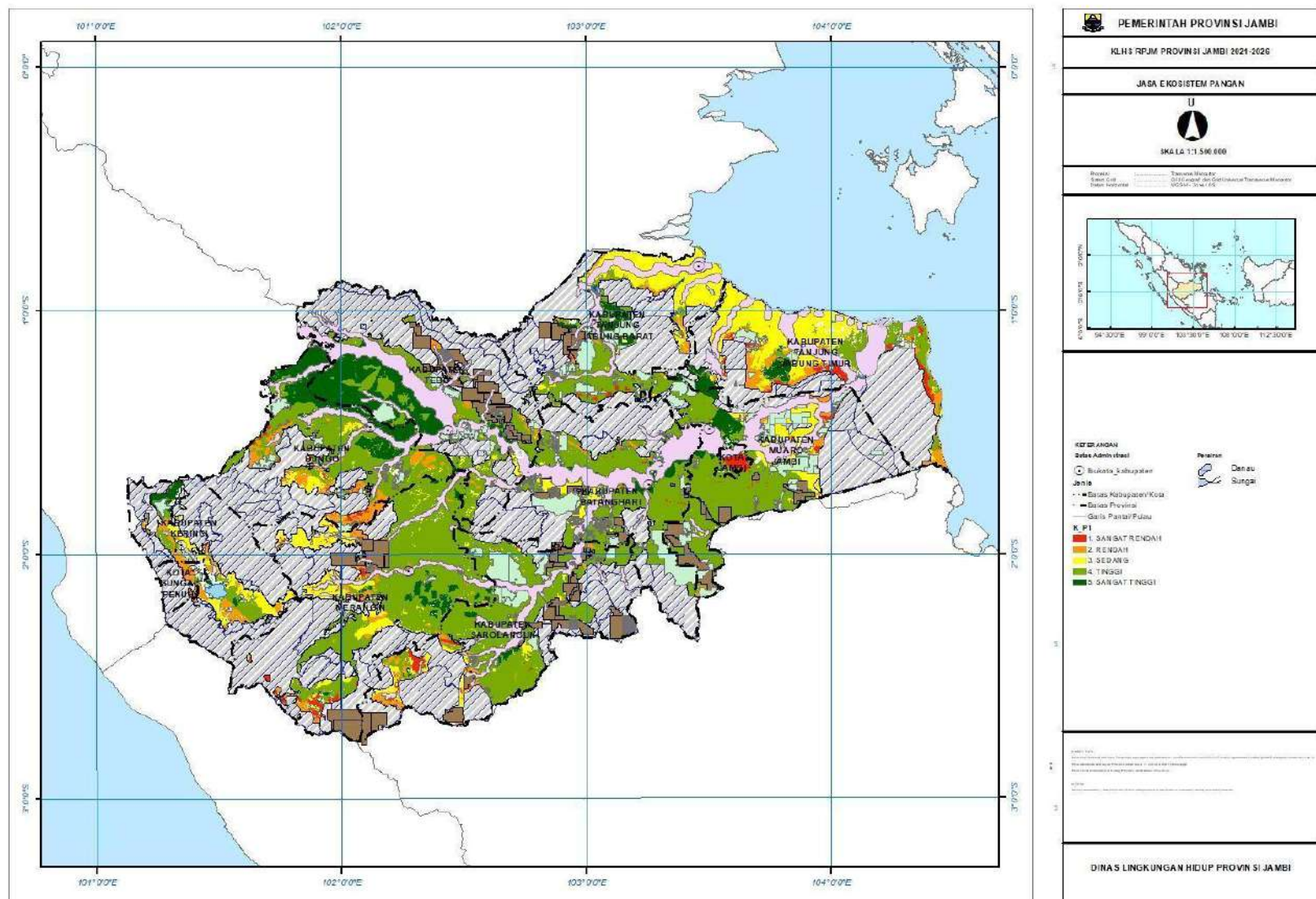








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Appendix A2. Records of Consultation Processes

Stakeholder Consultations Process and Coordination

Date and Location	Participants (Male/Female)	Topic and Summary of Results
National Level		
June 13th, 2019 Jakarta	Ministries (Home Affairs, Finance, Environment and Forestry /Directorate Mobilization), Universities (Research Center of University of Indonesia, Faculty of Forestry of Bogor Agricultural University/IPB, Institutions / donors(GIZ, USAid, UKAid, AUSAid) Male : 25 Person Female : 7 Person	FGD on National concept and Implementation Mechanism for BSM of Emission Reduction
June 14th-15th, 2019 Bogor	Directorate General Climate Change (Directorate Mitigation, GHG Inventory), Provincial Services, FMU (KPH, Tahura). National Park, Universities (University of Jambi, University of Lampung, Bogor Agricultural University), NGOs, ICs Male : 24 Person Female : 9 Person	FGD Developing the monitoring and tracking systems on landscape emission.

Date and Location	Participants (Male/Female)	Topic and Summary of Results
August 9th, 2019 Bogor	Ministries (Home Affairs, Finance, Village and Transmigration, Environment and Forestry), Universities (Research Center of University of Indonesia, Faculty of Forestry of Bogor Agricultural University/IPB, Institutions / donors(GIZ, USAid, UKAid, AUSAid, CIFOR< ICRAF), ICs, FIP Consultant Male : 38 Person Female : 13 Person	FGD on Design of Benefit Sharing Mechanism for BioCF ISFL
August 13rd, 2019 Bogor	Directorate General Climate Change (Directorate Mobilization), Provincial Services, FMU (KPH), Universities (University of Jambi), ICs, NGOs Male : 18 Person Female : 8 Person	FGD on Data Analysis and Information for BSM of Emission Reduction
November 7th, 2019 Bogor	Directorate General Climate Change (Directorate Mobilization), Provincial Services, FMU (KPH), Universities, ICs, NGOs Male : 21 Person Female : 7 Person	FGD on Data Analysis and Information for BSM of Emission Reduction

Date and Location	Participants (Male/Female)	Topic and Summary of Results
November 8th, 2019 Bogor	Forestry and Plantation Companies Non-Governmental Organization, LSM, Directorate General of Climate Change Control - Ministry of Environment and Forestry, Jambi Province Bappeda, Jambi Province Forestry Service, Jambi Province Plantation Service, Jambi Province Agriculture Service, Jambi Provincial Research and Development Agency Male : 56 Person Female : 38 Person	FGD on Private sector collaboration on reducing emissions in Jambi Provinces
November 25th, 2019 Jakarta	Directorate General of Climate Change Control - Ministry of Environment and Forestry, Jambi Province Bappeda, Jambi Province Forestry Service, Jambi Province Plantation Service, Jambi Province Agriculture Service, Regional Financial Agency, KPH-KPH in Jambi Province, Jambi University, Forestry and Plantation Companies Non-Governmental Organization Male : 23 Person Female : 9 Person	FGD on Consultation on final draft BSM of Emission Reduction with Jambi Stakeholders
November 26th, 2019 Jakarta	Forestry and Plantation Companies Non-Governmental Organization, LSM, Directorate General of Climate Change Control - Ministry of Environment and Forestry, Jambi Province Bappeda, Jambi Province Forestry Service, Jambi Province Plantation Service, Jambi Province Agriculture Service, Jambi Provincial Research and Development Agency Male : 86 Person	FGD on Private sector collaboration on reducing emissions in Jambi Provinces

Date and Location	Participants (Male/Female)	Topic and Summary of Results
	Female : 47 Person	
November 27th, 2019 Bogor	Directorate General of Climate Change Control - Ministry of Environment and Forestry, investment management system Directorate – Ministry of Finance, Regional Budget Directorate – Ministry of Internal Affairs Male : 14 Person Female : 7 Person	FGD on Consultation on final draft BSM of Emission Reduction with other relevant Ministries
November 28th, 2019 Bogor	Directorate General of Climate Change Control - Ministry of Environment and Forestry, Social Economic Forest Policy and Climate Change Center, UI Researcher Male : 17 Person Female : 8 Person	FGD on Consultation on final draft BSM of Emission Reduction with Expert/ Researcher

Date and Location	Participants (Male/Female)	Topic and Summary of Results
September 24th, 2020 Jakarta	The Ministry of Finance's Director of Loans and Grants, director of state treasury management, director of special transfer funds, head of the planning bureau, head of the bureau of foreign cooperation, secretary of the directorate general of climate change control, Secretary of the Directorate General of Regional Secretary, the director of the greenhouse gas inventory, World Bank Male : 26 Person Female : 14 Person	Further Meeting on Pre Investment Grants Proposal for Biocarbon Fund Initiative Forest Landscape
October 15th, 2020 Jakarta	Setditjen PPI, Head of sub BPO, Head of REDD+ Governance, Head of REDD Monitoring and Evaluation, Eko Nugroho, REDD+ Staff, Sofyan, Julius Raffles, Doso Sriraharjo, Hery Purnomo, Suyitno, Faisal Dahlan Male : 14 Person Female : 8 Person	Meeting to discuss the procurement of goods at the climate change mitigation directorate from the ISFL BioCF grant area
November 17th, 2020 Jakarta	Sekditjen PPI, Director of Fund Collection and Development - Environmental Fund Management Agency Hidup (BPD LH), Director of Conservation Area, Directorate General of KSDAE, Director of IGRK and MPV, Director of MPI, Director of MS2R, Head of the Center for PPI KHL Sumatra Region; the ICs Male : 12 Person Female : 9 Person	Jambi Province BSM Concept Refinement Workshop: Strengthening the Technical Aspects of Benefit Distribution to Central Government Institutions.

Date and Location	Participants (Male/Female)	Topic and Summary of Results
November 19th, 2020 Jakarta	Secretary of the Directorate General of PPI, Director of MPI, Director of IGRK and MPV, Director of MS2R, Head of Sub-Directorate for REDD, Head of B PPI KHL Sumatra Region, Head of Sub-Directorate for REDD +, Bappeda Prov. Jambi, Dishut Prov. Jambi, DLH Prov. Jambi, Food Crops Service Prov. Jambi, Disbun Prov. Jambi, Balitbangda Prov. Jambi, Team Leader SNPMU BioCF ISFL, Jambi Safeguard Team,, UPTD KPHP and Tahura in Jambi, Balai KSDAE Prov. Jambi, BTN Berbak and Sembilang, BTN Bukit Dua Belas, BTN Bukit Tiga Puluh, BTN Kerinci Seblat, UnJa (Faculty of Forestry), NGOs, WB, ICs. Male : 25 Person Female : 19 Person	2nd Discussion on Preparation for the Implementation of BioCF-ISFL FPIC Pre Investment (Focus on Methodology and Design)
November 24th, 2020 Jakarta	Offline: Secretary of the Directorate General of PPI, Director of IGRK and MPV, Director of MPI, Director of MS2R, Director of IPSDH, Directorate General of PKTL, Head of BPPI KHL Region Sumatra. On line: Bappeda Prov. Jambi, Dishut Prov. Jambi, DLH Prov. Jambi, Food Crops Service Prov. Jambi, Disbun Prov. Jambi, Team MAR Jambi, UnJa (Faculty of Forestry), Secretary of PSDH, UPTD KPHP and Tahura Scope Prov. Jambi, Balai KSDA Prov. Jambi, BTN Berbak and Sembilang, BTN Bukit Dua Belas, BTN Bukit Tiga Puluh, BTN Kerinci Seblat, NGOs, WB, ICs. Male : 29 Person	Further Discussion of MAR Jambi Province: Preparation of Standard Operating Procedures (SOP) for MAR System Institutional within the framework of the BioCF-ISFL Program Jambi Province Pre-Investment Phase

Date and Location	Participants (Male/Female)	Topic and Summary of Results
	Female : 16 Person	
November 26th, 2020 Bogor	Offline: Secretary of the Directorate General of PPI, Director of IGRK and MPV, Director of MPI, Director of MS2R, Director of KK, PI staff (Head of Sub-Directorate, Kasi, staff), ICs. On line: Bappeda Prov. Jambi, Dishut Prov. Jambi, DLH Prov. Jambi, Food Crops Service Prov. Jambi, Disbun Prov. Jambi, Balitbangda Prov. Jambi, Head of the SNPMU Jambi Team, Head of the Sumatra Region KHL PPI Hall; Jambi Safeguard Team, UPTD KPHP and Tahura Scope Prov. Jambi, Balai KSDA Prov. Jambi, BTN Berbak and Sembilang, BTN Bukit Dua Belas, BTN Bukit Tiga Puluh, BTN Kerinci Seblat, UnJa (Faculty of Forestry), NGOs (Sekber PSDH, etc.), WB, ICs. Male : 43 Person	3rd Discussion on Finalization of Preparation for FPIC Pre Investment Implementation of BioCF-ISFL Jambi

Date and Location	Participants (Male/Female)	Topic and Summary of Results
	Female : 19 Person	
December 1st, 2020 (Online)	Online: Sekditjen PPI, Direktur MPI, Direktur IGRK dan MPV, Direktur MS2R, Kasubdit REDD, Kepala Balai PPI KHL Region Sumatra, Kasi lingkup Subdit REDD+, Bappeda Prov. Jambi, Dishut Prov. Jambi, DLH Prov. Jambi, Dinas Tanaman Pangan Prov. Jambi, Disbun Prov. Jambi, Balitbangda Prov. Jambi, Ketua Tim SNPMU BioCF ISFL, Tim Safeguard Jambi, , UPTD KPHP dan Tahura Lingkup Prov. Jambi, Balai KSDAE Prov. Jambi, BTN Berbak dan Sembilang, BTN Bukit Dua Belas, BTN Bukit Tiga Puluh, BTN Kerinci Seblat, UnJa (Fakultas Kehutanan), NGOs, WB, ICs. Male : 27 Person Female : 16 Person	Discussion on the preparation for the implementation of FPIC

Date and Location	Participants (Male/Female)	Topic and Summary of Results
December 22nd, 2020 Jakarta	Offline: Secretary of the Directorate General of PPI, Director of IGRK and MPV, Director of MPI, Director of MS2R, Director of KK, PI staff (Head of Sub-Directorate, Kasi, staff), ICs. On line: Bappeda Prov. Jambi, Dishut Prov. Jambi, DLH Prov. Jambi, Food Crops Service Prov. Jambi, Disbun Prov. Jambi, Balitbangda Prov. Jambi, Head of the SNPMU Jambi Team, Head of the Sumatra Region KHL PPI Hall; Jambi Safeguard Team, UnJa (Faculty of Forestry), Secretary of PSDH, ICs Male : 23 Person Female : 11 Person	Discussion on the preparation for the implementation of FPIC
December 23rd, 2020 Jakarta	On line: Director of IGRK and MPV, Director of MPI, Director of IPSDH Directorate General of PKTL, Head of BPPI KHL Region Sumatra Staff of the Directorate General of PPI (Kasubdit, Kasi, staff); Bappeda Prov. Jambi, Dishut Prov. Jambi, DLH Prov. Jambi, Food Crops Service Prov. Jambi, Disbun Prov. Jambi, Team MAR Jambi, UnJa (Faculty of Forestry), Secretary of the PSDH, YLBHI, ICs Male : 26 Person Female : 13 Person	Further Discussion on Standard Operating Procedures (SOP) and MAR System Implementation Guidelines to Support BioCF-ISFL Implementation in Jambi Province

Date and Location	Participants (Male/Female)	Topic and Summary of Results
March 3rd, 2021 Bogor	Offline : Director of special transfer fund ministry of finance, Secretary of Directorate General Climate Change, Secretary of the Province of Jambi, Provincial Services (Bappeda Prov. Jambi), Finance Agency Jambi Province, Head of Sub REDD+ Directorate, Head of REDD+ Governance, Head of Monitoring and Evaluation REDD+, ICs. Online : Forestry Services of Jambi Provinces, DTPHP Prov. Jambi, Plantation Services Jambi Province, Environmental Services Jambi Province, Head of Sub National Project Management Unit, Head of Climate Change Control Sumatra Region, Haed of Planning Bereau, Head of Foreign Cooperation, Head of Safeguard, Head of MAR Male : 24 Person Female : 9 Person	Follow-up Meeting on FPIC Preparation and Draft PKS and SPKS BioCF ISFL Preparation Activities
March 4th, 2021 Jakarta	Directorate of IGRK and MPV, Directorate of MPI, Directorate of IPSDH Directorate General of PKTL, BPPI KHL Sumatra Region, Bappeda Jambi Province, Plantation Services Jambi Province (Disbun), NGOs, ICs Male : 19 Person Female : 4 Person	Coordination of the implementation of the MAR Pre-Investment BIOCF ISFL system development activities

Date and Location	Participants (Male/Female)	Topic and Summary of Results
March 12nd, 2021 Bogor	Offline : Director of IGRK and MPV, Director of MPI, Director of MS2R, Director of KK, PI staff (Head of Sub-Directorate, Kasi, staff), ICs. Online : Sekditjen PPI, UPTD KPHP and Tahura Scope Prov. Jambi, Balai KSDA Prov. Jambi, BTN Berbak and Sembilang, BTN Bukit Dua Belas, BTN Bukit Tiga Puluh, BTN Kerinci Seblat, ICs Male : 18 Person Female : 10 Person	Coordination of Budget Revision Procedures For BIOCF-ISFL Pre-Investment Activities
March 16 2021, Bogor	Director of IGRK MPV, Director of IPSDH, Head of Sub-Directorate of IGRK for Land-Based Sector, Head of Sub-Directorate of MPV for Mitigation Action and Land-Based Registry, Head of Sub-Directorate of PSDH Director of IPSDH, Technical Team of MAR Jambi, Dr. Ir. Teddy Rusolono Male : 14 Person Female : 9 Person	Coordination of the implementation of the uncertainty analysis discussion and the QA/QC process in the GHG Inventory (Series 1)
24 March 2021	Director of IGRK MPV, Director of IPSDH, Head of Sub-Directorate of IGRK for Land-Based Sector, Head of Sub-Directorate of MPV for Mitigation Action and Registry of Land-Based Sectors, Head of Sub-Directorate IPSDH, Dr. Ir. Teddy Rusolono (IPB), Solihin Manuri (MRV Specialist), Subarno (Data, System, and GHG Analyst), and staff from the DGCC, Staff of Balai PPIKHL Sumatera region, Jambi Province Carbon Calculation/MAR Technical Team, staf of P3SEKPI	Coordination of Preparation for Implementation of Uncertainty Analysis Activities Changes in Land Closure and the QA / QC Process in GHG Inventory within the Framework of the Jambi Province BIOCF ISFL program series 2

Date and Location	Participants (Male/Female)	Topic and Summary of Results
	Male : 14 Person Female : 9 Person	
March 30th – April 1st, 2021	Director of IGRK MPV, Director of IPSDH, Head of Sub-Directorate of IGRK for Land-Based Sector, Head of Sub-Directorate of MPV for Mitigation Action and Registry of Land-Based Sectors, Head of Sub-Directorate IPSDH, Dr. Ir. Teddy Rusolono (IPB), Solihin Manuri (MRV Specialist), Subarno (Data, System, and GHG Analyst), and staff from the DGCC, Staff of Balai PPIKHL Sumatera region, Jambi Province Carbon Calculation/MAR Technical Team, staf of P3SEKPI Male : 18 Person Female : 13 Person	Uncertainty Analysis and QA / QC in GHG Inventory within the framework of the BIOCF-ISFL, Jambi Province series 3 program

