

E2797

DRAFT
Environmental and Social Management
Framework for Ecosystem Restoration
Concessions (ESMF-ERCs)

27 May, 2011

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ABBREVIATIONS AND ACRONYMS

ADB	Asian Development Bank
AFD	Agence Française de Développement
AMAN	Alliance of Indigenous Peoples of the Archipelago
AMDAL	Environmental Impact Analysis
ARPF	Access Restriction Process Framework
BAPEDAL	Badan Pengendalian Dampak Lingkungan (Environmental Impact Management Agency)
BAPEDALDA	Badan Pengendalian Dampak Lingkungan Daerah (Regional Office of BAPEDAL)
BOSF	Borneo Orangutan Survival Foundation
BUHA	Directorate for Enterprise Development in Natural Forests
BPK	Production Forest Development
BRPUK	Directorate for Forest Use Planning and Enterprise Development
CBD	Convention on Biological Diversity
CI	Conservation International
CIDA	Canadian International Development Agency
COP	Conference of the Parties
CSO	Civil Society Organizations
CSR	Corporate Social Responsibility
DPNI	National Council For Climate Change
ER	Ecosystem Restoration
ERC	Ecosystem Restoration Concession
ES	Ecosystem Services
ESMF	Environmental Social Management Framework
EU	European Union
FGD	Focus Group Discussion

FORRU	Forest Research and Rehabilitation Unit
FPIC	Free Prior and Informed Consent
GDP	Gross Domestic Product
GEF	Global Environment Facility
GHG	Green House Gases
GOI	Government of Indonesia
GIZ	Gesellschaft für Internationale Zusammenarbeit
ha	Hectares
HTI	Hutan Tanaman Industri (Industrial Timber Plantation)
IBSAP	Indonesian Biodiversity Strategy and Action Plan
ICDP	Integrated Conservation Development Projects
ICRAF	World Agroforestry Centre
IFC	International Finance Corporation
IP	Indigenous People
IPP	Indigenous Peoples Plan
IPB	Bogor Agricultural University
IUPHHK-RE	Ecosystem Restoration Timber Forest Utilisation Permits for Natural Forest in Production Forests
LATIN	Indonesian Non-governmental Organization
LIPi	Indonesian Institute of Sciences
M&E	Monitoring and Evaluation
MDGs	Millennium Development Goals
MoE	Ministry of Environment
MoF	Ministry of Finance
MoFr	Ministry of Forestry
MOU	Memorandum of Understanding
MoT	Ministry of Trade
NGO	Non-Governmental Organization

NTFP	Non-Timber Forest Product
PAC	Project Advisory Committee
Permenhut	Forestry Ministerial Decree
PDO	Project Development Objective
PIR	Project Implementation Review
PIW	Project Inception Workshop
PMU	Project Management Unit
PPG	Project Preparation Grant
PSC	Project Steering Committee
PT REKI	PT Restorasi Ekosistem
PT. RHOI	PT. Restorasi Habitat Orangutan Indonesia
REDD	Reduced Emissions from Deforestation and Forest Degradation
RUPES	Rewarding Upland Poor for Environmental Services
SCF	Stakeholders Consultative Forum
STAP	Scientific and Technical Advisory Panel
TA	Technical Assistance
TAC	Technical Advisory Committee
TELAPAK	Indonesian Non-governmental Organization
TNC	The Nature Conservancy
TOT	Training for Trainers
UKL	Environmental Management Effort
UNCBD	United Nations Convention on Biological Diversity
UNFCC	United Nations Framework Convention on Climate Change
UNFF	United Nations Forum on Forests
UPL	Environmental Monitoring Effort

WARSI

Indonesian NGO Network

WB

World Bank

WWF

World Wide Fund for Nature

1. Introduction

1.1. Overview of the Program

1. In order to address the ongoing degradation and deforestation in Indonesia's production forests, the MoFr created a new policy framework which allows licenses for ecological restoration to be granted for logged-over concessions. Known as an 'Ecosystem Restoration' license (UUHHK-RE) the concession holder has a initial 60 year permit under which the concession holder must return the forests to its 'natural equilibrium'. During the first 20 years of the license there is a moratorium on cutting, but concession holders are allowed to develop non-timber forest products (NTFPs) and Ecosystem Services such as ecotourism and carbon sequestration.
2. Burung Indonesia and the BirdLife International Consortium in collaboration with PT Restorasi Ekosistem (PT REKI) pioneered the first ER site of 100,000 ha of Sumatran lowland rainforest known as "Harapan Rainforest" in 2007. Currently, there are 32 applicants for ER licenses in various stages of the application process totaling 3.3 million ha. But so far, in addition to PT REKI, only the BOSF/PT. RHOI has received a license for 86,450 ha ER site in east Kalimantan.¹ The majority of applicants plan to use the ER license as a means to enter the carbon markets. Other uses of the ER concession include ecotourism, biodiversity conservation and education. In all instances ER activities are designed to restore the forests with native species and are not expected to have any adverse environmental or social impacts.
3. As indicated in the Decree No.61/2008 by the Minister of Forestry, only activities that are beneficial for ER are allowed, while activities that result in ecosystem damage are prohibited. The priority of the license is to maintain forest function and its representativeness through activities of maintenance, protection and forest ecosystem recovery. Activities include planting, enrichment, pruning and wildlife breeding, as well as re-introduction to restore biotics (flora and fauna) and non-biotics (soil, climate and topography), so that equilibrium within the ecosystem can be accomplished. In contrast to a logging concession, the regulation allows the ecosystem restoration concession (ERC) owner to hold licenses for the commercialization of non-timber forest products (NTFPs) and ecosystem services, such as biodiversity protection, ecotourism, waterflow/water and carbon sequestration/storage.
4. The Government's policy on Ecosystems Restoration presents an encouraging opportunity for participants in the forestry sector to stabilize and enhance the natural production forest resources of Indonesia. The challenge is how to balance preservation of globally-important biodiversity and the impact on the reduction in greenhouse gasses that forest restoration brings, with maintaining the economic and social values of the resources. This requires a management approach which realizes the multi-product business potential of the

¹ Technically 3 licenses have been issued: PT REKI has 2 licenses, each one covering approximately 50,000 ha; and PT RHOI has one license.

ecosystem, conserves and enhances biodiversity, provides for equitable benefit sharing with communities, and provides sufficiently attractive returns on investment.

5. The uptake of an ER concession does not necessarily mean that the above management approach will be applied in that concession. Whilst the ER policy and regulations refer to natural balances in the ecosystem, that concept is not clearly defined. ER concession holders must prepare environmental and management plans acceptable to the Government as part of the application process, but these can be based on investments in reforestation and protection, to derive benefits only from carbon markets in the short term, and certified timber extraction in the longer term. This approach would fall short of mainstreaming biodiversity concerns themselves into those management plans, and does not necessarily take advantage of other ecosystem service values or multi-product business opportunities that can be used to ensure participation and equitable benefits sharing with communities. Communities living in and around an ER concession are part of the ecosystem, and benefits to their livelihoods to reduce pressures on the ecosystem are essential for its overall restoration. This aspect is crucial in eliminating the threats that communities pose to biodiversity through a sense of exclusion, lack of awareness and understanding, and poverty.
6. The concept of the project to develop a biodiversity management framework and a set of standards for the management of the concession as well as to promote the inclusion of communities living in or around the ERCs is expected to reduce risks of adverse effects to the environment and communities as well as provide a level of comfort to the authorities enabling them to speed up the issuance of new licenses for ERCs.
7. Funding for this project is being channeled through the World Bank, which means the project and potential ERC license holders receiving technical assistance from the project must adhere to the Bank's Safeguard Policies. "The objective of these policies is to prevent and mitigate undue harm to people and their environment in the development process. These policies provide guidelines for bank and borrower staff in the identification, preparation, and implementation of programs and projects." (<http://go.worldbank.org/WTA1ODE7T0>).

1.2. Objective of the ESMF

8. The main purpose of the ESMF is to establish a framework for how to approach environmental and social issues that may be encountered in an ER concession and to guide the ERC license applicant to prepare an Environmental and Social Management Plan(ESMP) (explained in Chapter 5) to monitor and mitigate any potential social and environmental risks on the site that may result from ER implementation that is receiving or technical assistance by the Project. In Indonesia, this instrument is referred to as UKL/UPL, and is prepared by the ERC license applicant as part of the license application process before any activities besides studies on the ground can take place.

