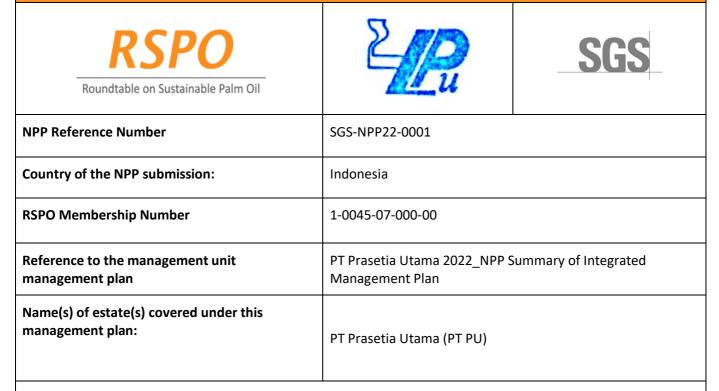
New Planting Procedure - Summary of Integrated Management Plan



Guidance Notes:

This summary management plan shall indicate at a minimum but not be limited to the following:

- Key findings of the various assessments (e.g., potential minor environment and/or social risk requiring mitigation actions; total conservation areas).
- Key mitigation and monitoring regime, covering both the environmental and social aspects.
- Evidence of FPIC and key agreements with local communities (if any).
- An action plan describing operational actions consequent to the findings of the various assessments, referencing the grower's relevant operational procedures.
- Designation of the management team and responsible person for the implementation.

1	EIA	Environmental impact management and monitoring Plan Purpose of management and monitoring report compilation is:
		a. Provide information on the implementation of environmental management and monitoring plan by PT PU to government agencies and agencies to assist in monitoring environmental management by the regions.
		b. Provide information on management and monitoring implementation of PT PU to central management to assist policy-making on environmental management.
		c. As control to the company for the implementation of management and monitoring in its operational area.
		d. Formulate the environmental management and monitoring plan (issues, strategies, programs and activities) that the company needs in managing the environmental aspect to create a healthy and safe environment.
		Output:
		 Output expected from the implementation of those activities are the formulation of environmental management and monitorin plan of PT PU that contain issues/problem, and efforts to solve them (strategy, program, activity, location and time of implementation).
		Benefits:
		a. As a guideline for the company to manage significant environmental aspects resulting from the company's activities to minimize significant environmental impacts.
		b. As material for the company in creating environmental management programs, both short-term, medium-term and long-term programs, based on applicable laws and regulations.
		c. To foster harmonious relationship between the company and the surrounding community

Table 1. PT PU's Environmental Impact Assessment (EIA) management plan

	MANAGED		INDICATOR OF			PERIOD OF	MA	NAGING INSTITUTI	ON
NO	ENVIRONMENTAL IMPACT	SIMPACT SOURCES	SUCCESS	ENVIRONMENTAL MANAGEMENT FORM	LOCATION	MANAGEMENT	DOER	SUPERVISOR	REPORT RECEIVER
1.	PHYISICAL – CHEMICAL COMPONENTS								
1.1	Air Ambient Quality								
	Based on the significant impacts evaluation indicate that the parameters of the impact is air quality degradation in the form of increased dust and emissions which are significant negative impacts and direct.	 Oil palm planting activities. Harvesting and transportation of FFB. Mill operations. Workshop and generator operations in 	Air quality degradation in the form of dust and gas emissions not exceeding the established environmental quality standard:	 On oil palm planting activities: a. Limit the speed of the transporting vehicles at maximum 20 km/ hour, particularly if passing residence or concentration of agriculture society. b. Conducting hardening and compaction on hauling roads 	 On oil palm planting, harvesting and transporting activities of FFB's, management need to be performed along the road and 	 Oil palm planting, harvesting & transportation activities are managed every working day. On mill operations maintenance to mill 	PT PU	 Plantation and forestry office of Kutai Kartanegara regency. Regional Environment 	 Plantation and Forestry Office of Kutai Kartanegar a Regency

The intensity of the impact	which series of	1. The quality	with specific aggregates	the surrounding	machinery need to	Agency o	f 2. Environme
that exceeds the	these activities	standard of	especially on seed	area.	be done at least	Kutai	nt agency
environmental quality	impact the air	airborne dust	transportation routes.	2. On mill operations	once in 2 weeks.	Kartanegara	of Kutai
standard may have further	quality in the form	content is 0.23 mg	c. During dry season, water the	management	3. On workshop and	Regency	Kartanegar
impacts on public and	of ambient dust	/ m³ (ambient air	road every 3 hours especially on	carried out is on	generator	negency	a Regency
workers' health.	concentration due	quality standard)	transportation route near the		•		<i>.</i> .
	to vehicle wheel	based on	settlement.	mill's machinery/	operations		3. Environme
	friction with the	Government		boiler unit.	management need		nt Agency
	road and emissions	Regulation	2) Harvesting and Transportation of	3. On workshop and	to be done once a		of East
	sourced from	number. 41 years	FFB's	generator	month.		Kalimantan
	transporting truck,	1999 on air	a. Limit the FFB's transporting	operations,			Province.
	generator engine	pollution control.	vehicle at maximum 20km/h,	management			
	and boiler at the	2. Dust at workplace	especially when passing	carried out is on the			
	mill.	threshold limit	through the settlement,				
		value is o3 mg / m ³	farming and concentration of	operation locations.			
		based on Decree	agriculture society.				
		Minister of Labour	b. Conducting hardening and				
		number 51 year	compaction on hauling roads				
		1999 on Dust	with specific aggregates				
		threshold values	especially on plantation road				
		at the workplace.	network.				
		3. Stationary	c. During dry season, water the				
		Emission Source	road especially on				
		Standards are	transportation route near the				
		based on Decree	settlement, farming and				
		of Environmental	concentration of agriculture				
		Minister number	society.				
		13/MENLH/3/200					
		5 (NO2 = 1000 mg)	3) Mill Operations:				
		$/ m^3$, SO2 =	a. Chop as smooth as possible the				
		8000mg / m ³ , Particulate = 350	oil palm waste used as boiler				
		and Opacity = 35%	fuel in order to increase high efficiency level of combustion				
		1)	(perfect).				
		1)	b. Installing dust collector device				
			5				
			on boiler's chimney.				
			c. Construct higher boiler chimney as high as 5 x higher than the				
			5 5				
			surrounding buildings.				
			d. Emissions generated by				
			generator and boiler				
			operations, these emissions				
			generally released to open air. Particulate releseased by boiler				
		I	Faillouidle releseased by DOller		I		

				in the form of ashes generally					
				controlled by installing dust					
				collector to catch the dust. Dust					
				collected by the dust collector					
				can be used to harden the lower					
				area.					
				e. Allocate area specific for					
				reforestation around the mill					
				area in order to reduce					
				pollutant concentration due to					
				boiler activity.					
				f. Require the workers primarily					
				who work in mill location to					
				wear personal protective					
				equipment.					
				g. Perform periodic and regular					
				maintenance on machines to					
				keep the condition well					
				maintained and still in					
				accordance with the technical					
				age.					
				0					
				4)Workshop and generator					
				operations:					
				a. Perform regular maintenance					
				on generator at regular					
				intervals to maintain machine					
				performance.					
				b. Generator chimney should be ±					
				2.5 times higher than the					
				surrounding buildings.					
				c. Generator should be located at					
				least 75 meters from the					
				location of estate employees					
				housing.					
1.2	Noise								
	Based on significant impact	Due to the operation	The level of noise	1). On mill operation activities:	1. On mill operations	1. On mill operations	PT PU	1. Plantation	1. Plantation
	evaluation results indicate	of mill's machinery and	emitted does not	a. Perform periodic and regular	management	maintenance to mill		and forestry	and
	that impact parameters on	generator engine and	exceed the	maintenance on machines to	carried out is on	machinery need to		office of	Forestry
	occurrence of increased noise	heavy equipment	established	keep the condition well	mill's machinery/	be done at least		Kutai	Office of
	intensity which is negative	repair on workshop	environmental	maintained and still in	boiler unit.	once in 2 weeks.		Kartanegara	Kutai
	and direct impact. The	and generator area.	standard:	accordance with the technical				0	
	intensity of the impact that		1. Quality standard of	age.	2. On workshop and	2. On workshop and		regency.	Kartanegar
	exceeds environmental		noise in housing and		generator	generator			a Regency.
			·	í	·	1		1	

quality standard may have further impacts on the health of working people. residential area is 55 dB (A) based on decree b. Require the workers, especially workers working at mill location to use personal protective equipment. operations, management operations, management operations, management management Environment Minister Number 48 year 1996 on Noise Quality Standards. variance of Environment Placing the boiler in a separate area with reinforced concrete foundation, indoor and closed to reduce boiler noise level. operations, management month. Kutai d. Allocate area specific for reforestation around the mill area in order to reduce pollutant concentration due to d. Allocate area specific for reforestation around the mill area in order to reduce operations, management operations, management month. Place on to be done once a month. Place on to be done once a month. <td< th=""><th>of of Kutai Kartanegar</th></td<>	of of Kutai Kartanegar
of working people. decree of Environment Minister Number 48 year 1996 on Noise Quality Standards. 2. Quality standard of environment as environment as Quality comment as environment as Quality comment as Quality standard of Quality comment as Quality standard of Quality comment as Quality comment	of of Kutai Kartanegar ra a Regency.
Image: Construction of the second of the	Kartanegar ra a Regency.
Environment C. Placing the boiler in a separate area with reinforced concrete foundation, indoor and closed operation locations. month. Kutai Vironment Minister Number 48 year 1996 on Noise Quality Standards. to reduce boiler noise level. Kutai Kartaneg Quality Standard of Allocate area specific for noise for working environment as reforestation around the mill area in order to reduce area in order to reduce <td< th=""><th>ra a Regency.</th></td<>	ra a Regency.
Minister Number 48 area with reinforced concrete foundation, indoor and closed kartaneg year 1996 on Noise foundation, indoor and closed to reduce boiler noise level. Regency Quality Standards. to reduce boiler noise level. d. Allocate area specific for reforestation around the mill noise for working area in order to reduce area in order to reduce noilutant concentration due to	
year 1996 on Noise foundation, indoor and closed Regency Quality Standards. to reduce boiler noise level. Regency 2. Quality standard of d. Allocate area specific for reforestation around the mill noise for working area in order to reduce area in order to reduce	
Quality Standards. to reduce boiler noise level. 2. Quality standard of noise for working environment as perior d. Allocate area specific for area in order to reduce noise level.	
2. Quality standard of noise for working environment as noise for working environment as	nt Agency
noise for working environment as noise for working environment as	of East
environment as nollutant concentration due to	Kalimantan
environment as nollutant concentration due to	
	Province.
stated in decree of boiler activity.	
Minister of Labour e. Delivering information to	
and Workforce communities living around the	
Number 51 year plant site on the equipment/	
1999 is 85 Db (A). machinery activity and the	
noise it generates.	
2). On workshop and generator	
operation activities	
a. Generator units must be placed	
on area specifically designed for	
generator to reduce the noise	
emitted.	
b. Perform maintenance on	
generator periodically and	
regularly so that the condition is	
well maintained and still in	
accordance with its technical	
age.	
c. Require all workshop workers	
to use ear plugs at the time of	
1.3 Surface Run off	
Based on significant impact Road network There is no surface 1. Carry out land clearing for At the road points and Once during road PTPU 1. Plantatio	1. Plantation
evaluation results indicate construction activities flow disruptions. plantations road network in a natural paths network construction activities and for	
that impact parameters on with surface runoff planned and efficient manner. and evaluated once a office	of Forestry
occurrence of disruption on 2 Constructing culvert at each vear for improvements	Office of
surface flow in which the kinetic surface flow in the ki	
impact is negative and direct drainage ditch with appropriate sections or material.	
due to micro and macro flow size.	Kartanegar
cut off on natural surface 3. Creating bridge on areas with 2. Regional	a Regency.
during cut and fill process. river flowing. Environm	ent

				4. Conduct routine maintenance				Agency of	2. Environme
				on bridges and culverts				Kutai	nt agency
				constructed.				Kartanegara	of Kutai
								0	
								Regency	Kartanegar
									a Regency.
									3. Environme
									nt Agency
									of East
									Kalimantan
									Province
1.4	Erosion Rates								
1.4	Based on significant impact	Vegetation	Resulted erosion rate	Development of Estate	On erosion-prone	Once during work on	PT PU	1.Plantation	1. Plantation
	evaluation results indicate	degradation on areas		Emplacement.	areas especially estate	progress and evaluated	FIFU	and forestry	and
		-	does not exceed					'	
	that impact parameters on	cleared:	critical threshold of 9	a. Implementation of estate	emplacement location,	once in 6 months.		office of Kutai	Forestry
	occurrence of increased	a. Development of	ton/ ha/ year based	emplacement development	road network, nursery			Kartanegara	Office of
	erosion rates in which the	estate	on Government	should be carried out in a	site planting location			regency.	Kutai
	impact is negative, significant	emplacement	Regulation No. 150	planned manner and does not	and mill's site.				Kartanegar
	and derivatives.	b. Development of	year 2000.	allow open land to be neglected					a Regency.
		road network		for long term.					2. Environme
		c. Preparation of		b. Land clearing carried out to					nt agency
		nursery land		construct estate emplacement					of Kutai
		d. Preparation of		should be done in a planned					Kartanegar
		planting area		manner and according to the					a Regency.
		e. Preparation of mill		needs.					3. Environme
		site.		c. Immediately plant land cover					nt Agency
				crops on areas cleared for					of East
				emplacement.					Kalimantan
				d. On sloping area with gradient >					Province m
				8% should have terraces to					
				avoid erosion prone areas.					
				Road network construction					
				a. Land clearing should be done in					
11				a planned and efficient manner.					
11				b. Construct terraces on runoff					
11				areas near river riparian.					
				c. Immediately plant land cover					
11				crops on areas cleared.					
				d. Surfacing the road with coral					
11				mixture.					
11				Preparation of nursery site					

				a. Establish nursery site on sloping					
				area.					
				b. Development of nursery land					
				should be conducted in a					
				planned and efficient manner.					
				c. Setting the pre-nursery site that					
				cuts the slope.					
				d. Immediately plant land cover					
				crops on nursery site that have					
				been left.					
				Preparation of planting site					
				a. Land preparation should be					
				conducted in a well and					
				planned manner.					
				b. Land clearing remnants should					
				be stacked lengthwise and cut					
				into the slope.					
				c. Immediately plant oil palm &					
				LCC on areas planned.					
				d. Do not carry out land clearing					
				by burning.					
				Preparation of mill site					
				a. Land clearing should be					
				conducted in a planned and					
				gradual manner.					
				b. Land clearing should be carried					
				out during dry season.					
				 Do not carry out land clearing by burning. 					
				d. Immediately commence					
				construction activities after					
				land clearing completed.					
				e. Immediately conduct					
				reforestation on surrounding					
				area of the ste with fast-growth					
				plant type and LCC to minimize					
				erosion.					
1.5	Sediment Load								·
	Based on significant impact	This is a derivative	Controlled load of	1) Emplacement Development	Surronding drainage	Once during work in	PT PU	1. Plantation	1. Plantation
	evaluation results indicate	effect of the increased	sediment in	a. Estate emplacement	ditch that áre	progress and evaluated		and forestry	and
	that impact parameters on	erosion rate caused by	surrounding water	construction should be	connected with	at least once in 3		office of	Forestry
	occurrence of increased		bodies.					Kutai	Office of

	T	, , , , , , , , , , , , , , , , , , , ,		1	1		1
	sediment load rates in which	the activities	conducted in a planned		months during PT PU	Kartanegara	Kutai
	the impact is negative,	implemented such as:	manner and gradually.	wáter body.	operations.	regency.	Kartanegar
	significant and may result in	a. Development of	b. Construct drainage ditch			2. Regional	a Regency.
	water quality degradation.	estate	which equipped with			Environment	2. Environme
		emplacement	sediment trap around the area			Agency of	nt agency
		b. Development of	that has been cleared for			Kutai	of Kutai
		road network	estate emplacement site			Kartanegara	Kartanegar
		c. Preparation of	construction.			Regency	a Regency
		nursery land	c. Immediately plant LCC on area			0,	3. Environme
		d. Preparation of	that has been cleared.				nt Agency
		planting área					of East
		e. Preparation of mill	2) Construction of road network				Kalimantan
		site.	a. Road network construction				Province m
			should be conducted in a				i i ovince ill
			planned manner and gradually				
			according to the needs.				
			b. Construct drainage ditch on				
			the right and the left side of				
			the road				
			c. Create sediment trap at each				
			end of the drainage ditch that				
			leads to water body.				
			d. Conduct intensive				
			maintenance to each				
			sediment trap on each				
			drainage ditch.				
			e. Conduct land clearing for oil				
			palm planting in a planned and				
			effective manner.				
			f. Create terraces for land				
			cleared close to river riparian.				
			g. Surfacing the road with cora				
			mixture.				
11							
i 1			3) Preparation of nursery site				
			a. Development of nursery land				
			should be conducted in a				
			planned and efficient manner.				
			b. Setting the pre-nursery site				
.			that cuts the slope.				
L	1			1	1		1

c. At the end of drainage ditch
construct sediment trap
measuring 40m x 15m x 2m
which divide into 2
components.
d. Conduct periodic
maintenance on sediment
trap.
4) Preparation of planting site
a. Land preparation should be
conducted in a well and
planned manner.
b. Land clearing remnants
should be stacked lengthwise
and cut into the slope.
c. Immediately plant oil palm &
LCC on areas planned.
d. Do not carry out land clearing
by burning.
5) Preparation of mill site
a. Land clearing should be
conducted in a planned and
gradual manner.
b. Land clearing should be
carried out during dry season.
c. Do not carry out land clearing
by burning.
d. Immediately commence
construction activities after
land clearing completed.
e. Immediately conduct
reforestation on surrounding
area of the ste with fast-
growth plant type and LCC to
minimize erosion.

1.6	Surface wáter quality								
1.0	Based on significant impact	Derivative impact due	Declining quality	Emplacement development:	Surronding drainage	Once during work in	PT PU	1. Plantation	1. Plantation
	evaluation results indicate	to increased	occurred does not	a. Estate emplacement	ditches that áre	progress and evaluated	-	and forestry	and
	that impact parameters on	sedimentation load	exceed the quality	construction should be	connected with	at least once in 3		office of	Forestry
	occurrence of surface water	(TSS) of fertilizers	standard as set by	conducted in a planned manner	sediment trap and	months during PT PU		Kutai	Office of
	quality degradation in which	residue carried away	local government	and gradually.	WWTP.	operations.		Kartanegara	Kutai
	the impact is negative,	to wáter bodies	regulation PERDA	b. Construct drainage ditch which				8	Kartanegar
	significant and direct. Impact	includes liquid waste	number 02 year 2011	equipped with sediment trap				regency.	0
	intensity that exceed environmental quality	sourced from mill, workshop and	on water quality management & water	around the area that has been				2. Regional	a Regency.
	standard can cause further	generator operations:	pollution control with	cleared for estate emplacement				Environment	2. Environme
	impacts of decreasing the	a. Development of	value	site construction.				Agency of	nt agency
	diversity of aquatic biota.	estate	TSS = 50mg / L	c. Immediately plant LCC on area				Kutai	of Kutai
		emplacement.	Pg = 6 - 9 in sediment					Kartanegara	Kartanegar
		b. Development of	basin and water	that has been cleared.				Regency	a Regency
		road network.	bodies.	Road network construction					3. Environme
		c. Preparation of		a. Road network construction					nt Agency
		nursery site.		should be conducted in a					of East
		d. Nursery activities.		planned manner and gradually					Kalimantan
		e. Preparation of		according to the needs.					Province
		-		b. Construct drainage ditch on the					
		planting área.		right and the left side of the					
		f. Preparation of mill		road.					
		site.		c. Create sediment trap at each					
		g. Plantation upkeep		end of the drainage ditch that					
		h. Mill operation		-					
		i. Workshop and		leads to water body. d. Conduct intensive maintenance					
		generator							
		operations		to each sediment trap on each					
		j. Fertilizer and		drainage ditch.					
		pesticide warehouse		e. Construct terraces on area					
		activities		cleared close to riparian river.					
				f. Conduct land clearing for oil					
				palm road network in a planned					
				and effective manner.					
				g. Create terraces for land cleared					
				close to river riparian.					
				h. Surfacing the road with coral					
				mixture.					
				Duran anation of municipality					
	l	<u> </u>	l	Preparation of nursery site	l	l	l	l	

a. Provide coagulation treatment
on sediment basin to accelerate
the precipitation process of
suspended fertilizers &
pesticides.
b. Application of fertilizers and
pesticides are implemented
effectively & efficiently.
Nursery
a. Fertilizers & pesticides are
applied in accordance with the
doses that have been
determined so as not to cause
environmental pollution,
especially resulting in
hazardous and toxic waste
around the nursery area.
b. Conducting pesticides spraying
in hot weather.
c. Conducting fertilization after
raining and applying only
around the seeds.
d. Create a drainage network that
leads to the retention basin in
each division so that the water
flow does not flow to water
bodies.
e. Using a biodegradable and
environmentally friendly
pesticide type.
f. Collect plastic waste from
pesticide bottles and other
plastic waste at temporary
storage facility for hazardous
and toxic waste.
Preparation of planting area.

a. Land preparation should be
conducted in a well and
planned manner.
b. Land clearing remnants should
be stacked lengthwise and cut
into the slope.
c. Immediately plant oil palm &
LCC on areas planned.
d. Do not carry out land clearing
by burning.
e. Not clearing area close to river
border zones and maintain
springs and natural vegetation
in river border zones.
Preparation of mill site
a. Construct WWTP to treat
wastewater generated from
milling activities.
b. Based on the characteristics of
waste and pollution loads,
wastewater management is
effective if WPH is more than 75
days so that COD and TTS levels
can be lowered to below quality
standards. For this intention PT
PU plans to handle wastewater
generated by constructing
WWTP that uses biological
system (anaerobic and aerobic
system) with a hydrological
retention time (WPH) of
approximately 150 days (5
months), the increased WPH is
expected to decrease the
quality of waste water and
pollution loads to below
environmental quality

standards and not pollute the
waste recipient.
c. Implementation of Land
Application in which requires
assessment in advance on
pollution aspect that will occur
previously conducted in the
previous assessment of the
aspect of pollution that will
occur, the carrying capacity of
land in the plantation area and
influence on the soil, especially
the microbiology/ biology of the
soil, surface water and its
permit (This assessment is
intended to obtain Land
Application permit from the
Regent/ Mayor in accordance
with decree of Environmental
Minister Number 28 year 2003
and Number 29 year 2003.
d. For handling of used lubricants
should be collected/ stored in a
specific container (barrel) and
then submitted to the farm or
sold to the third party (local
entrepreneurs who have received license from the
Ministry of Environment based
on recommendation from Kutai
Kartanegara regency
government. Company should
consult with Environmental
Agency of East Kalimantan
Province in advance when
appointing used lubricants
collector.

e. Training employees by
incorporating environmental
impact control programs.
f. In collaboration with relevant
agencies such as plantation
office and forestry of Kutai
Kartanegara regency and
universities on wastewater
treatment techniques.
Plants upkeep:
a. Provision of fertilizer in a
planned and efficient manner
to oil palm plant.
b. Application of pesticides to
prevent pests and diseases
should refer to doses that have
been recommended and using
permitted materials.
c. Herbicide application in weed
control should be the last
resort, non-chemical weeding is
the priority.
d. Conduct strict supervision on
field workers applying fertilizers
and pesticides in order to avoid
irregularities during the
application by following the
work procedures that have
been set.
e. Apply strict rules that prohibit
all estate workers either
intentionally or unintentionally
not to spill fertilizers or
pesticides to water bodies
f. Preparing safe storage for
fertilizers and pesticides from
runoff and protected from rain

at distribution points at
planting area.
g. Create SOP's on storage,
distribution and application of
fertilizers and pesticides in the
field.
h. Cease fertilization activities and
pesticide applications
temporarily during rain.
i. All estate drainage ditches
leading to local water bodies
should have sediment basin
that serves to test fertilizer and
pesticide that carried away by
water.
j. Collect used fertilizer and
pesticide containers on
collection location that has
been provided.
k. Provide training to all workers
who apply fertilizers and
pesticides by prioritizing
aspects of environmental
security.
I. Construct monitoring wells
within the project location and
local community residential
location.
Mill maintenance:
a. Construct WWTP to treat
wastewater generated from
milling activities.
b. Based on the characteristics of
waste and pollution loads,
wastewater management is
effective if WPH is more than 75
days so that COD and TTS levels
can be lowered to below quality
standards. For this intention PT