Date and Location	Participants (Male/Female)	Topic and Summary of Results
April 9th, 2021 Serpong	Offline : Director of IGRK and MPV, Director of MPI, Director of MS2R, PI staff (Head of Sub-Directorate, Kasi, staff), ICs. Online : Sekditjen PPI, UPTD KPHP and Tahura Scope Prov. Jambi, Balai KSDA Prov. Jambi, BTN Berbak and Sembilang, BTN Bukit Dua Belas, BTN Bukit Tiga Puluh, BTN Kerinci Seblat, ICs Male : 19 Person Female : 9 Person	Workshop on the Procurement of Goods and Services for the ISFL BioCF Program
April 12nd, 2021 Jambi	Director of IGRK MPV, Director of IPSDH, Head of Sub-Directorate of IGRK for Land-Based Sector, Head of Sub-Directorate of MPV for Mitigation Action and Registry of Land-Based Sectors, MAR Jambi Technical Team, Dr. Ir. Teddy Rusolono (IPB), Solihin Manuri (MRV Specialist), Rina Wulandari (Forestry Specialist) and staff from the Directorate General of PPI, Jambi Province Carbon Calculation/MAR Technical Team, P3SEKPI staff Male : 13 Person Female : 8 Person	Coordination of finalization of the preparation of MAR's institutional SOP in the BIOCF-ISFL program framework

Date and Location	Participants (Male/Female)	Topic and Summary of Results
April 12nd – 14th, 2021 Bogor	Director of IGRK MPV, Director of IPSDH, Head of Sub-Directorate of REDD+, Head of Sub-Directorate of IGRK for Land-Based Sector, Head of Sub-Directorate of MPV for Mitigation Action and Registry of Land-Based Sectors, Head of Sub-Directorate IPSDH, Dr. Ir. Teddy Rusolono (IPB), Solihin Manuri (MRV Specialist), Subarno (Data, System, and GHG Analyst), and staff from the DGCC, Staff of Balai PPIKHL Sumatera region, ambi Province Carbon Calculation/MAR Technical Team Male : 13 Person Female : 5 Person	Uncertainty Analysis and QA / QC IGRK BIOCF-ISFL series 4 program
April 15th, 2021 Jakarta	Director of IGRK MPV Head of Sub-Directorate of IGRK for Land-Based Sector, Dr. Ir. Teddy Rusolono (IPB), Dr. Arief Darmawan (Unila), dan staff of the government of jambi province, staff of Balai PPIKHL Sumatera region, staf of DGCC, Jambi Province Carbon Calculation/MAR Technical Team, P3SEKPI staff. Male : 13 Person Female : 7 Person	Finalized MAR System Institutional Standart Operational Procedure

Date and Location	Participants (Male/Female)	Topic and Summary of Results
April 19th, 2021 Jakarta	Director of IGRK MPV, Director of IPSDH, Head of Sub-Directorate of REDD+, Head of Sub-Directorate of IGRK for Land-Based Sector, Head of Sub-Directorate of MPV for Mitigation Action and Registry of Land-Based Sectors, MAR Jambi Technical Team, Dr. Ir. Teddy Rusolono (IPB), Solihin Manuri (MRV Specialist), Rina Wulandari (Forestry Specialist) and staff from the Directorate General of PPI, Jambi Province Carbon Calculation/MAR Technical Team, P3SEKPI staff. Male : 14 Person Female : 7 Person	C-Stock Data Measurement Coordination Workshop
April 21st-23rd, 2021 Bogor	Director of IGRK MPV, Head of Sub-Directorate for Land Based Sector IGRK, MAR Jambi Technical Team, Dr. Ir. Teddy Rusolono (IPB), Solichin Manuri Ph.D. (MRV Specialist), Head of Sub-Directorate PSDH Directorate of IPSDH, staff of Directorate General of PPI and staff of the Directorate of IPSDH. Male : 2 Person Female : 8 Person	Uncertainty Analysis and QA / QC IGRK BIOCF-ISFL series 5 program

Date and Location	Participants (Male/Female)	Topic and Summary of Results
April 27th, 2021 Jakarta	Director of IGRK MPV, Head of Sub-Directorate for Land Based Sector IGRK, MAR Jambi Technical Team, Dr. Ir. Teddy Rusolono (IPB), Solichin Manuri Ph.D. (MRV Specialist), Rina Wulandari (Forestry Specialist), Judin Purwanto (Directorate of IPSDH), Nurul Silva Lestari (P3SEKPI), P3SEKPI staff, PPI KHL Sumatra Regional staff, staff scope Directorate General of PPI and staff of the Directorate of IPSDH. Male : 6 Person Female : 6 Person	Carbon Measurement Methodology Workshop
April 28th-30th, 2021	Offline Head of Sub-Directorate of IGRK for Land-Based Sector, Head of Sub-Directorate of MPV for Mitigation Action and Registry of Land-Based Sectors, Dr. Ir. Teddy Rusolono (IPB), and staff from the DGCC Online: Director of IGRK MPV, Director of IPSDH, Head of Sub-Directorate IPSDH, Solihin Manuri (MRV Specialist), Subarno (Data, System, and GHG Analyst), , Staff of Balai PPIKHL Sumatera region, Jambi Province Carbon Calculation/ MAR Technical Team, staf of P3SEKPI Male : 14 Person Female : 9 Person	Uncertainty Analysis and QA / QC IGRK BIOCF-ISFL series 6

Date and Location	Participants (Male/Female)	Topic and Summary of Results
April 29th-30th, 2021 Bogor	Director of IGRK MPV, Head of Sub-Directorate for IGRK of Land-Based Sector, Head of Sub-Directorate of MPV for Mitigation Action and Registry of Land-Based Sectors, Head of Sub-Directorate of PSDH Director of IPSDH, Technical Team of MAR Jambi, Dr. Ir. Teddy Rusolono (IPB), Solichin Manuri (MRV Specialist), Subarno (Data, System, and GHG Analyst), staff of the Directorate General of PPI, staff of the Directorate of IPSDH, staff of 35the PPI KHL Center for Sumatra Region, and staff of P3SEKPI. Male : 24 Person Female : 11 Person	Jambi Province Carbon Stock and Emission Factor Measurement Data Compilation
May 3rd – 7th, 2021 Jakarta	Offline : DLH Prov. Jambi, Director of IGRK and MPV, Director of MPI, Director of MS2R, Director of KK, PI staff (Head of Sub-Directorate, Kasi, staff), National Park, ICs. Online : Sekditjen PPI, Director of IGRK and MPV, Director of MS2R, UPTD KPHP and Tahura Scope Prov. Jambi, Balai KSDA Prov. Jambi, BTN Berbak and Sembilang, BTN Bukit Dua Belas, BTN Bukit Tiga Puluh, BTN Kerinci Seblat, NGOs, WB, ICs Male : 24 Person Female : 12 Person	The Government of Indonesia and The World Bank Joint Implementation Mission BioCarbon Fund Plus Initiative for Sustainable Forest Landscapes (BioCFplus ISFL) Jambi Sustainable Landscape Management Project (JSLMP) Participants :

Date and Location	Participants (Male/Female)	Topic and Summary of Results
May 6th – 8th, 2021	Director of IGRK MPV, Director of IPSDH, Head of Sub-Directorate of IGRK for Land-Based Sector, Head of Sub-Directorate of MPV for Mitigation Action and Registry of Land-Based Sectors, Head of Sub-Directorate IPSDH, kehutanan, Kasi IGRK sektor pertanian, Kasi MPV dan Registri sektor Kehutanan, Dr. Ir. Teddy Rusolono (IPB), Solihin Manuri (MRV Specialist), staff from the DGCC, staf IPSDH, Staff of Balai PPIKHL Sumatera region, Jambi Province Carbon Calculation/MAR Technical Team, staf of P3SEKPI Male : 14 Person Female : 6 Person	Uncertainty Analysis and QA / QC IGRK BIOCF-ISFL series 7 programs
May 20th – 22nd, 2021 Bogor	Director of IGRK MPV, Director of IPSDH, Head of Sub-Directorate of IGRK Land-Based Sector Director of IGRK MPV, Head of Sub-Directorate of MPV for Mitigation Action and Registry for Land-Based Sector Director of IGRK MPV, Head of Sub-Directorate of PSDH Dir IPSDH, Head of IGRK for the forestry sector, Head of IGRK for the agricultural sector, Head of MPV and Registry for the Forestry sector , Jambi MAR Technical Team, Dr. Ir. Teddy Rusolono (IPB), Solichin Manuri (MRV Specialist), staff of the MPI directorate, staff of the Directorate General of PPI, staff of the Directorate of IPSDH, staff of Balai PPI KHL Sumatra Region, and staff of P3SEKPI scope. Male : 10 Person Female : 8 Person	Implementation of Uncertainty analysis of changes in national forest and land cover and the QC process from the results of the Jambi Province land cover assessment (Series 8) in the Pre-Investment phase

Date and Location	Participants (Male/Female)	Topic and Summary of Results
May 27th – 29th, 2021 Bogor	Director of IGRK MPV, Director of IPSDH, Head of Sub-Directorate of IGRK Land-Based Sector Director of IGRK MPV, Head of Sub-Directorate of MPV for Mitigation Action and Registry for Land-Based Sector Director of IGRK MPV, Head of Sub-Directorate of PSDH Dir IPSDH, Head of IGRK for the forestry sector, Head of IGRK for the agricultural sector, Head of MPV and Registry for the Forestry sector , Jambi MAR Technical Team, Dr. Ir. Teddy Rusolono (IPB), Solichin Manuri (MRV Specialist), staff of the MPI directorate, staff of the Directorate General of PPI, staff of the Directorate of IPSDH, staff of Balai PPI KHL Sumatra Region, and staff of P3SEKPI scope. Male : 12 Person Female : 8 Person	Implementation of Uncertainty analysis of changes in national forest and land cover and the QC process as a result of the Jambi Province land cover assessment (Series 9) in the Pre-Investment phase
May 28th, 2021 Serpong	Offline : Director of IGRK and MPV, Director of MPI, Director of MS2R, Director of KK, PI staff (Head of Sub-Directorate, Kasi, staff), ICs. Online : Sekditjen PPI, Director of IGRK and MPV, Director of MS2R, UPTD KPHP and Tahura Scope Prov. Jambi, Balai KSDA Prov. Jambi, BTN Berbak and Sembilang, BTN Bukit Dua Belas, BTN Bukit Tiga Puluh, BTN Kerinci Seblat, ICs Male : 22 Person Female : 10 Person	Follow-up Meeting Joint Implementation Mission Biocarbon Fund Plus Initiative for Sustainable Forest landscape (BIOCF ISFL) Jambi Sustainable Landscape Management Project (JSLMP)

Date and Location	Participants (Male/Female)	Topic and Summary of Results
June 07th – 09th, 2021 Bogor	Director of IGRK MPV, Director of IPSDH, Head of Sub-Directorate of IGRK Land-Based Sector Director of IGRK MPV, Head of Sub-Directorate of MPV for Mitigation Action and Registry for Land-Based Sector Director of IGRK MPV, Head of Sub-Directorate of PSDH Dir IPSDH, Head of IGRK for the forestry sector, Head of IGRK for the agricultural sector, Head of MPV and Registry for the Forestry sector , Jambi MAR Technical Team, Dr. Ir. Teddy Rusolono (IPB), Solichin Manuri, Ph.D. (MRV Specialist), staff of the MPI directorate, staff of the Directorate General of PPI, staff of the Directorate of IPSDH, staff of Balai PPI KHL Sumatra Region, and staff of P3SEKPI scope Male : 12 Person Female : 10 Person	Implementation of Uncertainty analysis of changes in national forest and land cover as well as the QC process from the results of the Jambi Province land cover assessment (Series 10) in the Pre-Investment phase
June 15th – 17th, 2021 Bogor	Director of IGRK MPV, Director of IPSDH, Head of Sub-Directorate of IGRK Land-Based Sector Director of IGRK MPV, Head of Sub-Directorate of MPV for Mitigation Action and Registry for Land-Based Sector Director of IGRK MPV, Head of Sub-Directorate of PSDH Dir IPSDH, Head of IGRK for the forestry sector, Head of IGRK for the agricultural sector, Head of MPV and Registry for the Forestry sector , Jambi MAR Technical Team, Dr. Ir. Teddy Rusolono (IPB), Solichin Manuri, Ph.D. (MRV Specialist), staff of the MPI directorate, staff of the Directorate General of PPI, staff of the Directorate of IPSDH, staff of Balai PPI KHL Sumatra Region, and staff of P3SEKPI scope Male : 10 Person Female : 4 Person	Implementation of Uncertainty analysis of changes in national forest and land cover and the QC process as a result of the Jambi Province land cover assessment (Series 11) in the Pre-Investment phase

Date and Location	Participants (Male/Female)	Topic and Summary of Results
June 21st, 2021 Jakarta	Director of MPI, Kasubdit REDD +, Head of Sub-Directorate for REDD +, Bappeda Prov. Jambi, Dishut Prov. Jambi, DLH Prov. Jambi, Food Crops Service Prov. Jambi, Disbun Prov. Jambi, Balitbangda Prov. Jambi, Team Leader SNPMU BioCF-ISFL, Jambi Safeguard Team, Sekditjen PPI, Director of IGRK and MPV, Director of MS2R Male : 23 Person Female : 10 Person	Meeting Reconfirmation of Funds Withdrawal Plans and Preparation of Annual Work Plan (AWP) Documents for JSLMP BioCF-ISFL Grants
June 21st – 23rd, 2021 Bogor	Director of IGRK MPV, Director of IPSDH, Head of Sub-Directorate of IGRK Land-Based Sector Director of IGRK MPV, Head of Sub-Directorate of MPV for Mitigation Action and Registry for Land-Based Sector Director of IGRK MPV, Head of Sub-Directorate of PSDH Dir IPSDH, Head of IGRK for the forestry sector, Head of IGRK for the agricultural sector, Head of MPV and Registry for the Forestry sector, Jambi MAR Technical Team, Dr. Ir. Teddy Rusolono (IPB), Solichin Manuri, Ph.D. (MRV Specialist), staff of the MPI directorate, staff of the Directorate General of PPI, staff of the Directorate of IPSDH, staff of Balai PPI KHL Sumatra Region, and staff of P3SEKPI scope Male : 5 Person Female : 4 Person	Implementation of Uncertainty analysis of changes in national forest and land cover and the QC process as a result of the Jambi Province land cover assessment (Series 12) in the Pre-Investment phase

Date and Location	Participants (Male/Female)	Topic and Summary of Results
June 23rd – 24th, 2021 Bogor	Director of IGRK MPV, Head of Sub-Directorate of IGRK Land-Based Sector Director of IGRK MPV, Head of Sub-Directorate of MPV for Mitigation Action and Registry for Land-Based Sector Director of IGRK MPV, Head of Sub-Directorate Resource Mobilization, Head of BPDAS Batanghari, Jambi MAR Technical Team, staff of DG KSDAE, reps from National Park/ BKSDA, Dr. Ir. Teddy Rusolono (IPB), Dr. Eva Achmad (UnJa), Dr. Arief Darmawan (UNILA), Eri Indrawan (Deputy PC), Solichin Manuri, Ph.D. (MRV Specialist), staff of the MPI directorate, staff of the Directorate General of PPI, staff of the Directorate of IPSDH, staff of Balai PPI KHL Sumatra Region, and staff of P3SEKPI scope Male : 36 Person Female : 17 Person	Compilation of Carbon Stock Data and GHG Accounting Results
July 2nd, 2021 (Online)	Kasubdit IGRK Sektor Berbasis Lahan, Kasi IGRK Sektor Kehutanan, Kepala Balai DASHL Batanghari, Forest Programme II, Konsultan FPII, Solichin Manuri (MRV Specialist), Teddy Rusolono (IPB), Rina Wulandari (Forestry Specialist, staf Direktorat IGRKMPV Male : 10 Person Female : 6 Person	Coordination of Carbon Stock Measurement Data with BPDASHL Batanghari and Forest Program II
July 16th, 2021 (Online)	Direktorat MS2R, Direktorat MPI, Direktur IGRK dan MPV, Bappeda Prov. Jambi, Tim MAR, Dinas Perkebunan, Dinas Lingkungan Hidup, IC, Biro Hukum, SN PMU BioCF, Dinas Kehutanan, Sekber PSDH, DLH Prov. Jambi, Dinas Tanaman Pangan Prov. Jambi	Limited Coordination Meeting for Completion of BioCF-ISFL Program Benefit Sharing Plan Documents

Date and Location	Participants (Male/Female)	Topic and Summary of Results
	Male : 20 Person Female : 8 Person	
Juli 23rd, 2021 Jakarta	Sekditjen PPI, Direktur MPI, Direktur IGRK dan MPV, Direktur MS2R, Kasubdit REDD, Kepala Balai PPI KHL Region Sumatra, Kasi lingkup Subdit REDD+, Bappeda Prov. Jambi, Dishut Prov. Jambi, DLH Prov. Jambi, Dinas Tanaman Pangan Prov. Jambi, Disbun Prov. Jambi, Ketua Tim SNPMU BioCF ISFL, Tim Safeguard Jambi, Balai KSDAE Prov. Jambi, BTN Berbak dan Sembilang, BTN Bukit Dua Belas, BTN Bukit Tiga Puluh, BTN Kerinci Seblat, LSM, Related Company, ICs. Male : 47 Person Female : 15 Person	Workshop on Pollution Prevention, Efficient Use of Resources, and Biodiversity Conservation in Jambi Province Emission Reduction Program Management Through BioCF-ISFL
Juli 30th, 2021 (Online)	Online : Sekditjen PPI, Direktur MPI, Direktur IGRK dan MPV, Direktur MS2R, Kasubdit REDD, Kepala Balai PPI KHL Region Sumatra, Kasi lingkup Subdit REDD+, Bappeda Prov. Jambi, Dishut Prov. Jambi, DLH Prov. Jambi, Dinas Tanaman Pangan Prov. Jambi, Disbun Prov. Jambi, Ketua Tim SNPMU BioCF ISFL, Tim Safeguard Jambi, Balai KSDAE Prov. Jambi, BTN Berbak dan Sembilang, BTN Bukit Dua Belas, BTN Bukit Tiga Puluh, BTN Kerinci Seblat, LSM, Related Company, ICs.	Safeguard Workshop on Respect for Indigenous Peoples/Local Traditional Communities, Protection of Cultural Heritage and Stakeholder Involvement and Information Disclosure in the Safeguard Implementation Framework for the Jambi Sustainable Landscape Management Project (J-SLMP)

Date and Location	Participants (Male/Female)	Topic and Summary of Results
	Male : 51 Person Female : 13 Person	
August 6th, 2021 (Online)	Online : Kementerian Pertanian, Sekditjen PPI, Direktur MPI, Direktur IGRK dan MPV, Direktur MS2R, Kasubdit REDD, Kepala Balai PPI KHL Region Sumatra, Kasi lingkup Subdit REDD+, Bappeda Prov. Jambi, Dishut Prov. Jambi, DLH Prov. Jambi, Dinas Tanaman Pangan Prov. Jambi, Disbun Prov. Jambi, UPTD KPHP Tanjung Jabung Barat, Ketua Tim SNPMU BioCF ISFL, Tim Safeguard Jambi, Balai KSDAE Prov. Jambi, BTN Berbak dan Sembilang, BTN Bukit Dua Belas, BTN Bukit Tiga Puluh, BTN Kerinci Seblat, Universitas Jambi, ICs, NGOs. Male : 39 Person Female : 12 Person	Kick Off on Jambi ERPD Improvement

Date and Location	Participants (Male/Female)	Topic and Summary of Results
August 9th, 2021 (Online)	Online: Director of MPI, Director of IGRK and MPV, Director of MS2R, Head of Sub-Directorate of REDD, Head of PPI KHL Region Sumatra, Head of Sub-Directorate for REDD+, Bappeda Prov. Jambi, World Bank, UNJA. Male : 12 Person Female : 8 Person	Progress of FPIC Implementation related to closing date of BioCF-ISFL project preparation
August 9th, 2021 (Online)	Secretariat General of PPI, Director of MPI, Bureau of KLN, Head of Sub-Directorate of REDD, Head of Sub-Directorate for REDD+, World Bank, ICs. Male : 9 Person Female : 4 Person	Discussion on the Follow-up of BioCF-ISFL Letter of Intent
August 12nd, 2021 (Online)	Secretary General of PPI, Director of MPI, Director of IGRK and MPV, Director of MS2R, Head of Sub-Directorate of REDD, Head of PPI KHL Region Sumatra, Head of Sub-Directorate for REDD+, Bappeda Prov. Jambi, Dishut Prov. Jambi, DLH Prov. Jambi, Provincial Food Crops Office. Jambi, Disbun Prov. Jambi, Head of SNPMU BioCF ISFL Team, Jambi Safeguard Team, KSDAE Prov. Jambi, BTN Berbak and Sembilang, BTN Bukit Dua Belas, BTN Bukit Tiga Puluh, BTN Kerinci Seblat, NGOs, Related Companies, ICs. Male : 32 Person Female : 16 Person	Completion of Baseline and Design of GHG Emission Reduction Program Based on Jurisdiction of Jambi Province through BioCF-ISFL