9. The ESMF is based on the World Bank's environmental and social safeguard policies. A key principle is to prevent and mitigate any harm to the environment or people by incorporating environmental and social concerns as an intrinsic part of project management. Environmental and social issues will be tracked during all stages of the project to ensure that all activities comply with the policies and guidelines laid out in the ESMF.
10. The instrument employed to ensure that large scale projects are designed to avoid or minimize negative environmental impacts in Indonesia is the AMDAL (Environmental Impact Assessment). For smaller impact projects, a UKL/UPL is sufficient. As per a letter from the State Ministry of Environment (B-7404/Dep I-I/LH/11/2006) an ecosystem restoration activity is not classified as an exploitation activity; therefore, there is no significant negative impact on the environment. Restoration activities tend to give positive results so the AMDAL should not be required for this type of activity.
11. In the case of this project where individual ERC sites targeted for technical assistance from the project are not known in advance at the beginning of the project, it is impossible to execute individual site level EIAs. Instead, the environmental and social safeguard requirements of both the GOI and World Bank will be addressed through the Environmental and Social Management Framework (ESMF), which will serve to guide the preparation of the site-specific UKL/UPL (essentially the Environmental and Social Management Plan). This document provides an ESMF which is to be used by the ERC selected to benefit from technical assistance from this project to ensure that all environmental and social safeguards are adequately addressed in the resulting UKL/UPL to the satisfaction of both the World Bank and the GOI. In such a case where an UKL/UPL has already been prepared prior to the ERC being selected to benefit from TA from this project, the ESMF will be used as guidance for strengthening the UKL/UPL via additional studies or measures, as the case may, be before TA can be provided.
12. The main purpose of the ESMF is to: (a) establish clear procedures and methodologies for the environmental and social assessment, review, approval and implementation of investments to be financed under the project; (b) specify appropriate roles and responsibilities, and outline the necessary reporting procedures, for managing and monitoring environmental and social concerns related to the project; (c) determine the training, capacity building and technical assistance needed to successfully implement the provisions of the ESMF; and (d) provide practical information resources for implementing the ESMF.
13. Under the ESMF, screening is conducted at project Steering Committee level. The six eventual ERC sites selected for technical assistance from the project will be determined when the government issues the next batch of ERC licenses (expected in 2012).
14. The ESMF is complemented by an Indigenous Peoples Planning Framework (IPPF) to deal with indigenous peoples issues and an Access Restriction Process Framework (ARPF) to deal with cases where access to resources utilized by local communities is restricted by the establishment of the ERC.

1.3. Legal and Institutional Guidelines

15. In 2009, the GOI passed Law No. 32/2009 on Environmental Protection and Management. Under this law, the AMDAL (Analisis Mengenai Dampak Lingkungan) process – the assessment of proposed activities with significant anticipated impact on the environment - has become a recognized instrument to measure environmental pollution and degradation.

Ecosystem Restoration (IUPHHK-RE) license shall be complemented by the following permit(s).

- a. UIPK (Commercial Forest Area Utilization) permit
 ↗ Work Permit issued for area utilization
- b. IUPJL (Environmental services Utilization) permit
 ↗ Permit issued for utilization of environmental services in production forest.
- c. IUPHHBK
 ↗ Business license to utilize non-timber forest products in production forest.

Under the Environment Law, both AMDALs and UKL/UPL² are required for the awarding of the environmental permits – now as prerequisites for development activity permits (e.g., mining, building, and industrial permits). The SPPL³ in lieu of AMDALs are necessary for activities where there is low anticipated impact.

16. ER is governed by the Minister of Forestry Regulation No. P.61 Menhut-II 2008 “On Provisions And Procedures For Issuing Ecosystem Restoration Forest Timber Utilisation Permits For Natural Forests In Production Forests Through Applications”. Article 1 states:
- a) Production Forest Areas are areas designated and/or established by the Government to be maintained as permanent forests with the primary function being to produce forest products.
 - b) Unproductive production forests are forests designated/allotted by the Minister as locations for ER and/or plantation forest development.
 - c) Ecosystem Restoration Timber Forest Utilisation Permits for Natural Forest in Production Forests hereafter referred to as IUPHHK-RE are permits as described in Article 1 number 14 of Government Regulation No. 6 Year 2007 in conjunction with Government Regulation No. 3 Year 2008.
 - d) ER means efforts to restore biotic elements (flora and fauna) and abiotic elements (soil and water) to a region with native species in order to achieve biological and ecosystem balance.

² UKL/UPL are environmental management and monitoring plans for proposed activities with moderate environmental impact (*Upaya Pengelolaan Lingkungan (UKL); Upaya Pemantauan Lingkungan (UPL)*).

³ *Surat Pernyataan Pengelolaan Lingkungan (SPPL)* are letters from firms confirming agreement to manage and monitor environmental impacts.

17. Article 4(g) states applicants for an ER permit must submit a technical proposal that includes:
 - a) The general condition of the intended area and the condition of the company;
 - b) A technical proposal comprising intentions and objectives, ER planning and utilisation after ecosystem balance has been achieved, the silviculture system used, organization/management, financing/cash flow, and forest protection.
18. Article 8(2), which relates to Law 32/2009 on Environmental Protection and Management, then states that once an application has been approved:
 - a) The Director General prepares a draft letter from the Minister to the applicant requesting preparation and delivery of an Environmental Impact Analysis (AMDAL) or Environmental Management Effort (UKL) and Environmental Monitoring Effort (UPL) documents in accordance with the prevailing laws and regulations.
19. Article 8(2) has caused confusion because it states applicants are required to complete an AMDAL or an UKL. Some district governments have interpreted the article 8(2) to mean that ER applicants must carry out an AMDAL.⁴ Although the P.61/2008 is under review, the Ministry of Environment has issued letters to two companies applying for an ER permit stating that applicants do not need to conduct an AMDAL, since the priority of ER permit is to restore forest areas (see Attachment 1)..
20. A ministerial regulation is expected to expand on the types of businesses and/or activities that require an AMDAL. It is also anticipated that the type of activities requiring a UKL/UPL will be further regulated at the governor and regent/mayor levels.
21. In December 2010, the Ministry of Forestry issued “Regulation (MENHUT II/P 50/2010): Procedures For Granting Permits and Expansion Area Work Permits, the Use of Wood Forest Products (IUPHHK) in Natural Forests, IUPHHK Ecosystem Restoration or IUPHHK in Forest Plantation Forest Industry in Production Forests” replacing P.61 MENHUT II-2008. PP50/2010 revised the approval process of ERCs requiring an additional layer of recommendations from the sub-national level, both from the Governor and District head (Bupati).

Table 1: Activities allowed and not allowed in ERCs

Activities	Regulation	Allowed	Not allowed	Remarks
Ecosystem Restoration activities	P.61/Menhut-II/2008	- Native species	- Non-native species	
Utilization of forest area	PP No.6/2007 Article 32	- Cultivating medicinal plants - Cultivating ornamental	- No negative impacts towards biophysics and socio-economy	Limitation of total area for processing

⁴ Law 32/2009, Article 23, sets out the criteria for activities that require an AMDAL. If the activities do not fulfill the criteria under Article 23, then the entity will be required to prepare a UKL/UPL. The UKL is less time-consuming and more cost effective than carrying out a full AMDAL. Attachment 2 presents the list of activities that must be completed by ER concessions according to the law.

		<ul style="list-style-type: none"> - plants - Cultivating mushrooms - Breeding bees - Breeding wildlife - Breeding swallow bird nests 	<ul style="list-style-type: none"> - No use of mechanical or heavy equipment - No development of any facilities that change the landscape 	
Non timber products utilization	PP No.6/2007 Article 43 and 49.	<ul style="list-style-type: none"> - Rattan, sago, nipah and bamboo, including planting, harvesting, enrichment, maintaining, and product marketing activities - Sap, bark, leaves, fruit or seeds and eaglewood, including harvesting, enrichment, maintaining, and product marketing activities 	<ul style="list-style-type: none"> - Protected wildlife and flora stipulated under the Act (UU) No. 5/1990, concerning conservation of natural resources and the ecosystem 	For non timber forest products except protected wildlife and flora, a maximum of 20 ton per household.
Ecosystem services utilization	PP No.6/2007 Article 33	<ul style="list-style-type: none"> - Water flow service and water - Ecotourism - Biodiversity protection - Saving and protecting the environment - Absorbing and/or storing carbon 	<ul style="list-style-type: none"> - No changes to the landscape - No damage to environmental elements - And/or not reducing its main function 	
Timber utilization	PP No.6/2007 Article 31, and 45	<ul style="list-style-type: none"> - Timber products harvested to support the development of public facilities for the local community, at a maximum of 50 (fifty) cubic meters, or to fulfill individual requirements, at a maximum of - 20 (twenty) cubic meters for every household. 	<ul style="list-style-type: none"> - Timber collected is not to be used for any commercial purposes. 	

2. Program Description

22. The project consists of 4 components to be implemented over 4 years:
- Component 1: Business Development in Ecosystem Restoration Concessions
 - Component 2: Policy and Administration of Ecosystems Restoration
 - Component 3: Knowledge and Experience
 - Component 4: Project Management
23. Since there are separate roles and responsibilities of the private sector and the Government in ER implementation, the project is structured so that the components and activities are grouped to accordance with the main targets. Consequently, Component 1 deals with the constraints of the private sector, and activities to overcome them, and Component 2, the Government. Component 3 involves activities to support sub-sectoral information and dialogue between the Government and private sector interests

Component 1: Business Development in Ecosystems Restoration Concessions

24. The focus of this component will be on promoting the development of multi-product sources of income that can be derived from the ecosystem whilst restoring natural balances, incorporating these into management plans of ERCs, and establishing working agreements between concession holders and local communities concerning the sharing of responsibilities and benefits in the use and management of ERCs. This component focuses on the private sector's issues and responsibilities. This component will be implemented by Burung Indonesia.

Component 2: Policy and Administration of Ecosystems Restoration

25. This component is aimed at strengthening the capacity of Government at all levels to achieve the visions and objectives of its ER policy. The project will support three areas: policy and regulation, understanding of ER concepts and technical aspects, and monitoring of ecosystems and biodiversity status. The component is planned to be implemented by the Ministry of Forestry.