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generated by constructing
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months), the increased WPH is
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pollution loads to below
environmental quality
standards and not pollute the
waste recipient.
c. Implementation of Land
Application in which requires
assessment in advance on
pollution aspect that will occur
the carrying capacity of land in
the plantation area and
influence on the soil, especially
the microbiology/ biology of the
soil, surface water and its
permit (This assessment is
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Kartanegara regency
government. Company should
consult with Environmental
Agency of East Kalimantan
Province in advance when
appointing used lubricants
collector.
e. Training employees by
incorporating environmental
impact control programs.
f. In collaboration with relevant
agencies such as plantation
office and forestry of Kutai
Kartanegara regency and
universities on wastewater
treatment techniques.
Workshop activities:
a. Create a drainage channel to
contain waste water from the
workshop with dimensions of
60 cm top width, 40 cm base
width and 50 cm depth and
connect it to oil trap unit.
b. Construct oil trap with a size of
0.75 x 0.75 x 1 m x 4 in one
series.
c. Temporary storage of
hazardous and toxic waste
should be equipped with permit
specific for hazardous and toxic
waste temporary storage.
d. Temporary storage of
hazardous and toxic waste is
equipped with symbols in
accordance with applicable
regulations
e. Containers used to
accommodate hazardous waste

should be equipped with	
symbols and identification	
labels in accordance with	
applicable regulations.	
f. In workshop area and generator	
house should be equipped with	
SOP on Fuel Management.	
g. Use workshop for estate	
equipment maintenance.	
h. Avoid oil/ used lubricants spills	
during estate equipment	
maintenance in the field.	
i. Accommodate used lubricants	
resulted from equipment	
maintenance in specific leak-	
proof container further collect	
them at specific storage.	
j. Maintenance/ repair of	
workshop equipment.	
- Accommodate all used	
lubricant on a leak-proof	
container and collect them	
in specific storage.	
- Temporary storage for used	
lubricants should be free	
from flood.	
- Used oil temporary storage	
must be free from flooding.	
k. Fuel loading and distribution	
unit:	
- Apply strict control and	
supervision to prevent the	
possibility of leakage on fuel	
tank installation.	
- Immediately empty the fuel	
tank if there is a leak and	
immediately fix the leak.	
- Construct bund wall made of concrete that surrounds	
the fuel tank. The bund wall	

				should have the capacity to					
				contain fuel tank maximum					
				capacity.					
				- Create and place warning					
				board around the workshop					
				location to avoid the					
				occurrence of pollution to					
				local water bodies due to					
				used oil and fuel spilled.					
				- Remove all used lubricants					
				that have been collected at					
				the project site and					
				submitting them to a					
				business entity that has the					
				official license from the					
				Ministry of Environment to					
				manage hazardous and					
				toxic waste.					
				- Provide periodic guidance					
				to all personnel at workshop					
				operations related to oil					
				pollution control to water					
				bodies around the project					
				site.					
1.7	Surface wáter debit								
	Based on significant impact	Increased surface	Runoff occured still	a. Implementation of planting site	On áreas designated as	Once during land	PT PU	1. Plantation	1. Plantation
	evaluation results indicate	wáter flow to wáter	can be well	preparation activities gradually &	planting áreas.	preparation activities		and forestry	and
	that impact parameters on	bodies around the	overcome.	planned as needed.				office of	Forestry
	occurrence of increased	planting áreas.		b. Conducting land clearing				Kutai	Office of
	surface water flow in which			activities during the dry season.				Kartanegara	Kutai
	the impact is negative,			c. Not clearing land in river border				U U	Kartanegar
	significant and direct. Impact			_				regency.	•
	intensity that exceed			zones and maintaining the				2. Regional	a Regency.
	environmental quality			existence of natural vegetation				Environment	2. Environme
	standard can cause further			as conservation zones.				Agency of	nt agency
	impacts in the form of			d. Adjust the slope and steep				Kutai	of Kutai
	increased erosion rate.			terraces on the steep terrain.				Kartanegara	Kartanegar
				e. Create trenches equipped with				Regency.	a Regency
				sediment trap around the field.				-0,	3. Environme
				f. Maintenance of erosion					
									nt Agency
				inhibitors is done regularly every					of East
				week, especially in rainy season.					Kalimanta
									n Province.

				g. Immediately plant the planting					
				area after land clearing is					
				completed.					
2	BIOLOGICAL COMPONENTS								
2.1	Vegetation								
	Based on significant impact	Degradation on áreas	Percentage of areas	. Environmental management	Restoration is	Once a year,	PT PU	1. Plantation	1. Plantation
	evaluation results indicate	cleared for:	and type of cover	activities for estate	conducted on áreas	conducted gradually		and forestry	and Forestry
	that impact parameters on	a. Development of	vegetation with total	emplacement development,	that have been	adjucted tol and		office of Kutai	Office of
	occurrence of land cover	estate	area cleared.	road network construction,	cleared so that	cleared on each		Kartanegara	Kutai
	decreased in which the	emplacement.		Preparation of nursery site,	impact the	división and evaluated		regency.	Kartanegara
	impact is negative, significant and direct. Impact intensity	b. Development of		preparation of planting area and	vegetations that are degraded.	twice, first evaluation at the age of 6 months		0,	Regency.
	that exceed environmental	road network.		preparation of mill site.	uegraueu.	and second at the age			2. Environmen
	quality standard can cause	c. Preparation of		a. Planting area preparation		of 1 year to obtain			t agency of
	further impacts in the form of	nursery site.		should be done gradually and		sucess rate.			Kutai
	increased erosion rate and	d. Preparation of		planned according to the					Kartanegara
	wildlife migration.	planting área.		needs.					Regency.
		e. Preparation of mill		b. Land clearing is conducted					3. Environmen
		site.		only on areas designated for					t Agency of
				estate emplacement					East
									Kalimantan
				development (± 18,06 Ha),					
				road network construction (±					Province.
				9,06 Ha), preparation of					
				nursery area (± 30 Ha),					
				Preparation of planting area (±					
				8,819, 755 Ha), preparation of					
				mill site (± 20 Ha).					
				c. Enriching and maintaining					
				conservation areas.					
				d. Warning board installation to					
				prohibit hunting on protected					
11				wildlife and land clearing on					
11				protected areas.					
11				e. Immediately plant the areas					
11				cleared with LCC.					
11				f. Employee training by					
11				incorporating environmental					
				impact control programs.					
				······································			1	1	J

g. Slope maintained at 8% on
road network construction.
h. Road signs installation
according to the needs.
i. Maintain road surfacing to
prevent slippery road.
j. Protect trees that can be
protected as home for
wildlife.
2) Land rehabilitation ad
restoration.
a. Land reclamation activities are
carried out after the location
permit has expired.
b. Immediately undertake
reclamation by conducting
reforestation on the location.
c. Land that has been restored is
surfaced with top soil then
planted with LCC.
d. Conducting land regeneration
with plant spacing of 3x3m on
areas that have been restored
with fast growing plant
species.
e. On regeneration areas need to
be planted with local fruit
rambutan, cempedak, durian
etc.
f. Plants maintenance and
fertilizing include:
- Planting hole measuring
30x30 cm –
- Dose of SP 36 fertilizer is
150 gr/tree
- Dose of NPK fertilizer is
100 gr/tree - Dose of calcium provided
is 1 ton/Ha

			-						
				 Plant insertion is done <1 					
				month on dead plants					
				- 1 year old plant					
				maintenance is done					
				every 3 months by					
				weeding on the circle.					
				- 2 year old plant					
				maintenance is done					
				every 6 months by					
				weeding on the circle.					
				- Fertilization for local					
				fruit crops is done until the age of 3 years.					
				g. Perform insertion on growing vegetation plants with					
				growing percentage of 90%					
				h. Installing signing board on re-					
				vegetation areas measuring					
				of 200x80 cm					
				i. Intensify patrol activities to					
				prevent destruction on areas					
				restored and rehabilitated.					
2.2	Wildlife habitat		•						
	Based on significant impact	Activities that have	Percentage of number	a. Installation of hunting	Forested areas	One time during	PT PU	1. Plantation	1. Plantation
	evaluation results indicate	impact on wildlife	and types of wildlife	prohibition board measuring	around the project	plantation work in		and forestry	and Forestry
	that impact parameters on	migration are:	living in the	120x80 cm.	site as well as the	progress by PT PU and		office of Kutai	Office of
	occurrence of wildlife	a. Development of	conservation area	b. Intensify patrol activity to	location of the river	evaluated once in		Kartanegara	Kutai
	migration in which the impact	estate	around the plantation	prevent wildlife hunting and file	border around the	every 6 months to		regency.	Kartanegara
	is significant negative and	emplacement.	location.	a lawsuit to those who against	location that are	obtain conservation		2. Regional	Regency.
	positive and derivative due to	b. Development of		it.	designated as	área capacity		0	u ,
	vegetation degradation.	road network.			conservation area.	compared with		Environment	2. Environmen
	•	c. Preparation of		c. Conservation areas and natural		number of percentage of wildlife living in the		Agency of	t agency of
		nursery site.		vegetation are wild animals'		área.		Kutai	Kutai
		d. Preparation of		habitat, prevent disruption as				Kartanegara	Kartanegara
		planting área.		much as possible and requires				Regency.	Regency.
				enrichment to maintain the					3. Environmen
				existence of these locations.					t Agency of
				d. Conducting socialization to the					East
				community and workers to					Kalimantan
				always protect the endangered					Province.
				species and if there is any					i i ovinice.
1				endangered species kept please					

				report to the authorities					
				immediately.					
2.3	Aquatic Biota			·					
2.3	Aquatic Biota Based on significant impact evaluation results indicate that impact parameters on occurrence of aquatic biota decreased in which the impact is significant negative and direct.	The continued impacts of fertilizers & pesticides residues pollution on local water bodies, used oil & TSS content exceeding the environmental standard determined in accordance with the East Kalimantan Government Regulation No. 2 Year 2011 which is 50	Aquatic biota diversity are well maintained such as bentos and nekton.	 Road network construction a. Road network construction should be conducted in a planned manner and gradually according to the needs. b. Construct drainage ditch on the right and the left side of the road. c. Create sediment trap at each end of the drainage ditch that leads to water body. d. Add alum to sediment basin until reaching pH 6-7. Plants upkeep a. Water polution control against fertilizers and pesticides residue should be conducted seriously and responsibly. b. Install notification boards in strategic areas and easily visible. Mill Operations a. Create surounding ditches that are connected to WWTP. b. Implementation of land application in which requires study in advance. c. For handling of used lubricants are collected and kept in barrels and submitted to third party who have obtained license from Environmental Ministry. 	On sediment basin, oil trap and WWTP.	Once during work in progress and evaluated at least once in 3 months during operations.	PT PU	 Plantation and forestry office of Kutai Kartanegara regency. Regional Environment Agency of Kutai Kartanegara Regency. 	 BLH Prov Kaltim Plantation and Forestry Office of Kutai Kartanegar a Regency. Environme nt agency of Kutai Kartanegar a Regency. Environme nt Agency of East Kalimanta n Province.

3 3.1	SOCIAL, ECONOMIC AND CULT Communitry attitude and pers			 a. Conduct strict control to prevent mineral oil pollution against local water bodies. b. Implement oil handling mechanism in accordance with regulations from Ministry of Energy and Mining. Fertilizer & pesticide warehouse. a. Avoid leakage during storage and distribution of pesticide and fertilizer. b. Apply storage provision for fertilizer and pesticides in accordance with regulations apply. 					
3.1	Significant impact in the form of positive perception on PT PU's plan is significant positive impact and direct impact. Number of human affected and happy or agree with PT PU's activity plan.	SpectiveChangesincommunity's negativeattitudeswho rejectthe planned activitieschange their attitudeintopositiveperceptionandsupportthedevelopment plan ofPT PU, among others:Sosialisasirencanakegiatana. Socializationb. Recruitmentc. CSR programd. Landrehabilitationand restoration.	Positive attitudes and perceptions of the community towards PT PU	 Sosialization of activity plan Conducting socialization/ public consultation relating to activity plan by PT PU which involves related agencies and society around, Muara Ritan Village, Muara Ritan Baru Village, Buluq Sen Village, Muara Pedohon Village & Umaq Dian Village. Providing explanations to the public on the positive and negative effects from PT PU's plantation & milling activities. Collaborate with village officials and related institutions by conducting socialization Acmmodate the suggestions and aspirations of the community 	 Socialization activities are conducted atian Baru Wuara Ritan Baru Village, Buluq Sen Village, Muara Pedohon Village & Umaq Dian Village. Workforce recruitment is conducted at PT PU's location. CSR Programs are performed for Muara Ritan Baru Village, Buluq Sen Village, Muara 	 Socialization activities are conducted once at the following villages: Muara Ritan Village, Muara Ritan Baru Village, Buluq Sen Village, Muara Pedohon Village & Umaq Dian Village Penerimaan Workforce recruitment is conducted once in the begining and evaluated once a year at PT PU's location. CSR Programs are performed for Muara Ritan Village, Muara Ritan Baru 	PT PU	 Village officials of Muara Ritan Village, Muara Ritan Baru Village, Buluq Sen Village, Muara Pedohon Village & Umaq Dian Village Plantation and forestry office of Kutai Kartanegara regency. Regional Environment Agency of 	 Plantation and forestry office of Kutai Kartanegar a regency. Regional Environme nt Agency of Kutai Kartanegar a Regency Regional Environme nt Agency of East Kalimantan Province.

 	•	•	
2) Labour recruitment	4. Lands that have	Village, Buluq Sen	Kutai
a. Prioritizing local employment	been restored are	Village, Muara	Kartanegara
b. In the implementation of	returned to the	Pedohon Village &	Regency.
manpower, the initiator	Kutai Kartanegara	Umaq Dian Village.	
coordinates with village	Regency Office.	4. Rehabilitasi &	
government and Manpower		pengembalian lahan	
Department of Kutai		dilakukan pada	
Kartanegara Regency.		tahun ke 1 seluruh	
c. Post an announcement at the		areal efektif tanam.	
village office relating to the		Land rehabilitation	
recruitment of workers for PT		and restoration are	
PU's activities.		conducted at the	
d. Announce the employee		first year at the end	
recruitment results at the		of PT PU's operation	
village office		to all planted áreas.	
e. Provide training to local			
workforce to improve skills			
and expertise in accordance			
with the level of education			
f. Provide salaries to workers in			
accordance with the			
classification, level of			
education and position and			
refers to the rules applicable.			
3) CSR			
a. Designing a CSR program that			
suits the needs and wants of			
the community around the			
plantation and explains the			
government 7 CSR program			
that can really be positive for			
the surrounding community. b. Immediately performs a			
deliberation with local			
community leaders in the			
·			
project area relating to the CSR programs preparation			
whereby it also involves local			
government represented by			

				Plantation and forestry office					
				of Kutai Kartanegara regency.					
				c. Implement all agreement					
				resulted from deliberation in					
				earnest.					
				d. Entire activity plans are					
				carried out openly both to the					
				affected village apparatus and					
				the community.					
				e. The PT PU works closely with					
				the affected village					
				government in explaining the					
				entire CSR program					
				4) Land rehabilitation and					
				restoration					
				a. Perform restoration activities					
				gradually					
				b. In restoration activities					
				involves local business actors.					
				c. Post an announcement at the					
				village office on PT PU's end of					
				operations.					
				d. Lands that have been restored					
				are returned to the Kutai					
				Kartanegara Regency Office.					
3.2	Social conflicto		•						
	Significant impact in the form	A direct impact due to	There is no social	1. Conduct socialization on	Project site location	Once during land	PT PU	1. Land	1) Land
	of social conflict in which the	land acquisition	conflict occurred	boundaries of areas that will be	especially on	acquisition process at		Administration	Administrat
	impact is negative and direct	activities at Muara	which may disrupt	acquired.	agriculture area,	pre-construction		Division of	ion Division
	to PT PU's activities. Social	Ritan Village, Muara	public peace and	2. Perform land acquisition	plantation and	stages.		Kutai	of Kutai
	conflict potential occured due to dipsute in land	Ritan Baru Village, Buluq Sen Village,	inhibit the plantation activities of PT PU.	process gradually according to	comunity field that will be acquired.			Kartanegara	Kartanegar
	acquisition process such as	Muara Pedohon		the progress of plantation	win be acquired.			Regency.	a Regency.
	overlapping in land	Village & Umaq Dian		activity plan.				2. Village officials	2) Plantation
	ownership and dispute on	Village.		3. No land acquisition on areas				of Muara Ritan	and
	land compensation value on			that have the potential to cause				Village, Muara	forestry
	land acquired.			land tenure disputes.				Ritan Baru	office of
				4. Determination of the				Village, Buluq	Kutai
				boundaries according to land				Sen Village,	
L	I	1	1					5,	II

						•			
				owner agreement and				Muara	Kartanegar
				acknowledged by Tabang Sub				Pedohon	a regency.
				District officials.				Village &	3) Regional
				5. Provision of land				Umaq Dian	Environme
				compensation to each				Village	nt Agency
				community according to				3. Plantation and	of Kutai
				agreement, in terms of type of				forestry office	Kartanegar
				compensation, amount, time of				of Kutai	a Regency
				delivery and parties entitled to				Kartanegara	Environme
				receive directly without				regency.	nt Agency
				intermediaries.				4. Regional	of East
				6. Implementation of land				Environment	
				acquisition involves village and				Agency of	Kalimantan
				sub-district government				Kutai	Province.
				apparatus and coordinate with				Kartanegara	
				related technical institution				Regency.	
				(Land Administration Division of				negeney.	
				Kutai Kartanegara Regency).					
				Kutai Kartanegara Kegency).					
3.3	Employment opportunity								1
	Significant impact in the form	It is the impact from	Number of local	1) Workforce recruitment.	The management	Once during	PT PU	1) Village	1) Manpower
	of employment opportunities	recruitment activity	people who are	a. 30 days' prior the operations,	office of PT PU,	recruitment process on		officials of	and
	for the community in which	and post-operations	accepted to work in	required for the company to	Settlement of Muara	progress in PT PU and		Muara Ritan	Transmigrat
	the impact is direct and	such as work	PT.PU with 60%	register the company to	Ritan Village, Muara	at the time of		Village, Muara	ion Office of
	significant positive. It can	termination.	percent of local	Workforce and	Ritan Baru Village,	termination of		Ritan Baru	Kutai
	lead to continued impact in increased of surrounding		workforce and wages provision in	Transmigration Department	Buluq Sen Village, Muara Pedohon	employment.		Village, Buluq	Regency
	community income. In		accordance with	of Kutai Kartanegara Regency.	Village and Umag			Sen Village,	Kartanegar
	addition, it can also cause		government	b. Publicly announcing to Muara	Dian Village, Tabang			Muara	a.
	continued impact which is		regulations (UMSK in	Ritan Village, Muara Ritan	Sub District.			Pedohon	2) Plantation
	negative and cumulative in		Kutai Kartanegara	Baru Village, Buluq Sen				Village &	and
	the form of perception and		Regency).	Village, Muara Pedohon				Umaq Dian	forestry
	attitude of the community			Village and Umaq Dian Village				Village	office of
	against PT.PU activity plan.			on the job recruitment.				2) Manpower	Kutai
				c. Prioritize local workforce to				and	Kartanegar
				work in the company tailored				Transmigratio	a regency.
				to educational qualifications				n Office of	
				•					
				required by the company. d. Job recruitment should be				Kutai Regency	
				based on the working age of				Kartanegara	nt Agency of Kutai
									of Kutai

				18 years in accordance with				3) Plantation and	Kartanegar
				government regulations on				forestry office	a Regency
				employment.				of Kutai	4) Regional
				e. Inform the number, type, skills				Kartanegara	Environme
				and requirements of the				regency.	nt Agency
				labour needed widely to the				4) Regional	of East
				surrounding community.				Environment	Kalimantan
				f. Provide special training for				Agency of	Province.
				local workers to improve skills				Kutai	
				& expertise.				Kartanegara	
				2) Employment termination				Regency.	
				a. Termination of employment				negency.	
				should be done in stages.					
				b. Preparation for termination of					
				employment should be done					
				in advance and detailed.					
				c. Provide severance pay to					
				employees who will be					
				affected by layoffs in which					
				the amount is adjusted to the					
				provisions of legislation.					
				provisions of registration.					
3.4	Business Field			l					
	Significant impact in the form	Business activities that	Increasing &	1) Emplacement development	Settlement of Muara	Once during the	PT PU	1. Village officials	1. Manpower
	of business opportunity	involve local business	developing local	a. Providing opportunities for	Ritan Village, Muara	development of		of Muara Ritan	and
	creation for the community in	actors in the activities	economic activity and	local carpenters in the	Ritan Baru Village,	estate emplacement,		Village, Muara	Transmigra
	which the impact is positive	such as:	the number of local	provision of carpentry services	Buluq Sen Village,	land preparation,		Ritan Baru	tion Office
	and direct, this impact can	a. Development of	people who can be	during development activities.	Muara Pedohon	nurseries, planting		Village, Buluq	of Kutai
	lead to continued positive	estate	empowered by PT PU	b. Provide wages in accordance	Village and Umaq	area preparation, mill		Sen Village,	
	impacts on increased	emplacement.		with the agreement	Dian Village, Tabang	area preparation.		Muara	Regency
	incomes of surrounding communities.	b. Preparation of			Sub District.			Pedohon Village &	Kartanegar
	communicies.	nursery location.		2) Nursery location preparation				Umag Dian	a.
		c. Nurseries.		a. Provide widespread				Village	2. Plantation
		d. Preparation of		opportunities to business				2. Manpower	and forestry
		planting area.		actors from surrounding				and	office of
		e. Planting of oil palm.		communities for nursery				Transmigratio	Kutai
		f. Construction of		activities				n Office of	Kartanegar
		palm oil mill.		b. Provide wages in accordance				Kutai Regency	a regency.
				with the agreement				Kartanegara	3. Regional
								3. Plantation	Environme
								and forestry	

3) Nurseries	office of Kutai	nt Agency
a. Provide announcement to the	Kartanegara	of Kutai
community around the	regency.	Kartanegar
location on the needs of	4. Regional	a Regency
services for nursery activities	Environment	4. Regional
by the company either type,	Agency of	Environme
classification and expertise	Kutai	nt Agency
required.	Kartanegara	of East
b. Provide opportunities for	Regency.	Kalimanta
business units/ individuals	hegeney.	n Province.
who are in and around the		
plantation location to		
participate particularly in the		
provision of goods and		
services to meet the needs of		
employees and companies.		
c. Involving the community of		
the sub-district government in		
the business unit activities.		
4) Preparation of palnting area		
a. Provide business		
opportunities as wide as		
possible to the surrounding		
community in the provision of		
land. b. Provide wages in accordance		
with the agreement.		
5) Oil palm planting		
a. Set the speed of the		
transporting vehicle at		
maximum of 20 km/h,		
especially if passing through		
settlement or concentration		
of community agriculture.		
b. Conducting hardening &		
compaction of haul roads with		
special aggregate, especially		
on seedlings transportation		
path.		

				c. During dry season water the					
				road every 3 on the					
				transportation path that					
				passes the nursery.					
				6) Palm oil mil constrution					
				a. Conduct special open bidding					
				for business groups from local					
				communities for plant					
				construction activities.					
				b. Provide wages in accordance					
				with the agreement.					
3.5	Community Revenue		ſ		-			1	
	Significant impact against	Is a derivative impact	Increasing or	1) Recruitment activity during	At PT PU	Once during	PT PU	1. Village officials	1. Plantation
	community revenue in which	of the recruitment	decreasing revenue	emplacement development,	management office	operation in progress		of Muara Ritan	and
	a continued impact due to	activities that create	of the surrounding	preparation of nursery, planting	and community	ad evaluated once a		Village, Muara	forestry
	land conversion which increase the community	jobs for the surrounding	community of PT PU.	area, oil palm plantation, plant	settlement around PT PU.	year during PT PU estate and mill		Ritan Baru	office of
	revenue	community from the		construction, harvesting	10.	operations.		Village, Buluq	Kutai
		following activities:		transportation.		operations.		Sen Village,	Kartanegar
		a. Workforce		a. Provide wages/ salaries to				Muara	a regency.
		recruitment		workers adjusted to				Pedohon	2. Regional
		b. Development of		classification, expertise and				Village &	Environme
		estate		level of education and refers				Umaq Dian	nt Agency
		emplacement		to legislation relating to				Village	of Kutai
		c. Preparation of		wages.				2. Manpower	Kartanegar
		nursery area		b. Provide education and				and	a Regency
		d. Seedling		training to workers to improve				Transmigratio	3. Regional
		e. Preparation of		skills and expertise.				n Office of	-
		planting area		c. Encourage the development				Kutai Regency	
		f. Oil palm planting		of community business				Kartanegara	of East
		g. Construction of a		around estate operations so				3. Plantation and	
		palm oil mill		that can create non-formal job				forestry office	
		•						of Kutai	
		h. Harvesting &		opportunities.					
		transporting of		2) Mill operations				Kartanegara	
		FFB's		a. Construct wastewater				regency.	
		i. Mill operations		treatment plants to manage				4. Regional	
								Environment	
				liquid waste generated from				Agency of	
				plant operations.				Kutai	

				b. Based on the waste				Kartanegara	
				characteristic & pollution				Regency.	
				load, the effluent treatment is					
				effective if WPH is more than					
				75 days so that the COD & TSS					
				level can be decreased to					
				below the standard. PT PU					
				plans the wastewater					
				treatment with a biologically					
				WWTP system (anaerobe &					
				aerobe system) with					
				hydrological retention time of					
				150 days so that WPH increase					
				is expected to decrease the					
				quality of waste water &					
				pollution loads to below the					
				quality standard.					
				c. Implementation of land					
				applications in which requires					
				study in advance on pollution					
				aspect that may occur, the					
				carrying capacity of the land,					
				the effect on soil and ground					
				water and surface water.					
				d. Convert the local people's					
				livelihoods sources from					
				farming to estate workers. If					
				the degradation of water					
				quality at the site is					
				considered to exceed the					
				quality standard of water					
				pollution.					
3.6	General Traffic (Land)	1					1		·
	Significant impact in the form	Is a direct impact from	1. No traffic	1) Employees transportation	At public road used by	During the operations	PT PU	1. Village officials	1. Plantation
	of traffic disturbance in which	the following activities	congestion and traffic	a. Time arrangement for	the company for	of PT PU estates.		of Muara Ritan	and
	the impact is negative and	a. Employees	accidents during	employee transportation to	transporting.			Village, Muara	forestry
	direct. The occurrence of	transportation.	transporting	work in the morning is at				Ritan Baru	office of
	impact may cause inconvenience for road users		employees activities, transportation &	06:00 pm				Village, Buluq	Kutai
	inconvenience for road users		harvesting of FFB's					Sen Village,	
L	1	1					1	1	