Date and Location	Participants (Male/Female)	Topic and Summary of Results
August 16th, 2021 (Online)	Directorate of IGRK and MPV, Directorate of MS2R Climate Change Mitigation Directorate Team, Head of DLH Jambi Province, National Parks, BSDA, Jambi Province DLH Survey Team, Safeguards Team, ICs Male : 27 Person Female : 14 Person	Further discussion on the implementation of FPIC Term II
August 19th – 21st, 2021 Bogor	Direktorate of IGRKMPV, Direktorat of MPI, Direktorat of IPSDH, Technical Team MAR Jambi, Teddy Rusolono (Expert), IC MRV, staff of Directorate General PPI Male : 19 Person Female : 9 Person	Implementation of Uncertainty Analysis (Series 13) - QC Stage 2 Land Use and Forest cover data changes of National and Jambi Province in the Framework of the BIOCF-ISFL Program in the Pre-Investment Phase
August 20th, 2021 Jakarta	Secretary General of PPI, Director of MPI, Director of IGRK and MPV, Director of MS2R, Head of Sub-Directorate of REDD, Head of PPI KHL Region Sumatra, Head of Sub-Directorate for REDD+, Bappeda Prov. Jambi, Dishut Prov. Jambi, DLH Prov. Jambi, Provincial Food Crops Office. Jambi, Disbun Prov. Jambi, Head of SNPMU BioCF ISFL Team, Jambi Safeguard Team, KSDAE Prov. Jambi, BTN Berbak and Sembilang, BTN Bukit Dua Belas, BTN Bukit Tiga Puluh, BTN Kerinci Seblat, NGOs, Related Companies, ICs. Male : 38 Person Female : 19 Person	Synergy Workshop among the Remaining Natural Forest Protection Programs by the Parties into the Design of the Jambi Province Jurisdiction-Based GHG Emission Reduction Program Through BioCF-ISFL

Date and Location	Participants (Male/Female)	Topic and Summary of Results
August 25th, 2021 Bogor	Offline: Direktorat MS2R, Direktorat MPI, BPD LH Online: Bappeda Prov. Jambi, Tim MAR, Dinas Perkebunan, Dinas Lingkungan Hidup, IC, Biro Hukum, SN PMU BioCF, Dinas Kehutanan, Sekber PSDH, DLH Prov. Jambi, Dinas Tanaman Pangan Prov. Jambi, Bakeuda Prov. Jambi Male : 25 Person Female : 14 Person	Discussion on the Responsibility Cost of the Benefit Sharing Plan for the BioCF-ISFL Program
August 25th – 27th, 2021 Bogor	Secretary General of PPI, Director of MPI, Director of IGRK and MPV, Director of MS2R, Head of Sub-Directorate of REDD, Head of Sub-Directorate for REDD+, Bappeda Prov. Jambi, Dishut Prov. Jambi, DLH Prov. Jambi, SNPMU BioCF ISFL Team Leader, ICs. Male : 32 Person Female : 15 Person	Implementation of Uncertainty Analysis (Series 14) - QC Stage 2 changes in forest and Land Cover of National and Jambi Province data within the Framework of the BIOCF-ISFL Program in the Pre-Investment Phase
August 25th – 27th, 2021 Bogor	Secretary General of PPI, Director of MPI, Director of IGRK and MPV, Director of MS2R, Head of Sub-Directorate of REDD, Head of Sub-Directorate for REDD+, Bappeda Prov. Jambi, Dishut Prov. Jambi, DLH Prov. Jambi, SNPMU BioCF ISFL Team Leader, ICs. Male : 32 Person Female : 15 Person	Technical Meeting for Emission Reduction Program Document for Jambi Province Jurisdiction Through BioCF-ISFL

Date and Location	Participants (Male/Female)	Topic and Summary of Results
September 3rd, 2021	Offline: Direktorat MS2R, Direktorat IGRK MPV, BPD LH ,Direktorat MPI, BPD LH Online: Bappeda Prov. Jambi, Tim MAR, Dinas Perkebunan, Dinas Lingkungan Hidup, IC, Biro Hukum, SN PMU BioCF, Dinas Kehutanan, Sekber PSDH, DLH Prov. Jambi, Dinas Tanaman Pangan Prov. Jambi, Bakeuda Prov. Jambi Male : 27 Person Female : 12 Person	Socialization of the Advance Draft Benefit Sharing Plan (BSP) for the BioCF-ISFL Program
September 7th 2021 Bogor	Director of MPI, Director of IGRK and MPV, Director of MS2R, Head of Sub-Directorate of REDD, Head of Sub-Directorate for REDD+, Bappeda Prov. Jambi, Dishut Prov. Jambi, DLH Prov. Jambi, SNPMU BioCF ISFL Team Leader, IC. Male : 18 Person Female : 7 Person	Coordination Meeting on Budget Revision Procedures for the Biocarbon Fund Plus Initiative For Sustainable Forest Landscape (BioCF-ISFL) Jambi Sustainable Landscape Management Project (JSLMP) Grant Activities
September 8th – 10th, 2021 Bogor	Direktorate of IGRKMPV, Direktorat of IPSDH, BPPI KHL Sumatera Region, Technical Team MAR Jambi, Teddy Rusolono (Expert), IC MRV, staff of directorate General PPI, SN PMU Male : 16 Person Female : 8 Person	Implementation of Uncertainty Analysis (Series 15) - QC Stage 2 changes in forest and Land Cover of National Data and QA Preparation of Data changes in forest and Land Cover of Jambi Province in the Framework of the BIOCF-ISFL Program in the Pre-Investment Phase

Date and Location	Participants (Male/Female)	Topic and Summary of Results
September 9th 2021 (Online)	Director of MPI, Director of IGRK and MPV, Director of MS2R, Head of Sub-Directorate of REDD, Head of PPI KHL Region Sumatra, Head of Sub-Directorate for REDD+, Bappeda Prov. Jambi, Dishut Prov. Jambi, DLH Prov. Jambi, Provincial Food Crops Office. Jambi, Disbun Prov. Jambi, Head of SNPMU BioCF ISFL Team, Jambi Safeguard Team, KSDAE Prov. Jambi, BTN Berbak and Sembilang, BTN Bukit Dua Belas, BTN Bukit Tiga Puluh, BTN Kerinci Seblat, NGOs, Related Companies, ICs. Male : 43 Person Female : 19 Person	Discussion on Labor and Working Conditions, Community Health and Safety and Land Acquisition, Restrictions on Land Use and Resettlement in the Implementation of the Jambi Sustainable Landscape Management Project
September 14th – 16th, 2021 Bogor	Direktorat of IGRKMPV, Direktorat of IPSDH, BPPI KHL Sumatera Region, Technical Team MAR Jambi, Teddy Rusolono (Expert), ICs, staff of directorate General PPI, CCROM-SEAP IPB Male : 16 Person Female : 7 Person	Implementation of Uncertainty Analysis (Series 16) - QC Stage 2 Data Change of Forest and Land Cover National and Data Analysis of Changes for Forest and Land Cover in Jambi Province in the BIOCF - ISFL Program Framework
September 16th, 2021 Bogor	Offline: Direktorat MS2R, Direktorat MPI, Bappeda Prov. Jambi, Tim MAR, Dinas Perkebunan, Dinas Lingkungan Hidup, IC, Biro Hukum, SN PMU BioCF, Dinas Kehutanan, Sekber PSDH, DLH Prov. Jambi, Dinas Tanaman Pangan Prov. Jambi, Bakeuda Prov. Jambi Online: Direktorat IGRK MPV, BPD LH Male : 12 Person	Follow-up to the meeting on August 25 regarding the amount of the BPD LH fee for the Operational Cost of the BioCF-ISFL Program

Date and Location	Participants (Male/Female)	Topic and Summary of Results
	Female : 8 Person	
September 17th, 2021 Serpong	Director of MPI, Director of IGRK and MPV, Director of MS2R, Head of Sub-Directorate of REDD, Head of Sub-Directorate for REDD+, Bappeda Prov. Jambi, Dishut Prov. Jambi, DLH Prov. Jambi, SNPMU BioCF ISFL Team Leader, ICs. Male : 13 Person Female : 6 Person	Discussion on Development of Writing Project Implement Manual (PIM) Jambi Sustainable Landscape Management Project (BioCF-JSMLP)
October 1st, 2021 Bogor	Direktorate IGRK dan MPV, Direktorat MPI, Direktorat IPSDH, BPPI KHL Sumatera Region, IC MRV Specialist, Expert (Teddy Rusolono dan Gito Immanuel, Oktaviar R) Male : 16 Person Female : 5 Person	Implementation of Uncertainty Analysis (Series 17) - Discussion of Uncertainty Analysis Documentation and QA Implementation Procedure

Date and Location	Participants (Male/Female)	Topic and Summary of Results
October 4th, 2021 Bogor	Offline: Direktorat MS2R, Direktorat MPI, Bappeda Prov. Jambi, Tim MAR Online: Direktorat MS2R, Direktorat IGRK MPV, BPDH Male : 22 Person Female : 16 Person	Discussion on the follow-up to the Benefit Sharing Plan (BSP) for the BioCF-ISFL Program
October 13rd, 2021 Jakarta	Direktorat IGRKMPV, Direktorat MPI, Direktorat IPSDH, Technical Team MAR Jambi, Expert (Teddy Rusolono, Gito Immanuel, Oktaviar R), IC MRV, Balai PPIKHL Region Sumatera Male : 16 Person Female : 4 Person	Implementation of Uncertainty Analysis (Series 18) - Documentation and Preparation for Implementation of Quality Assurance for calculating the accuracy and uncertainty of changes in forest and land cover within the framework of the Jambi Province BIOCF-ISFL program
October 18th, 2021 (Online)	Direktorat IGRK dan MPV, Direktorat MPI, Direktorat IPSDH, BPPIKHL Region Sumatera, Pusfatja - LAPAN, BRIN, Bappeda Jambi Province, Environment Agency Jambi Province, Plantation Agency Jambi Province, Technical Team MAR Jambi, Jambi University, Lampung University, UGM, Diponegoro University, IC MRV Specialist, Expert, Puspics – UGM Male : 21 Person Female : 11 Person	Technical Meeting in preparation for the implementation of Quality Assurance

Date and Location	Participants (Male/Female)	Topic and Summary of Results
October 21st – 22nd, 2021 Yogyakarta	Direktorat IGRK dan MPV, Direktorat IPSDH, IC MRV and Land Use Specialist, Expert NCS Data Analyst, Technical Team MAR Jambi, IT Consultant Male : 39 Person Female : 17 Person	Implementation of Uncertainty Analysis (Series 19) - Quality Assurance for calculating the accuracy and uncertainty of changes in forest and land cover within the framework of the Jambi Province BIOCF-ISFL program
October 21st, 2021 Bogor	Offline: Direktorat MS2R, Direktorat MPI, Direktorat IGRK MPV, BPD LH Online: Bappeda Prov. Jambi, Tim MAR, Dinas Perkebunan, Dinas Lingkungan Hidup, IC, Biro Hukum, SN PMU BioCF, Dinas Kehutanan, Sekber PSDH, DLH Prov. Jambi, Dinas Tanaman Pangan Prov. Jambi, Bakeuda Prov. Jambi Male : 22 Person Female : 14 Person	SN-PMU Technical Team Training BSP Division (Benefit Sharing Plan) BioCF-ISFL Program
October 22nd, 2021 Bogor	Offline: Direktorat MS2R, Direktorat MPI, BPD LH Online: Bappeda Prov. Jambi, Tim MAR, Dinas Perkebunan, Dinas Lingkungan Hidup, IC, Biro Hukum, SN PMU BioCF, Dinas Kehutanan, Sekber PSDH, DLH Prov. Jambi, Dinas Tanaman Pangan Prov. Jambi, Bakeuda Prov. Jambi, Tim Gubernur Jambi Male : 21 Person	Coordination Meeting for the Preparation of the Socialization of the Benefit Sharing Plan for the BioCF-ISFL Program: High-Level Meeting

Date and Location	Participants (Male/Female)	Topic and Summary of Results
	Female : 13 Person	
November 8th, 2021 Bogor	Secretariate General of PPI, Inspectorate general KLHK, Director of MPI, Directorate General of budget, Head of Sub-Directorate of REDD+, Head of Sub-Directorate for REDD+, Bappeda Prov. Jambi, Dishut Prov. Jambi, Head of SNPMU BioCF ISFL Team, ICs. Male : 15 Person Female : 10 Person	Coordination meeting on budget revision procedures for biocarbon fund grant activities plus the initiative for sustainable forest landscape (BioCF-ISFL) Jambi Sustainable Landscape Management Project (JSLMP)
November 11st – 12nd, 2021 Bogor	Director of MPI, Director of IGRK and MPV, Director of MS2R, Head of Sub-Directorate of REDD, Head of Sub-Directorate for REDD+, Bappeda Prov. Jambi, Dishut Prov. Jambi, DLH Prov. Jambi, Provincial Food Crops Office. Jambi, Disbun Prov. Jambi, Head of SNPMU BioCF ISFL Team, Jambi Safeguard Team, KSDAE Prov. Jambi, BTN Berbak and Sembilang, BTN Bukit Dua Belas, BTN Bukit Tiga Puluh, BTN Kerinci Seblat, ICs. Male : 25 Person Female : 10 Person	Capacity building of environmental and social screening systems for emission reduction programs

Date and Location	Participants (Male/Female)	Topic and Summary of Results
November 11st – 12nd, 2021, Bogor	Direktorat IGRKMPV, Direktorat MPI, Direktorat IPSDH, Technical Team MAR Jambi, IC MRV Specialist, YLBHL, BPPI KHL Sumatera Region, Bappeda Jambi Province, Environmental Agency of Jambi Province, Forestry Agency of Jambi Province Male : 16 Person Female : 8 Person	Capacity building workshop for GHG Accounting (series 3) within the BIOCF-ISFL program framework, Jambi Province
November 15th – 16th, 2021 Bogor	Offline: Direktorat MS2R, Direktorat IGRK MPV, Direktorat MPI, Bappeda Prov. Jambi, Tim MAR, Dinas Perkebunan, Dinas Lingkungan Hidup, IC, Biro Hukum, SN PMU BioCF, Dinas Kehutanan, Sekber PSDH, DLH Prov. Jambi, Dinas Tanaman Pangan Prov. Jambi, Tim Teknis SN-PMU Divisi BSP Online: Direktorat MS2R, Direktorat MPI, Tim Teknis SN-PMU Divisi BSP, BPD LH, IC BioCF Male : 21 Person Female : 12 Person	Workshop and Further Training of the SN-PMU BSP Division (Benefit Sharing Plan) BioCF-ISFL Program
November 23rd – 24th, 2021 Bogor	Direktorat IGRK dan MPV, Direktorat IPSDH, IC MRV and Land Use Specialist, Expert NCS Data Analyst, Technical Team MAR Jambi, IT Consultant Male : 12 Person Female : 6 Person	Uncertainty Analysis seri 20 Discussion on the results of QA data on changes in forest and land cover in Jambi Province as well as documentation reports on the process of uncertainty analysis

Date and Location	Participants (Male/Female)	Topic and Summary of Results
December 13rd, 2021 Bogor	Direktorat IGRKMPV, Direktorat MPI, Direktorat IPSDH, Technical Team MAR Jambi, Expert (Teddy Rusolono, Gito Immanuel, Oktaviar R), IC MRV, BPPIKHL Sumatera Region Male : 11 Person Female : 7 Person	Uncertainty Analysis Seri 21 - Pembahasan hasil QA data perubahan penutupan hutan dan lahan Provinsi Jambi serta laporan dokumentasi proses kegiatan uncertainty analysis
Desember 17th, 2021 Bogor	Director of MPI, Director of IGRK and MPV, Director of MS2R, Head of Sub-Directorate of REDD, Head of Sub-Directorate for REDD+, Bappeda Prov. Jambi, Dishut Prov. Jambi, DLH Prov. Jambi, Provincial Food Crops Office. Jambi, Disbun Prov. Jambi, Head of SNPMU BioCF ISFL Team, KSDAE Prov. Jambi, ICs. Male : 18 Person Female : 7 Person	Discussion on the Development of Writing Project Implement Manual (PIM) Jambi Sustainable Landscape Management Project (JSLMP) – Result Based Payment
December 27th – 28th, 2021 Bogor	Direktorat IGRKMPV, Direktorat MPI, Direktorat IPSDH, Technical Team MAR Jambi, Expert (Teddy Rusolono, Subarno, Rizaldi Boer), IC MRV, BPPIKHL Sumatera Region, SNPC, Bappeda of Jambi Province Male : 20 Person Female : 8 Person	Uncertainty Analysis Seri 22 - Pengerjaan assessment sampel uncertainty data perubahan penutupan hutan dan lahan Provinsi Jambi menggunakan kelas perubahan IPCC

Date and Location	Participants (Male/Female)	Topic and Summary of Results
Desember 28th, 2021 Serpong	Director of MPI, Director of IGRK and MPV, Director of MS2R, Head of Sub-Directorate of REDD, Head of Sub-Directorate for REDD+, Bappeda Prov. Jambi, Dishut Prov. Jambi, DLH Prov. Jambi, Provincial Food Crops Office. Jambi, Disbun Prov. Jambi, Head of SNPMU BioCF ISFL Team, KSDAE Prov. Jambi, ICs. Male : 17 Person Female : 5 Person	Completion of Jambi Province Emission Reduction Program Document through BioCF-ISFL
April 11st – 12nd, 2022 Jambi	Director of MPI, Director of IGRK and MPV, Director of MS2R, Head of Sub-Directorate of REDD, Head of Sub-Directorate for REDD+, Bappeda Prov. Jambi, Dishut Prov. Jambi, DLH Prov. Jambi, Provincial Food Crops Office. Jambi, Disbun Prov. Jambi, Head of SNPMU BioCF ISFL Team, KSDAE Prov. Jambi, ICs. Male : 20 Person Female : 11 Person	Join Implementation Mission the GOI and the World Bank for Jambi sustainable Landscape Management Project (JSLMP)
May 27th, 2022 Bogor	Director of MPI, Director of IGRK and MPV, Director of MS2R, Head of Sub-Directorate of REDD, Head of Sub-Directorate for REDD+, Bappeda Prov. Jambi, Dishut Prov. Jambi, DLH Prov. Jambi, Provincial Food Crops Office. Jambi, Disbun Prov. Jambi, Head of SNPMU BioCF ISFL Team, KSDAE Prov. Jambi, ICs. Male : 11 Person Female : 6 Person	Improving of Jambi Province Emission Reduction Program Document through BioCF-ISFL