Component 3: Knowledge and Experience

26. This component aims to ensure that information on best practices, frameworks and standards, current policy and regulatory issues is shared and exchanged among key interested parties in ER. This will be achieved by supporting the ER Forum in its discussions and activities, and through a communication and outreach program to ensure that documented experience is available to audiences directly concerned with ER. This component will be implemented by Burung Indonesia.

Component 4: Project Management

27. The project will require the establishment of an office at the Ministry of Forestry's headquarters in Jakarta to handle project administration, monitoring and evaluation, and

liaison with Government. This office will also support the technical staff required for the project's activities. The project management will be implemented by Burung Indonesia.

2.1 Planned locations for Interventions by the Project

28. For applying the frameworks and standards (to be developed by the project), the project will work with 6 ERC concession holders/applicants' sites in Indonesian production forest, to be identified during project implementation. The sites will be determined when the government issues the ERC licenses that are expected in 2012, and the ERCs benefiting from the project's support will be selected on the following basis:
- (1) the management plans as submitted to the Government in support of the application for the license fall short of the full integration of the multi-use restoration concept developed by the project;
 - (2) the concession area contains globally important biodiversity; and
 - (3) the concession company has expressed a commitment to proceed with the management approach of the project.
29. In addition to the specific ERC holders/applicants' sites chosen for technical assistance by the project, it is envisaged that the ESMF, IPPF and ARPF could be applied to ERCs more broadly in Indonesia through the development of biodiversity management frameworks and standards hopefully to be adopted and endorsed by the MoFr, ERC applicants and local communities alike.

2.2 Institutional arrangements

30. As the ERCs do not require a full AMDAL under the national legislation, but varies between regional governments, the responsibility for implementation of the ESMF rests with the local-level environmental impact management agencies (BAPEDALDA Kabupaten). BAPEDALDA is responsible, together with appointed experts (Technical Team or Tim Teknis and AMDAL Commission or Komisi AMDAL), for the scoping and the preparation of the terms of reference for an EA. BAPEDALDA also sets up the AMDAL Commission that reviews the draft EA, provides comments, and recommends approval to the district head. In smaller and more remote areas, where local governments might not be capable of dealing with EA reviews, the provincial level Environment Agency (BAPEDALDA Provinsi) has taken on the responsibility for determining the EA category of investment projects and for the review and approval of EA. Thus the authority in question (provincial or district level) will depend on the location of the ER concession.
31. The Minister of Forestry approves ERC licenses and is responsible for the implementation of P.50/2010. At the provincial level, the Governor provides a recommendation for the ERC license to the Ministry of Forestry based on technical advice from the Provincial Forestry Agency concerning the location of the site and flora and fauna. The letter of recommendation from the district head (Bupati) is limited to ensuring that there are no

overlapping permits for the site. During the life of the project, ERC concession license holders are expected required to coordinate and consult with the provincial and district forestry agencies on site level issues and provide periodic reports.

32. The ERC license is valid for a period of 60 years and may be extended once for a period of 35 years. An ERC license is evaluated every five years by the Minister of Forestry based on technical guidelines stipulated by the Director General.

3. Potential Environmental and Social Impacts

33. ER sites are generally logged-over expired concessions, that may or may not have parts of standing forest remaining – especially on hillsides or rocky terrain that has not been easily accessed during logging operations. These unlogged areas may contain biodiversity of high global importance, despite being situated in what is administratively known as *production forest*. The aim of the ER policy is to ‘bring back’ the characteristics of a healthy natural ecosystem within the boundary of the ER concession during a period of 20 years. ER policy has the *opposite* aims in comparison to the original logging concession. Yet there are a range of considerations that must be taken into account, most of which are social in nature, but include some environmental ones as well in order to maximize the desired benefits.
34. The most detrimental environmental impacts in forest settings would have to do with further degradation of the ecosystem through unsustainable resource extraction, ill-advised management practices or introduction of invasive non-native species. The project is not proposing any such activities, nor are they allowed by current ER regulations in Indonesia either. The most conceivable negative environmental outcome during ERC establishment would be a low rate of success in re-establishing the flora and fauna once removed during the logging operations inside the concession. This cannot be considered a further deterioration of the ecosystem, however, but a continuation of *status quo*, i.e. neutral impact. The annex on ECOPs will offer the ERC manager a collection of best practice advice from literature (CIFOR, ITTO and others) as well as good practice on mitigating and minimizing adverse impacts from workers and daily activities on the site.
35. Social impacts are, then again, more conceivable and much effort will have to be put into identifying what actions of undertaken in ERCs might lead to reduced quality of life or for communities living in our around the concession. These would generally have to do with reduction of access to resources inside the ER concession or failure to address indigenous peoples’ concerns. The social safeguard instruments will help the ERC manager avoid or mitigate any negative impacts and the project will help him/her identify synergies and win-win scenarios in collaborating with local communities.

3.1 Communities Living on the Borders or Near ER Concessions

36. ERCs are designated areas of production forest awarded by the MoFr to a private company for ecosystem restoration activities. In principle, such areas should be free from other concessionaires (whether for mining or plantations), individuals living inside its boundaries or using resources derived from within the concession. However, in reality, villagers from nearby communities often access the concession (especially after it has expired), for collection of various resources (food, wood, fibers, medicinal plants etc.).

37. The ESMF emphasizes the importance of community participation because local knowledge is required to identify, design and plan the implementation of practical mitigation measures. It is especially important as the success of ER depends on community support and action, both in implementing mitigation measures and in monitoring their success. As Table 3 below indicates, more often than not there will be communities living along the boundary of ER concessions. Not to mention those that are living within the concession's boundaries. The table below is illustrative of the issue and not a list of ERCs necessarily related to this project.

Table 3. List of ecosystem restoration sites and surrounding communities

Company Name	Location	Ha	No. of Villages	Total Population (person)
Rimba Raya Conservation*)	Seruyan, Central Kalimantan	101.730	25	51,613
Restorasi Habitat Orang Utan Indonesia Unit III	Murung Raya, Central Kalimantan	68.089	5	1,990
Rimba Makmur Utama	Kota Waringin Timur dan Katingan, Central Kalimantan	227.260	20	33.427
Indo Carbon Lestari	Pulang Pisau dan Katingan, Central Kalimantan	198.200	31	58.758
Ekosistem Katulistiwa Lestari	Kubu Raya, West Kalimantan	41.258	4	16.888
Restorasi Ekosistem Indonesia (REKI)	Musi Banyuasin, Sumatera Selatan dan Batanghari, Sarolangun, Jambi	53.657 + 49.185	10	24.082

4. World Bank Safeguards triggered by the project

4.1 Environmental Assessment (OP 4.01)

38. This policy requires Environmental Assessment (EA) of projects proposed for Bank financing to help ensure that they are environmentally sound and sustainable, and thus to improve decision making. The EA process takes into account the natural environment (air, water, and land); human health and safety; social aspects in a broad sense (involuntary resettlement, indigenous peoples, and cultural property – but also potential conflicts with foreign workers or disruption of community communication pathways etc) and transboundary and global environmental aspects.
39. As part of the ESMF process, proposed ERCs under the project are to comply with the requirements set out under World Bank safeguard policies. The World Bank system assigns a project to one of three project categories, as defined below:

Category “A” Projects

40. An EIA is always required for projects that are in this category. Impacts are expected to be ‘adverse, sensitive, irreversible and diverse with attributes such as pollutant discharges large enough to cause degradation of air, water, or soil; large scale physical disturbance of the site or surroundings; extraction, consumption or conversion of substantial amounts of forests and other natural resources; measurable modification of hydrological cycles; use of hazardous materials in more than incidental quantities; and involuntary displacement of people and other significant social disturbances.

Category “B” Projects

41. Although an EIA is not always required, some Environmental analysis is necessary. Category B projects have impacts that are ‘less significant, not as sensitive, numerous, major or diverse. Few, if any, impacts are irreversible, and remedial measures can be more easily designed. Typical projects include rehabilitation, maintenance, or upgrades, rather than new construction.

Category “C” Projects

42. No EIA or other analysis is required. Category C projects result in negligible or minimal direct disturbance of the physical Environment. Typical projects include education, family planning, health, and human resource development.
43. **This project has been screened and assigned an EA Category B.** Therefore, this ESMF sets out to establish the EA process to be undertaken for implementation of activities in the proposed ERCs when they are being identified and implemented. In addition, Environmental Codes of Practice (ECOPs) to be taken into account in carrying out the ecosystem rehabilitation activities are given in Attachment 5.
44. The EA and ESMFs take into account the requirements of Forests OP 4.36. and Natural Habitats OP 4.04 (below).

4.2 Natural Habitats (OP.4.04)

45. The objectives of the project are to provide technical assistance to the restoration and conservation of biodiversity in logged over production forest concession sites yet to be identified. No conversion or degradation of natural habitats is anticipated. To the contrary, degraded habitats will be restored through assisted regeneration and enrichment planting with local species for maximizing biodiversity. Planning of ER concessions will obviously have to take into account possible impacts as well as ensure that best available science is brought to the overall management for biodiversity enhancement and protection.
46. Requirements for Natural Habitats policy will be addressed through the development of a site specific ESMP by the ERC manager.