	1	1		1	1	1
in their if disturbance is not	b. Harvesting and		b. Time arrangement for		Muara	Kartanegar
managed well.	transportation of		employee transportation to		Pedohon	a regency.
	FFB's		return to home in the		Village &	-
			afternoon is at 14:00 wita.		Umaq Dian	
			c. Limit the speed of the		Village	nt Agency
			transporting vehicles at max		2. Manpower	of Kutai
			20 km / hour, especially when		and	Kartanegar a Regency
			passing through the		Transmigratio	3. Regional
			settlement.		n Office of	Environme
			d. Use appropriate vehicle in		Kutai Regency Kartanegara	nt Agency
			accordance with its function		3. Plantation	of East
			such bus/car for passenger.		and forestry	Kalimantan
					office of Kutai	Province.
			2) Harvesting & transportation of		Kartanegara	i rovince.
			FFB's		regency.	
			a. Disseminate to affected		4. Regional	
			workers on the detailed plan		Environment	
			estate road network.		Agency of	
			b. Allowing the local community		Kutai	
			to use the estate road for their		Kartanegara	
			accessibility.		Regency.	
			c. Prioritize maintenance of			
			estate road which used by the			
			community as access roads.			
			d. Implement traffic rules to all			
			road users.			
			e. At the section of the road			
			which used by the community			
			as access roads are installed			
			with traffic signs in			
			accordance with applicable			
			laws and regulations.			
			f. Prioritizing public road user			
			first.			
			g. Placing officer at the			
			intersection of public roads			
			and estate roads.			

				h. To limit the capacity of CPO					
				transporting unit at max 8					
				tons.					
3.7	Water traffic								
3.7	Significant impact in the form of water traffic disturbance in which the impact is negative and direct. The occurrence of impact may cause inconvenience for public transportation due to the operations of LCT.	Impacts arising from the following activities such as: Mobilisasi peralatan a. Mobilization of equipment. b. Demobilization of equipment.	No disruption on water traffic during the mobilization and demobilization of equipment.	 Conduct socialization to the surrounding community on estate equipment mobilization and demobilization plan Setting the port location for heavy machine unloading zone. Provide adequate lighting during equipment mobilization & demobilization process. Provide adequate signs for the activities around the area. Conduct estate equipment mobilization and demobilization in stages and periodically for the entire heavy equipment. Coordinate with the relevant Kutai Kartanegara Regency office transportation to provide guard at the time of mobilization and demobilization. 	On Belayan river wáter body.	Once during mobilization and demobilization process in progress.	PT PU	 Village officials of Muara Ritan Village, Muara Ritan Baru Village, Buluq Sen Village, Buluq Sen Village, Muara Pedohon Village & Umaq Dian Village Manpower and Transmigratio n Office of Kutai Regency Kartanegara Plantation and forestry office of Kutai Kartanegara regency. Regional Environment Agency of Kutai Kartanegara Regency. 	and forestry office of Kutai Kartanegar a regency. 2. Regional Environme nt Agency of Kutai Kartanegar a Regional Environme nt Agency of East Kalimanta n Province.
3.8	Environmental Hygiene								
	Significant impact against environmental higiene and sanitation due to estate emplacement activities which may lead to degradation of sanitation quality in the project environment.	Impact arises due to mill operations, office and housing activities.	Hygiene and sanitation are well managed at the Project location.	 Mill operations Accommodate the remaining liquid waste from mill operation in barrels then submitted to a licensed third party. 	At the location of activities such as office, employees housing and clinic.	Twice, in the evening and in the morning during the operations of PT PU.	PT PU	1. Health Department of Kutai Kartanegara Regency.	 Plantation and forestry office of Kutai

b. Create surrounding ditches	2. Plantation and Kartanegar
that are connected with	forestry office a regency.
WWTP.	of Kutai 2. Regional
c. Implementation of Land	Kartanegara Environme
Applications which requires	regency. nt Agency
assessment in advance.	3. Regional of Kutai
	Environment a Regency
2) Office and housing activities	Agency of 3. Regional
a. Provide solid waste	Kutai Environme
container at each unit that	Kartanegara nt Agenci
produces solid waste both	Regency. of Eas
organic & inorganic.	Kalimantan
b. Prohibit waste disposal to	Province.
water bodies.	rovince.
c. Create waste disposal	
system for housing unit.	
d. Toilet provision should have	
septic tank.	
e. Use biological	
decomposition for septic	
tank.	
3) Clinic operations	
a. Accommodate all solid	
waste generated from	
clinical operational activities	
by preparing waste	
container at several strategic	
locations.	
b. Installing warning board on	
the obligation to maintain	
the environment	
c. Provide waste container at	
the location that generates	
waste.	
d. Immediately deliver solid	
waste generated by clinical	
operations to a licensed	
third party that have	

			-		•				
				obtained from Ministry of					
				Environment					
				e. Cooperate with Kota					
				Bangun hospital for medical					
				waste destruction generated					
				by clinical operations.					
3.9	Occupational Health and Safet			by chinear operations.				<u>I</u>	<u> </u>
3.5	Significant impact to	mpact arised due to	Occupational health	1) Estate emplacement	At the project location	During the operations	PT PU	1. Health	1. Health
	occupational helath and	the following activities.	and safety	development	of the following	of PT PU.		Department of	Department
	safety in which the impact is	a. Development of	disturbance at work.	a. Determine and implement	activities:			Kutai	of Kutai
	potentialy harmful for the	estate		•	a. Development of				
	workforce working at Project	emplacement.		safety procedures relating to	estate			Kartanegara	Regency
	location during work in	b. Road network		estate emplacement	emplacement.			Regency.	Kartanegara.
	progress.	construction.		development.	b. Road network			2. Manpower	2. Plantation
		c. Preparation of		b. Provide means of first aid	construction.			and	and forestry
		nursery location.		and medical personnel	c. Preparation of			Transmigratio	office of
		d. Preparation of		c. Perform periodic medical	nursery location.			n Office of	Kutai
		planting area.		examinations	d. Preparation of			Kutai Regency	Kartanegara
		e. Planting of oil palm.		d. Provide an evacuation unit	planting area.			Kartanegara.	regency.
		f. Plants upkeep		to evacuate workers who	e. Planting of oil palm.			3. Plantation and	3. Regional
		g. Harvesting and		suffered injury due to	f. Plants upkeep			forestry office	Environmen
		transportation of		accident at workplace and				of Kutai	t Agency of
		FFB's		require further treatment to	g. Harvesting and			Kartanegara	Kutai
		h. Fertilizer and		hospital or public health	transportation of			regency.	Kartanegara
		pesticides		centre.	FFB's			4. Regional	Regency
		warehouse		e. Provide hearing &	h. Fertilizer and			Environment	4. Regional
		activities.		respiratory protection.	pesticides			Agency of	Environmen
					warehouse			0,	
				f. Insuring all the labour	activities.			Kutai	t Agency of
				involved in the project				Kartanegara	East
								Regency	Kalimantan
				2) Road network construction				5	Province.
				a. Socialization of the use of					
				occupational health and					
				safety equipment especially					
				for workers				1	
				b. Determination &					
				implementation of safety					
				procedures relating to the					
				operations undertaken				1	
								<u> </u>	

c. Provide first aid facilities	
along with medical	
personnel	
d. Perform periodic health	
checks e	
e. Provide an evacuation unit	
to evacuate workers who	
suffered injury due to	
accident at workplace and	
require further treatment to	
hospital or public health	
centre.	
f. Provide hearing &	
respiratory protection.	
g. Insuring all the labour	
involved in the project.	
3) Nursery location preparation	
a. Socialization of the use of	
occupational health and	
safety equipment especially	
for workers	
b. Determination &	
implementation of safety procedures relating to the	
operations undertaken.	
c. Provide first aid facilities	
along with medical	
personnel.	
d. Perform periodic health	
checks.	
e. Provide an evacuation unit	
to evacuate workers who	
suffered injury due to	
accident at workplace and	
require further treatment to	
hospital or public health	
centre.	
f. Insuring all the labour	
involved in the project	
4) Planting area preparation	

a. Socialization of the use of	
occupational health and	
safety equipment especially	
for workers	
b. Determination &	
implementation of safety	
procedures relating to the	
operations undertaken.	
c. Provide first aid facilities	
along with medical	
personnel.	
d. Perform periodic health	
checks.	
e. Provide an evacuation unit	
to evacuate workers who	
suffered injury due to	
accident at workplace and	
require further treatment to	
hospital or public health	
centre.	
f. Insuring all the labour	
involved in the project.	
5) Oil palm planting	
a. Socialization of the use of	
occupational health and	
safety equipment especially	
for workers	
b. Determination & implementation of safety	
procedures relating to the	
operations undertaken.	
c. Provide first aid facilities	
along with medical	
personnel.	
d. Perform periodic health	
checks.	
e. Provide an evacuation unit	
to evacuate workers who suffered injury due to	

accident at workplace and
require further treatment to
hospital or public health
centre.
f. Insuring all the labour
involved in the project.
6) Plant upkeep
a. Socialization of the use of
occupational health and
safety equipment especially
for workers
b. Determination &
implementation of safety
procedures relating to the
operations undertaken.
c. Provide first aid facilities
along with medical
personnel.
d. Perform periodic health
checks.
e. Provide an evacuation unit
to evacuate workers who
suffered injury due to
accident at workplace and
require further treatment to
hospital or public health
centre.
f. Insuring all the labour
involved in the project.
7) Harvesting and Transportation
of FFB's
a. Socialization of the use of
occupational health and
safety equipment especially
for workers
b. Determination &
implementation of safety

procedures relating to the
operations undertaken.
c. Provide first aid facilities
along with medical
personnel.
d. Perform periodic health
checks.
e. Provide an evacuation unit
to evacuate workers who
suffered injury due to
accident at workplace and
require further treatment to
hospital or public health
centre.
f. Insuring all the labour
involved in the project.
8) Fertilizer and pesticides
warehouse activities.
a. Socialization of the use of
occupational health and
safety equipment especially
for workers design of the second se
b. Determination &
implementation of safety
procedures relating to the
operations undertaken
c. Provide first aid facilities
along with medical personnel
d. Perform periodic health
checks e
e. Provide an evacuation unit
to evacuate workers who
suffered injury due to
accident at workplace and
require further treatment to
hospital or public health
centre.
f. Provide hearing &
respiratory protection.

				g. Insuring all the labour					
				involved in the project.					
3.10			1			· · · · · · · · · · · · · · · · · · ·		1	
3.10	Human Resources Human resources development is a positive significant impact and direct. The impact will develop local community human resorce for both skilled and non- skilled and have immediate impact against increased local community income.	Developed human resources due to CSR activities.	Meningkatnya keterampilan dan produktifitas masyarakat sekitar akibat program CSR	 Conducting socialization to the surrounding community on company CSR program. Company provides special field experts to train the workers enrolled in the program Conduct skills tests to program participants Conduct placement activities and course on the community so that people can be more independent to fulfil their economic needs. Together with the government to develop local business by using public facility as facilitator for local economy development. 	Muara Ritan Village, Muara Ritan Baru Village, Buluq Sen Village, Mura Pedohon Village and Umaq Dian Village	During the estate operation of PT PU.	PT PU	 Village Officials of Muara Ritan Village, Muara Ritan Baru Village, Buluq Sen Village, Buluq Sen Village, Muara Pedohon Village and Umaq Dian Village, Tabang Sub- District. Land Administration Division of Kutai Kartanegara Regency. Environment Agency of Kutai Kartanegara Regency. 	 Plantation Office of Kutai Kartanegar a Regency Regional Environme nt Agency of Kutai Kartanegar a Regency Environme nt Agency of East Kalimantan Province.
									<u> </u>
4	COMMUNITY HEALTH COMPO	DNENTS							
4.1	Community Health		1	1				1	
	Significant impact is the occurrence of public health problems with indicators of	Impact arised due to the following activities a. Nursery b. Planting of oil palm	No increase in public health problems in the vicinity of the project site.	 Nursery a. Nursery activities should be conducted in a planned 	At the project location of the following activities:	Once during activities on progress and evaluated once a	PT. PU	1. Health Department of Kutai	1. Health Departmen t of Kutai

·	-					
increased morbidity rate	c. Plant upkeep	manner and gradually	a. Preparation of	month during the	Kartanegara	Kartanegar
among local community.	d. Harvesting &	according to the estate	nursery location.	operations of PT PU.	Regency.	a Regency.
	transportation of	development.	b. Preparation of		2. Plantation	2. Environme
	FFB's	b. Construct drainage network	planting area. c. Planting of oil palm.		Office of Kutai	nt Agency
	e. Mill operations.	that lead to retention basin	d. Plants upkeep		Kartanegara	of Kutai
		at each división.	e. Harvesting and		Regency.	Kartanegar
		c. Use environmentally friendly			3. Environment Agency of	a Regency.
		pesticide type.	FFB's		Kutai	3. Environme
		d. Collect hazardous and toxic	f. Mill operations.		Kartanegara	nt Regency
		waste at hazardous and toxic			Regency.	of East
		waste storage facility.				Kalimantan
		2) Oil palm planting				Province.
		a. Avoid air pollution along the				
		seedling transportation				
		routes.				
		b. Inventory number of				
		resident who affected by				
		nursery activities.				
		c. Conducting intensive road				
		watering, especially in the				
		dry season on the				
		community residential areas				
		once in 2 hours				
		once in 2 hours				
		3) Plant upkeep				
		a. Planting activities should be				
		conducted in a planned				
		manner and gradually				
		according to the estate				
		development.				
		b. Construct drainage network				
		that lead to retention basin				
		at each división.				
		c. Use environmentally friendly				
		pesticide type.				
		d. Collect hazardous and toxic				
		waste at hazardous and toxic				
		waste storage facility.				
└───┴──────						

4) Harvesting and transportation
of FFB's
a. Minimize the dust caused by
transporting activities by
limiting the transportation
vehicle speed.
b. Installing notification board
on the need to use mask
especially on dusty áreas.
c. Provision of dust mask to
community affected by the
dust on the transporting
route.
d. Incorporate CSR program as
main program.
5) Mill operations
a. Construct wastewater
treatment plants to manage
liquid waste generated from
plant operations.
b. Based on the waste
characteristic & pollution
load, the effluent treatment is
effective if WPH is more than
75 days so that the COD & TSS
level can be decreased to below the standard. PT PU
plans the wastewater
treatment with a biologically
WWTP system (anaerobe &
aerobe system) with
hydrological retention time of
150 days so that WPH increase
is expected to decrease the
quality of waste water &
pollution loads to below the
quality standard.
c. Implementation of land
applications in which requires study in advance on pollution
aspect that may occur, the

-			1						
				carrying capacity of the land,					
				the effect on soil and ground					
				water and surface water.					
4.2									
4.2	Public safety Impact on public safety disturbance in which the impact is significant negativem and direct. The impact may occur durig the estate operations of PT PU.	Impact arised from activities such as: a. Mobilization of equipment b. Transport of employees c. Harvesting & transportation of FFB's d. Demobilization of equipment	No traffic accident occured during the following activities: 1) Mobilization of equipment 2) Transport of employees 3) Harvesting & transportation of FFB's 4) Demobilization of equipment	 the effect on soil and ground water and surface water. 1) Equipment mobilization and demobilization a. Conduct mobilization to equipment in stage to entire heavy equipment. b. Coodinate with Transport Department of Kutai Kartanegara regency on LCT operations. c. Install adequate lightings. 2) Employee transportation a. Time arrangement for employee transportation to work in the morning is at 06:00 pm b. Time arrangement for employee transportation to return to home in the afternoon is at 14:00 wita. c. c. Limit the speed of the transporting vehicles at max 20 km / hour, especially when passing through the settlement. d. Use appropriate vehicle in accordance with its function such bus/car for passenger. 	At public road intersection passed by or areas prone to traffic accident	During the operational activities of PT PU.	Pt PU	 Health Department of Kutai Kartanegara Regency. Plantation Office of Kutai Kartanegara Regency. Environment Agency of Kutai Kartanegara Regency. 	 Health Departmen t of Kutai Kartanegar a Regency. Environme nt Agency of Kutai Kartanegar a Regency. Environme nt Regency of East Kalimanta n Province.
				3) FFB's Harvesting and Transportation a. Carry out control measures of road traffic					
				b. Preparing mobilization units, first aid facilities &					

medical personnel to	
anticipate traffic accidents.	
c. Prioritizing public road	
users first.	

2	HCV areas and HCS forests	(Stewa commu reduce The thi ecosyst there v service continu The res low im Senger triggers areas a pressui presen	rt et.al., 2008). Threats to HCV can come from the internal scope of unities). Threat assessment aims to help companies to overcome is the impact of various external threats. reat assessment uses a comprehensive approach from the IUCN tems. The threat category assessment is based on the IUCN Treat Overe 5 categories of threats in the MU area of PT PU, namely agric corridors, and natural system modification. From each threat, the aity), scope (size/proportion of affected area/object) and severity of sults of the threat intensity assessment are generally medium imp pact, namely fires originating from a stretch of shrubs around the a rivers, which were former community fields. This is because the la such as a dry and long drought and the lighter (such as cigarette b round the Jalin River, Batu Brang River and Belayan River which is re is very fast (land becomes barren and dries quickly). For the thr ted.	making management decisions to protect and/or enhance HCV values of the land manager or from external factors (institutional or personal internal threats with proper management, and improve the ability to 4. This approach only assesses direct threats to species, habitats or Category (ITC) that has been verified in the field. Of the 12 categories, culture/plantation activity, pollution, biological use, transportation & here are 3 factors that are assessed, namely time (period of threat (rate of quality decline due to threat pressure). eact. However, there is an assessment of threats that are classified as a borders of the Sungai Batu Brang, Jalin, Bayeq, Meqloq, and Sungai location is in the form of small spots and only takes place if there are butts of people looking for fish). It is different with logging in forested a classified as high impact. The rate of decline in quality due to threat reat assessment at each location of the HCV area, Tables 2 and 3 are
		HCV	. HCV and HCMA threat intensity assessment Brief Description of Existence of Values in the Valuation Area	Main Threat
		1	 Presence of RTE species, especially populations of kelawait (Hylobates muelleri) and several species of Dipterocarpaceae. Kelawait occupies the remaining secondary forest fragments within the MU and AOI. Similarly, several Dipterocarp species make up the species composition of the secondary forest fragments in the assessment landscape. 	 Community hunting of animals, especially RTE species Illegal logging by local communities and migrants in forest fragments containing Dipterocarpaceae species Clearing of forested land/which still has good vegetation for farming/gardening by the community/company
		3	 Important areas of rivers within the assessment landscape that are natural habitats for various RTE aquatic fauna, including thorn turtles and sinyulong crocodiles. There are ecosystems that are threatened and meet the criteria for HCV 3, 	Company plans to clear land for oil palm plantation
			namely in the form of lowland forest in sandstone	 Company plans to build roads and blocking lanes, in the early stages of land clearing Illegal logging by local communities and migrants

		 Clearing of forested land/which is still well-vegetated for farming/gardening by the community/company
4	There is land with steep slopes, as well as rivers and their riparian zone. The land with steep slopes has good vegetation conditions in the valley area. Within the MU area, there are 8 rivers and riparian zones.	 Plantation operations by the company after the palm oil is planted (Agricultura effluent), such as application of fertilizers, pesticides, herbicides Land clearing for farming/gardening by the community on steep slopes and around river borders Illegal logging by local communities and migrants on sloping lands (such a Mount Naga, Mount Mendam, and valley areas with steep slopes east of the Banggeh River) Activities of anglers around the riparian zone of the river in the form of shrub that dry up during the dry season (prone to fire)
5	There are situations that meet the requirements for the existence of HCV 5, namely rivers that are used as a place to find fish and a source of clean water for local communities	Community/company land clearing activities for agriculture (fields) or oil palm plantations around the riparian zone

Table 3. Threat assessment for each HCV and HCVMA

HCV	ID Map	Source of Threat	Threat Source Status	Risk
HCV 1	ID01, ID03, ID06, ID09, ID12, ID15, ID16, ID18	Community hunting of animals, especially RTE species	Animal hunting is a side activity for local people, it has been going on for a long time and seems to be continuing in the future	Fauna belonging to RTE species is increasingly threatened
	1010, 1018	Illegal logging by local communities and migrants in forest fragments containing Dipterocarpaceae species	Timber logging has been carried out and will continue to be carried out by the community, especially in the Belayan, Batu Brang and Jalin forest blocks	Flora belonging to RTE species is increasingly threatened
		Clearing of forested land/which still has good vegetation for farming/gardening by the community/company	 Until now, the company has not carried out land clearing activities but in the near future it will clear land for oil palm plantations. In the land clearing process there must be a plan for making lanes and blocking lanes (eg real threats to ID04 and ID05 connectivity). Cultivation by the community has taken place, especially on land with slightly steep slopes and around the riparian zone. 	 The area and quality of habitat for endangered animals is decreasing (disturbed) Animal habitats are fragmented so that connectivity is lost, for example: riparian zones as ecological corridors that connect better and wider forested/shrub areas. Increased soil erosion so that sediment yields in rivers increase and water becomes very cloudy, as well as residues of plantation chemicals (aquatic fauna

1		I	I	
				habitat is disturbed and its quality decreases)
HCV 3	ID02, ID03, ID04, ID05, ID06, ID08, ID09, ID11, ID12	 Company plans to clear land for oil palm plantation Company plans to build roads and blocking lanes, in the early stages of land clearing Illegal logging by local communities and migrants 	 Until now, the company has not carried out land clearing activities but in the near future it will clear land for oil palm plantations. Plans for making lanes and blocking lanes in line with the company's plan to clear land for oil palm plantations Timber logging has been carried out and will continue to be carried out by the community, especially in the Belayan, Batu Brang and Jalin 	Fragments of old forest/groves which are part of a rare ecosystem are threatened with damage or even disappearance
			forest blocks	
HCV 4	ID01, ID03, ID06, ID07, ID09, ID10, ID12, ID13, ID14, ID15, ID16, ID17, ID18	Land clearing for farming/gardening by the community on land with steep slopes and around river borders	 The river flows across the PT PU HGU area. Until now the company has not carried out land clearing activities, in the near future land clearing will be carried out for oil palm plantations (starting with the construction of roads and blocking lanes). Without close supervision the riparian zone area can also be opened. It has become a local community tradition to open fields around riparian zones and land with steep slopes (although the area is not very large), and will continue to do so in the future. 	 Erosion yields increase, sedimentation yields also increase which causes silting Increased turbidity of river water (dissolved material in river water increases) Increase riverbank morphoerosion because there is no protection on the riverbank Riparian zone as a flood buffer area that still has natural vegetation will disappear
		Plantation operational activities by the company after palm oil is planted (Agricultural effluent), such as application of fertilizers, pesticides, herbicides	Plantation operational activities have not yet taken place, the threat will take place intensively in the first 5 years after planting	Increased agrochemical pollution when plantation operations have started (fertilizers, pesticides, herbicides)
		The activities of anglers around the riparian zone of the river in the form of shrubs that dry up during the dry season	Fishing is a local community side activity that takes place only at certain times. During the dry season the river water recedes, the frequency of fishing is getting more frequent. This will be repeated next time	Land fire
HCV 5	ID06, ID12, ID16	Community/company land clearing activities for agriculture (fields) or oil palm plantations	• The river flows across the PT PU HGU area. Until now the company has not carried out land clearing activities, in the near future land	Reducing river water quality, because:

 around riparian zones that are not environmentally friendly around riparian zones that are not environmentally friendly clearing will be carried out for oil palm plantations (starting with the construction of roads and blocking lanes). Without close supervision the riparian zone area can be opened too. It has become a local community tradition to open fields around riparian zones and land with steep slopes (although the area is not very large), and will continue to do so in the future. Increase 							
The general objective of HCV management is to maintain elements of the HCV; (if needed), the importance of the area can be enhanced. Maintenance of HCV elements is a minimum requirement in HCV management. This HCV maintenance can be done by protecting the HCV area and mitigating its threats so that the important value of the HCV is not degraded. In addition, the company is also expected to be able to recover from the significant decline in the value of HCV caused by the negative impact of the company's operational activities.							
The management recommondations for managing UCV areas in general areas follows:							
 The management recommendations for managing HCV areas in general are as follows: The company must have a commitment to carry out the land acquisition process for the entire HGU area, including the area to be managed as a conservation area (HCV-HCS, Risk Area). This needs to be done to ensure that there will be no problems in the process of managing and monitoring the conservation area on the grounds that the area is still controlled by the community. The land acquisition process to be carried out must refer to the procedures established by the company and the principles of FPIC. Immediately prepare a more detailed HCV Management Plan document, taking into account: Species protection aspect, because not all endangered species have a definite core area or clear path across the garden, also consider the connectivity between habitats. 							
 Regarding the connectivity of the HCV area (eg in ID04 and ID05), the thing that must be considered is to maintain the extension the forest in good condition and not fragmented by closing all access to the HCV area and creating a buffer area around the that cannot be changed by land use. make the buffer area an HCVMA No Go Area. Meanwhile, the border area of the nat that connects to the HCV ID04 area becomes the HCVMA Go Area. Strengthening communication links with other companies in the vicinity to develop management plans and action plans HCV areas. 							
 A landscape approach that involves local communities and related stakeholders, because the interests and benefits of the existence of HCVs are mutual interests and benefits. 							