Date and Location	Participants (Male/Female)	Topic and Summary of Results
July 4th – 5th, 2022 Jakarta - Jambi	Director of MPI, Director of IGRK and MPV, Director of MS2R, Head of Sub-Directorate of REDD, Head of Sub-Directorate for REDD+, Bappeda Prov. Jambi, Dishut Prov. Jambi, DLH Prov. Jambi, Provincial Food Crops Office. Jambi, Disbun Prov. Jambi, Head of SNPMU BioCF ISFL Team, KSDAE Prov. Jambi, ICs. Male : 21 Person Female : 7 Person	Technical Consultation with WB Seior Expert regarding ERPD Improvement
SUB NATIONAL LEVEL (JAMBI PROVINCE)		
May 8th – 9th, 2019 Jambi	Directorate General Climate Change (Directorate Mitigation, GHG Inventory), Provincial Services, FMU (KPH, Tahura). National Park, NGOs, ICs Male : 39 Person Female : 10 Person	FGD on output of Preparation activites (PDO, MRV)
May 11st – 17th, 2019 Jambi	Ministry of Environment and Forestry (Directorate Mitigation, GHG Inventory, Mobilization, Forest Resource Inventory, Social and Economic Research of Forestry), Provincial Services, Agency Of MOEF in Province (BPDAS, BKSDA, BPHP, BPPIKL, FMU (KPH, Tahura). National Park, Academics of University of Jambi, NGOs, ICs Male : 68 Person Female : 20 Person	Workshop on Joint Preparation BioCarbon Fund ISFL

Date and Location	Participants (Male/Female)	Topic and Summary of Results
May 23rd, 2019 Jambi	Ministry of Environment and Forestry (Directorate Mitigation, GHG Inventory) Universities : (Lampung, Jambi, Bogor), Provincial Services, Agency Of MOEF in Province (BPDAS, BKSDA, BPHP, BPPIKL, FMU (KPH, Tahura), National Park, Forest Fire Task Force (Manggal Agni) NGO's, IC's Male : 41 Person Female : 12 Person	Workshop on Identification of Developing Capacity for Calculating GHG Emission , REL and MRV System
June 19th – 21st, 2019 Jambi	Ministry of Environment and Forestry (Directorate Mitigation), Provincial Services, Agency Of MOEF in Province (BPKH, BKSDA, BPHP, BPPIKL, FMU (KPH, Tahura), National Park, Concesion (Forest, Crop Estate), NGO's, District Conflict Resolution Task Force (Tim Terpadu Kabupaten Tebo, Sarolangun, Batanghari), University of Jambi, ICs, Joint Scretariat of Forest Resources of Jambi Male : 48 Person Female : 14 Person	FGD Land Tenure Conflict Resolution
June 19th- 21st, 2019 Jambi	Ministry of Environment and Forestry (Directorate Mitigation), Provincial Services, Agency Of MOEF in Province (BPKH, BKSDA, BPHP, BPPIKL, FMU (KPH, Tahura), National Park, University of Jambi, IC's, Joint Scretariat of Forest Resources of Jambi Male : 34 Person Female : 11 Person	FGD synchronize national policies and at the sub-national level in order to support the implementation of REDD

Date and Location	Participants (Male/Female)	Topic and Summary of Results
June 21st, 2019 Jambi	Ministries (Bappenas, Finance, Environment and Forestry (Directorate Mobilization, Mitigation, GHG Inventory), Provincial Services, Agency Of MOEF in Province (BPKH, BKSDA, BPHP, BPPIKL, FMU (KPH, Tahura), Berbak National Park, University of Jambi, ICs, Joint Scretariat of Forest Resources of Jambi Male : 20 Person Female : 12 Person	FGD grant management mechanism and procedures for withdrawing grants to the regions
June 25th, 2019 Aston Hotel, Jambi	Participants : Ministry of Environment and Forestry (Directorate Mitigation, GHG Inventory, Forest Inventory) Universiites : (Lampung, Jambi, Bogor), Provincial Services, Agency Of MOEF in Province (BPDAS, BKSDA, BPHP, BPPIKL, FMU (KPH, Tahura), National Park, Forest Fire Task Force (Manggal Agni) NGOs, ICs Male : 31 Person Female : 10 Person	Continued Workshop on Indentification of Developing Capacity for Calculating GHG Emission , REL and MRV System
June 26th, 2019 Jambi	Ministry of Environment and Forestry (Directorate Mitigation, GHG Inventory) Universiites : (Lampung, Jambi, Bogor), Provincial Forestry Service, Agency of MOEF in Province (BPDAS, BKSDA, BPPIKL), FMU (KPH, Tahura), National Park, NGOs, ICs Male : 18 Person Female : 6 Person	FGD on Preparation of capacity building designs in the context of measuring the potential of forest carbon stocks

Date and Location	Participants (Male/Female)	Topic and Summary of Results
July 2nd, 2019 Jambi	Participants : Ministry of Environment and Forestry (Directorate Mobilization, Mitigation, GHG Inventory) Provincial Forestry Service, World Bank team, Joint Secretariate for Forestry Resources of Jambi, ICs Male : 16 Person Female : 4 Person	FGD BioCF ISFL Management Project
July 3rd – 4th, 2019 Jambi	Ministry of Environment and Forestry (Directorate Mobilization, GHG Inventory, Social and Economic Research of Forestry) Provincial Forestry Service, FMU (KPH, Tahura), Forest Fire Task Force (Manggala Agni), National Park, NGOs, ICs, Technical Advisor of World Bank Male : 29 Person Female : 7 Person	FGD on Forest and Land Cover Analysis for BioCF ISFL
July 3rd - 4th , 2019 Jambi	Ministry of Environment and Forestry (Directorate Mobilization, Mitigation, GHG Inventory) Provincial Forestry Service, FMU (KPH, Tahura), National Park, NGOs, ICs, Technical Advisor of World Bank Male : 15 Person Female : 6 Person	FGD on Design of Benefit Sharing Mechanism for BioCF ISFL

Date and Location	Participants (Male/Female)	Topic and Summary of Results
July 3rd – 5th, 2019 Jambi	Participants : Ministry of Environment and Forestry (Directorate Mobilization, Mitigation, GHG Inventory) Provincial Forestry Service, FMU (KPH, Tahura), National Park, NGOs, ICs Male : 29 Person Female : 4 Person	FGD on the application of the tenure conflict resolution model by using a non-litigation approach in supporting the BioCF ISFL program
July 3rd – 5th, 2019 Jambi	Ministry of Environment and Forestry (Directorate Mobilization, Mitigation) Provincial Forestry Service, FMU (KPH, Tahura), National Park, NGOs, ICs Male : 29 Person Female : 7 Person	FGD on Risk Management Team Work for BioCF ISFL
July 16th – 17th, 2019 Jambi	Ministry of Environment and Forestry (Directorate Mobilization, Mitigation, GHG Inventory) Provincial Forestry Service, FMU (KPH, Tahura), National Park, NGOs, ICs Male : 28 Person Female : 10 Person	FGD on Drafting of ERPD and PDO BioCF ISFL Program
July 17th – 18th , 2019 Jambi	Ministry of Environment and Forestry (Directorate Mitigation, Mobilization, GHG Inventory) Provincial Services, FMU (KPH, Tahura), National Park, Agency of MOEF in Province (BPDAS, BKSDA, BPPIKL, Academics of University of Jambi, NGOs, ICs, Private companies, Private companies association Male : 16 Person	FGD on GHG Reporting and Inventory for BioCF ISFL

Date and Location	Participants (Male/Female)	Topic and Summary of Results
	Female : 5 Person	
July 17th – 18th , 2019 Jambi	Ministry of Environment and Forestry (Directorate Mitigation, Mobilization, GHG Inventory) Provincial Services, FMU (KPH, Tahura), National Park, Agency of MOEF in Province (BPDAS, BKSDA, BPPIKL, BPHP), Academics of University of Jambi, NGOs, ICs, Private companies, Private companies association Male : 13 Person Female : 4 Person	FGD on Safeguard and Other Issues Related to Social and Environmental Aspect
July 17th – 18th, 2019 Jambi	Ministry of Environment and Forestry (Directorate Mitigation, Mobilization, GHG Inventory) Provincial Services, FMU (KPH, Tahura), National Park, Agency of MOEF in Province (BPDAS, BKSDA, BPPIKL, BPHP), Academics of University of Jambi, NGOs, ICs, Private companies, Private companies association Male : 15 Person Female : 7 Person	FGD on Description on Feedback and Grievance of Redress Mechanism

Date and Location	Participants (Male/Female)	Topic and Summary of Results
July 18th – 19th, 2019 Jambi	Ministry of Environment and Forestry (Directorate Mitigation, Mobilization, GHG Inventory) Provincial Services, FMU (KPH, Tahura), National Park, Agency of MOEF in Province (BKSDA), Academics of University of Jambi, NGOs, ICs, Private companies, Private companies association Male : 22 Person Female : 10 Person	FGD on Detailing of the main commodity value chain in the forestry and plantation sector
July 23rd – 25th, 2019 Jambi	Ministry of Environment and Forestry (Directorate GHG Inventory) Provincial Services, District Agricultural Services, District Environment Services, IC Male : 16 Person Female : 14 Person	Technical Guidance / FGD on non-land greenhouse gases inventory
August 5th – 6th, 2019 Jambi	Ministry of Environment and Forestry (Directorate Mobilization, Mitigation, GHG Inventory) Provincial substance work team, World Bank team, ICs Male : 22 Person Female : 6 Person	FGD on BioCF ISFL Management Project
August 14th – 16th, 2019 Jambi	Ministry of Environment and Forestry (Secretariate DG, Directorate : Mobilization, Mitigation, GHG Inventory) , Provincial Services, Provincial substance work team, ICs	FGD on Continued Drafting of ERPD and PDO BioCF ISFL Program

Date and Location	Participants (Male/Female)	Topic and Summary of Results
	Male : 20 Person Female : 3 Person	
August 21st, 2019 Jambi	Ministry of Environment and Forestry (Directorate GHG Inventory) Provincial Services, FMU (KPH), National Park, Agency of MOEF in Province (BKSDA, BPDAS), NGOs, ICs, Forest Fire Task Force (Manggala Agni) Male : 30 Person Female : 6 Person	Workshop on land greenhouse gases accounting
August 22nd – 23rd, 2019 Jambi	Ministry of Environment and Forestry (Secretariate DG, Directorate : Mobilization, Mitigation, GHG Inventory) , Provincial Services, National Park, FMU (KPH, Tahura), Agency of MOEF in Province (BKSDA, BPSKL, BPHP, BPPIKL), Provincial substance work team, Ics Male : 32 Person Female : 9 Person	FGD on Continued Drafting of ERPD and PDO BioCF ISFL Program
July 27th – 29th, 2019 Jambi	Ministry of Environment and Forestry (Directorate GHG Inventory) Provincial Services, District Agricultural Services, District Environment Services, IC Male : 14 Person	Continued Technical Guidance / FGD on non-land greenhouse gases inventory

Date and Location	Participants (Male/Female)	Topic and Summary of Results
	Female : 13 Person	
August 29th – 30th, 2019 Jambi	Ministry of Environment and Forestry (Directorate Mitigation, Mobilization, GHG Inventory) Provincial Services, FMU (KPH, Tahura), National Park, , Agency of MOEF in Province (BPDAS, BKSDA, BPHP, BPKH BPPIKL, Academics of University of Jambi, NGOs, Ics. Male : 25 Person Female : 6 Person	Workshop on compilation of emission factors for estimating greenhouse gas emissions and reference levels within the program framework of BioCF ISFL
September 18th – 19th, 2019 Jambi.	Provincial Services (BAPPEDA), Jambi Provincial Forestry Service, Forest Management Unit (KPH, TAHURA), Nature Conservation Agency (BKSDA), Central Management of Regional River Flow (BPDASHL), National Park, Local Fire Stations (Daops), Other Stakeholder (SEKBER), University of Jambi, NGOs, Ics Male : 30 Person Female : 5 Person	Capacity in order to Support the Implementation of Climate Change Mitigation.

Date and Location	Participants (Male/Female)	Topic and Summary of Results
October 08th – 11st, 2019 Jambi	Pusat Penelitian dan Pengembangan Sosial, Ekonomi, Kebijakan dan Perubahan Iklim (P3SEKPI), Provincial Services (BAPPEDA), Jambi Provincial Forestry Service, Forest Management Unit (KPH, TAHURA), Nature Conservation Agency (BKSDA), Central Management of Regional River Flow (BPDASHL), National Park, Local Fire Stations (Daops), Other Stakeholder (SEKBER), University (IPB). Male : 31 Person Female : 3 Person	FGD on capacity development in the framework of measuring forest carbon stock in the province of Jambi
October 29th – 31st, 2019, Jambi	CV. Galeri Angkasa Sejahtera, Provincial Services (BAPPEDA), Jambi Provincial Forestry Service, Forest Management Unit (KPH, TAHURA), Nature Conservation Agency (BKSDA), National Park, Local Fire Stations (Daops), Other Stakeholder (SEKBER), IC's, University (Ibn Khaldun Bogor) Male : 26 Person Female : 3 Person	Drone Operation Training for Mapping and Monitoring Forest Carbon Stocks
December 03rd – 04th, 2019 Jambi	Provincial Services (BAPPEDA), Jambi Provincial Forestry Service, Forest Management Unit (KPH, TAHURA), Nature Conservation Agency (BKSDA), National Park, Local Fire Stations (Daops), Other Stakeholder (SEKBER), IC's, University (Unja) Male : 25 Person Female : 5 Person	Capacity building workshop in order to share the methodology for calculating GHG emission in Jambi Province (Land Cover Change Analysis)

Date and Location	Participants (Male/Female)	Topic and Summary of Results
December 05th – 06th, 2019 Jambi	Provincial Services (BAPPEDA), Jambi Provincial Forestry Service, Forest Management Unit (KPH, TAHURA), Nature Conservation Agency (BKSDA), National Park, Local Fire Stations (Daops), Other Stakeholder (SEKBER), IC's, University (Unja, IPB, Unila) Male : 24 Person Female : 6 Person	Capacity building workshop in order to share the methodology for calculating GHG emission in Jambi Province (Baseline and FREL determination)
December 09th – 10th, 2019 Jambi	Pusat Penelitian dan Pengembangan Sosial, Ekonomi, Kebijakan dan Perubahan Iklim (P3SEKPI), Provincial Services (BAPPEDA), Jambi Provincial Forestry Service, Forest Management Unit (KPH, TAHURA), Nature Conservation Agency (BKSDA), National Park, Local Fire Stations (Daops), Other Stakeholder (SEKBER) Male : 31 Person Female : 3 Person	Consignment of data analysis results from the survey Field Practice for Calculation of Forest Carbon Stock
December 26th – 27th, 2019 Jambi	Directorate GHG Inventory, Directorate Mitigation, Provincial Services (BAPPEDA), Jambi Provincial Forestry Service, Forest Management Unit (KPH, TAHURA), Nature Conservation Agency (BKSDA), National Park, Local Fire Stations (Daops), Other Stakeholder (SEKBER), University (UNJA) Male : 22 Person Female : 7 Person	Capacity in order to Support the Implementation of Climate Change Mitigation

Date and Location	Participants (Male/Female)	Topic and Summary of Results
February 18th, 2020 Jambi	Director of special transfer fund ministry of finance, Secretary of the Province of Jambi, Provincial Services (Bappeda Prov. Jambi), Finance Agency Jambi Province, Forestry Services of Jambi Provinces, DTPHP Prov. Jambi, Plantation Services Jambi Province, Environmental Services Jambi Province, Head of Sub National Project Management Unit, Head of Safeguard, Head of MAR, Secretary of Directorate General Climate Change, Head of Climate Change Control Sumatra Region, Haed of Planning Bereau, Head of Foreign Cooperation, Head of Sub REDD+ Directorate, Head of REDD+ Governance, Head of Monitoring and Evaluation REDD+, ICs. Male : 28 Person Female : 10 Person	Discussion Meeting on Preparation of FPIC and Draft of PKS and SPKS Preparation Activities for BioCF-ISFL
February 19th, 2020 Jambi	Director of special transfer fund ministry of finance, Secretary of the Province of Jambi, Provincial Services (Bappeda Prov. Jambi), Finance Agency Jambi Province, Forestry Services of Jambi Provinces, DTPHP Prov. Jambi, Plantation Services Jambi Province, Environmental Services Jambi Province, Head of Sub National Project Management Unit, Head of Safeguard, Head of MAR, Secretary of Directorate General Climate Change, Head of Climate Change Control Sumatra Region, Haed of Planning Bereau, Head of Foreign Cooperation, Head of Sub REDD+ Directorate, Head of REDD+ Governance, Head of Monitoring and Evaluation REDD+, ICs. Male : 26 Person Female : 11 Person	Coordination of the implementation of the forwarding grant BioCF ISFL Trust Fund Grant Agreement No.TF0B3897, and No.TF0B3999 for Jambi Sustainable Landscape Management Project

Date and Location	Participants (Male/Female)	Topic and Summary of Results
October 20th, 2020 Jambi	Offline: Secretary of the Directorate General Climate Change Control, Director GHG Inventory, Director of Climate Change Mitigation, Director of MS2R, Director of IPSDH, Directorate General of PKTL, Head of the BPPI KHL Region Sumatra; Provincial Planning Services (BAPPEDA), Jambi Provincial Forestry Service (Dishut Prov. Jambi), Jambi Provincial Environment Service (DLH Prov. Jambi), Food Crops Service Prov. Jambi, Disbun Prov. Jambi, Team MAR Jambi, University (UNJA), Joint Secretary of PSDH, non-governmental organization, ICs. On line: UPTD KPHP and Tahura in Jambi, Balai KSDA Prov. Jambi, BTN Berbak and Sembilang, BTN Bukit Dua Belas, BTN Bukit Tiga Puluh, BTN Kerinci Seblat, NGOs, World Bank, ICs. Male : 20 Person Female : 3 Person	MAR System Institutional Workshop: Development of mechanisms and institutional arrangements in the ISFL BioCF Program Framework in the Pre-Investment phase; Jambi

Date and Location	Participants (Male/Female)	Topic and Summary of Results
October 21st, 2020, Jambi	Offline: Director General of Climate Change Control, Director of GHG Inventory, Director of Climate Change Mitigation, Director of MS2R, Directorate General of PKTL, Head of the BPPI KHL Region Sumatra; Provincial Planning Service (Bappeda Prov. Jambi), Provincial Forestr Service (Dishut Prov. Jambi), Provincial Environmental Service (DLH Prov. Jambi), Food Crops Service Prov. Jambi, Farm Service (Disbun Prov. Jambi), Balitbangda Prov. Jambi, Regional Financial Agency Prov. Jambi, University (UNJA), Joint Secretary of PSDH, ICs. On line: Director of Fund Collection and Development - Environmental Fund Management Agency Hidup (BPD LH), Head of KPHP 'TN, and BKSDA in Jambi Province Male : 18 Person Female : 23 Person	Discussion on the Improvement of the Benefit Sharing Mechanism Concept for the BioCF-ISFL Jambi Program: integration of the MAR system and safeguard mechanisms into the initial draft of BSM .