4.3 Forests (OP.4.36)

47. The management, conservation, and sustainable development of forest ecosystems and their associated resources are essential for lasting poverty reduction and sustainable development, whether located in countries with abundant forests or in those with depleted or naturally limited forest resources. The objective of this policy is to assist borrowers to harness the potential of forests to reduce poverty in a sustainable manner, integrate forests effectively into sustainable economic development, and protect the vital local and global environmental services and values of forests.
48. Where forest restoration and plantation development are necessary to meet these objectives, the Bank assists borrowers with forest restoration activities that maintain or enhance biodiversity and ecosystem functionality. The Bank also assists borrowers with the establishment and sustainable management of environmentally appropriate, socially beneficial, and economically viable forest plantations to help meet growing demands for forest goods and services.
49. Requirements for the Forests policy will be addressed through the development of a site specific ESMP by the ERC manager

4.4 Indigenous Peoples (OP 4.10)

50. For purposes of this policy, the term “Indigenous Peoples” is used in a generic sense to refer to a distinct, vulnerable, social and cultural groups possessing the following characteristics in varying degrees:
 - (a) self-identification as members of a distinct indigenous cultural group and recognition of this identity by others;

- (b) collective attachment to geographically distinct habitats or ancestral territories in the project area and to the natural resources in these habitats and territories;
- (c) customary cultural, economic, social, or political institutions that are separate from those of the dominant society and culture; and
- (d) an indigenous language, often different from the official language of the country or region.
- (e) in the case of Indonesia and for screening purposes, the following definitions can be used:

1. Masyarakat Adat /Adat communities/Customary law communities

These are based on lineage or locality and are bound by customary law.

Characteristics of these communities include: (i) self identification as a distinct indigenous cultural group, (ii) collective attachment to ancestral territories and to the natural resources in the territories; and (iii) and customary cultural, economic, social, or political institutions.

2. Komunitas Adat Terpencil (KAT)/Isolated and Vulnerable communities (IVPs):

This is a government-designated category of customary law communities that live in isolated areas.

The characteristics attributed to these communities include: (i) collective attachment to ancestral territories and to the natural resources in the territories; (ii) customary cultural, economic, social, or political institutions; (iii) an indigenous language. They are also identified by government as: (i) having a subsistence economy, (ii) using simple tools and technology, (iii) having a high dependence on the environment and local natural resources, and (iv) having restricted access to social, economic, and political services.

51. An ERC selected for technical assistance by the project that affects Indigenous Peoples requires:

- (a) screening by the ERC holder/applicant to identify whether Indigenous Peoples are present in, or have collective attachment to, the project area as per the IPPF;
- (b) a social assessment;
- (c) a process of free, prior, and informed consultation with the affected Indigenous Peoples' communities at each stage of the project, and particularly during project preparation, to fully identify their views and ascertain their broad community support for the project;
- (d) the preparation of an Indigenous Peoples Plan
- (e) disclosure of the draft Indigenous Peoples Plan

4.5 Physical Cultural Resources (OP 4.11)

52. Though it is unlikely that ER activities may cause damage to physical cultural property, the presence of rivers/forests/mountains/objects of spiritual significance should be assessed prior to starting work on the site. Activities in areas with possible physical cultural resources must follow specific procedures to identify the property and to avoid negative impacts. The ESMP will address any actions required. Procedures include:
- a) Consultations with the appropriate authorities and local inhabitants to identify known or possible sites during project planning
 - b) Site selection that avoids any identified property, which includes areas for protected and natural resource management planning and zoning
 - c) Procedures for “chance finds” will include the cessation of work until the significance of a find has been evaluated by the appropriate authorities and local inhabitants, and until suitable protection procedures have been determined
 - d) Procedures for construction contracts will include the same procedures for dealing with “chance finds”
 - e) Buffer zones or other management arrangements must be made to avoid damage to cultural property, including sacred forests and graveyards. The local communities should decide the access procedures and should never be excluded from accessing these areas.

4.6 Involuntary Resettlement (OP 4.12)

53. The objective of this policy to avoid where feasible, or minimize, exploring all viable alternative project designs, to avoid resettlement. This policy 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.
54. This policy covers direct economic and social impacts that both result from Bank-assisted investment projects, and are caused by (a) the involuntary taking of land resulting in (i) relocation or loss of shelter; (ii) loss of assets or access to assets, or (iii) loss of income sources or means of livelihood, whether or not the affected persons must move to another location; or (b) the involuntary restriction of access to legally designated parks and protected areas resulting in adverse impacts on the livelihoods of the displaced persons.
55. The policy on Involuntary Resettlement is triggered in anticipation to possible restriction of access to resources in ERCs previously accessed by local communities and an Access Restriction Process Framework has been prepared as a tool for identifying and dealing with such issues.

5. Environmental and Social Management Plan

56. An ESMP describes the site specific social and environmental setting and specific actions needed to manage and monitor the various impacts identified in a particular ERC. The ESMP is a key working document to guide how the ERC license applicant/license holder will provide assurances for mitigation against identified environmental or social risks. An approved UKL/UPL by the BAPPEDAL/BAPPEDALDA, based on the guidance in this chapter as well as in the Environmental Codes of Practice (Attachment 5) is a prerequisite for an ERC license holder to receive technical assistance from the Project.
57. An Indonesia portfolio safeguards review⁵ carried out by the WB considered the environmental requirements of Indonesia's AMDAL system to be "broadly consistent" with the requirements of the WB's environmental safeguard policies. Wherever the use of the AMDAL process is not likely to yield the necessary quality of work or the desired results, project proponents should take necessary additional steps and actions to ensure that the EA process and outputs fully meet all WB requirements under OP 4.01. This means the World Bank reserves a right of 'no-objection' for:
- the terms of reference of the EA study (including the budget and plan for public consultations);
 - the EA consultants' shortlist;
 - final output report of the process
- before the World Bank can allow Burung Indonesia to provide technical assistance to the ERC in question.
58. Recommended format for an ESMP in compliance with WB OP 4.01 is presented in Attachment 4, including a table with columns that include the activity identified with its impact/potential risk, mitigation measures to be taken, which party is required to do what and how often. The activities defined in this table relate to the sequence of operations or events as part of an overall project activity, like the construction of a nursery, which could pose a particular threat. Because the ESMP is a working document, its format and language should be relatively simple, non-technical with clear, concise language on what the EIA prescribes as necessary steps to avoid environmental or social risks in the ERC.
59. More broadly and with respect to community participation in the ERC, the ESMP may also relate to activities that promote improved synergies between development and conservation.
60. Another important part of the ESMP is monitoring, evaluation and corrective actions if necessary. Such description should include what internal procedures will be used by the implementing party to monitor and evaluate compliance of mitigation steps and what indicators will be used to signal if corrective or mitigating measures were effective. This prescription will also lay out the framework for what criteria to use in a subsequent

⁵ Indonesia Portfolio Review: Effectiveness of Safeguard Policies Implementation (Central Operations Services Unit (EAPCO), 2008)

environmental audit, should the project feel compliance is in question and that there is need to evaluate the effectiveness of the mitigation measures put into place.

5.1 Initial review of potential impacts

61. In order to identify negative social or environmental impacts, it is necessary to understand local communities' level of dependency on the forest, what forest products they utilize, customary laws, local knowledge concerning the forest ecosystem, and population levels. From an environmental perspective, a baseline assessment of the ecological parameters should be carried out, including a rapid biodiversity assessment, specifically focusing on the identification of endangered species and invasive non-native species in the proposed ERC.
62. Management of the ER will affect the communities living on or around the borders of a concession when the activities that they carry out inside the ER area have an impact on their livelihoods. Table 3 below can be used for analyzing possible impacts on local communities.

Table 3. Examples of possible impacts on local communities around the ER concession

Ecosystem Restoration Activities	Changes in access that may occur	Positive	Negative
Boundary demarcation	Access to the ER area for local communities will be limited.	Land ownership issues/conflicts resolved.	Livelihood sources may be reduced, potential conflicts over land use and land ownership
Inventory of potential forest resources	Interactions between the community with RE management may become more intensive.	Recognition of the use of community use of forest resources in the ER concession in some case.	Uncertainty in recognizing property rights of indigenous knowledge
Restoration of ER concession	Community economic activities with the ER site may be terminated.	Restoration of forest cover.	Loss of livelihoods
Utilization of non timber forest products	Local communities and RE management may utilise the same commodities.	Possible collaboration in utilising the same natural resources.	Competition may occur when utilising the same natural resources.

5.2 Study on Social and Environmental Impacts

63. After an initial study has identified any potential impacts, more in-depth studies are needed to ascertain social impacts. As part of the Project Preparation Grant financed activities, detailed social assessments were carried out in select sites (in Gorontalo and Halmahera) applying for an ERC license as well as Focus Group Discussions (FGD). The assessment found that, for example, boundary demarcation may mean the livelihoods of the local communities will be negatively affected. Therefore, further study is needed to better understand community activities in the ER concession area. Issues to be addressed include: the number of community members that will be affected if access is restricted; the affect that this will have on household incomes; and the impact this will have for women and other vulnerable groups. Findings of the social assessment and FGD have been incorporated into the design of the IPPF and Access Restriction Process Framework.
64. A more detailed biodiversity assessment will be carried out once an ERC site has been selected to receive TA from the Project.