 Integrated Management Plan and Monitoring of HCV area with other environmental management activities (Integrated Management Plan) such as AMDAL, HCS, and others
• This management plan must be on target, realistic, simple, practical and effective.
3. Build institutions for HCV management:
 Establish a management unit to ensure HCV management objectives are achieved.
 Train staff or recruit staff with the necessary qualifications for HCV management.
4. Strengthening capacity in identification, management, monitoring and evaluation:
 Detailed SOP for Management and monitoring of HCV areas.
 Consistent application of procedures and policies.
5. Conduct delineation and demarcation of HCV areas that have been identified and install sign boards as a form of socialization and public awareness regarding information on HCV areas
6. Before demarcating and delineating the HCV area, it is necessary to first consider the tenure/ownership of the land where the HCV area is located. This will have implications for further management actions of the HCV area and elements, namely:
 If the status of land ownership/tenure is still in the community, then all matters relating to the protection and management of the HCV area must be coordinated with the land owner, and carried out by mutual agreement between the company and the land owner. If the land ownership status is with the company, what is needed is the enforcement of protection rules.
7. Coordinate with relevant stakeholders (NGOs, government, communities) in the maintenance of HCV areas and support collaborative activities related to the concept of area management
8. Regarding the company's plan to build roads and blocking lanes, the management plan is to determine the location of the cross section between the road/blocking lane and river channel, which is minimal (in quantity) but effective in the operational mobility path of the plantation by maintaining the condition of the surrounding vegetation. Then, regarding the company's plan to create a drainage network, the things that must be considered are keeping the river flow in good condition (not normalizing the river) and making it the main drainage channel.
The direction in this HCV area management system is an adaptive management system where the manager always tries to make continuous improvement in the management and monitoring of HCVs. Recommendations for management of HCV areas are presented in Table 4.

Base Descrij	ID
Cond	
r The slope of is rather s condition of cover is stit the form that have disturbed Type : 1; 4	01

· · · · · · · · · · · · · · · · · · ·							
	02	Belayan River Block Forest	 In general the condition of land cover is still good (secondary forest scrub, only a small amount of shrubs), in some places there is land clearing by PT Lembang Ganesa and PT Karya Rimba Raya (still active). Important area as habitat for endangered species Ambon tortoise (Coura 	 Community hunting of animals, especially RTE species Illegal logging by local communities and migrants in forest fragments containing Dipterocarpace ae species Clearing of forested long (which still 	 on flora/ fauna in the HCV area. Conducting HCV boundary marking adjacent to operational areas as well as community land location & periodic border maintenance. Installation of nameplate in HCV location according to HCV type, installation of board prohibiting wildlife 	 Organize internal and external socialization explaining the importance of conserving HCV areas and biodiversity. Activities are also carried out targeting school-aged children (elementary, junior high school, high school) at schools located within village areas, sub-districts affected by PT. PU operations. Conduct HCV area management training to HCV officers and/ or staff & amplement 	 Determination of environmental and preservation of natural biodiversity policies by Top Management. Preparation of HCV Area Management and Monitoring Procedures/ SOP's. Establish and appoint HCV officers along with job descriptions and incorporate into the organizational structure of the company.
			(Coura amboinensis), Orlitia borneensis, Amyda cartilaginea, Cuora amboinensis, Heosemys spinose Type : 1; 3	 land/which still has good vegetation for farming/garden ing by the community/ company Company plans to clear land for oil palm plantation Company plans to build roads and blocking 	and enrichment activities (restoration) on areas identified as degraded based on land cover inventory results.	 employees. Conduct forest and land fire prevention and handling training to employees and gradually developing the fire-fighting community (MPA) program. Develop an accountable and relevant community development program in collaboration with government agencies, village agencies and community leaders in an effort to prevent and 	 Coordinate & cooperate with relevant agencies, such as BKSDA, Forestry and Plantations Agency, DLHK, Police, local government apparatus and surrounding communities in HCV area management program. Determination of environmental and preservation of natural
				lanes, in the early stages of land clearing	Ū.	minimize encroachment impact on HCV areas.	 biodiversity policies by Top Management. Preparation of HCV Area Management and

	Illegal logging	community land location &	Organize internal and outputternal	Monitoring Procedures/ SOP's.
	by local	periodic border	external socialization	-
	communities	maintenance.	explaining the importance	• Establish and appoint
	and migrants	Installation of HCV name	of conserving HCV areas	HCV officers along with
	Clearing of	board location according to	and biodiversity.	job descriptions and
	forested	HCV type, installation of	 Activities are also carried 	incorporate into the
	land/which is	board prohibiting wildlife	out targeting school-aged	organizational
	still well-	hunting and flora	children (elementary,	structure of the
	vegetated for	disruption.	junior high school, high	company.
	farming/garden	• Conducting patrols in HCV	school) at schools located	Coordinate &
	ing by the	areas.	within village areas, sub-	cooperate with
	community/co	Undertake rehabilitation	districts affected by PT. PU	relevant agencies, such
	mpan	and enrichment activities	operations.	as BKSDA, Forestry and
		(restoration) on areas	• Conduct HCV area	Plantations Agency,
		identified as degraded	management training to	DLHK, Police, local
		based on land cover	HCV officers and/ or staff &	government apparatus
		inventory results.	employees.	and surrounding
		Provision of forest and land	Conduct forest and land fire	communities in HCV
		fire prevention equipment	prevention and handling	area management
		in accordance with	training to employees and	program.
		prevailing laws and	gradually developing the	10 -
		regulations.	fire-fighting community	 Determination of
			(MPA) program.	environmental and
			• Develop an accountable	preservation of natural
			and relevant community	biodiversity policies by
			development program in	Top Management.
			collaboration with	 Preparation of HCV
				Area Management and
			government agencies, village agencies and	Monitoring
			community leaders in an	Procedures/ SOP's.
			effort to prevent and	 Establish and appoint
			minimize encroachment	HCV officers along with
			impact on HCV areas.	job descriptions and
				incorporate into the
				organizational
				structure of the
				company.
				Coordinate &
				cooperate with

			-	
				relevant agencies, such as BKSDA, Forestry and Plantations Agency, DLHK, Police, local government apparatus and surrounding communities in HCV area management program.
03 Batu Brang Rive and the Riparia Zone	 Community hunting of animals, especially RTE species Illegal logging by local communities and migrants in forest fragments containing Dipterocarpace ae species Clearing of forested land/which still has good vegetation for farming/garden ing by the community/ company Company plans to clear land for oil palm plantation 	 Conduct inventory and identification of land cover conditions. Comprehensive inventory on flora/ fauna in the HCV area. Conducting HCV boundary marking adjacent to operational areas as well as community land location & periodic border maintenance. Installation of nameplate in HCV location according to HCV type, installation of board prohibiting wildlife hunting and flora disruption. Conducting patrols in HCV areas. Undertake rehabilitation and enrichment activities (restoration) on areas identified as degraded based on land cover inventory results. Provision of forest and land fire prevention equipment in accordance with 	 Organize internal and external socialization explaining the importance of conserving HCV areas and biodiversity. Activities are also carried out targeting school-aged children (elementary, junior high school, high school) at schools located within village areas, sub-districts affected by PT. PU operations. Conduct HCV area management training to HCV officers and/ or staff & employees. Conduct forest and land fire prevention and handling training to employees and gradually developing the fire-fighting community (MPA) program. Develop an accountable and relevant community development program in collaboration with government agencies, and 	 Determination of environmental and preservation of natural biodiversity policies by Top Management. Preparation of HCV Area Management and Monitoring Procedures/ SOP's. Establish and appoint HCV officers along with job descriptions and incorporate into the organizational structure of the company. Coordinate & cooperate with relevant agencies, such as BKSDA, Forestry and Plantations Agency, DLHK, Police, local government apparatus and surrounding communities in HCV area management program.

			 Company plans 	prevailing laws and	community leaders in an	Determination of
			to build roads	regulations.	effort to prevent and	environmental and
			and blocking	 Conducting HCV boundary 	minimize encroachment	preservation of natural
			lanes, in the	marking adjacent to	impact on HCV areas.	biodiversity policies by
			early stages of	operational areas as well as		Top Management.
			land clearing	community land location &	 Organize internal and 	 Preparation of HCV
			 Illegal logging 	periodic border	external socialization	Area Management and
			by local	maintenance.	explaining the importance	Monitoring
			communities	Installation of HCV name	of conserving HCV areas	Procedures/ SOP's.
			and migrants	board location according to	and biodiversity.	 Establish and appoint
			• Clearing of	HCV type, installation of	 Activities are also carried 	HCV officers along with
			forested	board prohibiting wildlife	out targeting school-aged	job descriptions and
			land/which is	hunting and flora	children (elementary,	incorporate into the
			still well-	disruption.	junior high school, high	organizational
			vegetated for	 Conducting patrols in HCV 	school) at schools located	structure of the
			farming/gardeni	• •	within village areas, sub-	
				areas.	districts affected by PT. PU	company.
			ng by the	Undertake rehabilitation	operations.	Coordinate &
			community/co	and enrichment activities	•	cooperate with
			mpany	(restoration) on areas		relevant agencies, such
				identified as degraded	management training to	as BKSDA, Forestry and
			Plantation	based on land cover	HCV officers and/ or staff &	Plantations Agency,
			operations by	inventory results.	employees.	DLHK, Police, local
			the company	Provision of forest and land	Conduct forest and land fire	government apparatus
			after the palm	fire prevention equipment	prevention and handling	and surrounding
			oil is planted	in accordance with	training to employees and	communities in HCV
			(Agricultural	prevailing laws and	gradually developing the	area management
			effluent), such	regulations.	fire-fighting community	program.
			as application of	 Conduct inventory and 	(MPA) program.	
1			fertilizers,	identification of land cover	• Develop an accountable	• Determination of
1			pesticides,	conditions.	and relevant community	environmental and
			herbicides	 Comprehensive inventory 	development program in	preservation of natural
			 Land clearing for 	on flora/ fauna in the HCV	collaboration with	biodiversity policies by
			farming/gardeni	area.	government agencies,	Top Management.
			ng by the	 Conducting HCV boundary 	village agencies and	 Preparation of HCV
			community on	marking adjacent to	community leaders in an	Area Management and
			steep slopes and	operational areas as well as	effort to prevent and	Monitoring
			around river	community land location &	minimize encroachment	Procedures/ SOP's.
			borders	periodic border	impact on HCV areas.	 Establish and appoint
				maintenance.		HCV officers along with

	Illegal logging by Installation of nameplate in	 Organize internal and 	job descriptions and
	local HCV location according to	external socialization	incorporate into the
	communities HCV type, installation of	explaining the importance	organizational
	and migrants on board prohibiting wildlife	of conserving HCV areas	structure of the
	sloping lands hunting and flora	and biodiversity.	company.
	Activities of disruption.	• Conduct forest and land fire	Coordinate &
	anglers around • Conducting patrols in HCV	prevention and handling	cooperate with
	the riparian areas.	training to employees and	relevant agencies, such
	zone of the river • Undertake rehabilitation	gradually developing the	as BKSDA, Forestry and
	in the form of and enrichment activities	fire-fighting community	Plantations Agency,
	shrubs that dry (restoration) on areas	(KTPA) program.	DLHK, Police, local
	up during the identified as degraded	(KITA) program.	government apparatus
	_		and surrounding
	dry season based on land cover (prone to fire) inventory results.		communities in HCV
			area management
	Provision of forest and land		
	fire prevention equipment		program.
	in accordance with		• Determination of
	prevailing laws and		Determination of
	regulations.		environmental and
	Determination flood plain		preservation of natural
	on river riparian as wide as		biodiversity policies by
	the highest peak of		Top Management.
	inundation period.		 Preparation of HCV
	 Setting and marking of 		Area Management and
	boundaries of areas		Monitoring
	identified as HCV 4 (rivers		Procedures/ SOP's.
	and borders) followed by		 Establish and appoint
	installation of HCV 4		HCV officers along with
	information boards (rivers		job descriptions and
	and borders), mounting		incorporate into the
	signs containing		organizational
	restrictions and appeals,		structure of the
	especially prevention of		company.
	fires and cultivation and		Coordinate &
	logging		cooperate with
	 Identification of land cover 		relevant agencies, such
	in river basins for		as BKSDA, Forestry and
	rehabilitation/ enrichment		Plantations Agency,
	planting by categorizing		DLHK, Police, local
		1	, , ,

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						open areas, shrubs, low		government apparatus
						density stands, high density		and surrounding
						stands		communities in HCV
						Rehabilitation/ enrichment		area management
						planting in river border		program.
						river. If there are already		
						other plants in the border,		
						then enrichment is done by		
						planting the same plant		
						species. Types of plants		
						planted are local native		
						species.		
						• Conducting patrols on the		
						HCV river boundary		
						Provision of forest and land		
						fire prevention equipment		
						in accordance with		
						prevailing laws and		
						regulations.		
						• Do not occupy area on the		
						river border as settlement		
						to prevent river water		
						pollution.		
		04	Batu Brang River	 In general the 	 Community 	 Conduct inventory and 	 Organize internal and 	• Determination of
			Block Forest	condition of land	hunting of	identification of land cover	external socialization	environmental and
				cover is still good	animals,	conditions.	explaining the importance	preservation of natural
				(scrub-secondary	especially RTE	Comprehensive inventory	of conserving HCV areas	biodiversity policies by
				forest), there are	species	on flora/ fauna in the HCV	and biodiversity.	Top Management.
				logging areas of PT	Illegal logging	area.	 Activities are also carried 	 Preparation of HCV
				Lembang Ganesa	by local	 Conducting HCV boundary 	out targeting school-aged	Area Management and
				and PT Karya Rimba	communities	marking adjacent to	children (elementary,	Monitoring
				Raya, the slopes of	and migrants in	operational areas as well as	junior high school, high	Procedures/ SOP's.
				the land are gentle	forest	community land location &	school) at schools located	 Establish and appoint
				to bumpy	fragments	periodic border	within village areas, sub-	HCV officers along with
				• Lowland scrub and	containing	maintenance.	districts affected by PT. PU	job descriptions and
				secondary forest	Dipterocarpace	 Installation of nameplate in 	operations.	incorporate into the
				ecosystems that	ae species	HCV location according to	• Conduct HCV area	organizational
				support habitat for	Clearing of	HCV type, installation of	management training to	structure of the
				endangered species	forested	board prohibiting wildlife		company.

(Hylobates mue	eri land/which still	hunting and flora	HCV officers and/ or staff &	Coordinate &
and Buce	ros has good	disruption.	employees.	cooperate with
rhinoceros);	vegetation for	• Conducting patrols in HCV	• Conduct forest and land fire	relevant agencies, such
endemic spe	ies farming/garden	areas.	prevention and handling	as BKSDA, Forestry and
and limi		Undertake rehabilitation	training to employees and	Plantations Agency,
distribution	community/	and enrichment activities	gradually developing the	DLHK, Police, local
(Hylobates	company	(restoration) on areas	fire-fighting community	government apparatus
muelleri), refugi		identified as degraded	(MPA) program.	and surrounding
stepping stone		based on land cover	• Develop an accountable	communities in HCV
protected spe		inventory results.	and relevant community	area management
(Family	oil palm	 Provision of forest and land 	development program in	program.
Bucerotidae)	plantation	• Provision of forest and land fire prevention equipment	collaboration with	
Baccionacy	 Company plans 		government agencies,	Determination of
Type: 1; 3	to build roads		village agencies and	environmental and
1 ypc. 1, 5	and blocking		community leaders in an	preservation of natural
	lanes, in the	regulations.	effort to prevent and	biodiversity policies by
	early stages of	- Conducting UCV houndary	minimize encroachment	Top Management.
	land clearing			
	-	marking adjacent to	impact on HCV areas.	Preparation of HCV
	Illegal logging	operational areas as well as		Area Management and
	by local	community land location &	Organize internal and	Monitoring
	communities	periodic border	external socialization	Procedures/ SOP's.
	and migrants	maintenance.	explaining the importance	Establish and appoint
	Clearing of		of conserving HCV areas	HCV officers along with
	forested	board location according to	and biodiversity.	job descriptions and
	land/which is	HCV type, installation of		incorporate into the
	still well-	board prohibiting wildlife	out targeting school-aged	organizational
	vegetated for	hunting and flora	children (elementary,	structure of the
	farming/gardeni	disruption.	junior high school, high	company.
	ng by the	• Conducting patrols in HCV	school) at schools located	Coordinate &
	community/co	areas.	within village areas, sub-	cooperate with
	mpan	Undertake rehabilitation	districts affected by PT. PU	relevant agencies, such
		and enrichment activities	operations.	as BKSDA, Forestry and
		(restoration) on areas	Conduct HCV area	Plantations Agency,
		identified as degraded	management training to	DLHK, Police, local
		based on land cover	HCV officers and/ or staff &	government apparatus
		inventory results.	employees.	and surrounding
		Provision of forest and land	• Conduct forest and land fire	communities in HCV
		fire prevention equipment	prevention and handling	area management
		in accordance with	training to employees and	program.
			· · ·	_

05 Jalin River Block Forest	 In general the condition of land cover is still good (scrub-secondary forest), in some places there is land clearing by the 	 Community hunting of animals, especially RTE species Illegal logging by local 	 prevailing laws and regulations. Conduct inventory and identification of land cover conditions. Comprehensive inventory on flora/ fauna in the HCV area. Conducting HCV boundary 	 gradually developing the fire-fighting community (MPA) program. Develop an accountable and relevant community development program in collaboration with government agencies, village agencies and community leaders in an effort to prevent and minimize encroachment impact on HCV areas. Organize internal and external socialization explaining the importance of conserving HCV areas and biodiversity. Activities are also carried out targeting school-aged 	 Determination of environmental and preservation of natural biodiversity policies by Top Management. Preparation of HCV Area Management and Monitoring Procedures/SOP's. Establish and appoint HCV officers along with job descriptions and incorporate into the organizational structure of the company. Coordinate & cooperate with relevant agencies, such as BKSDA, Forestry and Plantations Agency, DLHK, Police, local government apparatus and surrounding communities in HCV area management program. Determination of environmental and preservation of natural biodiversity policies by Top Management. Preparation of HCV Area Management and
			-	-	

	sloping to	fragments	periodic border	within village areas, sub-	 Establish and appoint
	undulating.	containing	maintenance.	districts affected by PT. PU	HCV officers along with
	• Lowland scrub and	Dipterocarpace	 Installation of nameplate in 	operations.	job descriptions and
	secondary forest	ae species	HCV location according to	• Conduct HCV area	incorporate into the
	ecosystems that	• Clearing of	-	management training to	organizational
	support habitat for	forested	board prohibiting wildlife	HCV officers and/ or staff &	structure of the
	endangered species	land/which still		employees.	company.
	(Hylobates muelleri	has good	disruption.	 Conduct forest and land fire 	Coordinate &
	and Buceros	vegetation for	r • Conducting patrols in HCV	prevention and handling	cooperate with
	rhinoceros);	farming/garden		training to employees and	relevant agencies, such
	endemic species	ing by the		gradually developing the	as BKSDA, Forestry and
	and limited	community/	and enrichment activities	fire-fighting community	Plantations Agency,
	distribution	company	(restoration) on areas	(MPA) program.	DLHK, Police, local
	(Hylobates		identified as degraded	• Develop an accountable	government apparatus
	muelleri), refugium,	• Company plans	_	and relevant community	and surrounding
	stepping stone for	to clear land for		development program in	communities in HCV
	protected species	oil palm	'	collaboration with	area management
	(Family	plantation	fire prevention equipment	government agencies,	program.
	Bucerotidae)	Company plans		village agencies and	
		to build roads		community leaders in an	Determination of
	Type: 1; 3	and blocking	1 0	effort to prevent and	environmental and
		lanes, in the	<u> </u>	minimize encroachment	preservation of natural
		early stages of	f • Conducting HCV boundary	impact on HCV areas.	biodiversity policies by
		land clearing	marking adjacent to		Top Management.
		• Illegal logging		 Organize internal and 	Preparation of HCV
		by local		external socialization	Area Management and
		communities	periodic border	explaining the importance	Monitoring
		and migrants	, maintenance.	of conserving HCV areas	Procedures/ SOP's.
		Clearing of	 Installation of HCV name 	and biodiversity.	• Establish and appoint
		forested	board location according to	• Activities are also carried	HCV officers along with
		land/which is still	HCV type, installation of	out targeting school-aged	job descriptions and
		well-vegetated	board prohibiting wildlife	children (elementary,	incorporate into the
		for	hunting and flora	junior high school, high	organizational
		farming/gardenin	disruption.	school) at schools located	structure of the
		g by the	Conducting patrols in HCV	within village areas, sub-	company.
		community/comp	areas.	districts affected by PT. PU	Coordinate &
		an	Undertake rehabilitation	operations.	cooperate with
			and enrichment activities	• Conduct HCV area	relevant agencies, such
			(restoration) on areas	management training to	as BKSDA, Forestry and
			. ,		

					identified as degraded based on land cover inventory results. Provision of forest and land fire prevention equipment in accordance with prevailing laws and regulations.	 HCV officers and/ or staff & employees. Conduct forest and land fire prevention and handling training to employees and gradually developing the fire-fighting community (MPA) program. Develop an accountable and relevant community development program in collaboration with government agencies, village agencies and community leaders in an effort to prevent and minimize encroachment impact on HCV areas. 	 Plantations Agency, DLHK, Police, local government apparatus and surrounding communities in HCV area management program. Determination of environmental and preservation of natural biodiversity policies by Top Management. Preparation of HCV Area Management and Monitoring Procedures/ SOP's. Establish and appoint HCV officers along with job descriptions and incorporate into the organizational structure of the
						community leaders in an effort to prevent and minimize encroachment	Area Management and Monitoring Procedures/ SOP's. • Establish and appoint
							job descriptions and incorporate into the organizational
							company. • Coordinate & cooperate with relevant agencies, such as BKSDA, Forestry and
							Plantations Agency, DLHK, Police, local government apparatus and surrounding communities in HCV area management
06	Jalin River and the	• The river water is	Community		Conduct inventory and	 Organize internal and 	program. Determination of
	Riparian Zone	cloudy during the rainy season from	hunting animals,	of	identification of land cover conditions.	external socialization explaining the importance	environmental and preservation of natural

	vegetated for	hunting and flora	junior high school, high	structure of the
	farming/garden	disruption.	school) at schools located	company.
	ing by the		within village areas, sub-	Coordinate &
	community/	areas.	districts affected by PT. PU	cooperate with
	company	Undertake rehabilitation	operations.	relevant agencies, such
	company	and enrichment activities	Conduct HCV area	as BKSDA, Forestry and
	Plantation	(restoration) on areas	management training to	Plantations Agency,
	operations by	identified as degraded	HCV officers and/ or staff &	DLHK, Police, local
	the company	based on land cover	employees.	government apparatus
	after the palm	inventory results.	 Conduct forest and land fire 	and surrounding
	oil is planted	-	prevention and handling	communities in HCV
	(Agricultural	 Provision of forest and land fire provention equipment 		
	effluent), such	fire prevention equipment	training to employees and	Ũ
		in accordance with	gradually developing the	program.
	as application of fertilizers,	prevailing laws and	fire-fighting community	• Determination
	pesticides,	regulations.	(MPA) program.	 Determination of environmental and
	herbicides		Develop an accountable	
		Conduct inventory and	and relevant community	preservation of natural
	Land clearing	identification of land cover	development program in	biodiversity policies by
	for	conditions.	collaboration with	Top Management.
	farming/garden	Comprehensive inventory	government agencies,	Preparation of HCV
	ing by the	on flora/ fauna in the HCV	village agencies and	Area Management and
	community on	area.	community leaders in an	Monitoring
	steep slopes	Conducting HCV boundary	effort to prevent and	Procedures/ SOP's.
	and around	marking adjacent to	minimize encroachment	• Establish and appoint
	river borders	operational areas as well as	impact on HCV areas.	HCV officers along with
	Illegal logging	community land location &		job descriptions and
	by local	periodic border	Organize internal and	incorporate into the
	communities	maintenance.	external socialization	organizational
	and migrants on	· motanation of namepiate in	explaining the importance	structure of the
	sloping lands	HCV location according to	of conserving HCV areas	company.
	Activities of	HCV type, installation of	and biodiversity.	Coordinate &
	anglers around	board prohibiting wildlife	Conduct forest and land fire	cooperate with
	the riparian	hunting and flora	prevention and handling	relevant agencies, such
	zone of the river	disruption.	training to employees and	as BKSDA, Forestry and
	in the form of	 Conducting patrols in HCV 	gradually developing the	Plantations Agency,
	shrubs that dry	areas.	fire-fighting community	DLHK, Police, local
	up during the	Undertake rehabilitation	(KTPA) program.	government apparatus
	dry season	and enrichment activities		and surrounding
	(prone to fire)	(restoration) on areas		communities in HCV