Date and Location	Participants (Male/Female)	Topic and Summary of Results
October 27th, 2020 Jambi	Offline: Director of MPI, Ksubdit REDD +, Head of the Center for PPI KHL Sumatra Region, Head of Sub-Directorate for REDD +, Bappeda Prov. Jambi, Dishut Prov. Jambi, DLH Prov. Jambi, Food Crops Service Prov. Jambi, Disbun Prov. Jambi, Balitbangda Prov. Jambi, Team Leader SNPMU BioCF ISFL, Jambi Safeguard Team, UnJa (Faculty of Forestry), Jambi NGO (Sekber PSDH etc), ICs. On line: Sekditjen PPI, Director of IGRK and MPV, Director of MS2R, UPTD KPHP and Tahura in Jambi, Balai KSDA Prov. Jambi, BTN Berbak and Sembilang, BTN Bukit Dua Belas, BTN Bukit Tiga Puluh, BTN Kerinci Seblat, NGOs, WB, Ics Male : 11 Person Female : 5 Person	Workshop on Initial Preparation for the Implementation of FPIC
February 18th 2021, Jambi	Director of special transfer fund ministry of finance, Secretary of the Province of Jambi, Provincial Services (Bappeda Prov. Jambi), Finance Agency Jambi Province, Forestry Services of Jambi Provinces, DTPHP Prov. Jambi, Plantation Services Jambi Province, Environmental Services Jambi Province, Head of Sub National Project Management Unit, Head of Safeguard, Head of MAR, Secretary of Directorate General Climate Change, Head of Climate Change Control Sumatra Region, Haed of Planning Bereau, Head of Foreign Cooperation, Head of Sub REDD+ Directorate, Head of REDD+ Governance, Head of Monitoring and Evaluation REDD+, ICs. Male : 28 Person	Discussion Meeting on Preparation of FPIC and Draft of PKS and SPKS Preparation Activities for BioCF-ISFL

Date and Location	Participants (Male/Female)	Topic and Summary of Results
	Female : 10 Person	
March 31st - April 1st 2021 Jambi	Offline: Director of MS2R, Director of MPI, Director of IPSDH, DG PKTL, Bappeda Prov. Jambi, Dishut Prov. Jambi, DLH Prov. Jambi, Dinas Tanaman Pangan Prov. Jambi, Disbun Prov. Jambi, Jambi MAR team, PSDH Joint secretariate, ICs, Bakeuda Prov. Jambi Online: Director of IGRK dan MPV, UPTD KPHP and Tahura within Jambi province, BKSDA Jambi province, BTN Berbak dan Sembilang, BTN Bukit Dua Belas, BTN Bukit Tiga Puluh, BTN Kerinci Seblat, WB, Ics Male : 38 Person Female : 18 Person	Sub-National Focus Group Discussion Meeting (FGD) Completion of Benefit Sharing Plan (BSP) Document for BioCF-ISFL Program

Date and Location	Participants (Male/Female)	Topic and Summary of Results
April 12th, 2021 Jambi	Director of IGRK MPV, Director of MPI, Head of PPI KHL Sumatra Region, Head of IGRK Forestry Sector, Head of IGRK Agricultural Sector, Head of Bappeda Jambi Province, Head of Economic Affairs, Jambi Province Bappeda, Jambi MAR Technical Team, Jambi Province Uncertainty Analysis Assessment Team, Individual BioCF-ISFL Project Consultants and Experts Male : 13 Person Female : 8 Person	Preparation for Finalization of MAR System Institutional SOPs
April 15th, 2021 Jambi	Secretary of the Province of Jambi, Provincial Services (Bappeda Prov. Jambi), Finance Agency Jambi Province, Forestry Services of Jambi Provinces, DTPHP Prov. Jambi, Plantation Services Jambi Province, Environmental Services Jambi Province, Head of Sub National Project Management Unit, Head of Safeguard, Head of MAR, Secretary of Directorate General Climate Change, Head of Climate Change Control Sumatra Region, Haed of Planning Bereau, Head of Foreign Cooperation, Head of Sub REDD+ Directorate, Head of REDD+ Governance, Head of Monitoring and Evaluation REDD+, ICs. Male : 24 Person Female : 13 Person	Discussion of Pre Investment Jambi Sustainable Landscape Management Project Activities from Environmental and Social Aspects in the Framework of Safeguards Implementation in Jambi Province

Date and Location	Participants (Male/Female)	Topic and Summary of Results
April 26th, 2021 Jambi	Offline: Director of MPI, Ksubdit REDD +, Head of the Center for PPI KHL Sumatra Region, Head of Sub-Directorate for REDD +, Bappeda Prov. Jambi, Dishut Prov. Jambi, DLH Prov. Jambi, Food Crops Service Prov. Jambi, Disbun Prov. Jambi, Balitbangda Prov. Jambi, Team Leader SNPMU BioCF ISFL, Jambi Safeguard Team, UnJa (Faculty of Forestry), Jambi NGO (Sekber PSDH etc), ICs. On line: Sekditjen PPI, Director of IGRK and MPV, Director of MS2R, UPTD KPHP and Tahura Scope Prov. Jambi, Balai KSDA Prov. Jambi, BTN Berbak and Sembilang, BTN Bukit Dua Belas, BTN Bukit Tiga Puluh, BTN Kerinci Seblat, NGOs, WB, ICs Male : 21 Person Female : 11 Person	Preparation Meeting For Joint Implementation Mission World Bank : Biocarbon Fund Plus Initiative for Sustainable Forest Landscape (BIOCF ISFL) and East Kalimantan Jurisdictional Emission Reduction Program (EK-JERP)
April 29th, 2021 Jambi	Offline: Director of MPI, Ksubdit REDD +, Head of the Center for PPI KHL Sumatra Region, Head of Sub-Directorate for REDD +, Bappeda Prov. Jambi, Dishut Prov. Jambi, DLH Prov. Jambi, Food Crops Service Prov. Jambi, Disbun Prov. Jambi, Balitbangda Prov. Jambi, Team Leader SNPMU BioCF ISFL, Jambi Safeguard Team, UnJa (Faculty of Forestry), Jambi NGO (Sekber PSDH etc), ICs. On line: Sekditjen PPI, Director of IGRK and MPV, Director of MS2R, UPTD KPHP and Tahura Scope Prov. Jambi, Balai KSDA Prov. Jambi, BTN Berbak and Sembilang, BTN Bukit Dua Belas, BTN Bukit Tiga Puluh, BTN Kerinci Seblat, NGOs, WB, ICs	Socialization of the Emissions Reduction Program Document (ERPD) Jambi Sustainable Landscape Management Project (JSLMP) BioCF ISFL

Date and Location	Participants (Male/Female)	Topic and Summary of Results
	Male : 23 Person Female : 13 Person	
April 30th 2021 Jambi	Director of MS2R, Director of MPI, Bappeda Prov. Jambi, Dishut Prov. Jambi, DLH Prov. Jambi, Dinas Tanaman Pangan Prov. Jambi, Disbun Prov. Jambi, Jambi MAR team, PSDH Joint secretariate, ICs, Bakeuda Prov. Jambi Online: Director of IGRK dan MPV, BPD LH, WB Male : 22 Person Female : 14 Person	Sub-National Meeting for Completion of Benefit Sharing Plan (BSP) Documents for BioCF-ISFL Program

Date and Location	Participants (Male/Female)	Topic and Summary of Results
June 8th – 9th 2021 Jambi	Offline: Direktorat MS2R, Direktorat MPI, Bappeda Prov. Jambi, Tim MAR, Dinas Perkebunan, Dinas Lingkungan Hidup, IC, Biro Hukum, SN PMU BioCF, Dinas Kehutanan, Sekber PSDH, DLH Prov. Jambi, Dinas Tanaman Pangan Prov. Jambi, Bakeuda Prov. Jambi Online: Direktorat IGRK MPV, BPD LH Male : 27 Person Female : 10 Person	Sub-National Follow-Up Meeting on Completion of BioCF-ISFL Program Benefit Sharing Plan Documents
June 10th, 2021 Jambi	Offline: Director of MPI, Ksubdit REDD +, Head of Sub-Directorate for REDD +, Bappeda Prov. Jambi, Dishut Prov. Jambi, DLH Prov. Jambi, Food Crops Service Prov. Jambi, Disbun Prov. Jambi, Balitbangda Prov. Jambi, Team Leader SNPMU BioCF ISFL, Jambi Safeguard Team, Jambi NGO (Sekber PSDH etc), ICs. Online : Sekditjen PPI, Director of IGRK and MPV, Director of MS2R, UPTD KPHP and Tahura Scope Prov. Jambi, Balai KSDA Prov. Jambi, BTN Berbak and Sembilang, BTN Bukit Dua Belas, BTN Bukit Tiga Puluh, BTN Kerinci Seblat, ICs Male : 31 Person Female : 19 Person	Preparation of Design Procedures for Handling Complaints and Feedback, Grievance, Redress Mechanism (FGRM) within the Framework of Jambi Sustainable Landscape Management Project (J-SLMP)

Date and Location	Participants (Male/Female)	Topic and Summary of Results
June 16th, 2021 Jambi	Offline: Director of MPI, Kasubdit REDD +, Head of Sub-Directorate for REDD +, Bappeda Prov. Jambi, Dishut Prov. Jambi, DLH Prov. Jambi, Food Crops Service Prov. Jambi, Disbun Prov. Jambi, Balitbangda Prov. Jambi, Team Leader SNPMU BioCF ISFL, Jambi Safeguard Team, ICs. Online : Sekditjen PPI, Director of IGRK and MPV, Director of MS2R, UPTD KPHP and Tahura Scope Prov. Jambi, Balai KSDA Prov. Jambi, BTN Berbak and Sembilang, BTN Bukit Dua Belas, BTN Bukit Tiga Puluh, BTN Kerinci Seblat. Male : 17 Person Female : 6 Person	Discussion Meeting on Proposed Revision of Capital Expenditure for Fixed Assets for BioCF-ISFL Program
June 18th, 2021 Jambi	Secretary of the Province of Jambi, Provincial Services (Bappeda Prov. Jambi), Finance Agency Jambi Province, Forestry Services of Jambi Provinces, DTPHP Prov. Jambi, Plantation Services Jambi Province, Environmental Services Jambi Province, Head of Sub National Project Management Unit, Head of Safeguard, Head of MAR, Secretary of Directorate General Climate Change, Head of Climate Change Control Sumatra Region, Haed of Planning Bereau, Head of Foreign Cooperation, Head of Sub REDD+ Directorate, Head of REDD+ Governance, Head of Monitoring and Evaluation REDD+, ICs. Male : 19 Person Female : 11 Person	Discussion of Risk of Displacement and Risk of Reversal in BioCF-ISFL Management

Date and Location	Participants (Male/Female)	Topic and Summary of Results
June 25th, 2021 Jambi	Secretary of the Directorate General of PPI, Director of MPI, Director of IGRK and MPV, Director of MS2R, Head of Sub-Directorate for REDD, Head of the Center for PPI KHL Sumatra Region, Head of Sub-Directorate for REDD +, Bappeda Prov. Jambi, Dishut Prov. Jambi, DLH Prov. Jambi, Food Crops Service Prov. Jambi, Disbun Prov. Jambi, Balitbangda Prov. Jambi, Team Leader SNPMU BioCF ISFL, Jambi Safeguard Team. Male : 26 Person Female : 10 Person	Performance Strengthening Meeting of Sub National Project Management Unit (SN-PMU) ERPD BioCF-ISFL 2021 in Preparation for Implementation of the 2022 BioCF-ISFL On Granting Scheme
August 3th, 2021 Jambi	Director of MPI, Head of Sub-Directorate for REDD, Head of Sub-Directorate for REDD +, Bappeda Prov. Jambi, Dishut Prov. Jambi, DLH Prov. Jambi, Food Crops Service Prov. Jambi, Disbun Prov. Jambi, Team Leader SNPMU BioCF ISFL, Jambi Safeguard Team. Male : 53 Person Female : 22 Person	Free Prior Informed Consent (FPIC) Activities Bio Carbon Fund Plus Initiative Sustainable Forest Landscape (ISFL) Jambi Sustainable Landscape Management Project (JSLMP)

Date and Location	Participants (Male/Female)	Topic and Summary of Results
September 22th, 2021 Jambi	Secretary of the Directorate General of PPI, Director of MPI, Director of IGRK and MPV, Director of MS2R, Head of Sub-Directorate for REDD, Head of the Center for PPI KHL Sumatra Region, Head of Sub-Directorate for REDD +, Bappeda Prov. Jambi, Dishut Prov. Jambi, DLH Prov. Jambi, Food Crops Service Prov. Jambi, Disbun Prov. Jambi, Team Leader SNPMU BioCF ISFL, Jambi Safeguard Team. Male : 20 Person Female : 10 Person	Consultation on the Preparation and Implementation of Environmental and Social Safeguards in Jambi Province
September 22nd – 24th, 2021 Jambi	Directorate of IGRKMPV, Directorate of IPSDH, BPPIKHL Sumatera Region, Bappeda Jambi Province, DLH, Disbun, Dishut, Dinas TPHP, Technical Tim MAR Jambi, IC MRV Specialist, Expert team, FMUs (UPTD Tahura Jambi Province, KPHP Merangin, KPHP Hilir Sarolangun, KPHP Tanjung Jabung Barat, BBTNKS, BTNBD, BTNBS), NGOs (Sekber PSDH, YLBHL, Warsi KKI)\ Male : 30 Person Female : 9 Person	Workshop Capacity building for GHG accounting in the framework of the BIOCF-ISFL program, Jambi Province

Date and Location	Participants (Male/Female)	Topic and Summary of Results
September 23th, 2021 Jambi	Director of special transfer fund ministry of finance, Secretary of the Province of Jambi, Provincial Services (Bappeda Prov. Jambi), Finance Agency Jambi Province, Forestry Services of Jambi Provinces, DTPHP Prov. Jambi, Plantation Services Jambi Province, Environmental Services Jambi Province, Head of Sub National Project Management Unit, Head of Safeguard, Head of MAR, Secretary of Directorate General Climate Change, Head of Climate Change Control Sumatra Region, Haed of Planning Bereau, Head of Foreign Cooperation, Head of Sub REDD+ Directorate, Head of REDD+ Governance, Head of Monitoring and Evaluation REDD+, ICs. Male : 24 Person Female : 13 Person	Advanced Technical Meeting for Emission Reduction Program Document for Jambi Province Jurisdiction Through BioCF-ISFL
September 24th, 2021 Jambi	Director of MPI, Director of IGRK and MPV, Director of MS2R, Head of Sub-Directorate of REDD, Head of Sub-Directorate for REDD+, Bappeda Prov. Jambi, Dishut Prov. Jambi, DLH Prov. Jambi, SNPMU BioCF ISFL Team Leader, Universitas Jambi, Universitas Muhammadiyah Jambi, Universitas Batang Hari, ICs. Male : 27 Person Female : 23 Person	Workshop "Jambi is Fun with Low Emissions"

Date and Location	Participants (Male/Female)	Topic and Summary of Results
September 29th, 2021 Jambi	Head of Sub-Directorate of REDD, Representatives from PPIUs (Bappeda Prov. Jambi, Dishut Prov. Jambi, DLH Prov. Jambi, Provincial Food Crops Office. Jambi, Disbun Prov. Jambi), Head of SNPMU BioCF ISFL Team, ICs, Staffs of Secretariate Direktorat General of PPI, Directorate of MPI, Directorate of IGRK and MPV, Directorate of MS2R. Male : 24 Person Female : 11 Person	Lessons learned from the Preparation and Follow-up phase at J-SLMP BioCF ISFL 2018-2021; Jambi 29 September 2021
October 6th, 2021 Jambi	Directorate of IGRKMPV, Bappeda Jambi Province, DLH, Disbun, Dishut, Dinas TPHP, Technical Tim MAR Jambi, IC MRV Specialist, Expert team, FMUs (UPTD Tahura Jambi Province, KPHP Merangin, KPHP Hilir Sarolangun, KPHP Tanjung Jabung Barat, BBTNKS, BTNBD, BTNBS, BPPIKHL Sumatera Region, BKSDA), NGOs (YLBHL, Warsi KKI) Male : 17 Person Female : 7 Person	Capacity building workshop for GHG Accounting (series 2) within the framework of the BIOCF-ISFL program, Jambi Province
October 21st - 22nd , 2021 Yogyakarta	Directorate of IGRKMPV, Directorate of MPI, Directorate of IPSDH, BPPIKHL Sumatera Region, BPPIKHL JBN Region, Pusfatja - LAPAN, Bappeda Jambi Province, DLH Jambi Province, Disbun Jambi Province, Technical Team MAR Jambi, Academic Institution (Jambi University, Lampung University, UGM, Diponegoro University, IPB), IC MRV Specialist, Tim Expert, Puspics – UGM Male : 39 Person	Implementation of Uncertainty Analysis (Series 19) - Quality Assurance for calculating the accuracy and uncertainty of changes in forest and land cover within the framework of the Jambi Province BIOCF-ISFL program

Date and Location	Participants (Male/Female)	Topic and Summary of Results
	Female : 17 Person	
October 27th – 29th, 2021 Jambi	Secretary General of PPI, Director of MPI, Director of IGRK and MPV, Director of MS2R, Head of Sub-Directorate of REDD, Head of PPI KHL Region Sumatra, Head of Sub-Directorate for REDD+, Bappeda Prov. Jambi, Dishut Prov. Jambi, DLH Prov. Jambi, Provincial Food Crops Office. Jambi, Disbun Prov. Jambi, Head of SNPMU BioCF ISFL Team, Jambi Safeguard Team, NGOs, IC. Male : 17 Person Female : 9 Person	Capacity building in handling forest tenure conflicts using the RaTA (Rapid Land Tenure Assessment) concept
November 3rd – 5th 2021 Jambi	Director of MPI, Director of IGRK and MPV, Director of MS2R, Head of Sub-Directorate of REDD+, Head of Sub-Directorate for REDD+, Bappeda Prov. Jambi, Dishut Prov. Jambi, DLH Prov. Jambi, Provincial Food Crops Office. Jambi, Disbun Prov. Jambi, Head of SNPMU BioCF ISFL Team, Jambi Safeguard Team, ICs. Male : 36 Person Female : 33 Person	Preparation for the implementation of the J-SLMP On Granting Scheme by the Jambi Provincial Government

Date and Location	Participants (Male/Female)	Topic and Summary of Results
November 9th 2021, Jambi	Offline: Direktorat MS2R, Direktorat MPI, Bappeda Prov. Jambi, Tim MAR, Dinas Perkebunan, Dinas Lingkungan Hidup, IC, Biro Hukum, SN PMU BioCF, Dinas Kehutanan, Sekber PSDH, DLH Prov. Jambi, Dinas Tanaman Pangan Prov. Jambi, Tim Teknis SN-PMU Divisi BSP Online: Direktorat MS2R, Tim Teknis SN-PMU Divisi BSP, BPD LH Male : 20 Person Female : 11 Person	Continuing Training for the Sub-National Team-PMU Division of the BSP (Benefit Sharing Plan) BioCF-ISFL Program
November 30th - December 2nd 2021, Jambi	Directorate IGRK dan MPV, IC MRV and Land Use, NCS Data Analyst, Bappeda Jambi Province, DLH Jambi Province, Disbun Jambi Province, DTPHP Jambi Province, NGOs (YLBHL, KKI Warsi), Technical Team MAR Jambi, BPPI KHL Sumatera Region Male : 13 Person Female : 6 Person	Capacity building workshop for GHG Accounting (series 4) within the BIOCF-ISFL program framework, Jambi Province
December 14th, 2021 Jambi	World Bank Team, MoEF's Climate Change Mitigations Director, Government of Jambi Province, Individual Consultants, FMUs, National Park Authority, Universities in Jambi (UNJA) and NGOs Male : 38 Person Female : 17 Person	Public Consultation on Emission Reduction Program through BioCF-ISFL and Safeguard's Instrument

Date and Location	Participants (Male/Female)	Topic and Summary of Results
Februari 10th, 2022	MoEF's Directorate of MPI, Bappeda of Jambi Province, Environmental Services Agency of Jambi province, Forestry Agency of Jambi Province, Plantations Agency of Jambi Province, Agricultures Agency of Jambi Province, National Park Authorities, FMUs and ICs.	Workshop "Screening and Commisioning of Environmental Document and Government Regulation No 22 of 2021 Socialization"
Maret 29th, 2022	MoEF's Directorate of MPI, Bappeda of Jambi Province, Environmental Services Agency of Jambi Province, Forestry Agency of Jambi Province, Bappeda and Enviromental Agencies of Jambi Districts.	Public Consultation of Indigenous People (MHA)
April 26th, 2022	MoEF's Directorate of MPI, Bappeda of Jambi Province, Enviromental Services Agency of Jambi Province, ICs and World Bank Team	Workshop Update SESA Document
Juni 6th – 7th, 2022	MoEF's Directorate of MPI, MS2R, World Bank Team, Bappeda of Jambi Province, Enviromental Agency Services of Jambi Province, Forestry Agency of Jambi Provinces, National Park Authorities, FMUs, and ICs	Workshop Free, Prior, Informed Consent (FPIC) program BIOCF-ISFL
Juni 29th, 2022	MoEF's Directorate of MPI, Bappeda of Jambi Province, Environmental Agency of Jambi Province, Universities of Jambi (UNJA, UNBARI and UNMUH), NGOs	Workshop SISREDD+ dan Non-Carbon Benefit
July 05th, 2022	MoEF's Directorate of MPI, Bappeda of Jambi Province, Environmental Agency of Jambi Province, Universities of Jambi (UNJA, UNBARI and UNMUH), NGOs, and ICs	Public Consultation of Local Regulation of Indigenous People

Date and Location	Participants (Male/Female)	Topic and Summary of Results
Agustus 03rd, 2022	MoEF's Directorate of MPI, Bappeda of Jambi Province, Environmental Agency of Jambi Province, National Park Authorities, FMUs, Universities of Jambi (UNJA, UNBARI and UNMUH), NGOs and ICs	Workshop FGRM
Local Levels		
May 23rd, 2019 Muara Sabak	Directorate General Climate Change, Provincial Services, District Services, FMU (KPH, Tahura). National Park, Sub Districts (Camat), Forest Fire Task Force (Manggala Agni), ICs, NGOs Male : 35 Person Female : 7 Person	Safeguard/ Risk Management (Workshop/ Public Consultation on Safeguard of BioCF ISFL (SESA and EMSF by Hatfield Indonesia)
June 20th, 2019 Bangko	Directorate General Climate Change, Provincial Services, District Services, FMU (KPH). National Park, Sub Districts (Camat), Forest Fire Task Force (Manggala Agni), ICs, NGOs, Univeristy of Jambi Male : 39 Person Female : 9 Person	Safeguard/ Risk Management (Workshop/ Public Consultation on Safeguard of BioCF ISFL (SESA and EMSF by Hatfield Indonesia)

Date and Location	Participants (Male/Female)	Topic and Summary of Results
1) Kab. Kerinci (06th – 15th November 2019) 2) Kab. Merangin dan Bungo (06th – 15th November 2019) 3) Kab. Sarolangun (06th – 15th Nov 2019) 4) Kab. Tanjabbar (19th– 28th November 2019) 5) Kab. Tebo (28th October - 06th November 2019) 6) Kab. Muaro Jambi (23rd October – 01st November 2019) 7) Kab. Batanghari (19th – 28th October 2019) 8) Kab. Tanjabtim (18th– 27th November 2019)	Provincial Services (BAPPEDA), Jambi Provincial Forestry Service, Forest Management Unit (KPH, TAHURA), Nature Conservation Agency (BKSDA), National Park, Local Fire Stations (Daops), Other Stakeholder (SEKBER), University (UNJA) Male : 28 Person Female : 4 Person	Survey Field Practice for Calculation of Forest Carbon Stock

Summary of consultations on the ERP conducted by PT. Hatfield.