5.3 Consultation and Participation

5.3.1 Use of Appropriate Communication Media, Strategies for Working with Local Communities

65. The WB requires a public consultation before the EA study is begun, and another consultation after the drafts of the EA and the EMSP have been prepared, whereas it is common practice in Indonesia to have just one consultation meeting at the start of the process, while only a selected representative of the community is allowed to sit on the AMDAL Commission (Komisi AMDAL) that reviews the draft EA and EMP. As a result, the affected public has little further opportunity to raise any concerns if the draft EA has not addressed all perceived environmental issues properly.
66. Recognizing the weaknesses in the public involvement (PI) process for AMDAL, the National Environment Agency (Bapedal) issued decree 08/2000 as a guideline for improved and strengthened PI. The decree clearly spells out the rights of the public to: (a) receive all relevant information about a proposed project, (b) make interventions and ask questions on the proposal, and (c) have a representative of the directly affected public sit as a member of the AMDAL Commission that reviews the draft EA.
67. Presentation meetings must be conducted in the local or native language. In addition, facilitators must use simple and uncomplicated process flows during these interactions. Local patterns of social organization, religious beliefs and resource use must be considered when preparing any development response that affects local communities.
68. Participating ERC license holders must adhere to the requirements for documentation of meetings conducted with local communities, especially those which pertain to the process of Free and Prior Informed Consultations leading to broad community support. It shall not proceed with the project's civil works unless the corresponding documentation of meetings

with the local communities is attached to the request, and that this documentation indicates no objection.

5.3.2 Participation in Development, Monitoring and Evaluation of Mitigation Measures

69. Where projects pose potential adverse impacts on the environment and the socioeconomic-cultural-political lives of these communities, they must be informed of such impacts and their rights to compensation.
70. Should communities grant their approval for projects with adverse impacts, the implementing unit must ensure that affected communities are included in the development of action plans so they may meaningfully participate in the implementation, monitoring and evaluation of the mitigation measures agreed upon.
71. Should potential effects be positive or beneficial to the local communities specific plans shall be made so the benefits are culturally responsive.
72. Project implementers must adhere to the requirements for documentation of meetings conducted with communities, especially those related to the Free and Prior Informed Consultations leading to broad community support.
73. Dedicated meetings shall be conducted for purposes of monitoring and evaluation of mitigation measures.

5.4 Mitigation Measures

74. ER concessions will be used for a number of uses such as recreation, NTFPs and Ecosystem Services such as carbon sequestration. The increased recreational use of the concession site may also produce direct impacts due to under-management of tourist sites and facilities, possible overuse of campsites or trails, increased waste, harvesting of live wood for campfires, accidental fires, disturbance of flora and fauna, trespassing into fragile areas and non-maintenance of trails that could lead to slope erosion. Appropriate site selection, good construction practices and diligent management will ensure that each of these impacts is minimal.
75. ER concession holders are required to establish certain infrastructure. The main environmental impacts would occur from infrastructure construction (e.g. base camp, checkpoints, guard posts and trails), increased recreational use of the concession area and changes in natural resource management/use (Refer to list in Attachment 2).
76. Attachment 3 provides a list of potential environmental impacts and standard mitigation measures.

5.5 Coordination, Supervision and Monitoring

77. Supervision meetings/visits in ERC sites receiving TA will be done periodically (frequency to be established during Project implementation) by the World Bank task team and Burung Indonesia as the implementing agency, who will involve the community representatives in these meetings/visits.
78. All complaints shall be discussed and negotiations must be carried out in the specific communities that have been affected. Facilitation will be carried out by a mutually agreed upon mechanism/individual. Such meetings and interactions with affected households/communities must be documented and distributed to relevant stakeholders.

5.6 Grievance Mechanism

79. Local communities and other interested stakeholders may raise a grievance at any time to the ERC license holder in the concession in question. Procedures for guaranteeing the receipt, processing and follow-up grievances should be included in the site specific ESPM as well as the contact person for grievances. Affected local communities should be informed about the ESMP provisions, including its grievance mechanism. Contact information of the ERC license holder, Ministry of Forestry, Burung Indonesia and the World Bank task team should be made publicly available.
80. As a first stage, grievances should be made to the ERC license holder, who should respond to grievances in writing within 15 calendar days of receipt. Claims should be filed, included in project monitoring, and a copy of the grievance should be provided to Burung Indonesia project team leader. If the claimant is not satisfied with the response from Burung Indonesia, the grievance may be submitted to the World Bank GEF project task team in the SDN unit, World Bank Office Jakarta.

Attachment 1. State Ministry of the Environment Letters on AMDAL in RE Concessions

**THE STATE MINISTRY OF THE ENVIRONMENT
THE REPUBLIC OF INDONESIA**

JL. D.I. Panjaitan, Kebon Nanas
Jakarta 13410
PO Box 7777 JAT 13000

Tel. : 021-8580067-69, 8517148
Fax. : 021-8518135, 8517147
Website: <http://www.menlh.go.id>

Jakarta, November 6, 2006

Number : B-7404/Dep I-I/LH/11/2006 To:
Attachment : 1 file The Director General of Forestry Product
Subject : The implementation of the Development
Environmental Impact The Ministry of Forestry
Assessment of the forest
restoration activities in South
Sumatra Province

PT. Restorasi Ekosistem Hutan (PT. REKI) has submitted a plan to conduct restoration and reforestation of the forest land in South Sumatra Province on October 16, 2006 (please find attached the minutes of the meeting). The plan is submitted in relation to the obligation to conduct the Environmental Impact Assessment of the planned activities. After studying various prevailing rules and regulations that are applicable to activities which must be provided with the Environmental Impact Assessment, there are some points that require follow-up:

1. Basically a restoration activity is not classified as an exploitation activity; therefore, there is no significant negative impact on the environment. Restoration activities tend to give positive results so the Environmental Impact Assessment should not be required for this type of activity. This matter is also related to the list of activities which shall be provided with the Environmental Impact Assessment (AMDAL) as stated in the Regulation of the Minister of the Environment No. 11/ 2006 (previously the Decree of the Minister of the Environment No. 17/2001) which states that for forestry sector activities, the AMDAL is only required for forest exploitation activities in the form of business which uses forest timber products (UPHHK)
2. With regard to the activities which will be carried out by PT. REKI we understand that it is related to the type of permit issued by the Ministry of Forestry; therefore, there is an assumption that said company shall be required to perform the Environmental Impact Assessment. We have provided support so that the Environmental Impact Assessment process can take place properly because of limited time to fulfill the permit requirements.
3. As a follow up, we hope that in the future such restoration activities will be supported or given incentives because they are aimed to improve the condition of the environment. Thus this type of activities should be exempted from the obligation to conduct the

Environmental Impact Assessment because the environmental restoration activities do not require any Environmental Impact Assessment.

Thank you for your attention and cooperation.

For Deputy State Minister of the
Environment,
Environmental Regulation Section
Assistant Deputy for
Environmental Impact Review
signed and sealed
Hermien Roosita
NIP. 770 000 068

Carbon copies:

1. First Deputy to Minister of the Environment, as a report
2. Governor of South Sumatra, c.q. Head of BPLHD South Sumatra Province,
3. Regent of Musi Banyuasin, c.q. Head of Bapedalda of Musi Banyuasin Regency,
4. Head of the Environmental Management Center - Sumatra,
5. PT. Restorasi Ekosistem Indonesia.

Attachment 2. Steps in Ecosystem Restoration Implementation

Activities/ Processes

Prior to IUPHHK-RE (ERC) license being granted

1. Application

IUPHHK-RE application requirements comprise:

- A copy of the deed of establishment of the private PT, CV, or Firma enterprise together with any amendments preferably carrying out business activities in the field of forestry/agriculture/estate crops;
- A business permit from the competent authority;
- A taxpayer registration number (NPWP);
- A bank reference stating that the applicant is a responsible customer;
- A statement of willingness to open a branch office in the Province and/or District/Municipality;
- A plan of the location applied for made by the applicant submitted with a satellite image of at least 30 (thirty) meter resolution, from a clear source, supplemented by a map of at least 1:100,000 scale; and
- A technical proposal consisting of among others:
 - the general condition of the intended area and the condition of the company;
 - a technical proposal comprising intentions and objectives, ecosystem restoration planning and utilization after ecosystem balance has been achieved, the silvicultural system to be used, organization/management, financing/ cash flow, and forest protection.

2. Environmental Impact Assessment (AMDAL or UKL/UPL)

In the case of the Minister of Forestry approves the application, the Director General prepares a letter from the Minister to the applicant requesting preparation and delivery of an Environmental Impact Analysis (AMDAL) or Environmental Management Effort (UKL) and Environmental Monitoring Effort (UPL) documents in accordance with the prevailing laws and regulations.

An AMDAL or UKL and UPL with approval or confirmation from the competent authority is then submitted by the applicant to the Minister through the Director General, and after a legal check, preparation of the designated area map and payment of applicable fees, the Minister of Forestry issues a Decree on IUPHHK-RE Permit Issuance.