Community/co mpany liard dearing activities for agriculture (fields) or oil plantations around the riparianzone around the riparianzone area management program. area management riparianzone riparianzone riparianzone area management riparianzone area management riparianzone riparianzone riparianzone riparianzone riparianzone riparianzone area management riparianzone area management around the riparianzone area management around the riparianzone around the riparianzone around the riparianzone				
inventory results. inventory results. invent			identified as degraded	area management
 clearing activities for agriculture (fields) or oil palm glantations around the ripartan zone Provision of forest and land preservation of natural pale tights of regulations. Preparation of regulations around the ripartan zone Determination flood plain or river ripartan swide as the highest peak of inundation period. Determination bards (rivers and borders) followed by organizational information bards (rivers and borders) foundation appeals, especially prevention of HCV 4 (relevant agencies, such as BKDA, Forestry and borders), mounting comparate with plantations around the information bards (rivers and borders) for lowed by installation of HCV 4 (relevant agencies, such as BKSDA, Forestry and borders), for lowed by comparate into the langeals, especially prevention of and such agency. Identificat an HCV 4 (rivers and borders), mounting comparate, into the information of and appeals, especially prevention of and such agency. Identification of and cover in river basins for enablitation of and cover in river basins for enablitation of archement comparatus stands Rehabilitation, enrichment planting by categorizing are surrounding on the planting by categorizing on the border, there are aready other plants in the border, there aready other plants in t		Community/co	based on land cover	program.
activities of galm activities of galm free prevention equipment in accordance with persailing laws and regulations. environmental and biodiversity policies by Top Management. activities of palm palmitations plantations around the riparian zone • Determination flood plain oriver iparian as wide as the highest peak of setting and marking of biodiversity SOP's. • Preparation of HCV Area Management and Monitoring Procedures/SOP's. • Determination flood plain riparian zone • Determination flood plain oriver iparian as wide as the highest peak of setting and marking of biodiversity SOP's. • Establish and appoint HCV officers along with organizational incorporate into the organizational installation of HCV 4 (rivers and borders), floodwed by installation of HCV 4 installation of HCV 4 installation of appeals, especially prevention of fires and cultivation and planting by categorizing open areas, Shubbi, low density stands, high density stands • Coordinate government apparatus and surrounding open areas, Shubb, low density stands, high density stands • Rehabilitation/ enrichment planting by categorizing open areas, shubb, low density stands, high density stands • Rehabilitation/ enrichment planting by categorizing open areas, shubb, low density stands, high density stands • Rehabilitation/ enrichment planting in river border, there areardy other plants in the border,		mpany land	inventory results.	
activities of gain (fields) or oi palm plantations around the ripatian zone fire prevention equipment in accordance with prevailing laws and regulations. environmental and biodiversity policies by Top Management. • Determination flood plain or her ripatian zone • Determination flood plain or her ripatian as wide as the highest peak of setting and marking of biodiversity 200°s. • Preparation of HCV Area Management and Monitoring Procedures/SOP's. • Determination flood plain or her ripatian zone • Determination flood plain or her ripatian as wide as the highest peak of setting and marking of biodinaties of areas and borders) floidwed by installation of HCV 4 (rivers and borders), mounting signs containing cooperate with fire an activation and floetification of and cover in river basins for rehabilitation/ enrichment planting by categorizing open areas, shubs, low density stands, high density stands • Coordinate gaver. • Her basins for rehabilitation/ enrichment planting by categorizing open areas, shubs, low density stands, high density stands • Rehabilitation/ enrichment planting by categorizing open areas, shubs, low density stands, high density stands • Rehabilitation/ enrichment planting in river border, ther endichment is done by		clearing	• Provision of forest and land	Determination of
agriculture (fields) or oil palm plantations around the riparian zone		activities for	fire prevention equipment	environmental and
palm plantations around the riparianzoneregulations.Top Management. Preparation of HCV Area Management and Monitoring Procedures/SOP's.• Determination flood plain on river riparianzone• Determination flood plain on river riparian swide as the highest peak of isoundation period.• Establish and appoint HCV officers isoundation period.• Setting and marking of boundaries of areas identified as HCV 4 (rivers installation of HCV 4 installation of HCV 4 issigns containing restrictions and appeals, especially prevention of fires and cultivation and logging• Coordinate & & coorganizational coorganizational signs containing restrictions and appeals, especially prevention of fires and cultivation and logging• Coordinate & & susceptions and borders), mounting signs containing restrictions and appeals, logging• Identification of land cover in herbabilitation/ enrichment planting by categorizing open areas, shrub, low density stands, high density stands• Pienartions and surrounding area management program.• Rehabilitation/ enrichment planting in river border river. If there are already other plants in the border, the anrichment is one by• Top Management. Monitoring Monitoring Monitoring Monitoring Monitoring Coordinate and surrounding area management program.		agriculture	in accordance with	preservation of natural
palm regulations. Top Management. plantations plantations Preparation of HCV around the riparian zone Determination flood plain Preparation of HCV Setting and marking of Determination flood plain Procedures/SOP's. Setting and marking of boundaries of areas point HCV affees and the organizational installation of HCV and borders), followed by incorporate into the organizational incorporate into the organizational installation of HCV 4 installation of HCV 4 structure of the company. Coordinate & company. and borders), mounting signs coordinate & sepecially prevention of fires and cultivation and logging Plant, Porestry and logging Plantations Agency. Plantations genery. indentification of land cover in river basins for in rehabilitation/ enrichment communities in HCV office. local logging plantations and surrounding communities in HCV biolice. local program. in river basins for river basits into border, low density stands, high density stands, low density stands high density stands area management program.		(fields) or oil	prevailing laws and	biodiversity policies by
 plantations around this riparian zone Determination flood plain on river riparian as wide as the highest peak of inundation period. Station peri		palm	regulations.	
riparian zone on river riparian as wide as the highest peak of inundation period. • Establish and appoint HCV officers along with boundaries of areas identified as HCV 4 (rivers and borders) followed by installation of HCV 4 information boards (rivers and borders) followed by installation of HCV 4 information boards (rivers and borders), mounting signs containing restrictions and appeals, especially prevention of fires and cultivation and logging • Identification of land cover in river basins for rehabilitation/ enrichment planting by categorizing open areas, shrubs, low density stands, high density stands • Rehabilitation/ enrichment planting in river border river. If there are already other plants in the border, then enrichment is one by		plantations	_	
riparian zone on river riparian as wide as the highest peak of inundation period. • Establish and appoint HCV officers along with boundaries of areas identified as HCV 4 (rivers and borders) followed by installation of HCV 4 information boards (rivers and borders) followed by installation of HCV 4 information boards (rivers and borders), mounting signs containing restrictions and appeals, especially prevention of fires and cultivation and logging • Identification of land cover in river basins for rehabilitation/ enrichment planting by categorizing open areas, shrubs, low density stands, high density stands • Rehabilitation/ enrichment planting in river border river. If there are already other plants in the border, then enrichment is one by		around the	• Determination flood plain	Area Management and
the highest peak of inundation period. • Setting and marking of boundaries of areas identified as HCV 4 (rivers and borders) followed by installation of HCV 4 (rivers and borders) followed by installation of HCV 4 information boards (rivers and borders), mounting signs containing restrictions and appeals, especially prevention of fires and cultivation and plantations for relabilitation/ enrichment plantation of HCV logging • Identification / enrichment plantations for rehabilitation/ enrichment plantations for gorgarm. • Rehabilitation/ enrichment planta in river border river. If there are already other plants in the border, then enrichment is done by		riparian zone		-
 inundation period. Setting and marking of boundaries of areas identified as HCV 4 (rivers and borders) followed by organizational structure of the information boards (rivers and borders), mounting signs containing restrictions and appeals, especially prevention of fires and cultivation and logging Identification of and cover in river basins for rehabilitation/ enrichment planting by categorizing open areas, shrubs, low density stands, high density stands Rehabilitation/ enrichment planting in river border river. If there are already other plants in the border, the enrichment is done by 			the highest peak of	Procedures/ SOP's.
 Setting and marking of boundaries of areas identified as HCV 4 (fivers along with job descriptions and identified as HCV 4 (fivers and borders) followed by installation of HCV 4 Structure of the information boards (rivers and borders), mounting signs containing restrictions and appeals, especially prevention of fires and cultivation and logging Identification of land cover in river basins for rehabilitation/ enrichment planting in river basins for goen areas, shrubs, low density stands, high density stands Rehabilitation/ enrichment planting in river border river. If there are already other plants in the border, then enrichment is done by 				
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signs containing restrictions and appeals, especially prevention of fires and cultivation and fires and cultivation and government apparatus in river basins for rehabilitation/ enrichment open areas, shrubs, low density stands, high density stands Rehabilitation/ enrichment planting in river border river. If there are already other plants in the border, then enrichment is done by			information boards (rivers	company.
restrictions and appeals, especially prevention of fires and cultivation and fires and cultivation and logging I Identification of land cover in river basins for rehabilitation/ enrichment planting by categorizing open areas, shrubs, low density stands, high density stands Rehabilitation/ enrichment planting in river border river. If there are laready other plants in the border, then enrichment is done by			and borders), mounting	Coordinate &
especially prevention of fires and cultivation and logging • Identification of land cover in river basins for rehabilitation/ enrichment planting by categorizing open areas, shrubs, low density stands, high density stands • Rehabilitation/ enrichment planting in river border river. If there are already other plants in the border, then enrichment is done by				cooperate with
especially prevention of fires and cultivation and logging • Identification of land cover in river basins for rehabilitation/ enrichment planting by categorizing open areas, shrubs, low density stands, high density stands • Rehabilitation/ enrichment planting in river border river. If there are already other plants in the border, then enrichment is done by			restrictions and appeals,	relevant agencies, such
logging Identification of land cover in river basins for rehabilitation/ enrichment planting by categorizing open areas, shrubs, low density stands, high density stands Rehabilitation/ enrichment planting in river border river. If there are already other plants in the border, then enrichment is done by			especially prevention of	as BKSDA, Forestry and
 Identification of land cover in river basins for rehabilitation/ enrichment open areas, shrubs, low density stands, high density stands Rehabilitation/ enrichment planting in river border river. If there are already other plants in the border, then enrichment is done by 			fires and cultivation and	Plantations Agency,
in river basins for rehabilitation/ enrichment planting by categorizing open areas, shrubs, low density stands, high density stands • Rehabilitation/ enrichment planting in river border river. If there are already other plants in the border, then enrichment is done by			logging	DLHK, Police, local
rehabilitation/ enrichment planting by categorizing open areas, shrubs, low density stands, high density stands • Rehabilitation/ enrichment planting in river border river. If there are already other plants in the border, then enrichment is done by			Identification of land cover	government apparatus
Image: second			in river basins for	and surrounding
 open areas, shrubs, low density stands, high density stands Rehabilitation/ enrichment planting in river border river. If there are already other plants in the border, then enrichment is done by 			rehabilitation/ enrichment	communities in HCV
density stands, high density stands • Rehabilitation/ enrichment planting in river border river. If there are already other plants in the border, then enrichment is done by			planting by categorizing	area management
stands • Rehabilitation/ enrichment planting in river border river. If there are already other plants in the border, then enrichment is done by			open areas, shrubs, low	program.
 Rehabilitation/ enrichment planting in river border river. If there are already other plants in the border, then enrichment is done by 			density stands, high density	
planting in river border river. If there are already other plants in the border, then enrichment is done by			stands	
river. If there are already other plants in the border, then enrichment is done by			Rehabilitation/ enrichment	
other plants in the border, then enrichment is done by			planting in river border	
then enrichment is done by			river. If there are already	
			other plants in the border,	
			then enrichment is done by	
species. Types of plants			species. Types of plants	

		 planted are local native species. Conducting patrols on the HCV river boundary Provision of forest and land fire prevention equipment in accordance with prevailing laws and regulations. Do not occupy area on the river border as settlement to prevent river water pollution. 		
07 Jalin Tukung River and the Riparian Zone	conditionoftheupstreamcoveristheformofthickets.Thedownstreampartflowsinhillvalleyswhichhavebetween15-25%.Type:4; 5ingbrcommunisteepandriverbot	 on flora/ fauna in the HCV ompany area. Conducting HCV boundary planted conducting HCV boundary marking adjacent to operational areas as well as community land location & periodic border maintenance. es, Installation of nameplate in HCV location according to HCV type, installation of board prohibiting wildlife hunting and flora disruption. Installation of HCV name board location according to HCV type, installation of board prohibiting wildlife hunting and flora disruption. Installation of HCV name board location according to HCV type, installation of board location according to HCV type, installation of board prohibiting wildlife hunting and flora disruption. 	 out targeting school-aged children (elementary, junior high school, high school) at schools located within village areas, sub- districts affected by PT. PU operations. Conduct HCV area management training to HCV officers and/ or staff & employees. Conduct forest and land fire prevention and handling 	 Determination of environmental and preservation of natural biodiversity policies by Top Management. Preparation of HCV Area Management and Monitoring Procedures/ SOP's. Establish and appoint HCV officers along with job descriptions and incorporate into the organizational structure of the company. Coordinate & cooperate with relevant agencies, such as BKSDA, Forestry and Plantations Agency, DLHK, Police, local government apparatus and surrounding communities in HCV

 Activities of enclosed and encidement activities and enci
in accordance with and relevant community preservation of natural prevailing laws and development program in biodiversity policies by regulations. collaboration with Top Management.

	the highest peak of effort to prevent and	Monitoring
	inundation period. minimize encroachment	Procedures/ SOP's.
	• Setting and marking of impact on HCV areas.	 Establish and appoint
	boundaries of areas	HCV officers along with
	identified as HCV 4 (rivers • Organize internal and	job descriptions and
	and borders) followed by external socialization	incorporate into the
	installation of HCV 4 explaining the importance	organizational
	information boards (rivers of conserving HCV areas	structure of the
	and borders), mounting and biodiversity.	company.
	signs containing Conduct forest and land fire	Coordinate &
	restrictions and appeals, prevention and handling	cooperate with
	especially prevention of training to employees and	relevant agencies, such
	fires and cultivation and gradually developing the	as BKSDA, Forestry and
	logging fire-fighting community	Plantations Agency,
	Identification of land cover (KTPA) program.	DLHK, Police, local
	in river basins for	government apparatus
	rehabilitation/ enrichment	and surrounding
	planting by categorizing	communities in HCV
	open areas, shrubs, low	area management
	density stands, high density	program.
	stands	program.
	Rehabilitation/ enrichment	 Determination of
	planting in river border	environmental and
	river. If there are already	preservation of natural
	other plants in the border,	biodiversity policies by
	then enrichment is done by	Top Management.
	planting the same plant	 Preparation of HCV
	species. Types of plants	Area Management and
	planted are local native	Monitoring
	species.	Procedures/ SOP's.
	 Conducting patrols on the 	 Establish and appoint
	HCV river boundary	HCV officers along with
	Provision of forest and land	job descriptions and
	fire prevention equipment	incorporate into the
	in accordance with	organizational
	prevailing laws and	structure of the
	regulations.	company.
	-	
	Do not occupy area on the	
	river border as settlement	cooperate with

Forestsecondary forest ecosystems that support the habitat of endangered species (Hylobates muelleri and Buceros); endemic species and limited distribution (Hylobates muelleri), refugium, stepping stone for protected species (Family Bucerotidae)hunting of animals, especially RTE species on flora/ fauna in the HCV area.external soci external soci on flora/ fauna in the HCV area.external soci explaining the imp of conserving HC and biodiversity.• Comprehensive inventory on flora/ fauna in the HCV and biodiversity.• Conducting HCV boundary marking adjacent to operational areas as well as communities and migrants in forest containing stone for protected species (Family Bucerotidae)• Clearing of forested• Conducting HCV boundary marking adjacent to operational areas as well as community land location & maintenance.• Activities are also out targeting schor children (eler operational areas as well as community land location & maintenance.• Conducting HCV boundary marking adjacent to operational areas as well as community land location & maintenance.• Activities are also out targeting schor school at schools• Clearing of forested• Clearing of forested• Conduct HCV management train HCV officers and/o						F
(Hylobates muelleri and Buceros rhinoceros); endemic species and limited distribution• Illegal logging by local communities and migrants in forest• Activities are also out targeting scho communities and migrants in forest• Conducting HCV boundary marking adjacent to operational areas as well as community land location & school) at schools within village area distribution(Hylobates muelleri), refugium, stepping stone for protected Bucerotidae)• Illegal logging by local communities and migrants in forest• Activities are also out targeting scho communities and migrants in forest• Motion by local communities and migrants in distribution• Conduct HCV management train HCV type, installation of board prohibiting wildlife• Activities are also out targeting scho children (eler schools within village area districts affected by operations.	lization environmental and ortance preservation of natural ' areas biodiversity policies by	 Pollution. Pollution. Conduct inventory and identification of land cover conditions. Comprehensive inventory Comprehensive inventory 	hunting of animals, especially RTE	secondary forest ecosystems that support the habitat of	 08	
Type: 1; 3land/which still has vegetation for ing by the community/ emerced and enrichment activities identified as degradedhunting and flora flora flora employees.Type: 1; 3land/which still has vegetation for ing by the community/ emerced and emerced and emerced and 	Top Management.carried ol-aged nentary, l, high located s, sub- PT. PUProcedures/ SOP's.Establish and appoint HCV officers along with job descriptions and incorporate into the organizational structure of the company.and fire andling tess and ng the munityCoordinate RESDA, Forestry and Plantations Agency, DLHK, Police, local government apparatus and surrounding communities in HCV	 on flora/ fauna in the HCV area. Conducting HCV boundary marking adjacent to operational areas as well as community land location & periodic border maintenance. Installation of nameplate in HCV location according to HCV type, installation of board prohibiting wildlife hunting and flora disruption. Conducting patrols in HCV areas. Undertake rehabilitation and enrichment activities (restoration) on areas identified as degraded based on land cover inventory results. Activities are also carried out targeting school-aged children (elementary, junior high school, high school) at schools located within village areas, subdistricts affected by PT. PU operations. Conduct HCV area management training to HCV officers and/ or staff & employees. Conduct forest and land fire prevention and handling training to employees and gradually developing the fire-fighting community (MPA) program. Develop an accountable and relevant community development program in 	 species Illegal logging by local communities and migrants in forest fragments containing Dipterocarpace ae species Clearing of forested land/which still has good vegetation for farming/garden ing by the community/ company Company plans to clear land for 	(Hylobates muelleri and Buceros rhinoceros); endemic species and limited distribution (Hylobates muelleri), refugium, stepping stone for protected species (Family		

	Company pla	ns prevailing laws and	community leaders in an	Determination of
	to build roa	ds regulations.	effort to prevent and	environmental and
	and blocki	ng	minimize encroachment	preservation of natural
	lanes, in t	-	impact on HCV areas.	biodiversity policies by
	early stages	•		Top Management.
	land clearing	operational areas as well as	 Organize internal and 	 Preparation of HCV
	 Illegal loggi 		external socialization	Area Management and
	by log		explaining the importance	Monitoring
	communities	maintenance.	of conserving HCV areas	Procedures/ SOP's.
	and migrants	Installation of HCV name	and biodiversity.	 Establish and appoint
		of board location according to	 Activities are also carried 	
	forested	0		HCV officers along with
		HCV type, installation of	out targeting school-aged	job descriptions and
		is board prohibiting wildlife	children (elementary,	incorporate into the
	still we	0	junior high school, high	organizational
	-0	or disruption.	school) at schools located	structure of the
	farming/garde	01	within village areas, sub-	company.
	ng by t		districts affected by PT. PU	Coordinate &
	community/co		operations.	cooperate with
	mpan	and enrichment activities	• Conduct HCV area	relevant agencies, such
		(restoration) on areas	management training to	as BKSDA, Forestry and
		identified as degraded	HCV officers and/ or staff &	Plantations Agency,
		based on land cover	employees.	DLHK, Police, local
		inventory results.	Conduct forest and land fire	government apparatus
		 Provision of forest and land 	prevention and handling	and surrounding
		fire prevention equipment	training to employees and	communities in HCV
		in accordance with	gradually developing the	area management
		prevailing laws and	fire-fighting community	program.
			(MPA) program.	Determination of
		regulations.	• Develop an accountable	environmental and
			and relevant community	preservation of natural
			development program in	biodiversity policies by
			collaboration with	Top Management.
			government agencies,	Preparation of HCV
			village agencies and	Area Management and
			community leaders in an	Monitoring
			effort to prevent and	Procedures/ SOP's.
			minimize encroachment	 Establish and appoint
			impact on HCV areas.	HCV officers along with
			,	job descriptions and
	<u>I</u> I	I	1	jes descriptions and

					 incorporate into the organizational structure of the company. Coordinate & cooperate with relevant agencies, such as BKSDA, Forestry and Plantations Agency, DLHK, Police, local government apparatus and surrounding communities in HCV area management program.
09 Bayeq River and the Riparian Zone	 The upper reaches of the Bayeq River is located on Mount Naga, the water conditions are relatively clear (not too cloudy), flowing throughout the year Lowland scrub and secondary forest ecosystems that support habitat for endangered species (Hylobates muelleri and Buceros rhinoceros); endemic species and limited distribution (Hylobates muelleri), refugium, stepping stone for 	 Community hunting of animals, especially RTE species Illegal logging by local communities and migrants in forest fragments containing Dipterocarpace ae species Clearing of forested land/which still has good vegetation for farming/garden ing by the community/ company 	 Conduct inventory and identification of land cover conditions. Comprehensive inventory on flora/ fauna in the HCV area. Conducting HCV boundary marking adjacent to operational areas as well as community land location & periodic border maintenance. Installation of nameplate in HCV location according to HCV type, installation of board prohibiting wildlife hunting and flora disruption. Conducting patrols in HCV areas. Undertake rehabilitation and enrichment activities (restoration) on areas 	 Organize internal and external socialization explaining the importance of conserving HCV areas and biodiversity. Activities are also carried out targeting school-aged children (elementary, junior high school, high school) at schools located within village areas, sub-districts affected by PT. PU operations. Conduct HCV area management training to HCV officers and/ or staff & employees. Conduct forest and land fire prevention and handling training to employees and gradually developing the fire-fighting community (MPA) program. 	 Determination of environmental and preservation of natural biodiversity policies by Top Management. Preparation of HCV Area Management and Monitoring Procedures/ SOP's. Establish and appoint HCV officers along with job descriptions and incorporate into the organizational structure of the company. Coordinate & cooperate with relevant agencies, such as BKSDA, Forestry and Plantations Agency, DLHK, Police, local government apparatus

protected species	• Company plans	identified as degraded	• Develop an accountable	and surrounding
(Family	to clear land for	based on land cover	and relevant community	communities in HCV
Bucerotidae)	oil palm	inventory results.	development program in	area management
• As a corridor	plantation	 Provision of forest and land 	collaboration with	program.
connecting Mount	Company plans	fire prevention equipment	government agencies,	Determination of
Naga and forest	to build roads	in accordance with	village agencies and	environmental and
blocks in the lower	and blocking	prevailing laws and	community leaders in an	preservation of natural
reaches of the	lanes, in the	regulations.	effort to prevent and	biodiversity policies by
Bayeq River (around	early stages of	Conducting HCV boundary	minimize encroachment	Top Management.
the Belayan River)	land clearing	marking adjacent to	impact on HCV areas.	 Preparation of HCV
the belayan tively	-	operational areas as well as	impact of the aleas.	Area Management and
Туре; 1; 3; 4	Illegal logging		Organiza internal and	_
, Abc, T, J, H	by local	community land location &	 Organize internal and external socialization 	Monitoring Procedures/ SOP's.
	communities	periodic border		,
	and migrants	maintenance.	explaining the importance	• Establish and appoint
	Clearing of	Installation of HCV name	of conserving HCV areas	HCV officers along with
	forested	board location according to	and biodiversity.	job descriptions and
	land/which is	HCV type, installation of	Activities are also carried	incorporate into the
	still well-	board prohibiting wildlife	out targeting school-aged	organizational
	vegetated for	hunting and flora	children (elementary,	structure of the
	farming/gardeni	disruption.	junior high school, high	company.
	ng by the	• Conducting patrols in HCV	school) at schools located	Coordinate &
	community/co	areas.	within village areas, sub-	cooperate with
	mpany	Undertake rehabilitation	districts affected by PT. PU	relevant agencies, such
		and enrichment activities	operations.	as BKSDA, Forestry and
	 Plantation 	(restoration) on areas	Conduct HCV area	Plantations Agency,
	operations by	identified as degraded	management training to	DLHK, Police, local
	the company	based on land cover	HCV officers and/ or staff &	government apparatus
	after the palm	inventory results.	employees.	and surrounding
	oil is planted	• Provision of forest and land	• Conduct forest and land fire	communities in HCV
	(Agricultural	fire prevention equipment	prevention and handling	area management
	effluent), such	in accordance with	training to employees and	program.
	as application of	prevailing laws and	gradually developing the	Determination of
	fertilizers,	regulations.	fire-fighting community	environmental and
	pesticides,	Conduct inventory and	(MPA) program.	preservation of natural
	herbicides	identification of land cover	• Develop an accountable	biodiversity policies by
	Land clearing for	conditions.	and relevant community	Top Management.
	farming/gardeni	Comprehensive inventory	development program in	 Preparation of HCV
	ng by the	on flora/ fauna in the HCV	collaboration with	Area Management and
	community on	area.	government agencies,	, and management and
	connictive on	arca.		L]

	steep slopes and	• Conducting HCV boundary	village agencies and	Monitoring
	around river	marking adjacent to	community leaders in an	Procedures/ SOP's.
	borders	operational areas as well as	effort to prevent and	 Establish and appoint
	 Illegal logging by 	community land location &	minimize encroachment	HCV officers along with
	local	periodic border	impact on HCV areas.	job descriptions and
	communities	maintenance.		incorporate into the
	and migrants on	Installation of nameplate in	 Organize internal and 	organizational
	sloping lands	HCV location according to	external socialization	structure of the
	Activities of	HCV type, installation of	explaining the importance	company.
	anglers around		of conserving HCV areas	Coordinate &
	the riparian		and biodiversity.	cooperate with
	zone of the river	disruption.	• Conduct forest and land fire	relevant agencies, such
	in the form of		prevention and handling	as BKSDA, Forestry and
	shrubs that dry	•	training to employees and	Plantations Agency,
	, up during the	Undertake rehabilitation	gradually developing the	DLHK, Police, local
	dry season		fire-fighting community	government apparatus
	(prone to fire)	(restoration) on areas	(KTPA) program.	and surrounding
		identified as degraded		communities in HCV
		based on land cover		area management
		inventory results.		program.
		Provision of forest and land		Determination of
		fire prevention equipment		environmental and
		in accordance with		preservation of natural
		prevailing laws and		biodiversity policies by
		regulations.		Top Management.
		Determination flood plain		 Preparation of HCV
		on river riparian as wide as		Area Management and
		the highest peak of		Monitoring
		inundation period.		Procedures/ SOP's.
		• Setting and marking of		• Establish and appoint
		boundaries of areas		HCV officers along with
		identified as HCV 4 (rivers		job descriptions and
		and borders) followed by		incorporate into the
		installation of HCV 4		organizational
		information boards (rivers		structure of the
		and borders), mounting		company.
		signs containing		Coordinate &
		restrictions and appeals,		cooperate with
		especially prevention of		relevant agencies, such
			1	5, ,

				fires and cultivation and		as BKSDA, Forestry and
				logging		Plantations Agency,
				 Identification of land cover 		DLHK, Police, local
				in river basins for		government apparatus
				rehabilitation/ enrichment		and surrounding
				planting by categorizing		communities in HCV
						area management
				open areas, shrubs, low		program.
				density stands, high density stands		program.
				Rehabilitation/ enrichment		
				planting in river border		
				river. If there are already		
				other plants in the border,		
				then enrichment is done by		
				planting the same plant		
				species. Types of plants		
				planted are local native		
				species.		
				• Conducting patrols on the		
				HCV river boundary		
				 Provision of forest and land 		
				fire prevention equipment		
				in accordance with		
				prevailing laws and		
				regulations.		
				Do not occupy area on the		
				river border as settlement		
				to prevent river water		
				pollution.		
10	Mount Name	Logated asst of Marriet	• Diamtation			- Determinetier
10	Mount Naga	Located east of Mount		Determination flood plain	Organize internal and	Determination of
		Mendam, extending	operations by	on river riparian as wide as	external socialization	environmental and
		to the banks of the	the company	the highest peak of	explaining the importance	preservation of natural
		Belayan River. Has a	after the palm	inundation period.	of conserving HCV areas	biodiversity policies by
		micro slope of up	oil is planted	 Setting and marking of 	and biodiversity.	Top Management.
		to40%? Covered with	(Agricultural	boundaries of areas	 Conduct forest and land fire 	 Preparation of HCV
		thickets and shrubs.	effluent), such	identified as HCV 4 (rivers	prevention and handling	Area Management and
		as a catchment area	as application of	and borders) followed by	training to employees and	Monitoring
		for the Baya River.	fertilizers,	installation of HCV 4	gradually developing the	Procedures/ SOP's.
				information boards (rivers		