TOPI C	WHAT IS THE ISSUE	RELEVANCE TO REDD+	RECOMMENDATIONS
Kick-Off Meeting Joint Preparation Mission BioCF ISFL	PDO result-chain Annual Work Plan Procurement Plan Draft Grant Agreement Aide of Memoire ToR Individual Consultant Concept Note	MAR, Safeguards, and initial design of the ERP	
Joint Mission BioCF-ISFL	PPG Procurement, Lol, Financial agreement progress, AWP ERP Document Result chain & Pre-investment activities Agriculture framework Private sector ER allocation Benefit Sharing Mechanism Safeguards	Part of REDD+ readiness process	The mission agreed that continued refinements of the results framework and monitoring arrangement with interactive follow-up sessions and email communication with the M&E specialist would take place in the next four months and would be presented to the next mission.

Focus group discussion (FGD) of identification of potential locations for deforestation and forest degradation and peat	Identification Implementation Area REDD+ Deforestasi and degradation	As a document that supports the preparation of ERP	The presentation of SEA stated that at this time a program design for Biocarbon Fund ISFL is needed, and how to portray the causes/drivers & strategy for handling it

damage (1)			The obstacles to the implementation of the Jambi ERP at this time include, procedurally, the issuance of the Decree regarding the involvement of elements from the SKPD (provincial agencies) Data used for ERP, at least the last 10 years The existence of data and maps that are likely to be different, even though the data (both) are sourced from Government agencies In KPH/National Park/Tahura/BPHP Units, generally the problems that occur are community forest encroachment expansion, forest fires, illegal logging, unlicensed plantations (oil & rubber), plantation investors (non local Jambi), forest encroachment for oil palm and rubber, encroachment in the inter-zone buffer zone, lack of implementation of good governance from various relevant stakeholders, tenure conflicts, peat decomposition, illegal mining, land use (mining, gardens, agriculture), unsustainable forest management The agency mapping for data availability is in accordance with the required basic data (attached ppt slide-13), from the basic data they can be developed again in accordance with the progress of deliberative discussion and process Pre-identification of the main drivers that cause
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			issues in the forestry sector (attached-xl), will be met again by the audience in accordance with the next plan of follow- up discussion
Focus group discussion (FGD) of identification of	Identification Implementation Area REDD+	Verification of Main Drivers & Causes of	Participants to complete information on the main causes and things that underlie Deforestation and

potential locations for deforestation and forest degradation and peat damage (2)	Deforestasi and degradation	Deforestation and degradation Screening of SESA Issues Identification of Social & Environmental Impacts PDO and ERP Consolidation Identification of the Area of Public Consultation	Degradation, with supporting data Participants deliver information on the social and environmental impacts of the arising issues, along with the required program plan directions, this input can strengthen PDO and the details of its activities program details in participants' slide As per initial information from the previous info recap and screening support from spatial data processing, several issues have been addressed In the process of ensuring that the issue on the second day was obtained a short list of agreed issues was 7 points Based on cluster issues that arise from the participants' discussion, several alternative locations for public consultation areas are proposed, the next screening can be arranged in accordance with the consideration of the basis of spatial data processing and expert judgment
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Interview the perceptions of key stakeholders in the sample districts (Bungo, Merangin, Sarolangun, Kerinci and Tanjung Jabung Timur)	Interview related to the Bio Carbon Fund, drivers of deforestation, related stakeholders, fund management mechanisms, important issues and future expectations	Verification of Main Drivers & Causes of DD Screening of SESA Issues	More than half of the respondents stated ignorance of the details of the emission reduction program, its relevance to REDD +, and its role in the implementation process later. However, most stakeholders hope that the program can be applied at the local level at the district level, so that the benefits of the programs and subprograms can be directly felt by the related units in the field in dealing with the dynamics that occur at this time.
Focus group discussion (FGD) of six villages	know the problems of natural resource management, the root of the problem,	SESA & ESMF	Participants complete information in accordance with the directions. Most of them raised the issue of

(Beringin Tinggi, Guguk, Kandis Dendang, Pandan lagan, Sungai beras, & Rantau kermas) and 1 indigenous people	the parties involved, and the solutions offered		recognition of indigenous right, difficult acces to the market for the agriculture products, lack of capacity in agriculture product processing, lack of law enforcement leading to illegal activities inside forest areas.
Public consultation at district level (representatives from Tanjung Jabung Timur, Tanjung Jabung Barat, Muaro Jambi, and Batanghari)	Introduction of BioCF and activities that can be supported at district level. Update information on existing social forestry, sustainable plantation, and sustainable agriculture practices Challenges in peatland management, including fire prevention Additional driver of deforestation (mangrove) outside the Implementation Area Illegal oil mining in grand forest park (Taman Hutan Raya / Tahura) under provincial forestry agency	SESA & ESMF Leakages between districts, and between provinces Existing regulatory instruments at district level (e.g., Perda No. 18/2013 on land for sustainable agriculture, and 13/2013 on corporate social and environmental responsibilities	Addressing the issues of leakages by building coordination across districts and across provinces Strengthen implementation of regulations (Component 1 of the PDO) to support safeguards of BioCF Need to find best practice model for peat land agriculture management (paludiculture)

Appendix A3. SESA Terms of Reference

Terms of Reference

NAME OF ASSIGNMENT:	Prepare a Strategic Environment and Social Assessment (SESA) Final Report for Indonesia's REDD+ Readiness Preparation
FINANCIAL SOURCE	FCPF Readiness Grant/BioCF Grant
METHOD OF SELECTION	Quality and Cost Based Selection
REVIEW METHOD	Post Review
TYPE OF CONTRACT	Lump Sum
IMPLEMENTATION	Aug. 1, 2018 until Dec. 31, 2020
LOCATIONS	Jakarta
REPORTING TO	DGCC and FORDIA

1. INDONESIA REDD+ AND FCPF/BioCF GRANT

The Government of Indonesia (GOI) has progressively advanced the development of its REDD+ architecture to address the drivers and underlying causes of deforestation and forest degradation. This includes the necessary elements required to prepare the country for a future performance-based emission reduction program implementation, such as: development of a national REDD+ strategy, putting in place the institutional arrangement/management structures to help sustainable land use management through a multi-sectorial and participatory way; putting in place a funding mechanism for REDD+; as well as building their national emission reference levels and MAR systems.

The activities funded by the FCPF/BioCF Grant are a subset of an overall readiness effort laid out in the Readiness Preparation Proposal, which was presented to the FCPF in June 2009. Since 2009, there have been many other sources of international support, including UN-REDD (\$6 million), AUSAID Indonesia Australia Forest Climate Alliance (\$30 million), and Norway's Forest Climate Initiative and Letter of Intent provided \$30 million in Phase 1 of a three-part results-based program. In this context, the FCPF/BioCF has supported a select subset of strategic analytical inputs and a consultative process, but not the entire REDD+ Readiness architecture. Given the multiplicity of actors and the small size of the FCPF/BioCF grant compared to other efforts, the FCPF/BioCF grant cannot be held responsible for the entire national REDD+ strategy, but should be seen as a contributor of specific inputs into a broader multi-donor, multi- sectoral dialogue and development process. The FCPF/BioCF Grant has four main components:

- i. Analytical Works. This includes a synthesis and analysis of available assessments and studies on causes of deforestation and compilation of options for main investment types and other interventions, which would reduce deforestation and greenhouse gas emissions.
- ii. Support of Readiness Process. This component includes the assessment of options and discussion of pros and cons of new REDD+ relevant regulations, including benefit sharing systems; capacity building of institutions and stakeholders; a large subcomponent of consultation and outreach to cover all actors including Indigenous Peoples; and the completion of the Strategic Environmental and Social Assessment, resulting in an ESMF.
- iii. Reference Emission Level (REL) and Monitoring, Analysis & Reporting (MAR). This component contributes to efforts to improve understanding of the effect of land use change on carbon stocks; develops a time series of land use change; and develops systems to monitor carbon stocks at the ground level in permanent sample plots.
- iv. Regional Data Collection and Capacity Building. The fourth component of the project facilitates relevant REDD+ readiness activities at sub-national level.

2. INDONESIA REDD+ SAFEGUARDS

Addressing safeguards is critical to enhance the effectiveness and success of REDD+ implementation. The importance of this was articulated in the seven Cancun safeguard principles by which countries are required to report on how safeguards are implemented and addressed. Furthermore, REDD+ participating countries have widely recognized that failure to address social and environmental risks/impacts associated with REDD+ would result in negative consequences for the millions of forest-dependent communities including Indigenous Peoples who depend on the forest for their economic, social and cultural well-being.

The GOI has performed extensive work on safeguards in recent years and has already developed national safeguards-related initiatives, principally: (i) The Principles, Criteria, and Indicators for REDD+ Safeguards (PRISAI) for the management of project/program level S&E impacts/risks, and (ii) Safeguards Information System (SIS) – a web based system developed through translating 7 Cancun REDD+ safeguards and related COP UNFCCC decision into the national context that will serve as a basis for providing information and reporting to UNFCCC on how REDD+ safeguards are addressed and respected. The development of both these instruments from 2011-2013 was accompanied by a comprehensive analysis of the national policies, laws and regulations related to environment, social and institutional issues, as well as series of multi- stakeholder consultation processes to solicit views especially from Indigenous Peoples, and CSOs. Various national level instruments pertinent to the management of social and environmental aspects of development programs were also used to inform the development of PRISAI and SIS, including:

- AMDAL tool for conducting environmental impact assessments
- Strategic Environmental Assessment (KLHS)
- Sustainable Forest Management and Production (PHPL)
- SMF Certification
- System for verification of timber legality
- Partnership Governance Index (PGI)

The results of these analyses combined with consultations, led to the development of specific social and environmental criteria and indicators for both PRISAI and SIS in order to be able to address/mitigate, monitor and report on safeguards. PRISAI has already been tested in East Kalimantan, Central Kalimantan and Jambi, while SIS has been piloted in Jambi and East Kalimantan. In addition, the REDD+ SES (Social and Environmental Standards) for Central and East Kalimantan have been developed and tested in both provinces.

Two key documents remain to be developed for safeguards as required by the World Bank in preparation for the implementation of REDD+ programs, namely the Strategic Environmental and Social Assessment (SESA) and Environmental and Social Management Framework (ESMF). As Indonesia is currently preparing two major provincial-level programs for REDD+ implementation in East Kalimantan (for the FCPF Carbon Fund) and Jambi (for the BioCarbon Fund), the SESA and ESMF—while principally national in scope—also need to be tailored to the context of these pilot provinces. A sound ESMF (based on the analytical work performed for the SESA) is a requirement for these programs receive financing (results-based carbon payments) for future emission reductions. .

3. PRINCIPLES AND OBJECTIVES OF THE SESA AND ESMF

The REDD+ Readiness process should ensure that implementation of REDD+ programs and activities will not cause adverse social and environmental impacts, while striving to enhance benefits for local communities and the environment. 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 deemed to be an adequate tool for this purpose as it offers a platform for consultation 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 and Jambi have been selected as pilot provinces for the carbon payments, the SESA outcomes should reflect strategic relevance of REDD+ activities for these provinces and recommended measures to mitigate potential adverse impacts and leverage positive benefits that may accrue from the proposed activities. The SESA is 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 provides an analysis of potential risks and impacts associated with future REDD+ initiatives and will include adequate safeguard measures based on relevant typologies of activities and ER strategic options. 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. A preliminary assessment has indicated that the following World Bank safeguard policies may potentially be triggered by REDD+ related activities in Indonesia, including⁹⁸:

- 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)
- Indigenous Peoples (OP/BP 4.10)
- Involuntary Resettlement (OP/BP 4.12)

The consultant team shall ensure that the provisions of the safeguards policies and procedures above are adequately accommodated in the ESMF to ensure that the REDD+ initiatives achieve objectives materially consistent with the OPs/BPs triggered. The framework applies to future REDD+ activities funded by the World Bank in particular and the Government and other Agencies to use WB safeguards. **The ESMF described in this TOR will build on an indicative ESMF developed for REDD+ that needs to be further tailored into the context of East Kalimantan and Jambi based on SESA's key findings and recommendations.**

Due to the sequence of analytical work to inform the REDD+ design and related safeguards instruments, the ESMF development is an inseparable process from SESA and therefore the same consultant team responsible for the SESA will be requested to adjust the indicative REDD+ ESMF to be fully aligned with SESA.

4. THE SCOPE OF THE CONSULTING SERVICES

The consultant team is required to facilitate assessment and consultation processes to produce sound SESA and ESMF as detailed in the following:

A. STRATEGIC ENVIRONMENTAL AND SOCIAL ASSESSMENT (SESA)

The consultant will prepare a SESA comprising the following six tasks: (a) Analysis of strategic context of REDD+; (b) Analysis of environmental and socio-cultural characteristics in priority emission reduction locations in East Kalimantan and Jambi Provinces; (c) Stakeholder analysis; (d) Assessment of legal and institutional frameworks; (e) A scenario analysis in sample priority areas; and (f) Policy implications and proposed recommendations. In consultation with MoEF, provincial level steering committees, and the World Bank, sample location selection for the assessment will be focused in selected districts in East Kalimantan and Jambi Provinces. The selected consultant team/firm is required to assess and analyse existing REDD+ materials developed for Indonesia since 2011 as part of the analytics to be used for the overall SESA document. The materials will be made available to the consultant team/firm⁹⁹. The SESA process is further guided by the Government Regulation (Peraturan Pemerintah/PP) No. 46/2016 on the Guidelines for Strategic Environmental Assessments (KLHS). The SESA shall capture the following elements:

a. Strategic Context of REDD+

- Building on previous analytics and consultation processes for REDD+, present key results of REDD+ consultations involving relevant stakeholders at the national and sub-national to ensure that views and concerns, including risks and issues, are made known to decision makers and taken into account;

⁹⁸ These policies can be accessed under the Investment Project Financing (IPF) operational manual on environmental and social safeguards policies. See <https://policies.worldbank.org/sites/PPF3/Pages/Manuals/Operational%20Manual.aspx>

⁹⁹ The DGCC and FORDIA has developed a comprehensive inventory database of documentation for the REDD+ process in Indonesia, containing around 400 materials. This database will be made available to the selected consultant team/firm.

- Analysis of strategic rationale for Indonesia to participate in REDD+ initiatives, including national and local government's readiness, understanding, current capacity and capacity gaps, political buy-in. Complemented with other pertinent studies, this section should also cover a political-economy analysis of REDD+ which may contribute to understanding of prospects and challenges to ensure the management of environmental and social aspects and sustainability of ER interventions;
- Present lessons-learned from previous ER demonstration pilots/activities, including analysis of various conditions and building blocks to foster community acceptance, understanding, and participation, grievance handling, as well as key risks and challenges to enforce and promote good practices in environmental and social management.

b. Environmental and Socio-cultural Characteristics in Priority ER Locations in East Kalimantan and Jambi Provinces¹⁰⁰:

- Identification of baseline conditions of sample priority areas in terms of key physical, biological, cultural and socio-economic characteristics. Sub-categories for project areas may be developed based on ecosystem/landscape characteristics for analytical purposes. The selection of sample areas shall be done through consultations with FORDIA, DGCC, DDPI East Kalimantan, Jambi focal points and World Bank;
- Analysis of key environmental and social issues of concern in potential project areas (e.g. pressures on protected areas, competing demands for natural resources and extractive activities, biodiversity hotspots and other critical areas qualifying as Critical Natural Habitats as per WB's OP 4.04, settlement expansion, potential conflicts between forest dependent communities and private actors, settled agriculturalists and pastoralists, indigenous peoples and local communities. Identification of key social and environmental issues related to REDD+ should involve primary stakeholders who may be affected or have interest in the initiative. This will include affected groups and local non-governmental organizations, as early as possible, in the preparation process and ensure that their views and concerns are made known to decision makers and taken into account;
- Identification of core environmental and social indicators that need to be tracked and monitored, which may include but is not limited to information on: land use, biodiversity, forest cover, population distribution, land tenure and conflicts, access to basic services, livelihoods displacement, etc¹⁰¹. This should also include understanding of the threats and opportunities resulting from REDD+ activities based on recent trends and future outlook and identification of how best to monitor such trends and threats.

c. Stakeholder Analysis

- Analysis outlining the key stakeholders likely to be affected, either positively or negatively, directly or indirectly, through project implementation. For each stakeholder group identified, the analysis shall: 1) Outline the specific ways in which the project may positively or negatively affect them; 2) Recommend ways to enhance positive benefits, or mitigate negative impacts; and 3) Recommend measures to encourage their participation in project consultation and implementation, as appropriate.

d. Assessment of Legal and Institutional Framework

- Assess the existing GOI's legal and institutional framework for environmental and social risk and impact management for REDD+ related activities and provide a gap analysis of the current institutional and governance capacity both at the national and sub-national levels in East Kalimantan and Jambi to address aversive effects as they emerge from analytical work;
- Assess whether the current set up and capacity both at the national and sub-national governments (district and provincial) is adequate to ensure the project meets its objective without harming people or yielding environmental damage. This should also include assessments on national and sub-national governments' capacity to enforce rules and regulations across wide Jambi Sub National involving multiple stakeholders including private and non-private actors that collectively contribute to emission reduction;

¹⁰⁰ The SESA may contain specific chapters on East Kalimantan and Jambi.