First Year

1. Building facilities and infrastructure

- Base camp and facilities (offices, employee dormitories, guest houses, water installation, electrical installation, public kitchen, worship areas, warehouses, workshops and health facilities)
- Facilities to conserve and safeguard the forest (guard posts and warning signs)

2. Procurement of vehicles and equipment

- Means of transportation (cars, motorcycles)
- Equipment to conserve and safeguard the forest (fire fighting unit)
- Road maintenance/construction unit
- Office equipment (computers, furniture, stationary)
- Survey equipment
- Communication equipment

3. Preparation of planning documents

- Prepare report on forest with 1% IS (flora and fauna potential)
- Prepare UPHHK-RE Work Flow documents
- Prepare 10-Year UPHHK-RE Work Plan
- Procurement of Land Satellite (Landsat) images

- Public awareness campaign on the decree of IUPHHK – RE

Second Year

- Prepare IUPHHK-RE Annual Work Plan
- Organize border and boundary reconstruction
- Prepare concession boundary demarcation with the community
- Prepare routes and boundary guidelines
- Boundary demarcation implementation in the field
- Prepare the minutes on concession boundary demarcation
- Organizing work area/work block

Third Year

- Prepare IUPHHK-RE Annual Work Plan
- Inventory/Report on the forest in the work block
- Organize work area/work block
- Plant nursery facilities

Fourth Year

- Preparing IUPHHK-RE Annual Work Plan
- Road maintenance/construction
- Cultivation of seedlings
- Inventory/report on the forest on the work block
- Organize work area/work block

Yearly Activities

- Payment of taxes, fees, etc to the State
- Managing and monitoring the environment.
- Empowering the community
- Protection and safeguarding the community (patrols, etc)
- Research and development

Attachment 3. Potential Environmental Impacts and Standard Mitigation Measures

Activity	Potential Impacts	Standard Mitigation Measures	Monitoring and Indicators
Construction of basic infrastructure (e.g. base camp)	Minor, short-term potential impacts on already disturbed and small areas of vegetation – mainly due to soil excavation, dust and noise	<p>Consult local communities to determine an appropriate site for the infrastructure to minimise impacts</p> <p>Ensure trails are fit-for-purpose, restricting trail width to that required for foot patrols or tourists</p> <p>In areas where trail bikes are used, the means of controlling access will be instituted</p> <p>Obtain any permits required by national and local regulations prior to construction</p> <p>Infrastructure will be designed in accordance with local traditions, local architecture, and good environmental practices</p> <p>Appropriate management and disposal of waste and debris</p>	<p>Incidental take of species is recorded (indicator species identified and monitored)</p> <p>Free, prior and informed consent of the community is recorded</p> <p>Debris does not litter the site</p>
Road construction	<p>Disturbance to wildlife habitats or populations</p> <p>Disturbance to environmentally sensitive areas</p>	<p>Identify and avoid effects to habitats and migration routes of key species</p> <p>Consult local communities to determine appropriate sites to minimise impacts</p>	
Changes to natural resource use and management (e.g. restoration of gallery forest)	<p>Environmental impacts are expected to always be positive</p> <p>Use only native species for restoration</p>	<p>Consult local communities to determine appropriate land and resource management regimes</p> <p>Consider compensation and/or avoidance mechanisms to minimise crop loss and conflict</p>	<p>The free, prior and informed consent of the communities is recorded</p> <p>Monitor native indicator species for ecosystem response</p>
Nursery Construction	Minor, short-term potential impacts on already disturbed and small areas of vegetation – mainly due to soil excavation, dust and noise.	<p>Consult local communities to determine an appropriate site for the infrastructure to minimise impacts</p> <p>Appropriate management and disposal of waste and debris</p> <p>Assess water supply and existing demands, and manage sustainability</p> <p>Identify and avoid negative impacts on existing water users in the planning phase</p>	<p>Ensure debris does not litter the site</p> <p>Ensure water supplies remain stable</p>

Attachment 4. Suggested Format for a Simple ESMP

The ESMP identifies feasible and cost-effective measures that may reduce potentially significant adverse environmental impacts to acceptable levels. The plan includes compensatory measures if mitigation measures are not feasible, cost-effective, or sufficient.

Specifically, the ESMP

- (a) identifies and summarizes all anticipated significant adverse environmental impacts (including those involving indigenous people or involuntary resettlement);
- (b) describes--with technical details--each mitigation measure, including the type of impact to which it relates and the conditions under which it is required (e.g., continuously or in the event of contingencies), together with designs, equipment descriptions, and operating procedures, as appropriate;
- (c) estimates any potential environmental impacts of these measures; and
- (d) provides linkage with any other mitigation plans (e.g., for involuntary resettlement, indigenous peoples, or cultural property) required for the project.

The ESMP emphasizes that an Environmental and social management plan (ESMP) should fit the needs of a subproject and be easy to use. The basic elements of an ESMP are:

- A description of the subproject activity;
- A description of potential environmental/social impacts;
- A description of planned mitigation measures;
- An indication of institutional/individual responsibility for implementing mitigation measures (including enforcement and coordination);
- A program for monitoring the environmental/social effects of the subproject both positive and negative (including supervision);
- A time frame or schedule; and
- A cost estimate and source of funds.

The operationalization of an ESMP can be made easier with a simple table as follows:

Subproject Activity	Potential Environmental/Social Impacts	Proposed Mitigation Measures	Responsibility (including enforcement and coordination)	Monitoring Requirements (including supervision)	Time Frame or Schedule	Cost Estimate

Attachment 5. Environmental Codes of Practice for Ecosystem Restoration Concessions

I. General

1. In order to minimize the impacts on the environment during the construction and operation of Ecosystem Restoration Concessions (ERC), ERC license holders benefiting from technical assistance from this project and contractor(s) and employees shall adhere to the mitigation measures set down in:
 - The government regulations on ERCs.
 - The specifications, procedures, and best practices included in this Annex. These specifications complement any technical specifications included in the work quantities and the requirements of any other Indonesian regulations.

II. Environmental Duties of the Contractor

2. The duties of the license holders and Contractor(s) include but are not limited to:
 - a. Compliance with relevant environmental legislative requirements in Indonesia;
 - b. Work within the scope of contractual requirements;

III. Social and Environmental Rules for Contractor

4. The Contractor will prepare and enforce a Workers Code of Conduct to reflect the following:

3.1 Prohibitions

5. The following activities are prohibited on or near the project site:
 - a) Cutting of trees for any reason outside the approved construction area;
 - b) Hunting, fishing, wildlife capture and poaching, or plant collection;
 - c) Buying of wild animals or their meat for food or any other purposes (See 5.1.1);
 - d) Disturbance to anything with architectural or historical value;
 - e) Building fires outside camp areas without being authorization;
 - f) Use of firearms (except authorized security guards as applicable under national law);
 - g) Use of alcohol by workers during working hours
 - h) Washing car or machinery in streams or creeks.
 - i) Doing maintenance (change of oils and filters) of cars and equipment outside authorized areas
 - j) Littering of the site and disposing trash in unauthorized places
 - k) Workers driving motorbikes without wearing helmets
 - l) Control construction plants or vehicles by unauthorized person.
 - m) Driving at speeds exceeding limits.

- n) Having caged wild animals (especially birds) in camps.
- o) Working without safety equipment (including gloves, boots and masks)
- p) Creating nuisances and disturbances in or near communities
- q) Disrespecting local customs and traditions
- r) The use of rivers and streams for washing of clothes.
- s) The use of welding equipment, oxy-acetylene torches and other bare flames where fires constitute a hazard.
- t) Indiscriminate disposal of rubbish or construction wastes or rubble.
- u) Spillage of potential pollutants, such as petroleum products.
- v) Collection of firewood.
- w) Urinating and defecating outside of the designated facilities.
- x) Burning of wastes and/or cleared vegetation.

3.1.1 Steps to Take to Curtail Hunting in ERCs

6. According to Act No. 5 of 1990 of the Government of Indonesia, concession managers in Indonesia have the obligation to prevent any activities detrimental to the survival of protected species (Ministry of Forestry 1990)
 - Closing non-essential roads as soon as the operations are complete, which prevents hunter access from those roads, reduces market access, commercial hunting, and illegal trade, and it also reduces the opportunities for illegal re-entry logging;
 - The establishment of conservation zones within the concession where hunting is not allowed;
 - A prohibition on snare hunting as wasteful and unselective;
 - A prohibition on hunting protected species;
 - The banning of commercial hunting throughout the concession;
 - The development of a system of official hunters for controlled legal take of certain species for subsistence;
 - Ensuring that adequate fresh protein supplies are available to all staff and workers, thereby removing the need for them to hunt;
 - Link pay to productivity in an effort to reduce time available to employees for hunting;
 - Preventing logging company vehicles from carrying wildlife, thereby ensuring that they cannot be used for wild meat trade. Security checks at concession entry/exit points can enforce this measure as well as increasing security and preventing log theft.
 - Use contractual clauses specifying that violation of any of these regulations may result in loss of job, and meaningful enactment of this to malefactors.

3.2 Transport

7. The Contractor shall use selected routes to the project site, and appropriately sized vehicles suitable to the class of roads in the area. The contractor shall restrict loads to prevent damage to local roads and bridges used for transportation purposes. The Contractor shall be held responsible for any damage caused to local roads and bridges due to the transportation of excessive loads, and shall be required to repair such damage to the approval of the DSC.
8. The Contractor shall not use any vehicles, either on or off road with grossly excessive, exhaust or noise emissions. In any built up areas, noise mufflers shall be installed and maintained in good condition on all motorized equipment under the control of the Contractor.
9. Adequate traffic control measures shall be maintained by the Contractor throughout the duration of the Contract.