		Type: 4	pesticides,	and borders), mounting	fire-fighting community	 Establish and appoint
			herbicides	signs containing	(KTPA) program.	HCV officers along with
			 Land clearing for 	restrictions and appeals,		job descriptions and
			farming/gardeni	especially prevention of		incorporate into the
			ng by the	fires and cultivation and		organizational
			community on	logging		structure of the
			steep slopes and	 Identification of land cover 		company.
			around river	in river basins for		Coordinate &
			borders	rehabilitation/ enrichment		cooperate with
			 Illegal logging by 	planting by categorizing		relevant agencies, such
			local	open areas, shrubs, low		as BKSDA, Forestry and
			communities	density stands, high density		Plantations Agency,
			and migrants on	stands		DLHK, Police, local
			sloping lands	 Rehabilitation/ enrichment 		
				-		government apparatus and surrounding
				planting in river border river. If there are already		and surrounding communities in HCV
			anglers around	-		
			the riparian zone of the river	other plants in the border,		area management
				then enrichment is done by		program.
			in the form of	planting the same plant		
			shrubs that dry	species. Types of plants		
			up during the	planted are local native		
			dry season	species.		
			(prone to fire)	Conducting patrols on the		
				HCV river boundary		
				• Provision of forest and land		
				fire prevention equipment		
				in accordance with		
				prevailing laws and		
				regulations.		
				Do not occupy area on the		
				river border as settlement		
				to prevent river water		
				pollution.		
11	Belayan River Scrub	Area penting sebagai	Community	 Conduct inventory and 	Organize internal and	• Determination of
		habitat spesies	hunting of	identification of land cover	external socialization	environmental and
		terancam punah	animals,	conditions.	explaining the importance	preservation of natural
		(Hylobates muelleri	especially RTE	Comprehensive inventory	of conserving HCV areas	biodiversity policies by
		dan Buceros	species	on flora/ fauna in the HCV	and biodiversity.	Top Management.
		rhinoceros); spesies		area.		

endemik dan sebaran	Illegal logging	• Conducting HCV boundary	Activities are also carried	 Preparation of HCV
terbatas (Hylobates	by local	marking adjacent to	out targeting school-aged	Area Management and
muelleri), refugium,	communities	operational areas as well as	children (elementary,	Monitoring
stepping stone bagi	and migrants in	community land location &	junior high school, high	Procedures/ SOP's.
spesies yang	forest	periodic border	school) at schools located	• Establish and appoint
dilindungi (Family	fragments	, maintenance.	within village areas, sub-	HCV officers along with
Bucerotidae)	containing	Installation of nameplate in	districts affected by PT. PU	job descriptions and
,	Dipterocarpace	HCV location according to	operations.	incorporate into the
Type: 1; 3	ae species	HCV type, installation of		organizational
.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Clearing of	board prohibiting wildlife	management training to	structure of the
	forested	hunting and flora	HCV officers and/ or staff &	company.
	land/which still	disruption.	employees.	
		-	 Conduct forest and land fire 	
	has good vegetation for	Conducting patrols in HCV		cooperate with
	-	areas.	prevention and handling	relevant agencies, such
	farming/garden	Undertake rehabilitation	training to employees and	as BKSDA, Forestry and
	ing by the	and enrichment activities	gradually developing the	Plantations Agency,
	community/	(restoration) on areas	fire-fighting community	DLHK, Police, local
	company	identified as degraded	(MPA) program.	government apparatus
		based on land cover	Develop an accountable	and surrounding
	 Company plans 	inventory results.	and relevant community	communities in HCV
	to clear land for	Provision of forest and land	development program in	area management
	oil palm	fire prevention equipment	collaboration with	program.
	plantation	in accordance with	government agencies,	• Determination of
	Company plans	prevailing laws and	village agencies and	environmental and
	to build roads	regulations.	community leaders in an	preservation of natural
	and blocking		effort to prevent and	biodiversity policies by
	lanes, in the	• Conducting HCV boundary	minimize encroachment	Top Management.
	early stages of	marking adjacent to	impact on HCV areas.	 Preparation of HCV
	land clearing	operational areas as well as	 Organize internal and 	Area Management and
	Illegal logging	community land location &	external socialization	Monitoring
	by local	periodic border	explaining the importance	Procedures/ SOP's.
	communities	maintenance.	of conserving HCV areas	• Establish and appoint
	and migrants	Installation of HCV name	and biodiversity.	HCV officers along with
	Clearing of	board location according to	 Activities are also carried 	job descriptions and
	forested	HCV type, installation of	out targeting school-aged	incorporate into the
	land/which is	board prohibiting wildlife	children (elementary,	organizational
	still well-	hunting and flora	junior high school, high	structure of the
	vegetated for	disruption.	school) at schools located	company.
	farming/gardeni		within village areas, sub-	company.

	ng by the	• Conducting patrols in HCV	districts affected by PT. PU	Coordinate &
	community/co	areas.	operations.	cooperate with
	mpan	 Undertake rehabilitation 	 Conduct HCV area 	relevant agencies, such
		and enrichment activities	management training to	as BKSDA, Forestry and
		(restoration) on areas	HCV officers and/ or staff &	Plantations Agency,
		identified as degraded	employees.	DLHK, Police, local
		based on land cover	 Conduct forest and land fire 	government apparatus
		inventory results.	prevention and handling	and surrounding
		 Provision of forest and land 	training to employees and	communities in HCV
		fire prevention equipment	gradually developing the	area management
		in accordance with	fire-fighting community	program.
		prevailing laws and	(MPA) program.	Determination of
		regulations.	Develop an accountable and	environmental and
			relevant community	preservation of natural
			development program in	biodiversity policies by
			collaboration with	Top Management.
			government agencies, village	Preparation of HCV
			agencies and community	Area Management and
			leaders in an effort to prevent	Monitoring
			and minimize encroachment	Procedures/ SOP's.
			impact on HCV areas.	 Establish and appoint
			impact off field areas.	HCV officers along with
				job descriptions and
				incorporate into the
				organizational
				structure of the
				company.
				Coordinate &
				cooperate with
				relevant agencies, such
				as BKSDA, Forestry and
				Plantations Agency,
				DLHK, Police, local
				government apparatus
				and surrounding
				communities in HCV
				area management
				program.

12	Meqloq River & its	• The upstream is in	Community	Conduct inventory and	Organize internal and	• Determination of
	tributaries and	Mendam hills and	hunting of	identification of land cover	external socialization	environmental and
	riparian zone	Mount Naga, there	animals,	conditions.	explaining the importance	preservation of natural
		are 2 waterfall	especially RTE	Comprehensive inventory	of conserving HCV areas	biodiversity policies by
		locations with fairly	species	on flora/ fauna in the HCV	and biodiversity.	Top Management.
		clear water	Illegal logging	area.	 Activities are also carried 	 Preparation of HCV
		conditions,	by local	• Conducting HCV boundary	out targeting school-aged	Area Management and
		vegetation	communities	marking adjacent to	children (elementary,	Monitoring
		conditions around	and migrants in	operational areas as well as	junior high school, high	Procedures/ SOP's.
		the riparian zone in	forest	community land location &	school) at schools located	 Establish and appoint
		the form of shrubs	fragments	periodic border	within village areas, sub-	HCV officers along with
		and shrubs are still	containing	maintenance.	districts affected by PT. PU	job descriptions and
		good	Dipterocarpace	Installation of nameplate in	operations.	incorporate into the
		 Lowland scrub 	ae species	HCV location according to	Conduct HCV area	organizational
		ecosystem that	Clearing of	HCV type, installation of	management training to	structure of the
		supports the	forested	board prohibiting wildlife	HCV officers and/ or staff &	company.
		habitat of the	land/which still	hunting and flora	employees.	Coordinate &
		endangered species	has good	disruption.	Conduct forest and land fire	cooperate with
		Ambon tortoise	vegetation for	• Conducting patrols in HCV	prevention and handling	relevant agencies, such
		(Coura	farming/garden	areas.	training to employees and	as BKSDA, Forestry and
		amboinensis),	ing by the	Undertake rehabilitation	gradually developing the	Plantations Agency,
		Orlitia borneensis,	community/	and enrichment activities	fire-fighting community	DLHK, Police, local
		Amyda cartilaginea,	company	(restoration) on areas	(MPA) program.	government apparatus
		Cuora amboinensis,		identified as degraded	Develop an accountable	and surrounding
		Heosemys spinose	Company plans	based on land cover	and relevant community	communities in HCV
		Tomistoma	to clear land for	inventory results.	development program in	area management
		schlegelii	oil palm	 Provision of forest and land 	collaboration with	program.
		Tupo, 1, 2, 4, 5	plantation	fire prevention equipment	government agencies,	• Determination of
		Туре: 1; 3; 4; 5	Company plans	in accordance with	village agencies and	environmental and
			to build roads	prevailing laws and	community leaders in an	preservation of natural
			and blocking	regulations.	effort to prevent and	biodiversity policies by
			lanes, in the	Conducting HCV boundary	minimize encroachment	Top Management.
			early stages of	marking adjacent to	impact on HCV areas.	Preparation of HCV
			land clearing	operational areas as well as		Area Management and
			Illegal logging	community land location &	Organize internal and	Monitoring
			by local	periodic border	external socialization	Procedures/ SOP's.
			communities	maintenance.	explaining the importance	Establish and appoint
			and migrants	Installation of HCV name	of conserving HCV areas	HCV officers along with
				board location according to	and biodiversity.	job descriptions and

	Clearing of	HCV type, installation of	Activities are also carried	incorporate into the
	forested	board prohibiting wildlife	out targeting school-aged	organizational
	land/which is	hunting and flora	children (elementary,	structure of the
	still well-	disruption.	junior high school, high	company.
	vegetated for	• Conducting patrols in HCV	school) at schools located	Coordinate &
	farming/garden	areas.	within village areas, sub-	cooperate with
	ing by the	Undertake rehabilitation	districts affected by PT. PU	relevant agencies, such
	community/	and enrichment activities	operations.	as BKSDA, Forestry and
	company	(restoration) on areas	Conduct HCV area	Plantations Agency,
	company	identified as degraded	management training to	DLHK, Police, local
	Plantation	based on land cover	HCV officers and/ or staff &	government apparatus
			-	and surrounding
	operations by	inventory results.	employees.	communities in HCV
	the company	Provision of forest and land	Conduct forest and land fire	
	after the palm	fire prevention equipment	prevention and handling	area management
	oil is planted	in accordance with	training to employees and	program.
	(Agricultural	prevailing laws and	gradually developing the	Determination of
	effluent), such	regulations.	fire-fighting community	environmental and
	as application		(MPA) program.	preservation of natural
	of fertilizers,	 Conduct inventory and 	• Develop an accountable	biodiversity policies by
	pesticides,	identification of land cover	and relevant community	Top Management.
	herbicides	conditions.	development program in	 Preparation of HCV
	 Land clearing 	Comprehensive inventory	collaboration with	Area Management and
	for	on flora/ fauna in the HCV	government agencies,	Monitoring
	farming/garden	area.	village agencies and	Procedures/ SOP's.
	ing by the	• Conducting HCV boundary	community leaders in an	 Establish and appoint
	community on	marking adjacent to	effort to prevent and	HCV officers along with
	steep slopes	operational areas as well as	minimize encroachment	job descriptions and
	and around	community land location &	impact on HCV areas.	incorporate into the
	river borders	periodic border	 Organize internal and 	organizational
	Illegal logging	, maintenance.	external socialization	structure of the
	by local	 Installation of nameplate in 	explaining the importance	company.
	communities	HCV location according to	of conserving HCV areas	Coordinate &
	and migrants on	HCV type, installation of	and biodiversity.	cooperate with
	sloping lands	board prohibiting wildlife	Conduct forest and land fire	relevant agencies, such
	 Activities of 	hunting and flora	prevention and handling	as BKSDA, Forestry and
	anglers around	disruption.	training to employees and	Plantations Agency,
	the riparian	 Conducting patrols in HCV 	gradually developing the	DLHK, Police, local
	zone of the river		fire-fighting community	government apparatus
	in the form of	areas.	(KTPA) program.	and surrounding
				and Surrounding

	shrubs that dry	Undertake rehabilitation	communities in HCV
	up during the	and enrichment activities	area management
	dry season	(restoration) on areas	program.
	(prone to fire)	identified as degraded	Determination of
		based on land cover	environmental and
	 Community/co 	inventory results.	preservation of natural
	mpany land	Provision of forest and land	biodiversity policies by
	clearing	fire prevention equipment	Top Management.
	activities for	in accordance with	Preparation of HCV
	agriculture	prevailing laws and	Area Management and
	(fields) or oil	regulations.	Monitoring
	palm	5	Procedures/ SOP's.
	plantations	Determination flood plain	 Establish and appoint
	around the	on river riparian as wide as	HCV officers along with
	riparian zone	the highest peak of	job descriptions and
		inundation period.	incorporate into the
		 Setting and marking of 	organizational
		boundaries of areas	structure of the
		identified as HCV 4 (rivers	company.
		and borders) followed by	Coordinate &
		installation of HCV 4	cooperate with
		information boards (rivers	relevant agencies, such
		and borders), mounting	as BKSDA, Forestry and
		signs containing	Plantations Agency,
		restrictions and appeals,	DLHK, Police, local
		especially prevention of	government apparatus
		fires and cultivation and	and surrounding
		logging	communities in HCV
		Identification of land cover	area management
		in river basins for	program.
		rehabilitation/ enrichment	
		planting by categorizing	
		open areas, shrubs, low	
		density stands, high density	
		stands	
		Rehabilitation/ enrichment	
		planting in river border	
		river. If there are already	
		other plants in the border,	
			1

13 Mount Mendam	of the MU area. Covered with old scrub forest, has a micro slope of up to 40%. This mountain is a water catchment area for the Bangge River, Tumau River, Meqloq River, Baya River, and Jalin Tutung River. • Land farm ng com stee arou bord	er the palm is planted ricultural uent), such application of titizers, ticides, bicides d clearing for ming/gardeni by the planted boundaries of areas identified as HCV 4 (rivers and borders) followed by installation of HCV 4 information boards (rivers and borders), mounting signs containing restrictions and appeals, especially prevention of fires and cultivation and logging Identification of land cover in river basins for	 Organize internal and external socialization explaining the importance of conserving HCV areas and biodiversity. Conduct forest and land fire prevention and handling training to employees and gradually developing the fire-fighting community (KTPA) program. 	 Determination of environmental and preservation of natural biodiversity policies by Top Management. Preparation of HCV Area Management and Monitoring Procedures/ SOP's. Establish and appoint HCV officers along with job descriptions and incorporate into the organizational structure of the company. Coordinate & cooperate with
	arou bord Illeg loca com and	und river • Identification of land cover in river basins for gal logging by rehabilitation/ enrichment		Coordinate &

14 Tumau River and the Riparian Zone The upstream part is mouth the riparian zone of the triver in the form of shrubs that diverses (grone to fire) ¹ • Plantation operations by the company around the riparian zone of the triver in the accordance with prevailing laws and regulators. • Organize explaining the importance of conserving HCV areas and biodiversity. and surrounding communities in HCV area montered planting the same plant planting the same plant prevaling laws and regulators. • Determination of external socialization operations by the company around the riparian zone are still good (in disturbance) in the form of shrubs, ther are few community and plantation operations around the riparian zone are still good (in disturbance) in the form of shrubs, ther are few community area few community area few community planting the riparian zone are still good (in disturbance) in the form of shrubs, ther are few community planting the riparian zone are still good (in disturbance) in the form of shrubs, ther are few community planting the riparian zone are still good (in disturbance) in the form of shrubs, ther are few community planting the riparian zone are still good (in disturbance) in the form of shrubs, ther are few community planting the riparian zone are still good (in disturbance) in the form difficulties and the fire-fighting community diversities and diversity program. • Determination of external socialization of external socialization of exter
Type; 4 community on steep slopes and around river borders fires and cultivation and logging structure of the company. • Identification of land cover in river basins for • Identification of land cover in river basins for • Coordinate & cooperate with

				 Illegal logging by 	planting by categorizing		as BKSDA, Forestry and
				local	open areas, shrubs, low		Plantations Agency,
				communities	density stands, high density		DLHK, Police, local
				and migrants on	stands		government apparatus
				sloping lands	Rehabilitation/ enrichment		and surrounding
				Activities of	planting in river border		communities in HCV
				anglers around	river. If there are already		area management
				the riparian	other plants in the border,		program.
				zone of the river	then enrichment is done by		program.
				in the form of	planting the same plant		
				shrubs that dry	species. Types of plants		
				up during the	planted are local native		
				dry season	species.		
				(prone to fire)	 Conducting patrols on the 		
					HCV river boundary		
					 Provision of forest and land 		
					fire prevention equipment		
					in accordance with		
					prevailing laws and		
					regulations.		
					• Do not occupy area on the		
					river border as settlement		
					to prevent river water		
					pollution.		
	15	Valley area with	Vegetation	 Community 	Conduct inventory and	 Organize internal and 	Determination of
	_	steep slopes east of	condition in the	hunting of	identification of land cover	external socialization	environmental and
		the Banggeh River	form of undisturbed	animals,	conditions.	explaining the importance	preservation of natural
		001	old scrub has a	especially RTE		of conserving HCV areas	biodiversity policies by
			slope of more than	species	on flora/ fauna in the HCV	and biodiversity.	Top Management.
			40%. This	 Illegal logging by 	area.	 Activities are also carried 	 Preparation of HCV
			vegetation cover	local	 Conducting HCV boundary 	out targeting school-aged	Area Management and
			serves to control	communities	marking adjacent to	children (elementary,	Monitoring
			sheet erosion and	and migrants in		junior high school, high	Procedures/ SOP's.
			stabilize steep	U	operational areas as well as		-
			slopes	forest fragments	community land location &	school) at schools located	Establish and appoint
			 Important areas as 	containing	periodic border	within village areas, sub-	HCV officers along with
				Dipterocarpacea	maintenance.	districts affected by PT. PU	job descriptions and
				e species	Installation of nameplate in	operations.	incorporate into the
			endangered species	Clearing of	HCV location according to	Conduct HCV area	organizational
			(Hylobates muelleri	forested	HCV type, installation of	management training to	
L							

	and Buceros	land/which still	board prohibiting wildlife	HCV officers and/ or staff &	structure of the
	rhinoceros),	has good	hunting and flora	employees.	company.
	endemic species	vegetation for	disruption.	• Conduct forest and land fire	Coordinate &
	and limited	farming/gardeni	• Conducting patrols in HCV	prevention and handling	cooperate with
	distribution	ng by the	areas.	training to employees and	relevant agencies, such
	(Hylobates	community/	Undertake rehabilitation	gradually developing the	as BKSDA, Forestry and
	muelleri), refugium,	company	and enrichment activities	fire-fighting community	Plantations Agency,
	stepping stone for		(restoration) on areas	(MPA) program.	DLHK, Police, local
	protected species	 Plantation 	identified as degraded	• Develop an accountable	government apparatus
	(Family	operations by	based on land cover	and relevant community	and surrounding
	Bucerotidae) and	the company	inventory results.	development program in	communities in HCV
	unique and rare	after the palm	-	collaboration with	area management
	ecosystems in the	oil is planted	fire prevention equipment	government agencies,	program.
	form of lowland	(Agricultural	in accordance with	village agencies and	
	forest ecosystems	effluent), such	prevailing laws and	community leaders in an	• Determination of
		as application of	regulations.	effort to prevent and	environmental and
	Type: 1; 4	fertilizers,	Ũ	minimize encroachment	preservation of natural
		pesticides,	• Determination flood plain	impact on HCV areas.	biodiversity policies by
		herbicides	on river riparian as wide as		Top Management.
		• Land clearing for	the highest peak of	 Organize internal and 	 Preparation of HCV
		farming/gardeni	inundation period.	external socialization	Area Management and
		ng by the	• Setting and marking of	explaining the importance	Monitoring
		community on	boundaries of areas	of conserving HCV areas	Procedures/ SOP's.
		steep slopes and	identified as HCV 4 (rivers	and biodiversity.	 Establish and appoint
		around river	and borders) followed by	• Conduct forest and land fire	HCV officers along with
		borders	installation of HCV 4	prevention and handling	job descriptions and
		Illegal logging by	information boards (rivers	training to employees and	incorporate into the
		local	and borders), mounting	gradually developing the	organizational
		communities	signs containing restrictions	fire-fighting community	structure of the
		and migrants on	and appeals, especially	(KTPA) program.	company.
		sloping lands	prevention of fires and		Coordinate &
		Activities of	cultivation and logging		cooperate with
		anglers around	Identification of land cover		relevant agencies, such
		the riparian	in river basins for		as BKSDA, Forestry and
		zone of the river	rehabilitation/ enrichment		Plantations Agency,
		in the form of	planting by categorizing		DLHK, Police, local
		shrubs that dry	open areas, shrubs, low		government apparatus
		up during the	density stands, high density		and surrounding
			stands		communities in HCV
		-	-	-	-

	 -	 			
		 Community/co 	 Conduct inventory and 	fire-fighting community	Determination of
		mpany land	identification of land cover	(KTPA) program.	environmental and
		clearing	conditions.	• Develop an accountable	preservation of natural
		activities for	Comprehensive inventory	and relevant community	biodiversity policies by
		agriculture	on flora/ fauna in the HCV	development program in	Top Management.
		(fields) or oil	area.	collaboration with	Preparation of HCV
		palm	 Conducting HCV boundary 	government agencies,	Area Management and
		plantations	marking adjacent to	village agencies and	Monitoring
		around the	operational areas as well as	community leaders in an	Procedures/ SOP's.
		riparian zone	community land location &	effort to prevent and	 Establish and appoint
			periodic border	minimize encroachment	HCV officers along with
			maintenance.	impact on HCV areas.	
				•	job descriptions and incorporate into the
			 Installation of nameplate in 	-	-
			HCV location according to		organizational
			HCV type, installation of	explaining the importance	structure of the
			board prohibiting wildlife	of conserving HCV areas	company.
			hunting and flora	and biodiversity.	Coordinate &
			disruption.	• Conduct forest and land fire	cooperate with
			 Conducting patrols in HCV 	prevention and handling	relevant agencies, such
			areas.	training to employees and	as BKSDA, Forestry and
			 Undertake rehabilitation 	gradually developing the	Plantations Agency,
			and enrichment activities	fire-fighting community	DLHK, Police, local
			(restoration) on areas	(KTPA) program.	government apparatus
			identified as degraded		and surrounding
			based on land cover		communities in HCV
			inventory results.		area management
			 Provision of forest and land 		program.
			fire prevention equipment		Determination of
			in accordance with		environmental and
			prevailing laws and		preservation of natural
			regulations.		biodiversity policies by
			- conditions		Top Management.
			• Determination flood plain		 Preparation of HCV
			on river riparian as wide as		Area Management and
			the highest peak of		Monitoring
			•		Procedures/ SOP's.
			inundation period.		
			• Setting and marking of		Establish and appoint
			boundaries of areas		HCV officers along with
			identified as HCV 4 (rivers		job descriptions and