¹⁰¹ The determination of core environmental and social indicators shall be based on the SIS for the REDD+, which needs to be further analyzed to assess the adequacy and relevance to the study areas in East Kalimantan and Jambi.

- Assess the impacts and consequences of recent changes in law particularly on the forestry and sub-national governments have on the management of natural resources and oversight capacity¹⁰²;

e. A Scenario Analysis in Sample Priority Areas

- Development of a scenario analysis framework to analyse environmental and social impacts—biophysical and socio-economic positives and negatives, direct and indirect, and cumulative to the extent possible for strategic options proposed for both provinces. Provide a robust analysis, to the extent possible, of the past trends in distribution, quantity and quality of critical environmental and social components and how such trends might change with and without proposed ER interventions. The analysis could factor in relevant aspects affecting ER objectives such as regulatory and law enforcement, development (commercial and non-commercial), political-economy, population growth, spatial planning scenarios vis-à-vis business as usual scenarios. This should include assessment of key environmental, social and economic indicators that can be used to compare alternative development/investment scenarios. The development of such scenario analysis shall involve and be consulted to a broad range of stakeholders both at the national and sub-national levels;
- Analyse key risks and threats that may affect the achievement of environmental and social outcomes of REDD+ related activities;
- For each scenario, provide an assessment of strategic options that promote sustainable natural resource management and have positive impacts on local communities. Where policies could adversely affect the environment or local communities, identify alternatives to the proposed policies and/or mitigate negative social and environmental impact;
- Screen for potential negative impacts on indigenous and other forest dependent and vulnerable communities and identify viable alternatives including alternatives for economic activities that minimize adverse impacts on vulnerable groups;
- Identify gender issues and other issues affecting vulnerable communities related to REDD+ and alternatives to avoid and/or mitigate potential adverse impacts for each scenario described;

f. Policy Implications and Proposed Recommendations

- Present key environmental and social considerations that should be taken into account to ensure that REDD+ initiatives do not have and/or minimize unintended negative environmental and social consequences. For each strategic option proposed, what are context-specific measures that could be undertaken and/or policies that should be enforced, amended and/or elaborated to avoid, minimize or mitigate identified negative impacts. Present potential measures and/or actions that can enhance positive impact;
- Analyse capacity building needs and engagement strategies for key stakeholders both at the national and sub-national level;
- Provide an indicative assessment of financial requirements and resources to implement recommended measures, including capacity building.

B. INTEGRATED ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK (ESMF)

Building on the indicative ESMF developed for the program, the integrated ESMF under this TOR shall be fully aligned with key findings and insights obtained through the SESA process (see Task A). The ESMF shall be tailored to the contexts of East Kalimantan and Jambi and provide specific procedures for: (i) Consultations with concerned stakeholder groups based on the principles of free, prior and informed consultations to obtain broad community support; (ii) Capacity assessments across key stakeholders and capacity building measures; (iii) Environmental and social impact screening, assessment, and monitoring; and (iv) Relevant measures and procedures to manage and minimize adverse impacts. Specific for East Kalimantan, the ESMF shall also build on the Social and Environmental Standards (SES) for Kaltim developed earlier and ensure that the SES Kaltim is in full alignment with the World Bank's safeguards requirements. The Framework also specifies the inter-institutional arrangements for the preparation of time-bound action plans for mitigating adverse impacts related to the future projects, activities, and/or policies/regulations. **Two critical sub-tasks integral to the ESMF include (a) Land Acquisition and Resettlement Planning Framework (LARPF) and Access Restriction Process Framework; and (b) Grievance Redress Mechanism (GRM) specific**

¹⁰² The SESA specifically shall identify a range of impacts that result from recent policy and regulatory changes and assess whether the current local capacity following such changes is adequate to manage and address potential impacts as they emerge from the implementation of REDD+ initiatives.

to the context of East Kalimantan and Jambi. Depending on the level of complexity and institutional arrangements, the latter documents could be developed as standalone documents and must be explicitly referenced in the ESMF.

By doing the above, the ESMF and its related instruments will provide the overall framework for addressing social and environmental risk management issues in FCPF and WB financed REDD+ activities that are implemented beyond the readiness preparatory work. Drawing from the SESA and various documents, including analytical work carried out as part of the FCPF program, the ESMF should contain at a minimum the following:

- A description of the indicative REDD+ strategy option(s) for East Kalimantan and Jambi, its main social and environmental considerations, and the various risks involved in its implementation;
- An outline of relevant legislative, regulatory, and policy regime (in relation to forest resources management, land use, indigenous rights, local wisdoms, etc.) within which the REDD+ strategy options will be implemented in the East Kalimantan and Jambi Sub National. This should also include analysis of inhibiting factors and enabling environments to enforce laws and regulations, together with any reforms in this regime that are proposed as part of the REDD+ strategy options' implementation;
- An analysis of the potential impacts, both positive and negative, deriving from future project(s) and activity(-ies) associated with the implementation of the emerging strategy/strategic options, and the geographic/spatial distribution of these impacts particularly within Jambi Sub National and possibly beyond due to trans-boundary and cumulative impacts;
- Identification of vulnerable groups and mechanisms for participation and measures to mitigate impacts on vulnerable communities including Indigenous Peoples (*Masyarakat Adat*) and other forest dependent communities who may be impacted by ER activities to a various degree due to their reliance on natural resources and attachment to lands. Such mechanisms could be presented as an Indigenous Peoples Planning Framework (IPPF), integral to the ESMF;
- A description of the arrangements for implementing the specific project(s) and activity(-ies), and relevant measures to avoid and if inevitable mitigate adverse impacts particularly stemming from land acquisition, resettlement, access restrictions and livelihoods displacement (**refer to Sub-task 1 on Land Acquisition and Resettlement Planning Framework and Access Restriction Process Framework (RPPF)**). This should also include descriptions of the responsible institutions, agencies, and partners albeit indicative if not decided;
- A description of the particular institutional needs within the national readiness management arrangements for implementing the ESMF. This should be based on a review of the authority and capability of institutions at different administrative levels (e.g. local/village/community, sub-district and district, provincial/regional, and national), and their capacity to manage and monitor ESMF implementation. The analysis should draw mainly from the SESA and may extend to proposed laws and regulations, new agencies or agency functions, staffing needs, inter-sectoral arrangements, management procedures, operation and maintenance arrangements, budgeting, and financial support;
- An outline of capacity building actions for the entities responsible for implementing the ESMF;
- Requirements for technical assistance to public- and private-sector institutions, communities, and service providers to support implementation of the ESMF;
- An outline of the budget for implementing the ESMF;
- Provisions for Monitoring and Evaluation;
- Complaint/Grievance Handling Mechanism (GRM) – **refer to sub-task 3**;

C. SUB-TASK 1: LAND ACQUISITION AND RESETTLEMENT PLANNING FRAMEWORK (LARPF) AND PROCESS FRAMEWORK

This sub-task is to be complimented with key findings of the Land and Resource Tenure Assessment and Benefit Sharing (separate contracts) and the SESA. Given the magnitude of potential adverse impacts, the project should make deliberate efforts to avoid activities which would potentially result in land acquisition and resettlement, access restrictions to legally designated parks and/or conservation areas and natural resources, and livelihoods displacement. However, in circumstances where land acquisition (both voluntary and involuntary) and resettlement and access restrictions are inevitable for ER initiatives to be viable, the project proponents must commit to follow provisions set out in the LARPF and Process Framework agreed by the WB. Integral to the ESMF, a LARPF and Process Framework need to be prepared to ensure that any REDD+ activities which have impacts on resettlement, access restrictions and livelihoods displacements or ones that require the exercise of eminent domain could be

avoided or if inevitable, handled in a participatory, fair and transparent manner with people affected. The LARPF and Process Framework shall establish resettlement objectives and principals, organizational arrangements, and funding mechanisms for impact mitigation resulting from resettlement, land acquisition and access restrictions associated with the implementation of REDD+ activities. Both frameworks shall be prepared since the extent and location of resettlement and access restrictions are unknown at the time of the REDD+ readiness phase and will be detailed during the early project screening. When activities requiring resettlement or causing access restrictions are identified, a Resettlement Action Plan and/or livelihoods restoration plans shall be subsequently prepared by project implementing entities.

The LARPF ensures that any Resettlement Action Plan protects affected parties, assets and livelihoods are restored to their previous level and preferably exceed their current status. The LARPF will include the process for valuation of all associated impacts on people's property, livelihoods and other intangible impacts and address mitigation measures based on international and national best practices. Under the Process Framework, the nature of restrictions, as well as the type of measures necessary to mitigate adverse impacts, is determined with the participation of the displaced persons during the design and implementation of the project. The Process Framework is developed to guide project implementing agencies to ensure that mitigation measures developed to address and minimize the impacts of access restrictions and livelihoods displacement are adequate and fully consulted with the affected persons prior to the implementation of ER activities. Both frameworks shall include the following aspects:

- **Situational analysis:** Identification of activities and interventions under the ER program that have potentials to result in resettlement (physical displacement of people), access restrictions and livelihoods displacement, including stakeholders who may be affected. The analysis shall also capture the roles of specific actors in such initiatives and interventions, as well as their current practices in handling land acquisition and restrictions of access relevant to the ER program.
- **Legal and institutional frameworks:** a) Review relevant laws, policies, legal and administrative procedures of GOI, and in particular East Kalimantan and Jambi in terms of handling land acquisition and compensation practices both by the sub-national governments and private actors (concession holders); b) Assess the current capacity of implementing resettlement agencies (Land Agency, East Kalimantan and Jambi governments, and other project proponents, including private actors) and relevant REDD+ agencies in terms of handling land acquisition and resettlements, mitigating associated impacts of access restrictions and livelihoods displacement, grievance handling and conflict resolution; c) Identify gaps and relevant measures to address such gaps to ensure that impacts are properly assessed and adequately mitigated and compensated; d) Identify mechanisms to enhance institutional capacity and accountability, including community participation;
- **Valuation of assets:** a) Identify current practices for valuation of assets and losses to determine their replacement costs under national and local laws; b) Establish principles, basis and methods to be used in valuing losses under REDD+ initiatives; c) Identify eligibility criteria for PAPs (displaced persons); d) Identify eligibility for compensation, types and levels of compensation under relevant laws; e) Establish procedures for cut-off dates for compensation; f) Identify gaps particularly with regards to compensation for the landless or people without legal tenure recognition; e) Identify supplementary measures necessary to achieve replacement costs for lost assets and livelihoods restoration as well as legal implications under national and local laws;
- **Impact mitigation approaches:** a) Analyse technically and economically feasible packages of compensation and other mitigation measures for impacts caused by resettlement, access restriction, and livelihoods displacement; b) Provide mechanisms to ensure participatory approaches including necessary conditions and requirements to ensure that mitigation measures and resettlement packages are compatible with cultural and social preferences of affected persons; c) Mitigation measures for access restrictions, mechanisms for livelihoods restoration including benefit sharing arrangements and mechanisms to channel benefits down to the community levels; d) Mechanisms to promote access to information, community participation and grievance resolution;
- **Implementation arrangements:** a) Identify institutional and technical arrangements for identifying and preparing relocation sites; b) Identify measures necessary to prevent land speculation or influx of ineligible persons at selected sites; c) Procedures for physical relocation and current practices in East Kalimantan and Jambi; d) Legal processes for regularizing tenure and transferring titles/grant recognition to re-settlers.
- **Monitoring and evaluation arrangements:** Develop principles, strategies and procedures for monitoring impacts associated with resettlements and access restrictions for REDD+ activities. This also includes development of a framework for project evaluation and impact assessment for activities covering a wide Jambi Sub National and involving multiple partners;

- **Cost and identification of possible funding sources:** a) estimate cost implications for impact mitigation and compensation for resettlements and access restrictions based on previous projects; b) identify potential funding sources, including cost-sharing arrangements; c) institutional mechanisms for the payment of compensation.

D. SUB-TASK 2: GRIEVANCE REDRESS MECHANISM (GRM)

GRM for REDD+ provides local communities and affected parties with a means of raising concerns relating to the project's operations, and any activities associated with the project and dealing with such concerns in a manner that is considered to be fair, confidential, transparent, and timely by both parties submitting grievances and the project management. In consultation with both national and local stakeholders in East Kalimantan and Jambi, including potentially affected communities, this deliverable seeks to develop a practical and functioning GRM for East Kalimantan and Jambi that could be potentially replicated to other Jambi Sub National. Specifically, the proposed mechanism should be based on:

- Assessment of relevant legal, regulatory and procedures for GRM, including local laws/customary laws in selected sites in East Kalimantan and Jambi for grievance handling;
- Stakeholder analysis (see SESA), further identifying institutional capacity of relevant agencies in implementing their mandates with regards to conflict resolution and complaint handling;
- Assessment of existing GRMs both at the national and sub-national levels and identification of good practices, loopholes and gaps, including possible modalities for GRM that are already operating at the site level. Assessment how various GRMs could be synchronized;
- Assessment of potential funding sources and requirements for establishing a responsive project-level GRM, including identification of responsible parties both at the national, sub-national and local/community levels;
- Assessment of strategies/approaches to ensure that grievances and concerns are properly documented, tracked and followed up. This assessment should include identification of MIS (Management Information System) requirements and how Safeguard Information System (SIS) developed by MoEF can be enhanced to support GRM¹⁰³;

The consultant team is expected to design a GRM for REDD+ activities in East Kalimantan and Jambi based on assessments and consultations with a broad range of stakeholders. The proposed mechanism should ideally accommodate existing systems and practices and fully integrated into the MoEF. The deliverable should also include a roadmap to establish, pilot and roll-out the proposed GRM, including capacity and resource requirements and timeline.

5. OVERALL MANAGEMENT AND COORDINATION

The consultant team will report to DGCC and FORDIA and consult regularly with the WB, DDPI East Kalimantan, Jambi focal points and other departments in MoEF and relevant line ministries and agencies both at the national and sub-national levels. All required deliverables will be submitted to DGCC and FORDIA and will be reviewed by a panel commissioned by the DGCC, FORDIA and WB. Integral to the deliverables, the consultant team is required to accommodate inputs and feedback obtained from the technical panel, including necessary revisions and additional analysis and data collection. The consultant team will coordinate closely with key stakeholders in carrying out all aspects of the ToR and engage actively in and make deliberate efforts to promote knowledge transfer and capacity building to local stakeholders in East Kalimantan and Jambi. In doing so, the consultant team shall seek involvement of local consultants and researchers from East Kalimantan and Jambi in an effort to strengthen local participation and promote capacity building and knowledge transfer throughout the overall assessment process.

The methods and procedures, including the work plan and assessment design, including site selection and the number of sample locations and target respondents, shall be agreed upon at the beginning of the contracts. The contract also requires the selected consultant team to facilitate necessary training sessions for local consultants and researchers in East Kalimantan and Jambi based on needs. In addition, the consultant team shall also be responsible for the following:

¹⁰³ Some of the key platforms to be assessed for the GRM shall include the SIS for REDD+ and the existing Complaint Handling System (CHS) within the MoEF and other channels at the provincial level, including existing CHS (*Kotak Pengaduan Masyarakat*) at relevant agencies (SKPD).

Documentation: The consultant shall establish and maintain a comprehensive inventory of all relevant documents and data collected, including photo and video documentation. Confidential materials and information provided to the consultant team shall not be replicated or distributed and shall be returned to DGCC and FORDIA at the end of the contract.

Personnel: The consultant team shall be responsible to provide and maintain all key personnel proposed. Any changes are subject to approvals from the contracting authority and the WB.

Logistics: The consultant team shall be responsible for all logistical arrangements including travels, workspace, communication, transportation and office support.

Knowledge Dissemination: In consultation with DGCC and FORDIA, the consultant shall also be responsible to assist the DGCC and FORDIA to prepare relevant materials and disseminate key findings and recommendations of the SESA and related safeguard instruments to key stakeholders both at the national and sub-national level. All materials produced shall be retained and owned by the DGCC and FORDIA and shall be subject to permission from the DGCC and FORDIA for use. Such knowledge dissemination activities shall be reflected in the work plan.

6. CONSULTANT QUALIFICATIONS

The consultant team will consist of a team with a mix of senior and mid-level specialists with representation of local specialists from East Kalimantan and Jambi. The expected duration of the assignment will be approximately six months from notice to proceed. The consultant will be required to identify **key personnel** and provide sufficient qualified personnel to ensure achievement of all deliverables with acceptable quality and within the timeframe. It is expected that the following key professional personnel will be required:

- A. **Team Leader** preferably with a graduate degree in environmental or social science (particularly forestry or natural resource management) and at least 15 years of international experience, having excellent written and spoken command of English and Bahasa Indonesia and significant experience in leading environmental and social impact assessment and mitigation, long term impact planning, cumulative impact assessment, institutional strengthening and research methodologies. At least 5 years of professional experience within Indonesia. Detailed knowledge of existing and past Indonesian REDD+ safeguard activities (including SIS-REDD+, PRISAI / BP REDD+, and UN-REDD) would be considered a strong asset;
- B. **Environmental Specialist** preferably with a graduate degree in environmental science and at least 7 years of experience in environmental aspects of natural resource and forestry projects; Strategic Environmental Assessments; developing environmental management plans (EMPs), and monitoring and evaluation of EMPs, environmental management frameworks (EMFs). Experience working with the World Bank, including knowledge of the Bank Operational Policies and REDD+ safeguards related experience will be highly preferred;
- C. **Social Specialist/Community Development Specialist** preferably with a graduate degree in social science and at least 7 years of experience working with rural, indigenous and/or ethnic minority communities, participatory community planning and natural resource management, undertaking Social Impact Assessments and developing social management plans including Indigenous Peoples Plans (IPPs), Land Acquisition and Resettlement Plans (LARAPs) and have familiarity with government systems. The specialist must be knowledgeable about the local institutional and social structures. Experience working with the World Bank, including knowledge of the Bank Operational Policies and REDD+ safeguards related experience will be highly preferred;
- D. **Regional Development Specialist/Planner** preferably with a graduate degree in spatial planning and at least 7 years of experience working in regional spatial, forestry, and agricultural development planning, mapping and spatial analysis. REDD+ safeguards related experience will be highly preferred.

In addition, the consultant team may need to solicit additional support from senior, mid-level and junior technical professionals with the following expertise as needed:

- Agriculture development/policy;
- Civil works (e.g. water sources, hydrology);
- AMDAL (Environmental Impact Assessment);
- Benefit sharing;
- Land tenure;
- Participatory planning;
- Community-driven development;
- Geographical Information System;
- Database management;

The consultant may wish to propose alternative staffing to ensure achievement of the deliverables. As part of selection processes, the consultant team is required to share proposed key personnel's Curriculum Vitae to the contracting authority (DGCC and FORDIA) and the WB. The availability of each proposed staff person must be identified as well as whether they are full-time staff persons of the consulting firm or subcontractors or consultants. It is expected that the Team Leader, if not costed full time for the project, will be available throughout the duration of the contract to address all management and administrative matters.

7. EXPECTED CONSULTANT DELIVERABLES AND TIMELINE

Deliverable	Inception report	Draft Report	Final Report
SESA ESMF (including sub-task)* of East Kalimantan Province	August 2018 (tba)	November 2018	December 2018
Preparation of SESA ESMF (including sub-task)* of Jambi Province	August 2018 (tba)	November 2018	December 2018
SESA ESMF (including sub-task)* of Jambi Province	January 2019	March 2019	April 2019
Final Document (including sub-task)* of SESA-ESMF for East Kalimantan and Jambi Provinces	January 2019	March 2019	April 2019

*Depending on the complexity of potential risks and impacts based on ER strategic options and priority locations, the LARPF and Process Framework and GRM can be developed as standalone documents and referenced in the ESMF.