3.3 Workforce and Camps

10. The Contractor should, whenever possible, locally recruit the majority of the workforce and shall provide appropriate training as necessary.

Minimum Facilities Required

11. Construction camps when required shall be provided with the following minimum facilities:
 - A perimeter security fence at least 2m in height constructed from appropriate materials.
 - In every site adequate and suitable facilities for washing clothes and utensils shall be provided and maintained for the use of contract labor employed therein. Separate and adequate bathing facilities shall be provided for the use of male and female workers. Such facilities shall be conveniently accessible and shall be kept in clean and hygienic conditions.
 - Sanitary arrangements, latrines and urinals shall be provided in every camp sites on the following scale:
 - ⌚ Where female workers are employed, there shall be at least one latrine for every 25 females or part thereof.
 - ⌚ Where males are employed, there shall be at least one latrine for every 25 males or part thereof.
 - ⌚ Every latrine shall be under cover and so partitioned off as to secure privacy, and shall have a proper door and fastenings.
 - ⌚ Where workers of both sexes are employed, each latrine or urinal must be lockable from inside, and outside of each block there must be a notice in the language understood by the majority of the workers “For Men” or “For Women” as the case may be.
 - ⌚ The latrines and urinals shall be adequately lighted and shall be maintained in a clean sanitary condition at all times and
 - ⌚ Water shall be provided in or near the latrines and urinals by storage in drums.

- A sick bay and first aid station. First aid box shall be provided at every construction campsite and under the charge of a responsible person who shall always be readily available during working hours of the work place. He shall be adequately trained in administering first aid-treatment. Formal arrangement shall be prescribed to make motor transport available to carry injured person or person suddenly taken ill to the nearest clinic or hospital.
- Areas for the storage of fuel or lubricants and for a maintenance workshop. Such an area shall be enclosed with an impervious bund of sufficient size to contain all of the contents of the storage tank or stored drums in case of rupture and have a compacted/impervious floor to prevent the escape of accidental spillage of fuel and or lubricants from the site. Surface water drainage from enclosed areas shall be discharged through purposely designed and constructed oil traps. Empty fuel or oil drums may not be stored on site.
- Low cost sanitation facilities to provide treatment for wastewater discharges from toilets, wash rooms and the like. The standard of treatment to be achieved at all times is biological oxygen demand (BOD5) less than 30 ppm, suspended solids less than 50 ppm or as required by environmental regulations in Indonesia.
- Storm water drainage system to discharge all surface run off from the camp site to a silt retention pond which shall be sized to provide a minimum of 15 minutes retention for storm water flow from the whole site that will be generated by a 20 year return period rainfall having duration of at least 15 minutes. The run-off coefficient to be used in the calculation of the silt pond volume shall be 0.9. Silt ponds shall be maintained in an efficient condition for use throughout the construction period with trapped silt and soil particles being regularly removed and transported and placed in waste material disposal.
- All discharge from the silt retention pond shall be channeled to discharge to natural water via a grassed swale at least 20 meters in length with suitable longitudinal gradient.
- Waste disposal facilities shall be provided:
 - ⌚ Disposal of sanitary wastes and excreta shall be into septic tanks.
 - ⌚ Kitchen wastes shall be disposed into soak pits. Wastewater from campsites will be discharged and disposed in a kitchen sump located at least 15 meters from any body of water. Sump capacity should be at least 1.3 times the maximum volume of wastewater discharged. The bottom of the pit should be filled with coarse gravel and the sides shored up with board, etc. to prevent erosion and collapse of the pit.
 - ⌚ Solid wastes generated in the construction site shall be reused if recyclable or disposed off in land fill sites
 - ⌚ All camp facilities shall be maintained in a safe clean and or appropriate condition throughout the construction period.
- Fire breaks are important, together with an effective fire prevention policy.

Activities in Construction Camp

12. The following precautions need to be taken in construction of camps:

1. Measures to ensure that no leaching of oil and grease into water bodies or underground water takes place
 2. Wastewater should not be disposed into water bodies
 3. Regular collection of solid wastes should be undertaken and should be disposed off safely
 4. All consumables as the first aid equipment, cleaning equipment for maintaining hygiene and sanitation should be recouped immediately
13. The Contractor shall ensure that site offices, storages and workshops are located in appropriate areas and not within 200 meters of existing residential settlements. Explosive materials storage must be away from residential areas, administrative areas or other public areas, the location of the storage must be accepted, approved by relevant authority and comply with existing Indonesia regulations.
14. The Contractor shall ensure that site offices and particularly storage areas for diesel fuel and bitumen are not located within 50 meters of watercourses, and are operated so that no pollutants enter watercourses, either overland or through groundwater seepage, especially during periods of rain. This will require lubricants to be recycled and a ditch to be constructed around the area with an approved settling pond/oil trap at the outlet.

Site Restoration

15. At the completion of the construction work, all construction camp facilities shall be dismantled and removed from the site and the whole site restored to a similar condition to that prior to the commencement of the works or to a condition agreed to with the owner of the land. Various activities to be carried out for site restoration are:
- Oil and fuel contaminated soil shall be removed and transported and buried in waste disposal areas.
 - Construction campsite shall be grassed and trees cut replaced with similar tree species.
 - Trees planted shall be handed over to the community or the land owner for further maintenance and watering
 - Soak pits and septic tanks shall be covered and effectively sealed off.

3.4 Clearing the Right-of-Way

16. The Contractor shall ensure that vegetation clearing of right of way is carried properly.
- Before clearing, all valuable timber and vegetation should be selectively cleared. Whenever possible, communities should be allowed to benefit from this vegetation for firewood and other uses. Communities should be allowed to remove all usable bamboos from the right of way.
 - Trees should be cut in such a way that they fall longitudinally and not transversally to the right of way alignment. Extra care should be taken to avoid tress from falling down slope with potential risk for communities or traffic below.
 - Make use of any usable timber (after community uses) before construction starts.

- The Contractor shall remove and store the organic layer of the soil to be used for re-vegetation and restoration of affected sites.

3.5 Waste Management and Erosion

17. Solid, sanitation, and, hazardous wastes must be properly controlled, through the implementation of the following measures:

Waste Management:

- Minimize the production of waste that must be treated or eliminated.
- If hazardous wastes such as used oil, batteries, etc. are generated, proper procedures must be taken regarding their storage, collection, transportation and disposal.
- Identify and demarcate disposal areas clearly indicating the specific materials that can be deposited in each.
- Control placement of all construction waste (including earth cuts) to approved disposal sites (>200 m from rivers, streams, lakes, or wetlands and suit Indonesia standards, or the contractor shall implement the mitigation measures regulated in the Bidding document). Dispose in authorized areas all of garbage, metals, used oils, and excess material generated during construction, incorporating recycling systems and the separation of materials.

Erosion Control:

- Disturb as little ground area as possible, stabilize that area as quickly as possible, control drainage through the area, and trap sediment onsite. Erect erosion control barriers around perimeter of cuts, disposal pits, and roadways
- Conserve topsoil with its leaf litter and organic matter, and reapply this material to local disturbed areas to promote the growth of local native vegetation.
- Apply local, native grass seed and mulch to barren erosive soil areas or closed construction surfaces.
- Apply erosion control measures before the rainy season begins preferably immediately following construction. Install erosion control measures as each construction site is completed.
- In all construction sites, install sediment control structures where needed to slow or redirect runoff and trap sediment until vegetation is established. Sediment control structures include windrows of logging slash, rock beams, sediment catchment basins, straw bales, brush fences, and silt
- Control water flow through construction sites or disturbed areas with ditches, beams, check structures, live grass barriers, and rock
- Maintain and reapply erosion control measures until vegetation is successfully established.
- Spray water on dirt roads, cuts, fill material and stockpiled soil to reduce wind-induced erosion, as needed

Maintenance:

- Identify and demarcate equipment maintenance areas (>15m from rivers, streams, lakes or wetlands). Fuel storage shall be located in proper areas.
- Ensure that all equipment maintenance activities, including oil changes, are conducted within demarcated maintenance areas; never dispose spent oils on the ground, in water courses, drainage canals or in sewer systems.
- All spills and collected petroleum products shall be disposed of in accordance with standard environmental procedures/guidelines. Fuel storage and refilling areas shall be located at least 50m from all cross drainage structures and important water bodies.

3.6 Environmental considerations

18. Rehabilitation of deforested or severely degraded land can serve a useful conservation role (e.g., Dunn 2004; Goosem & Tucker 1995). This is especially likely when such rehabilitation makes use of a variety of native tree species that are both of value to the timber industry and to wildlife, and increases connections between original forest areas, or serves to buffer forest edges. Much of the advice in this section draws from Maijaard et al (2005) “Life after logging: reconciling wildlife conservation and production forestry in Indonesian Borneo” (CIFOR 2005) and ITTO “Guidelines for the restoration, management and rehabilitation of degraded and secondary tropical forests” (ITTO 2002).