Identification of land cover in river basins for DLHK, Police government a	
installation of HCV 4 information boards (rivers and borders), mounting signs containing restrictions and appeals, especially prevention of fires and cultivation and logging • Identification of land cover in river basins for rehabilitation/ enrichment planting by categorizing open areas, shrubs, low area manu density stands, high density stands • Rehabilitation/ enrichment planting in river border river base a manu density stands, high density stands	the
information boards (rivers and borders), mounting signs containing restrictions and appeals, especially prevention of fires and cultivation and logging • Identification of land cover in river basins for rehabilitation/ enrichment planting by categorizing open areas, shrubs, low density stands, high density stands • Rehabilitation/ enrichment planting in river border river. If there are already	
and borders), mounting signs containing restrictions and appeals, especially prevention of fires and cultivation and logging • Identification of land cover in river basins for planting by categorizing open areas, shrubs, low density stands, high density stands • Rehabilitation/ enrichment planting in river border river. If there are already	
signs containing restrictions and appeals, especially prevention of fires and cultivation and logging • Identification of land cover in river basins for rehabilitation/ enrichment planting by categorizing open areas, shrubs, low density stands, high density stands • Rehabilitation/ enrichment planting in river border river. If there are already	&
restrictions and appeals, especially prevention of fires and cultivation and logging • Identification of land cover in river basins for rehabilitation/ enrichment planting by categorizing open areas, shrubs, low density stands, high density stands • Rehabilitation/ enrichment planting in river border river. If there are already	
especially prevention of fires and cultivation and logging • Identification of land cover in river basins for rehabilitation/ enrichment planting by categorizing open areas, shrubs, low density stands, high density stands • Rehabilitation/ enrichment planting in river border river. If there are already	with
fires and cultivation and logging as BKSDA, Fore Plantations Identification of land cover in river basins for rehabilitation/ enrichment planting by categorizing open areas, shrubs, low density stands DLHK, Police government al and surr communities Second Density stands area Rehabilitation/ enrichment planting in river border river. If there are already program.	
 Identification of land cover in river basins for rehabilitation/ enrichment planting by categorizing open areas, shrubs, low density stands, high density stands Rehabilitation/ enrichment planting in river border river. If there are already 	-
 Identification of land cover in river basins for rehabilitation/ enrichment planting by categorizing open areas, shrubs, low density stands, high density stands Rehabilitation/ enrichment planting in river border river. If there are already 	Agency,
in river basins for rehabilitation/ enrichment planting by categorizing open areas, shrubs, low density stands, high density stands • Rehabilitation/ enrichment planting in river border river. If there are already	
rehabilitation/ enrichment planting by categorizing open areas, shrubs, low density stands, high density stands • Rehabilitation/ enrichment planting in river border river. If there are already	
Image: stands Image: stands<	ounding
open areas, shrubs, low density stands, high density stands • Rehabilitation/ enrichment planting in river border river. If there are already	
density stands, high density program. stands Rehabilitation/ enrichment planting in river border river. If there are already	
stands • Rehabilitation/ enrichment planting in river border river. If there are already	Sement
Rehabilitation/ enrichment planting in river border river. If there are already	
planting in river border river. If there are already	
river. If there are already	
then enrichment is done by	
planting the same plant	
species. Types of plants	
planted are local native	
species.	
Conducting patrols on the	
HCV river boundary	
Provision of forest and land	
fire prevention equipment	
in accordance with	
prevailing laws and	
regulations.	
Do not occupy area on the river border as settlement	
to prevent river water	
pollution.	
17 Banggeh River and The upstream part is • Plantation • Determination flood plain • Organize internal and • Determination	of
the Riparian Zone in Mount Mendam operations by on river riparian as wide as external socialization environmental	
and its surroundings. the company explaining the importance preservation of	and

		The condition of the	after the palm	the highest peak of	of conserving HCV areas	biodiversity policies by
		vegetation around the	oil is planted	inundation period.	and biodiversity.	Top Management.
		riparian zone is still	(Agricultural	 Setting and marking of 	 Conduct forest and land fire 	 Preparation of HCV
		good in the form of	effluent), such	boundaries of areas	prevention and handling	Area Management and
		shrubs.	as application of	identified as HCV 4 (rivers	training to employees and	Monitoring
			fertilizers,	and borders) followed by	gradually developing the	Procedures/ SOP's.
		Type: 4	pesticides,	installation of HCV 4	fire-fighting community	 Establish and appoint
			herbicides	information boards (rivers	(KTPA) program.	HCV officers along with
			 Land clearing for 	and borders), mounting		job descriptions and
			farming/gardeni	signs containing		incorporate into the
			ng by the	restrictions and appeals,		organizational
			community on	especially prevention of		structure of the
			steep slopes and	fires and cultivation and		company.
			around river	logging		Coordinate &
			borders	 Identification of land cover 		cooperate with
			 Illegal logging by 	in river basins for		relevant agencies, such
			local	rehabilitation/ enrichment		as BKSDA, Forestry and
			communities	planting by categorizing		Plantations Agency,
			and migrants on	open areas, shrubs, low		DLHK, Police, local
			sloping lands	density stands, high density		government apparatus
			Activities of	stands		and surrounding
			anglers around	Rehabilitation/ enrichment		communities in HCV
			the riparian	planting in river border		area management
			zone of the river	river. If there are already		program.
			in the form of	other plants in the border,		•
			shrubs that dry	then enrichment is done by		
			up during the	planting the same plant		
			dry season	species. Types of plants		
			(prone to fire)	planted are local native		
				species.		
				• Conducting patrols on the		
				HCV river boundary		
				 Provision of forest and land 		
				fire prevention equipment		
				in accordance with		
				prevailing laws and		
				regulations.		
				• Do not occupy area on the		
				river border as settlement		
	<u>k</u>					

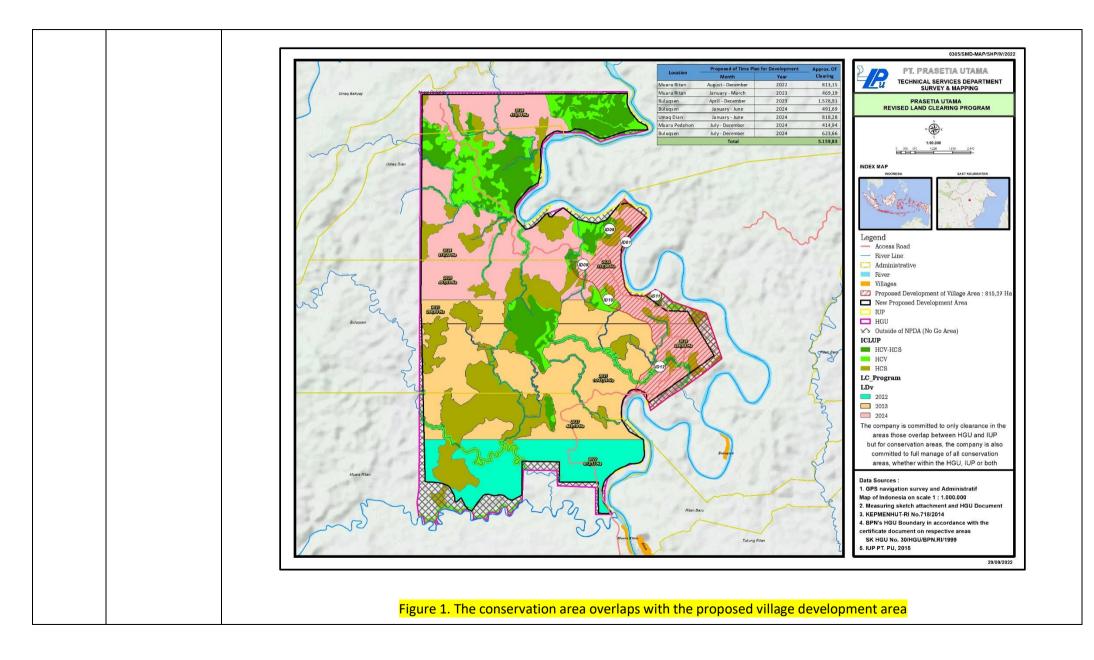
18 Ritan River Riparian • Located in the lower reaches of the Kit River, • Important area as habitat for communitie amboinensis), Oritia berneaminensis, Oritia berneaminensi oritia berneaminenti oritia berneaminenti oritia berneamin						
18 Rian River Riparian • Located in the lower • Community • Organize • Organize • Determination of 18 Rian River Riparian • Located in the lower • Community • Organize • Organize • Determination of 18 Rian River Riparian • Located in the lower • Important area as begins • Scheeling • Conduct invertory and • Organize • Organize • Determination of <				to prevent river water		
 reaches of the Ritan hunting of River, Important area as habitinessi, Coura amboinenssi, Coura amboinenssi, Coura amboinenssi, Corrital bonematis, Amyda cartilaginea, Cuora amboinenssi, Corritalingines, Amyda cartilaginea, Cuora amboinenssi, Corritalingines, Presentation of the Ritan Yipe: 1; 4 rupe: 1; 4 rupe:				pollution.		
herbicides on river riparian as wide as • Preparation of HCV • Land clearing for farming/gardeni the highest peak of inundation period. • Organize internal and external socialization Area Management and Monitoring	Ritan River Riparian	reaches of the Ritan River, Important area as habitat for endangered species Ambon tortoise (Coura amboinensis), Orlitia borneensis, Amyda cartilaginea, Cuora amboinensis, Heosemys spinose Tomistoma schlegelii	 hunting of animals, especially RTE species Illegal logging by local communities and migrants in forest fragments containing Dipterocarpacea e species Clearing of forested land/which still has good vegetation for farming/gardeni ng by the community/ company Plantation operations by the company after the palm oil is planted (Agricultural effluent), such as application of fertilizers, 	 pollution. Conduct inventory and identification of land cover conditions. Comprehensive inventory on flora/ fauna in the HCV area. Conducting HCV boundary marking adjacent to operational areas as well as community land location & periodic border maintenance. Installation of nameplate in HCV location according to HCV type, installation of board prohibiting wildlife hunting and flora disruption. Conducting patrols in HCV areas. Undertake rehabilitation and enrichment activities (restoration) on areas identified as degraded based on land cover inventory results. Provision of forest and land fire prevention equipment in accordance with prevailing laws and regulations. 	 external socialization explaining the importance of conserving HCV areas and biodiversity. Activities are also carried out targeting school-aged children (elementary, junior high school, high school) at schools located within village areas, sub- districts affected by PT. PU operations. Conduct HCV area management training to HCV officers and/ or staff & employees. Conduct forest and land fire prevention and handling training to employees and gradually developing the fire-fighting community (KTPA) program. Develop an accountable and relevant community development program in collaboration with government agencies, village agencies and community leaders in an effort to prevent and minimize encroachment 	 environmental and preservation of natural biodiversity policies by Top Management. Preparation of HCV Area Management and Monitoring Procedures/ SOP's. Establish and appoint HCV officers along with job descriptions and incorporate into the organizational structure of the company. Coordinate & cooperate with relevant agencies, such as BKSDA, Forestry and Plantations Agency, DLHK, Police, local government apparatus and surrounding communities in HCV area management program. Determination of environmental and preservation of natural biodiversity policies by
farming/gardeni inundation period. external socialization Monitoring			herbicides			Preparation of HCV
farming/gardeni inundation period. external socialization Monitoring			 Land clearing for 	•	 Organize internal and 	
			0		0	-

IΓ			community on	 Setting and marking of 	of conserving HCV areas	 Establish and appoint
			steep slopes and	boundaries of areas	and biodiversity.	HCV officers along with
			around river	identified as HCV 4 (rivers	 Conduct forest and land fire 	job descriptions and
			borders	and borders) followed by	prevention and handling	incorporate into the
			 Illegal logging by 	installation of HCV 4	training to employees and	organizational
			local	information boards (rivers	gradually developing the	structure of the
			communities	and borders), mounting	fire-fighting community	company.
			and migrants on	signs containing	(KTPA) program.	Coordinate &
			sloping lands	restrictions and appeals,		cooperate with
			Activities of	especially prevention of		relevant agencies, such
			anglers around	fires and cultivation and		as BKSDA, Forestry and
			the riparian zone	logging		Plantations Agency,
			of the river in the	 Identification of land cover 		DLHK, Police, local
			form of shrubs	in river basins for		government apparatus
			that dry up during	rehabilitation/ enrichment		and surrounding
			the dry season	planting by categorizing		communities in HCV
			(prone to fire)	open areas, shrubs, low		area management
				density stands, high		program.
				density stands		
				Rehabilitation/		
				enrichment planting in		
				river border river. If there		
				are already other plants in		
				the border, then		
				enrichment is done by		
				planting the same plant		
				species. Types of plants		
				planted are local native		
				species.		
				 Conducting patrols on the 		
				HCV river boundary		
				 Provision of forest and 		
				land fire prevention		
				equipment in accordance		
				with prevailing laws and		
				regulations.		
				 Do not occupy area on the 		
				river border as settlement		
L	I					

	farming/gardeni	Installation of HCV name	of conserving HCV areas	Monitoring
	ng by the	board location according to	and biodiversity.	Procedures/ SOP's.
	community/co	HCV type, installation of	Activities are also carried	 Establish and appoint
	mpany	board prohibiting wildlife	out targeting school-aged	HCV officers along with
	 Plantation 	hunting and flora	children (elementary,	job descriptions and
	operations by	disruption.	junior high school, high	incorporate into the
	the company	• Conducting patrols in HCV	school) at schools located	organizational
	after the palm	areas.	within village areas, sub-	structure of the
	oil is planted	Undertake rehabilitation	districts affected by PT. PU	company.
	(Agricultural	and enrichment activities	operations.	Coordinate &
	effluent), such	(restoration) on areas	• Conduct HCV area	cooperate with
	as application of	identified as degraded	management training to	relevant agencies, such
	fertilizers,	based on land cover	HCV officers and/ or staff &	as BKSDA, Forestry and
	pesticides,	inventory results.	employees.	Plantations Agency,
	herbicides	 Provision of forest and land 	 Conduct forest and land fire 	DLHK, Police, local
	Land clearing for	fire prevention equipment	prevention and handling	government apparatus
	farming/gardeni		training to employees and	and surrounding
	ng by the			communities in HCV
	community on	prevailing laws and	gradually developing the	
	steep slopes and	regulations.	fire-fighting community	U
	around river	Conduct inventory and	(KTPA) program.	program.
	borders	identification of land cover	Develop an accountable	Determination of
		conditions.	and relevant community	environmental and
	Illegal logging by	Comprehensive inventory	development program in	preservation of natural
	local	on flora/ fauna in the HCV	collaboration with	biodiversity policies by
	communities	area.	government agencies,	Top Management.
	and migrants on	Conducting HCV boundary	village agencies and	Preparation of HCV
	sloping lands	marking adjacent to	community leaders in an	Area Management and
	• Activities of	operational areas as well as	effort to prevent and	Monitoring
	anglers around	community land location &	minimize encroachment	Procedures/ SOP's.
	the riparian	periodic border	impact on HCV areas.	• Establish and appoint
	zone of the river	maintenance.		HCV officers along with
	in the form of	Installation of nameplate in	Organize internal and	job descriptions and
	shrubs that dry	HCV location according to	external socialization	incorporate into the
	up during the	HCV type, installation of	explaining the importance	organizational
	dry season	board prohibiting wildlife	of conserving HCV areas	structure of the
	(prone to fire)	hunting and flora	and biodiversity.	company.
		disruption.	Conduct forest and land fire	Coordinate &
		• Conducting patrols in HCV	prevention and handling	cooperate with
		areas.	training to employees and	relevant agencies, such
	-	-		

planting the same plant species. Types of plants planted are local native species. Conducting patrols on the HCV river boundary Provision of forest and land fire prevention equipment in accordance with prevailing laws and regulations. Do not occupy area on the
river border as settlement
to prevent river water
pollution.
Specific HCV-HCS area management plan The management referred to here is the management plan for HCV-HCS area which is included in the area proposed by the Government of Buluq Sen Village to be reserved as a village development area of <u>+</u> 815.27 Ha and removed from the PT Prasetia Utama HGU. In this case, the proposal was submitted to the Government of Buluq Sen Village through a letter dated 8 th August 2022 to RSPO during the public comment period of PT Prasetia Utama's NPP. The company accommodates the proposal and has agreed with the Governemnt of Buluq Sen Village to resolve this issue through the stages and mediation process with the Regency Government and other relevant agencies, namely the National Land Agency/Badan Pertanahan Nasional (BPN) & Plantation Service/Dinas Perkebunan and other relevant stakeholder, this considers that the HGU change is not under the authority of the company because the HGU is a legal product so related to changes it must still follow the provisions of the applicable laws.
As a form of the company's commitment to this issue, specifically for this area, the company has changed its new development plan, where the initial plan for the area to be developed in 2023 was changed to 2024 while waiting for the results of mediation decisions with the Regency Government and related agencies in completing the proposed HGU changes (see Table 2 and Figure 2 in the NPP notification statement document). However, based on the analysis of the overlap between the conservation area (based on the final ICLUP of PT Prasetia Utama) and the proposed
village development area, the company is committed to continuing to carry out management and monitoring involving the village government and the community so that all conservation areas that overlap with the village development area will still be subject to land acquisition of <u>+</u>

2	66.91 Ha (see Figure 1. The conservation area overlaps with the area proposed as a village development area). Land acquisition in this
c c	onservation area is a very crucial stage and becomes the basis for management, namely full control of the conservation area to be managed.
7	he steps the company will take to overcome this are:
	1. Conduct initial socialization of the company's needs, goals and objectives related to the conservation area management plan that overlaps
	with the area proposed as a village development area.
	2. Identify and conduct a participatory mapping with the Village Government in the conservation area that overlaps with the area proposed
	as a village development area.
[3. Submit an application to the Village Government for special land acquisition to be carried out in the conservation area with the intent and
	purpose as a basis for further management.
	4. Develop a management and monitoring plan in the conservation area that involves the Buluq Sen Village community through program
	initiatives that can provide benefits to the village community.
	The above plan will be implemented in parallel with the completion stages related to the proposed revision of the HGU for village development
	area and for management and monitoring best practices impelemnetation still referring to the management plan (Table 4) and monitoring
	Table 5) of the HCV-HCS area.



 Monitoring of HCV elet (getting worse). Monit (HCV1-5). In addition to time there will be a de 1. Implementation of the field (operation 2. Implementation of not achieve the exp 3. New or changed to monitoring). The result of this mon accordance with its go 	of monitoring is to know the dev ments is related to the value/fun oring the size of the HCV area tha o monitoring the indicators for HC crease in the value/function of th the management strategy in the f nal monitoring) management strategy is done po pected goals and objectives (strate hreats/conditions. Management	relopment of the condition of the ction inherent in the HCV area, w t has been determined is related to V elements, the management stra e HCV. Monitoring of the manage field, related to whether or not the orly. Even if the planned manage egic monitoring/effectiveness). strategies that were effective over tion to ensure whether the imple- tuons for monitoring of HCV area	whether it is increasing (getting l to the coverage area that still ha ntegy is also monitored. There is ment strategy includes: e planned HCV management stra ment strategy is good, if it is car er time may not always be effe ementation of the HCV area ma	better) or decreasing s HCV value/function a possibility that over ategy is carried out in ried out poorly it will ective forever (threat	
Location and Type of HCV	Indicators Monitored	Monitoring Objectives	Parameters	Monitoring Period	
ID 01 - Belayan River Riparian The slope of the land is rather steep; the condition of the land cover is still good in the form of shrubs that have not been disturbed Type : 1; 4	 a. Disturbance intensity to the HCV location includes fire hazards, illegal logging, wildlife hunting and encroachment. b. Number and composition of flora & fauna species. c. Species growth rate (power of life) in rehabilitation/ enrichment activities 	intensity of disturbance to HCV location including fire dangers.b. Obtaining information on the population of species of flora/fauna that are threatened with extinction.	 Good: Fauna diversity and flora density (including protected and RTE species) at HCV sites is at fixed states or increased by >15%. Fair: Fauna diversity and flora density (including protected and RTE species) at HCV sites has increased by 5 up to 15%. 	a. Once a monthb. Once in 6 months.c. Once in 3 months.d. Once in 6 months.e. Once a month.	

ID 02 - Belayan River Block Forest In general condition of land cove still good (second forest scrub, only a sn amount of shrubs), some places there is la clearing by PT Lemba Ganesa and PT Ka Rimba Raya (still activ Important area habitat for endange species Ambon torto (Coura amboinens Orlitia borneen Amyda cartilagin Cuora amboinen Heosemys spinose Type : 1; 3	 location includes fire hazards, illegal logging, wildlife hunting and encroachment. b. Number and composition of flora & fauna species. c. Species growth rate (power of life) in rehabilitation/ enrichment activities d. The development of land cover conditions. e. Monitoring and safeguarding the habitat conditions to the area such as boundary conditions, nameplates installed. intensity of disturbance to HCV location including fire dangers. b. Obtaining information on the realization of monitoring and security activities. d. The development of land cover conditions. e. Monitoring and safeguarding the habitat conditions to the area such as boundary conditions, nameplates installed. intensity of disturbance to HCV location including fire dangers. b. Obtaining information on the realization of monitoring and security activities. d. The development of land cover conditions. e. Obtaining information on the realization of monitoring and security activities. d. The development of land cover conditions. e. Obtaining information on the realization of monitoring and security activities. d. The development of land cover conditions. e. Obtaining information on the realization of monitoring and security activities. d. The development of land cover conditions, nameplates installed. 	nce a month nce in 6 months. nce in 3 months. nce in 6 months. nce a month.
 ID 03 - Batu Brang Rivand the Riparian Zone The river water cloudy during the raseason from trupstream (communagricultural ladevelopment area) Most of the vegetat on the riverbank is sigood (shrub-second forest) Lowland scrub as secondary for ecosystem that support the habitat of the second forest) 	 location includes fire hazards, illegal logging, wildlife hunting and encroachment. b. Number and composition of flora & fauna species. c. Species growth rate (power of life) in rehabilitation/ enrichment activities d. The development of land cover conditions. e. Monitoring and safeguarding the habitat conditions to the area such as boundary conditions, nameplates installed. intensity of disturbance to HCV location including fire dangers. b. Number and composition of flora & fauna that are threatened with extinction. c. Species growth rate (power of life) in rehabilitation/ enrichment rate. d. The development of land cover conditions. e. Monitoring and safeguarding the habitat conditions to the area such as boundary conditions, nameplates installed. d. The development of land cover conditions. e. Monitoring and safeguarding the habitat conditions to the area such as boundary conditions, nameplates installed. d. The development of land cover conditions. e. Monitoring and safeguarding the habitat conditions to the area such as boundary conditions, nameplates installed. d. The development of land cover conditions. e. Obtaining information on the realization of monitoring and security activities. e. Obtaining information on the realization of monitoring and security activities. d. The development of land cover conditions, nameplates installed. d. The development of land cover conditions, nameplates installed. d. The development of land cover conditions, nameplates installed. d. The development of land cover conditions, nameplates installed. d. The development conditions conditions, nameplates installed. d. The development conditions conditions, nameplates installed. d. The development conditions conditions conditions, nameplates installed. d. The development conditions conditions conditions, na	nce a month nce in 6 months. nce in 3 months. nce in 6 months. nce a month.

Block Forestloca• In general the condition of land cover is still good (scrub- secondary forest), there are logging areas of PT Lembang Ganesa and PT Karya Rimba Raya, the slopes of the land are gentle to bumpyb. Nur & fr & fr active d. The composition of the land are gentle to bumpy• Lowland scrub and secondary forest ecosystems that support habitat for endangered species (Hylobates muelleri and Buceros rhinoceros); endemic species and limited distribution (Hylobates muelleri), refugium, stepping stone for protected species (Family Bucerotidae)Type: 1; 3ID 05 - Jalin River Blocka. Dist	mber and composition of flora auna species. ecies growth rate (power of) in rehabilitation/ enrichment c. ivities e development of land cover d. nditions. onitoring and safeguarding the bitat conditions to the area e. th as boundary conditions, meplates installed.	 intensity of disturbance to HCV location including fire dangers. Obtaining information on the population of species of flora/fauna that are threatened with extinction. Obtaining information on enrichment rate. Obtaining information on the development of land cover conditions. Obtaining information on the realization of monitoring and security activities. 	 density (including protected and RTE species) at HCV sites is at fixed states or increased by >15%. Fair: Fauna diversity and flora density (including protected and RTE species) at HCV sites has increased by 5 up to 15%. Poor: Fauna diversity and flora density (including protected and RTE species) at HCV sites has decreased or increased by >5%. Good: Fauna diversity and flora 	a. Once a month b. Once in 6 months. c. Once in 3 months. d. Once in 6 months. e. Once a month.
Forest loca	ation includes fire hazards,	intensity of disturbance to HCV location including fire dangers.	density (including protected and	b. Once in 6 months. c. Once in 3 months.