Appendix A4. List of stakeholders by potential contributors to deforestation in Jambi Province

Location of Deforestation, Institutional Arrangement, Level of Contribution to deforestation and potential influences and Capacities

Locations of Deforestation	Stakeholders								
	Regulators and Executors	Level of contributions to Deforestation	Potential influences and capacities	Land users	Level of contributions to Deforestation	Potenetial influences and capacities	NGO / Donor Programs	Level of contributions to Deforestation	Potenetial influences and capacities
Palm Oil	- District Plantation Agency - District Environmental Agency - Provincial and district agrarian agencies	Weight: 2 Contribution to deforestation is unintentional. Despite the dependence on plantation sub-sector in the GDP, Provincial agencies are paying attention to sustainable plantation mechanism. Weak technical support and enforcement of the mechanism contributes to the deforestation due to unsustainable practices.	These stakeholders influence policies on land acquisition, licenses issuance (HGU), and plantation activities at sub-national level (province and district). Their mandate is aligned with the development plan stated in the RPJMD (i.e., target for plantation production). As outlined in the SRAP REDD+ and RAD-GRK, their mandate includes preventing deforestation from risk of fire (sustainable plantation and discouraging non-burning methods). Plantation agency may also be mandated to “educate” smallholder	▪ Plantation companies ▪ <i>Serikat Petani Indonesia</i> (Indonesian Farmers Union) ▪ Orang Rimba Customary Group ▪ Smallholder farmers	Weight 4-5 (Except for Orang Rimba) Most Plantation companies and smallholder planters employ burning methods for preparing the plantation land. <i>Serikat Petani Indonesia</i> encourage	Large companies (e.g., Asian Agri) comply with RSPO principles. However, smallholder farmers (majority of palm oil plantation operators in Jambi) are not familiar with RSPO or sustainable plantation designs.	- <i>KKI Warsi</i> - <i>Walhi Jambi</i> - <i>Setara Jambi</i> - <i>Inisiatif Dagang Hijau (IDH)</i>	Weight 1: NGOs and donor program are working towards halting deforestation by introducing / supporting international mechanisms such as RSPO and ISPO.	These stakeholders have experience in advocating smallholder farmers, and providing training on sustainable palm oil (e.g., ISPO). Despite the lack of authority in creating policies, they are providing advocacy to policy makers (regulators and executors)

Locations of Deforestation	Stakeholders								
	Regulators and Executors	Level of contributions to Deforestation	Potential influences and capacities	Land users	Level of contributions to Deforestation	Potenetial influences and capacities	NGO / Donor Programs	Level of contributions to Deforestation	Potenetial influences and capacities
			farmers on sustainable plantation mechanism		ges encroachment on forest and conservation areas for plantation				
IUPHHK-HTI	- Provincial Forestry Agency - Provincial Environmental Agency - Forest Management Unit	Weight: 2 Contribution to deforestation is unintentional. Despite the dependence on forestry sub-sector in the GDP, Provincial agencies are paying attention to sustainable forest	These stakeholders are involved in providing recommendation to national government (i.e., Ministry of Environment and Forestry) on IUPHHK-HTI licenses (as well as moratorium) Their mandate is aligned with the development plan stated in the RPJMD (i.e., target for GDP	Forestry companies	Weight 3: All concession holders have established business plans that include sustainability practices. There are cases where forestry companies	Upon receiving concession licenses (IUPHHK-HTI), forestry companies are required to develop annual plan (Rencana Kerja Tahunan – RKT). Most of the forestry	- KKI Warsi - Walhi Jambi - CAPP - Perhimpunan Hijau	Weight 1: NGOs work to halt deforestation from IUPHHK-HTI, and promotes involvement of local communities in community	These stakeholders have the technical capacity and experience to implement social forestry strategies (HKm, HD, HTR, and HA) in production forest (as well as protected forest).

Locations of Deforestation	Stakeholders								
	Regulators and Executors	Level of contributions to Deforestation	Potential influences and capacities	Land users	Level of contributions to Deforestation	Potenetial influences and capacities	NGO / Donor Programs	Level of contributions to Deforestation	Potenetial influences and capacities
		management and moratorium. Weak technical support and resources among FMUs indirectly contributes to the deforestation	from forestry sub-sector). As outlined in the SRAP REDD+ and RAD-GRK, their mandate includes implementing sustainable forest management and preventing deforestation from encroachment. FMUs in Jambi lack the capacity to prevent and reduce encroachment within Production Forest areas.		encourage indigenous communities to conduct illegal logging (E.g., in Tebo District/ Bukit 30 NP)	companies have the capacity to develop this document. However, They lack the capacity to prevent and reduce encroachment within their concessions		forestry schemes	Additionally, these stakeholders have donor supports to implement the strategy, and link it with carbon markets such as voluntary carbon market (e.g., Plan Vivio in Merangin and Bungo districts), and other REDD+ initiative (e.g., Forest Programme II).
Transmigration	- District and provincial transmigration	Weight: 2 Contribution to deforestation is	These stakeholder have mandate to ensure that the transmigration process as mandated in Regulation of Ministry						

Locations of Deforestation	Stakeholders								
	Regulators and Executors	Level of contributions to Deforestation	Potential influences and capacities	Land users	Level of contributions to Deforestation	Potenetial influences and capacities	NGO / Donor Programs	Level of contributions to Deforestation	Potenetial influences and capacities
	agencies - District and Provincial Environment Agency - District and Provincial Public Works and Housing Agencies - District's Civil Registry Office (Dukcapil)	unintentional. Transmigration involves land clearing (up to 2 ha per household) for agriculture practices. Transmigration is also linked with palm oil plantation (e.g., Tebo and Sarolangun districts). Influx of migrants for encroachments in Merangin occurs beyond the designated transmigration areas, and needs to be regulated through the	of Village, underdeveloped region and Transmigration No. 20/2016 regarding delegation and assignments of ministerial scope to the provincial government. Preparation of transmigration area is done by proper feasibility study and environmental impact assessment. No capacity for reducing/halting deforestation is observed in this stakeholder group						

Locations of Deforestation	Stakeholders								
	Regulators and Executors	Level of contributions to Deforestation	Potential influences and capacities	Land users	Level of contributions to Deforestation	Potenetial influences and capacities	NGO / Donor Programs	Level of contributions to Deforestation	Potenetial influences and capacities
		Civil's registry office							
Mining	- Provincial Energy and Mineral Resources Agency - Provincial and District Environmental Agency - Governor's office	Weight 1: These agencies regulate mining activities and enforce environmental safeguards (e.g., AMDAL) for mining sectors	These stakeholders have the capacity to influence the policy, as well as providing recommendation on issuance of mining licenses. Environmental agency is in charge for reviewing and monitoring the environmental impacts due ot mining activities. Halting and preventing deforestation are not explicitly mandated. These stakeholders are involved (authorised) to hold the issuance of (and revoke) mining licenses	▪ Mining companies ▪ Artisanal miners	Weight: 4-5 Major contributors to the deforestation from mining sectors. All mining acitivities in Jambi (e.g., Sarolangun, Tebo, Muaro Jambi districts) involve land conversion in APL/ other use area). Artisanal mining contributes to	Activities done by these stakeholders are almost always associated with deforestation and environmental degradation (land clearing and mining effluent).. There is a lack of capacity for preventing and halting deforestation and degradation	- KKI Warsi - Walhi Jambi	Weight 1: NGOs work to halt deforestation from mining sector through advocacy, campaigns, and community empowerment	These organisations are capable of conducting campaign and advocacy for reducing deforestation and degradation from minng industry and artisanal mining (Merangin and Bungo districts)

Locations of Deforestation	Stakeholders								
	Regulators and Executors	Level of contributions to Deforestation	Potential influences and capacities	Land users	Level of contributions to Deforestation	Potenetial influences and capacities	NGO / Donor Programs	Level of contributions to Deforestation	Potenetial influences and capacities
					deforestation (e.g., Muara Bungo and Merangin districts) in forest and conservation areas				
APL	- District and provincial plantation agencies - District and provincial Agriculture and Horticulture	Weight: 2 Contribution to deforestation is unintentional. Despite the efforts for ensuring energy and food independence, Jambi Province is paying attention to sustainable plantation and agriculture. Weak technical	These stakeholders focus mainly on community welfare (according to the targets laid out in the Medium term Development Plan – RPJMD). Potential support towards reducing deforestation and degradation may be gained from application of sustainable agriculture. These stakeholders are involved and are authorised in creating	▪ Private companies (plantation and mining) ▪ <i>Serikat Petani Indonesia</i> (Indonesian Farmers Union)	Weight 4-5 Most companies and small holder planters employ burning methods for preparing the plantation land. Serikat Petani Indonesia encourages	Private companies operating in the APL have obtained HGU (plantation). Some companies (e.g., Asian Agri) comply with RSPO principles. Indonesian farmers union supports agrarian reform, and	- <i>KKI Warsi</i> - <i>Walhi Jambi</i> - <i>Mitra Aksi</i> - <i>Gita Buana</i> - <i>JMGJ</i> - <i>Walestra</i>	Weight 1: NGOs work to halt deforestation in APL through advocacy, campaigns, and community empowerment	These organisations are capable of conducting campaign and advocacy for reducing deforestation and degradation in APL (advocacy through village governments)

Locations of Deforestation	Stakeholders								
	Regulators and Executors	Level of contributions to Deforestation	Potential influences and capacities	Land users	Level of contributions to Deforestation	Potenetial influences and capacities	NGO / Donor Programs	Level of contributions to Deforestation	Potenetial influences and capacities
	Agencies - District and Provincial Public Works and Housing Agencies - District and Provincial Environment Agencies - Provincial and district agrarian agencies	capacity and enforcement of the mechanism contributes to the deforestation due to the presence of unsustainable practices.	policies to encourage sustainable agriculture and plantation. Sustainable agriculture has been introduced in Jambi Province, However, stakeholders at village and sub-district level may be lacking capacities for implementing sustainable agriculture and plantation.		encroachment on forest and conservation areas for plantation.	has the capacity to bring in migrant farmers to Jambi province.			

Locations of Deforestation	Stakeholders								
	Regulators and Executors	Level of contributions to Deforestation	Potential influences and capacities	Land users	Level of contributions to Deforestation	Potential influences and capacities	NGO / Donor Programs	Level of contributions to Deforestation	Potential influences and capacities
	- Village governments								
Production forest	- Provincial Forestry Agency - Forest Management Units - Production Forest Management Authority (BPHP) – Jambi	Weight: 2 Contribution to deforestation is unintentional. Despite the dependence on forestry sub-sector in the GDP, Provincial agencies are paying attention to sustainable forest management and moratorium. Weak technical support and resources among FMUs indirectly	These stakeholders are involved in providing recommendation to national government (i.e., Ministry of Environment and Forestry) on IUPHHK-HTI licenses (as well as moratorium) Their mandate is aligned with the development plan stated in the RPJMD (i.e., target for GDP from forestry sub-sector). As outlined in the SRAP REDD+ and RAD-GRK, their mandate includes implementing sustainable forest management and	▪ Forestry companies ▪ Social forestry groups ▪ Coffee farmers ▪ Frankfurt Zoological Society (FZS) Indonesia Program	Weight 4: All concession holders have established business plans that include sustainability practices. There are cases where forestry companies encourage indigenous communities to conduct illegal logging (e.g., in Tebo	Upon receiving concession licenses, forestry companies are required to develop annual plan (Rencana Kerja Tahunan – RKT). Most of the forestry companies have the capacity to develop this document. However, They lack the capacity to prevent and	- KKI Warsi - Walhi Jambi - Amphal - Forest Programme II (KfW)	Weight 1: NGOs work to halt deforestation in production forest through advocacy, campaigns, and social forestry (including Voluntary Carbon Standard – VCS)	These stakeholders have the technical capacity and experience to implement social forestry strategies (HKm, HD, HTR, and HA) in production forest (as well as protected forest). Additionally, these stakeholders have donor supports to implement the strategy, and link it with

Locations of Deforestation	Stakeholders								
	Regulators and Executors	Level of contributions to Deforestation	Potential influences and capacities	Land users	Level of contributions to Deforestation	Potential influences and capacities	NGO / Donor Programs	Level of contributions to Deforestation	Potential influences and capacities
		contributes to the deforestation	preventing deforestation from encroachment. BPHP validates production forest boundaries		District/ Bukit 30 NP) Coffee farmers/ migrants enter Merangin District to establish coffee plantation in production forest (FMU Merangin). FZS is conducting orangutan and elephant conservation programs in Tebo District.	reduce encroachment within their concessions FZS has the capacity on conservation of biodiversity (elephant monitoring and orangutan re-introduction) in Tebo District.			carbon markets such as voluntary carbon market (e.g., Plan Vivio in Merangin and Bungo districts), and other REDD+ initiative (e.g., Forest Programme II)
National Park	- MoEF (Directorate General	Weight: 2 Contribution to deforestation is unintentional.	Mandate and the resources available within these stakeholders are	▪ Coffee farmers ▪ Serampas Customary	Weight 4-5 (Except for customary groups)	Indonesian farmers union supports agrarian	- KKI Warsi - Walhi Jambi	Weight 1: NGOs work to halt deforestation	These stakeholders have the technical

Locations of Deforestation	Stakeholders								
	Regulators and Executors	Level of contributions to Deforestation	Potential influences and capacities	Land users	Level of contributions to Deforestation	Potential influences and capacities	NGO / Donor Programs	Level of contributions to Deforestation	Potential influences and capacities
	of Conservation of Natural Resource and Ecosystem) - Kerinci Seblat NP - Berbak-Sembilang NP - Bukit Tigapuluh NP - Bukit Duabelas NP	Despite the mandate for preserving biodiversity, weak technical support and resources among NPs indirectly contributes to the deforestation.	focused on conserving biodiversity, and maintaining forest ecosystem. These stakeholders employ forest rangers, ecosystem technician, and facilitators that enable them to protect the forest, conduct studies, as well as work with local people. There is a lack of resources (numbers of forest rangers) available to effectively protect the forest from encroachment (driver of deforestation)	- Group (Kerinci Seblat NP) ▪ Talang Mamak Customary Group (Bukit Tigapuluh NP) ▪ Nature tourists (public) ▪ Hydropower plants ▪ Geothermal companies ▪ Academics/researchers ▪ <i>Serikat Petani Indonesia</i> (Indonesia	Many farmers (migrant) encroach Kerinci Seblat National Park for coffee plantation. Serikat Petani Indonesia encourages encroachment on forest and conservation areas for plantation. There are customary claims within the national parks, but these have not resulted	reform, and has the capacity to bring in migrant farmers to Jambi province to start coffee plantation in the conservation area (encroachment in merangin District / Kerinci Seblat NP). Geothermal companies (Pertamina and Supreme Energy) has the capacity to conduct	- <i>Lahar</i> - <i>Gita Buana</i> - <i>Walestra</i> - <i>Pundi Sumatera</i> - <i>WWF Indonesia</i> - <i>ZSL Indonesia Program</i> - <i>FZS</i> - <i>FFI Indonesia</i> - <i>Forest Programme II (KfW)</i>	on in conservation areas through advocacy, campaigns, rehabilitation (ecosystem recovery), and social forestry	capacity and experience to support biodiversity conservation (elephant and tiger conservation), as well as to gather support from donor/funding support. These stakeholders have experience with other REDD+ initiatives

Locations of Deforestation	Stakeholders								
	Regulators and Executors	Level of contributions to Deforestation	Potential influences and capacities	Land users	Level of contributions to Deforestation	Potenetial influences and capacities	NGO / Donor Programs	Level of contributions to Deforestation	Potenetial influences and capacities
				- n Farmers Union) - Orang Rimba customary group (Bukit Duabelas NP)	in deforestation	exploratory operations in the national park. These companies have collaborations with the national park to conduct ecosystem restoration.			
Protected forest/peat land	- <i>Provincial Forest Office (Dinas Kehutanan Provinsi)</i> - <i>Forest Management Unit</i>	Weight: 1 Contribution to deforestation is not observed. Mandate for forest management includes mandate for preventing deforestation and forest fire	Mandate and the resources available within these stakeholders are focused on conserving peatland ecosystem. These stakeholders aim to protect and rehabilitate forest and peatland ecosystem in Jambi. Their goal is to protect the forest from encroachment and fire	- Coffee farmers (Liberica) - Private companies (forest concessions)	Weight 4-5 Most companies and small holder coffee farmers employ non-sustainable methods for preparing the plantation land.	Upon receiving concession licenses, forestry companies are required to develop annual plan (Rencana Kerja Tahunan – RKT). Most of the forestry	- <i>KKI Warsi</i> - <i>JMGJ</i> - <i>Gita Buana</i> - <i>Walestra</i> - <i>Forest Programme II (KfW)</i>	Weight 1: NGOs work to halt deforestation in protected forest/peat land areas through advocacy, campaigns, rehabilitation	These stakeholders have the technical capacity and experience in implementing conservation program in protected forest/peatland. Additionally, these stakeholders

Locations of Deforestation	Stakeholders								
	Regulators and Executors	Level of contributions to Deforestation	Potential influences and capacities	Land users	Level of contributions to Deforestation	Potenetial influences and capacities	NGO / Donor Programs	Level of contributions to Deforestation	Potenetial influences and capacities
	- <i>Watershed & Protected Forest Authority (BPDAS HL)</i> - <i>Peatland Restoration Agency (Badan Restorasi Gambut)</i>		(driver of deforestation)			companies have the capacity to develop this document. However, They lack the capacity to prevent and reduce encroachment within their concessions		(ecosystem recovery), and social forestry	have donor supports to implement the strategy. These stakeholders are also familiar with other REDD+ initiative
Grand Forest Park	- <i>Dinas Kehutanan Provinsi</i> - <i>Provincial Agency</i>	Weight: 1 Contribution to deforestation is not observed. Mandate for forest management	Mandate and the resources available within these stakeholders are focused on conserving Grand Forest Park (<i>Taman Hutan</i>)	Nature Tourists (public)	Weight 2: No significant contribution to the deforestation by visitors.	General public has some degree of awareness on the importance of forest			

Locations of Deforestation	Stakeholders								
	Regulators and Executors	Level of contributions to Deforestation	Potential influences and capacities	Land users	Level of contributions to Deforestation	Potential influences and capacities	NGO / Donor Programs	Level of contributions to Deforestation	Potential influences and capacities
	<i>for Grand Forest Park</i>	includes mandate for preventing deforestation and forest fire	<i>Raya</i> /TAHURA). These stakeholders aim to protect and rehabilitate part of forest and peatland ecosystem in Jambi (e.g., Tahura Bukit Raya, and Orangkayo Hitam). Their goal is to protect the forest from encroachment and fire (driver of deforestation)		However Grand Forest Park Orang Kayo Hitam suffered from fire (human activities) and lost 80% of its forest	ecosystem. Most do not have capacity to halt and/or prevent deforestation and degradation. However, actions of responsible nature tourists may influence the behaviour of general public.			
Nature Reserves	- MoEF (DG Conservation of Natural Resources and	Weight: 1 Contribution to deforestation is not observed. Mandate for forest management includes	Mandate and the resources available within these stakeholders are focused on conserving biodiversity, and maintaining forest ecosystem. These stakeholders employ	Academics / researchers	Weight 1: No significant contribution to the deforestation by Academic	Academics and researchers have high degree of awareness on the importance of forest			

Locations of Deforestation	Stakeholders								
	Regulators and Executors	Level of contributions to Deforestation	Potential influences and capacities	Land users	Level of contributions to Deforestation	Potenetial influences and capacities	NGO / Donor Programs	Level of contributions to Deforestation	Potenetial influences and capacities
	<i>Ecosystem)</i> - <i>Conservation of Natural Resource Agency (BKSDA – Jambi)</i>	mandate for preventing deforestation and forest fire in nature reserves	forest rangers, ecosystem technician, and facilitators that enable them to protect the forest, conduct studies, as well as work with local people. There is a lack of resources (numbers of forest rangers) available to effectively protect the forest from encroachment (driver of deforestation)		communities and researchers	ecosystem. They have the capacity to explore new methods for halting and/or preventing deforestation and degradation. Results from the researches and studies may be used to improve forest management and reduce the rate of deforestation			