3.6.1. Restoring the forest

19. The ERC license holder and Contractor shall use enrichment planting and assisted natural regeneration techniques and use locally prevailing species suitable to the climatic and soil conditions in the area for the restoration of the ecosystem within ER the concession. More specifically, the use of non-native species is prohibited.
20. Degraded and secondary forests should be rehabilitated and restored wherever possible by natural succession. Favoring and accelerating natural succession processes is in most cases the ecologically most natural and economically most feasible strategy for the restoration of degraded primary forests, the management of secondary forests and the rehabilitation of degraded forest land. If natural succession cannot achieve the target in a reasonable period of time, planting may be necessary.
21. Areas without any remaining tree cover should be replanted with vigorous pioneer species. In Malinau this might include species like *Trema* able to persist and grow in bright open conditions. These trees should encourage the establishment and growth of shade-dependent forest species;
22. When replanting is required include native tree species that are important a) for wildlife, such as non-dipterocarps like *Parkia speciosa*, *P. javanica*, *Baccaurea* spp., *Nephelium* spp., *Ficus* spp., *Mangifera* spp. and *Pithecellobium* spp.; or b) for timber and wildlife e.g., *Tetramarista glabra*, *Meliosma sumatrana*, some of *Artocarpus*, *Aglaia* and *Dysoxylum* species (good timber), *Santiria oblongifolia*, *Durio zibethinus* and *D. oxleyanus* (general utility timber) and *Dracontomelon dao* (Keßler & Sidiyasa 1994)

23. ERC managers should monitor exotic species in their area, and actively remove them before they become a problem for wildlife and forest regeneration. Species and genera known to cause problems elsewhere should be actively guarded against
24. TPTI (Indonesian selective cutting and replanting system) prescribes slashing of ground vegetation to speed up regeneration. Meijaard *et al* (2005) argue that this is worse than the logging; ground-tending crews, however, work on foot and slash everything, which removes a lot of vegetation from the forest—and is perceived by local people as excessively damaging to many valued non-timber resources (Sheil *et al.* 2003a, b). This has almost certainly a negative impact on many terrestrial animal species (see, for instance, Bernard 2004). In practice this activity is already ignored in many concessions.
25. There should be a systematic post-logging rehabilitation of roads, log landings and stream crossings of sites affected by logging in the past —primarily to reduce soil erosion.
26. Pest and weed control shall be first and foremost be based IPM approaches. In case of a pest outbreak, organic pesticides or fungicides shall be used as a first line of defense.
27. The use of organic fertilizer, where required, shall be promoted.

3.6.2. Maintaining and enhancing biodiversity

28. Conserving and restoring biological diversity, including genetic resources, is a particular concern in all programs to restore, manage and rehabilitate degraded and secondary forests. Whatever the primary objective of forest restoration, management or rehabilitation, biological diversity and genetic resources need to be conserved. An underlying objective in each management strategy applied in degraded and secondary forests is to increase species richness and to build up a complex community structure.
 - Hollow trees should be retained as much as possible as these provide cavities of importance to vertebrates that use them for breeding, nesting and food storage (mandatory);
 - Arboreal water is very important to a number of species. Key aspects are pitcher plants and hollows in certain tree species;
 - Rotting tree stumps are used by species such as squirrels, Sun Bear (*Ursus malayanus*), trogons, forest kingfishers and forest bee-eaters (Lambert & Collar 2002), and as much as possible these stumps should be retained;
 - Preparation of the site for regeneration by burning should be avoided as it reduces habitat heterogeneity and destroys many resources and microhabitats used by invertebrates (Ghazoul & Hill 2001);

- If a cave provides habitat for protected and/or rare and endangered species, then prohibiting entry into caves should be considered;
- ‘Salt springs’, ‘salt earths’ and sites with clays eaten by animals, should be located and incorporated in area planning (local people can usually help locate these). They should not be disturbed;
- There is a wealth of indigenous knowledge regarding tree species that are important for maintaining wildlife populations. Such local knowledge should be evaluated and as much as possible incorporated in concession management

3.7 Community Relations

29. To enhance adequate community relations the Contractor shall:

- Inform the population about construction and work schedules, blasting schedules, interruption of services, traffic detour routes and provisional bus routes, and demolition, as appropriate.
- All community infrastructures such as roads, bridges, water supply systems, micro-power generators, boat landings, irrigation systems, etc. affected during construction must be restored to the satisfaction of the communities.
- All local roads used or by-passed by the Contractor will need to be rehabilitated to their original conditions.
- Establish and maintain a unit to receive, process and reach resolution on community complaints arising from construction activities.
- Coordinate with community leaders in making employment opportunities available to local residents to the extent possible.

3.8 Physical Cultural Resources Chance-finds Procedures

30. If the Contractor discovers archeological sites, historical sites, remains and objects, including graveyards and/or individual graves during excavation or construction, the Contractor shall:

- (a) Halt the construction activities in the area of the chance find;
- (b) Delineate the discovered site or area;
- (c) Secure the site to prevent any damage or loss of removable objects. In cases of removable antiquities or sensitive remains, a night guard shall be arranged until the responsible local authorities or the Provincial Department of Culture, or the local Institute of Archaeology if available to take over;
- (d) Notify the Employer, responsible local authorities and the relevant Institute of Archaeology immediately (within 24 hours or less);
- (e) Responsible local authorities would be in charge of protecting and preserving the site before deciding on subsequent appropriate procedures. This would require a

- preliminary evaluation of the findings to be performed by the local Institute of Archaeology. The significance and importance of the findings should be assessed according to the various criteria relevant to cultural heritage; those include the aesthetic, historic, scientific or research, social and economic values;
- (f) Decisions on how to handle the finding shall be taken by the responsible authorities. This could include changes in the layout (such as when finding an irremovable remain of cultural or archeological importance) conservation, preservation, restoration and salvage;
 - (g) Implementation for the authority decision concerning the management of the finding shall be communicated in writing by relevant local authorities; and
 - (h) Construction work at the site could resume only after permission is given from the responsible local authorities.

3.9 Health Services, HIV/AIDS Education

- 31. The Contractor shall provide basic first aid services to the workers as well as emergency facilities for emergencies for work related accidents including as medical equipment suitable for the personnel, type of operation, and the degree of treatment likely to be required prior to transportation to hospital.
- 32. The Contractor shall be responsible for providing a voluntary program for the detection screening of sexually transmitted diseases, especially with regard to HIV/AIDS, amongst laborers.
- 33. The Contractor shall at all times take all reasonable precautions to maintain the health and safety of the Contractor's Personnel. In collaboration with local health authorities, the Contractor shall ensure that medical staff, first aid facilities, sick bay and ambulance service are available at all times at the Site and at any accommodation for Contractor's and Employer's Personnel, and that suitable arrangements are made for all necessary welfare and hygiene requirements and for the prevention of epidemics.
- 34. The Contractor shall appoint an accident prevention officer at the Site, responsible for maintaining safety and protection against accidents. This person shall be qualified for this responsibility, and shall have the authority to issue instructions and take protective measures to prevent accidents. Throughout the execution of the Works, the Contractor shall provide whatever is required by this person to exercise this responsibility and authority.
- 35. The Contractor shall send, details of any accident as soon as practicable after its occurrence. The Contractor shall maintain records and make reports concerning health, safety and welfare of persons, and damage to property, as the Engineer may reasonably require.
- 36. The Contractor shall conduct an HIV-AIDS awareness program via an approved service provider, and shall undertake such other measures as are specified in this Contract to reduce the risk of the transfer of the HIV virus between and among the Contractor's

Personnel and the local community, to promote early diagnosis and to assist affected individuals.

37. The Contractor shall throughout the contract (including the Defects Notification Period): (i) conduct Information, Education and Consultation Communication (IEC) campaigns, at least every six months, the first one should be within three weeks from construction commencement, addressed to all the Site staff and labor (including all the Contractor's employees, all Sub-Contractors and Consultants' employees, and all truck drivers and crew making deliveries to Site for construction activities) and to the immediate local communities, concerning the risks, dangers and impact, and appropriate avoidance behaviour with respect to Sexually Transmitted Diseases (STD)-or Sexually Transmitted Infections in general and HIV/AIDS in particular; (ii) provide male or female condoms for all Site staff and labor as appropriate; and (iii) provide for STI and HIV/AIDS screening, diagnosis, counseling and referral to a dedicated national STI and HIV/AIDS program, (unless otherwise agreed) of all Site staff and labor.

3.10 Environmental Training and Awareness

38. The Contractor should ensure that all concerned staff are aware of the relevant environmental requirements as stipulated in local environmental legislation and the Contract specifications. The Contractor(s) is responsible for providing appropriate training to all staff. This should be tailored to suit their level of responsibility for environmental matters. The Contractor(s) should also ensure that all site staff members are aware of the emergency response procedures. All staff should receive environmental induction training and managerial staff should receive additional training.

3.11 Remedial Actions

39. Remedial actions which cannot be effectively carried out during construction should be carried out on completion of the works (and before issuance of the acceptance of completion of works):
- (a) All affected areas should be landscaped and any necessary remedial works should be undertaken without delay, including grassing and reforestation;
 - (b) water courses should be cleared of debris and drains and culverts checked for clear flow paths; and
 - (c) All sites should be cleaned of debris and all excess materials properly disposed;
 - (d) Borrow pits should be restored.