 In general the condition of land cover is still good (scrubsecondary forest), in some places there is land clearing by the community for farming, the slopes of the land are sloping to undulating. Lowland scrub and secondary forest ecosystems that support 	c. d.	illegal logging, wildlife hunting and encroachment. Number and composition of flora & fauna species. Species growth rate (power of life) in rehabilitation/ enrichment activities The development of land cover conditions. Monitoring and safeguarding the habitat conditions to the area such as boundary conditions, nameplates installed.	c. d.	Obtaining information on the population of species of flora/ fauna that are threatened with extinction. Obtaining information on enrichment rate. Obtaining information on the development of land cover conditions. training information on the realization of monitoring and security activities.	RTE species) at HCV sites is at fixed states or increased by >15%. Fair: Fauna diversity and flora density (including protected and RTE species) at HCV sites has increased by 5 up to 15%. Poor: Fauna diversity and flora density (including protected and RTE species) at HCV sites has decreased or increased by >5%.	d. Once in 6 months. e. Once a month.
habitat for endangered species (Hylobates muelleri and Buceros rhinoceros); endemic species and limited distribution (Hylobates muelleri), refugium, stepping stone for protected species (Family Bucerotidae) Type: 1; 3						
 ID 06 - Jalin River and the Riparian Zone The river water is cloudy during the rainy season from the upstream (community agricultural land development area) In the dry season it is used by the community as a source of water for bathing and washing 	b. c. d.	Disturbance intensity to the HCV location includes fire hazards, illegal logging, wildlife hunting and encroachment. Number and composition of flora & fauna species. Species growth rate (power of life) in rehabilitation/ enrichment activities The development of land cover conditions. Monitoring and safeguarding the habitat conditions to the area	b. c.	Obtaining information on the intensity of disturbance to HCV location including fire dangers. Obtaining information on the population of species of flora/ fauna that are threatened with extinction. Obtaining information on enrichment rate. Obtaining information on the development of land cover conditions.	River Riparian Width: Good: If there is an increase in the width of river riparian Fair: If there is no increase in the width of river riparian. Poor: If the width of river riparian has decreased. Class II surface water quality for indicator such as dissolved residue, pH, BOD, DO	 a. Once a month b. Once in 6 months. c. Once in 3 months. d. Once in 6 months. e. Once a month. f. Once a month. g. Once in 6 months h. Once in six months. i. Once in six month j. Once a month.

t t p iii e s s e t t e t t e t t e t t e t t s s s s	 The Jalin River during the flood is used by people who are logging n the upstream to extract wood Lowland shrub and secondary forest ecosystem that supports the habitat of the endangered species Ambon tortoise (Coura amboinensis), Orlitia porneensis, Amyda cartilaginea, Cuora amboinensis, Heosemys spinose Tomistoma schlegelii Type: 1; 3; 4; 5 	f. g. h.	such as boundary conditions, nameplates installed. Intensity of disturbance to areas with HCV type, including hazards from fire, illegal logging and encroachment. The development of land cover conditions. Monitoring to river riparian width which is an indicator of enrichment program success. Monitoring of surface water quality such as turbidity level (soluble residue), pH, and BOD, DO reflecting the erosion rate of river riparian. This in accordance with Government Regulation number 82/2001 on Water Quality Management and Water Pollution Control (Class II Water Criteria). Monitoring and safeguarding habitat conditions especially on areas with HCV types. Activities undertaken such as monitoring to boundary conditions, nameplates installed.	g.	Obtaining information on the realization of monitoring and security activities. Intensity of disturbance to areas with HCV type Predicting erosion rate resulted from erosion rate measurements in which refers to Government Regulation Number. 150 years 2000 on Control of Soil Damage for Biomass Production Obtaining information on the development of land cover conditions. Monitoring and safeguarding habitat conditions especially on areas with HCV types	Good: In accordance with the quality standard. Poor: Exceed the quality standard determined.	
F Z T J I C C I I T	River and the Riparian Zone The upper reaches of the lalin Tutung River is ocated at Mount Mendam. The condition of the upstream cover is n the form of old	b. c.	Intensity of disturbance to areas with HCV type, including hazards from fire, illegal logging and encroachment. The development of land cover conditions. Monitoring to river riparian width which is an indicator of enrichment program success. Monitoring of surface water quality such as turbidity level (soluble residue), pH, and BOD,	b.	Obtaining information on intensity of disturbance to areas with HCV types Obtaining information on the development of land cover conditions. Predicting erosion rates from river width measurement Obtaining information on pollution indicators of surface water surface water quality	 River Riparian Width: Good: If there is an increase in the width of river riparian Fair: If there is no increase in the width of river riparian. Poor: If the width of river riparian has decreased. Class II surface water quality for indicator such as dissolved residue, pH, BOD, DO 	a. Once a month. b. Once in 6 months. c. Once in 6 months. d. Once in 6 months e. Once a month.

Slo Typ ID Fo Shi sec ecc the en (H H Bu en lim (H H Bu En Shi State Shi State Shi Shi State Shi Shi Shi Shi Shi Shi Shi Shi Shi Shi	08 - Bayeq River Block prest arub and lowland condary forest cosystems that support e habitat of ndangered species ylobates muelleri and uceros rhinoceros); ndemic species and pitad	e. a. b. c. e.	DO reflecting the erosion rate of river riparian. This in accordance with Government Regulation number 82/2001 on Water Quality Management and Water Pollution Control (Class II Water Criteria). Monitoring and safeguarding habitat conditions especially on areas with HCV types. Activities undertaken such as monitoring to boundary conditions, nameplates installed. Disturbance intensity to the HCV location includes fire hazards, illegal logging, wildlife hunting and encroachment. Number and composition of flora & fauna species. Species growth rate (power of life) in rehabilitation/ enrichment activities The development of land cover conditions. Monitoring and safeguarding the habitat conditions to the area such as boundary conditions, nameplates installed.	e. a. b. c. d.	variable to surface water quality standard. Monitoring and safeguarding habitat conditions especially on areas with HCV types Obtaining information on the intensity of disturbance to HCV location including fire dangers. Obtaining information on the population of species of flora/ fauna that are threatened with extinction. Obtaining information on enrichment rate. Obtaining information on the development of land cover conditions. Obtaining information on the realization of monitoring and security activities.	 Good: In accordance with the quality standard. Poor: Exceed the quality standard determined. Good: Fauna diversity and flora density (including protected and RTE species) at HCV sites is at fixed states or increased by >15%. Fair: Fauna diversity and flora density (including protected and RTE species) at HCV sites has increased by 5 up to 15%. Poor: Fauna diversity and flora density (including protected and RTE species) at HCV sites has increased by 5 up to 15%. Poor: Fauna diversity and flora density (including protected and RTE species) at HCV sites has increased by 5 up to 15%. 	
the • - the loc the	09 - Bayeq River and e Riparian Zone The upper reaches of e Bayeq River is cated on Mount Naga, e water conditions are latively clear (not too	b.	Disturbance intensity to the HCV location includes fire hazards, illegal logging, wildlife hunting and encroachment. Number and composition of flora & fauna species.		Obtaining information on the intensity of disturbance to HCV location including fire dangers. Obtaining information on the population of species of flora/ fauna that are threatened with extinction.	 Good: Fauna diversity and flora density (including protected and RTE species) at HCV sites is at fixed states or increased by >15%. Fair: Fauna diversity and flora density (including protected and 	a. Once a month.b. Once in 6 months.c. Once in 3 months.d. Once in 6 monthse. Once in a month

 cloudy), flowing throughout the year Lowland scrub and secondary forest ecosystems that support habitat for endangered species (Hylobates muelleri and Buceros rhinoceros); endemic species and limited distribution (Hylobates muelleri), refugium, stepping stone for protected species (Family Bucerotidae) As a corridor connecting Mount Naga and forest blocks in the lower reaches of the Bayeq River (around the Belayan River) Type; 1; 3; 4 	 c. Species growth rate (power of life) in rehabilitation/ enrichment activities d. The development of land cover conditions. e. Monitoring and safeguarding the habitat conditions to the area such as boundary conditions, nameplates installed. 	 enrichment rate. d. Obtaining information on the development of land cover conditions. increased by 5 up to 15%. Poor: Fauna diversity and flora density (including protected and RTE species) at HCV sites has
ID 10 - Mount Naga Located east of Mount Mendam, extending to the banks of the Belayan River. Has a micro slope of up to40%? Covered with thickets and shrubs. as a catchment area for the Baya River. Type: 4	 a. Disturbance intensity to the HCV location includes fire hazards, illegal logging, wildlife hunting and encroachment. b. Number and composition of flora & fauna species. c. Species growth rate (power of life) in rehabilitation/ enrichment activities d. The development of land cover conditions. e. Monitoring and safeguarding the habitat conditions to the area such as boundary conditions, nameplates installed. 	 intensity of disturbance to HCV location including fire dangers. b. Obtaining information on the population of species of flora/ fauna that are threatened with extinction. c. Obtaining information on enrichment rate. d. Obtaining information on the development of land cover conditions. d. Obtaining information on the development of land cover conditions. d. Obtaining information on the development of land cover conditions. d. Once in 6 months. e. Once in a month.

Scrub Area penting sebagai habitat spesies terancam punah (Hylobates muelleri dan Buceros rhinoceros);	 a. Intensity of disturbance to areas with HCV 4 type, including hazards from fire, illegal logging and encroachment. b. Monitoring of erosion rate by taking plots sample randomly and periodically. c. The development of land cover conditions. d. Monitoring and safeguarding habitat conditions especially on areas with HCV 4 types. Activities undertaken such as monitoring to boundary conditions, nameplates installed. 	 a. Obtaining information on intensity of disturbance to areas with HCV 4 type b. Predicting erosion rate resulted from erosion rate measurements in which refers to Government Regulation Number. 150 years 2000 on Control of Soil Damage for Biomass Production c. Obtaining information on the development of land cover conditions. d. Monitoring and safeguarding habitat conditions especially on areas with HCV 4 types. 	Critical threshold value of erosion rate at a soil depth of 150 Cm is <9 Ton/ Ha/ Year.	a. Once in a month. b. Once in a month. c. Once in 6 months. d. Once in a month.
 its tributaries and riparian zone The upstream is in Mendam hills and Mount Naga, there are 2 waterfall locations with fairly clear water conditions, vegetation 	 a. Intensity of disturbance to areas with HCV 4 type, including hazards from fire, illegal logging and encroachment. b. Monitoring of erosion rate by taking plots sample randomly and periodically. c. The development of land cover conditions. d. Monitoring and safeguarding habitat conditions especially on areas with HCV 4 types. Activities undertaken such as monitoring to boundary conditions, nameplates installed. 	 intensity of disturbance to areas with HCV 4 type b. Predicting erosion rate resulted from erosion rate measurements in which refers to Government Regulation Number. 150 years 2000 on Control of Soil Damage for Biomass Production 	Critical threshold value of erosion rate at a soil depth of 150 Cm is <9 Ton/ Ha/ Year.	a. Once in a month b. Once a year. c. Once in 6 months. d. Once a month.

spinose Tomistoma schlegelii Type: 1; 3; 4; 5 ID 13 - Mount Mendam Located in the middle of the MU area. Covered with old scrub forest, has a micro slope of up to 40%. This mountain is a water catchment area for the Bangge River, Tumau River, Meqloq River, Baya River, and Jalin Tutung River. Type: 4	 a. Disturbance intensity to the HCV location includes fire hazards, illegal logging, wildlife hunting and encroachment. b. Number and composition of flora & fauna species. c. Species growth rate (power of life) in rehabilitation/ enrichment activities d. The development of land cover conditions. e. Monitoring and safeguarding the habitat conditions to the area such as boundary conditions, nameplates installed. 	 intensity of disturbance to HCV location including fire dangers. b. Obtaining information on the population of species of flora/ fauna that are threatened with extinction. c. Obtaining information on the development rate. d. Obtaining information on the development of land cover conditions. d. Obtaining information on the development of land cover conditions. d. Obtaining information on the development of land cover conditions. d. Obtaining information on the development of land cover conditions. d. Obtaining information on the development of land cover conditions. d. Obtaining information on the development of land cover conditions. d. Obtaining information on the development of land cover conditions. d. Obtaining information on the development of land cover conditions. d. Obtaining information on the development of land cover conditions. d. Obtaining information on the development of land cover conditions. d. Obtaining information on the development of land cover conditions. d. Obtaining information on the development of land cover conditions. d. Obtaining information on the development of land cover conditions. d. Obtaining information on the development of land cover conditions. d. Obtaining information on the development of land cover conditions. d. Obtaining information on the development of land cover conditions. d. Obtaining information on the development of land cover conditions. d. Obtaining information on the development of land cover conditions. 	a. Once in a month. b. Once in 6 months. c. Once in 3 months d. Once in 6 months. e. Once a month.
ID 14 - Tumau River and the Riparian Zone The upstream part is in Mount Mendam, most of the vegetation conditions around the riparian zone are still good (no disturbance) in the form of shrubs, there are few community oil palm plantations, downstream there is the Ung Tumau waterfall Type; 4	 a. Disturbance intensity to the HCV location includes fire hazards, illegal logging, wildlife hunting and encroachment. b. Number and composition of flora & fauna species. c. Species growth rate (power of life) in rehabilitation/ enrichment activities d. The development of land cover conditions. e. Monitoring and safeguarding the habitat conditions to the area such as boundary conditions, nameplates installed. 	 intensity of disturbance to HCV location including fire dangers. b. Obtaining information on the population of species of flora/ fauna that are threatened with extinction. c. Obtaining information on enrichment rate. d. Obtaining information on the development of land cover conditions. d. Obtaining information on the development of land cover conditions. d. Obtaining information on the development of land cover conditions. d. Obtaining information on the development of land cover conditions. d. Obtaining information on the development of land cover conditions. d. Obtaining information on the development of land cover conditions. d. Obtaining information on the development of land cover conditions. d. Obtaining information on the development of land cover conditions. d. Obtaining information on the development of land cover conditions. d. Obtaining information on the development of land cover conditions. d. Obtaining information on the development of land cover conditions. d. Obtaining information on the development of land cover conditions. d. Obtaining information on the development of land cover conditions. d. Obtaining information on the development of land cover conditions. d. Obtaining information on the development of land cover conditions. 	 a. Once in a month. b. Once in 6 months. c. Once in 3 months d. Once in 6 months. e. Once a month.
ID 15 - Valley area with steep slopes east of the Banggeh River	a. Intensity of disturbance to areas with HCV 4 type, including	intensity of disturbance to areas	a. Once a month. b. Once in 6 months. c. Once in 6 months.

in ur ha 40 cc sh st • ha sp m r h sp di m st pr (F ar eco of eco	indisturbed old scrub has a slope of more than 10%. This vegetation lover serves to control heet erosion and	c. d.	hazards from fire, illegal logging and encroachment. Development of land cover conditions. Monitoring to width of river riparian in which one of indicators of encrichment program success. Monitoring of surface water quality such as turbidity level (soluble residue), pH, and BOD, DO reflecting the erosion rate of river riparian. This in accordance with Government Regulation number 82/2001 on Water Quality Management and Water Pollution Control (Class II Water Criteria). Monitoring and safeguarding habitat conditions especially on areas with HCV 4 types. Activities undertaken such as monitoring to boundary conditions, nameplates installed.	c. d.	Obtaining information on the development of land cover conditions. Predicting erosion rates from river width measurement Obtaining information on pollution indicators of surface water surface water quality variable to surface water quality standard. Monitoring and safeguarding habitat conditions especially on areas with HCV 4 types	 Good: If there is an increase in the width of river riparian Fair: If there is no increase in the width of river riparian. Poor: If the width of river riparian has decreased. Class II surface water quality for indicator such as dissolved residue, pH, BOD, DO Good: In accordance with the quality standard. Poor: Exceed the quality standard determined. 	d. Once in 6 months. e. Once a month.
ar • • • • • • • • • • • • • • • • • • •	D 16 - Sengen River and the Riparian Zone The upstream part of he Sengen River is a orested area outside he MU area, very luctuating flow conditions (floods in the ainy season and elatively shallow in the dry season), vegetation conditions around the iparian zone in the form	b. c.	Intensity of disturbance to areas with HCV 4 type, including hazards from fire, illegal logging and encroachment. Development of land cover conditions Monitoring to width of river riparian in which one of indicators of encrichment program success. Monitoring to surface water quality, this in accordance with Government Regulation number 82/2001 on Water Quality	b. c.	Obtaining information on intensity of disturbance to areas with HCV 4 type Obtaining information on the development of land cover conditions. Predicting erosion rates from river width measurement Obtaining information on pollution indicators of surface water surface water quality variable to surface water quality standard.	 River Riparian Width: Good: If there is an increase in the width of river riparian Fair: If there is no increase in the width of river riparian. Poor: If the width. Class I surface water quality Good: In accordance with the quality standard. 	 a. Once a month. b. Once in 6 months. c. Once in 6 months. d. Once in 6 months. e. Once a month.

of community farming land and shrubs. • Important area as habitat for endangered species Ambon tortoise (Coura amboinensis), Orlitia borneensis, Amyda cartilaginea, Cuora amboinensis,	e.	Management and Water Polution Control (Class I Water Criteria). Monitoring and safeguarding habitat conditions especially on areas with HCV 4 type. Activities undertaken such as monitoring to boundary conditions, nameplates installed.	e.	Monitoring and safeguarding habitat conditions especially on areas with HCV 4 type	Poor: Exceed the quality standard determined.	
Heosemys spinose Tomistoma schlegelii Type: 1; 4; 5 ID 17 - Banggeh River	a.	Intensity of disturbance to areas	а.	Obtaining information on	River Riparian Width:	a. Once a month.
and the Riparian Zone The upstream part is in Mount Mendam and its surroundings. The condition of the vegetation around the riparian zone is still good in the form of shrubs. Type: 4	d. e.	riparian in which one of indicators of encrichment program success. Monitoring to surface water quality, this in accordance with Government Regulation number 82/2001 on Water Quality Management and Water Polution Control (Class I Water Criteria). Monitoring and safeguarding habitat conditions especially on areas with HCV 4 type. Activities undertaken such as monitoring to boundary conditions, nameplates installed.	c. d. e.	intensity of disturbance to areas with HCV 4 type. Obtaining information on the development of land cover conditions. Predicting erosion rates from river width measurement. Obtaining information on pollution indicators of surface water surface water quality variable to surface water quality standard. Monitoring and safeguarding habitat conditions especially on areas with HCV 4 type.	 Good: If there is an increase in the width of river riparian Fair: If there is no increase in the width of river riparian. Poor: If the width of river riparian has decreased. Class II surface water quality for indicator such as dissolved residue, pH, BOD, DO Good: In accordance with the quality standard. Poor: Exceed the quality standard determined. 	b. Once in 6 months. c. Once in 6 months. d. Once in 6 months. a. Once a month.
ID 18 - Ritan River Riparian	а.	Intensity of disturbance to areas with HCV 4 type, including hazards from fire, illegal logging and encroachment.	a.	Obtaining information on intensity of disturbance to areas with HCV 4 type.	Critical threshold value of erosion rate at a soil depth of 150 Cm is <9 Ton/ Ha/ Year.	a. Once a month. b. Once a year. c. Once in 6 months. d. Once a month.

		 Located in the lower reaches of the Ritan River, Important area as habitat for endangered species Ambon tortoise (Coura amboinensis), Orlitia borneensis, Amyda cartilaginea, Cuora amboinensis, Heosemys spinose Tomistoma schlegelii Type: 1; 4 	 b. Monitoring of erosion rate by taking plots sample randomly and periodically. c. The development of land cover conditions. d. Monitoring and safeguarding habitat conditions especially on areas with HCV 4 type. Activities undertaken such as monitoring to boundary conditions, nameplates installed. 	c. d.	Obtaining information on the development of land cover conditions. Predicting erosion rates from river width measurement Obtaining information on pollution indicators of surface water surface water quality variable to surface water quality standard. Monitoring and safeguarding habitat conditions especially on areas with HCV 4 type.				
		HCS Conservation Areas The type of land cover varied, consisting of low- medium density forest, young regenerated forest, and shrubs. are scattered within the MU area, referring to the ICLUP HCSA study	 a. Disturbance intensity to the HCS location includes fire hazards, illegal logging, wildlife hunting and encroachment. b. Number and composition of flora & fauna species. c. Species growth rate (power of life) in rehabilitation/ enrichment activities d. The development of land cover conditions. e. Monitoring and safeguarding the habitat conditions to the area such as boundary conditions, nameplates installed. 	b. c. d.	Obtaining information on the intensity of disturbance to HCS location including fire dangers. Obtaining information on the population of species of flora/ fauna that are threatened with extinction. Obtaining information on enrichment rate. Obtaining information on the development of land cover conditions. Obtaining information on the realization of monitoring and security activities.	 Good: Fauna diversity and flora density (including protected and RTE species) at HCV sites is at fixed states or increased by >15%. Fair: Fauna diversity and flora density (including protected and RTE species) at HCV sites has increased by 5 up to 15%. Poor: Fauna diversity and flora density (including protected and RTE species) at HCV sites has decreased or increased by >5%. 	b. Once in 6 months.		
3	Social impact, stakeholder and local people engagement (FPIC process)	surrounding villages of the development proce Discussion of impacts a as well as within the sco	presence and operation of PT Prasetia Utama oil palm plantations has the potential to give social impact on the communities in the bunding villages of the company's HGU areas and associated employees. The impacts arise from various activities undertaken relating to development process and operations of the estate. ussion of impacts are identified from the facts or sources of occurring impact within the employee, community surrounding the company, ell as within the scope of neighbourhood, village, sub-district and district and can have both negative and positive dimensions on Pentagonal ts. The explanation are as follows:						

• Social impacts are positive or negative changes to one or more of social pentagon assets occurred at the time of the assessment as a direct or indirect result due to company operations (estates and mill); policies of management practices or corporate social management performance.
• Potential social impacts are positive or negative changes to one, or more, possible social pentagon assets that may occur in the future as a direct or indirect result due to company operations (estate and mill); policies of management practices or corporate social management performance.
• Social risks are social conditions, social issues or social reactions that are likely to disrupt the performance of the company's operations and or sustainability.
• Social issue in this case is the perception of a particular social group about a matter.
Explanation on the relation and explanation on social impacts of PT Prasetia Utama's existence to society, social impact on employees, and on the end, on social risks, and social issues faced by the company. Explanations on impact relationships, potential impacts, social risks and social issues need to be done so that we can understand the cause-and-effect relationship between these three issues and the source of the cause.
Social Risk
Social risk is a social condition that has the potential to cause material or immaterial losses/damage for the company so that the company is forced to stop operating or has to bear high social cost due to social issues. The source of the risk in question comes from the surrounding community as an outside party. Based on the social conditions in the study area and the conditions of the people who have interaction with the company, it was found that there are social risks faced by the company. There are three risks identified by reviewing the condition of the community:
• Prohibition of any activities until the request of the Buluq Sen Village community is approved, which stems from the failure to reach an initial agreement with the Buluq Sen Village community. The problem is that there are some requests or expectations that are quite demanding from certain individuals or groups.
 Low land acquisition rates and high social costs due to land disputes and conflicts. The low level of land acquisition is classified as operational risk, but because the source comes from the community who controls the land in the HGU area, it can be categorized as social risk. Disturbance from the community which has high social costs originating from the development of plasma plantations which if not carried out in conjunction with the nucleus plantations.
The level of risk is highly dependent on the company's attitude, leadership policies/decisions, and ways of communicating. The level of risk is categorized as high if the land acquisition is far below the target and the company's plantation development planning is hampered. In addition to the risks mentioned above, there are other risks with a medium or low level, the sources of which are the internal environment itself or the control measures tend to be less complex which do not depend on external parties or factors:

 Did not get full support from all community groups. There are community groups in Buluq Sen Village who feel that the company is only communicating with a certain person or community group. This group feels less involved in matters related to PT PU. Reputational risk. The long process of developing the plantations and the lack of communication and openness have made the community view that the new management of PT PU is the same as other companies that are not serious about investing in the village area.
Social impact management plan The aspect of social management undoubtedly has a very important function for the company, both now and in the future. Meanwhile, social issues are a necessity, which will always occur, are broad and dynamic in accordance with environmental changes that occur.
Social impact management is intended to mitigate, minimize or eliminate negative impacts (mitigating adverse effects) and increase positive impacts (advancing benefits). Likewise, with social risks, which need to be followed up and managed properly to minimize negative issues, social problems, and conflicts. The proposed recommendations refer to the principles of social justice and human rights as well as ecological principles that include sustainability, diversity, and balance.
 Recommendations for mitigating negative impacts and social risks are: a. Conduct social mapping and document profiles and descriptions of each village; including important stakeholders and figures, Company partners, forms of interaction between the Company and villages and villagers, social issues/issues with the Company, and other important information in order to maintain good social relations. b. Completely map out stakeholders to help manage social aspects and maintain social relations with key figures, and compile them in the stakeholder list and developing communication with all affected parties c. Mapping each issue, identify actors and community leaders, and provide complete data and information needed for strategic decision
 making. d. Avoiding land conflicts between the Company and the community by asking the community and villages to resolve their own internal land claims and overlapping land claims before starting the land acquisition process. e. Continue the plantation development plan or consider relinquishing HGU status on uncultivated land and hold joint discussions with the
 villages concerned, local government, and possibly mining companies. f. Ensure the application of the principle of FPIC in the process of land acquisition, land clearing, and other processes in the future that are related to the community. g. Implement best practices in plantation management and oil palm processing and consistently comply with all laws and regulations in the fields of land, labor and environment.
 h. Ensure to carry out monitoring and evaluation of negative impact mitigation and risk mitigation on a regular basis and document any developments, changes, and countermeasures.

d. Examine alternat	Prasetia Utama's HGl	na plantations toget or plasma plantatio J).	ther with the nuns to be jointly	cleus estates. registered wit	and remaining. h cooperatives an	d plasma farmers (in
Impact Sources	Negative Impact	Positive Impact	Impact Magnitude	Specific Location	Community Response (Predicted)	Mitigation
Type of Activities (Impact Communication, social relations and partnerships, forms of activities include: Socialization of land clearing plans and plasma development plans	This is because the process should have been running at the beginning of the PU plan commenced but the fact that the development of PT PU has not be initiated yet and conflict arises in relation to land rights (ownership status, territorial boundaries) in plasma development program.	Social capital: Increasing opportunity and hope with the development plan of PT PU oil palm plantations with ownership by REA KALTIM will lead to positive attitude by the community.	Quite large. This activity should be carried out from the beginning, preparation and systematic plan is required	All affected villages	 Negative and positive relating to resumption of PT PU development plan. This is due to the failure from previous PU management so that the community needs to regain their trust to PT PU management in this case is REA Kaltim. The company is still not transparent in communicating & socializing to the community relating to the process of plantation 	 Re-identification of current social conditions includes assessing the impact and control to existing social issues. Changes in perceptions that occur in the field today need to be done study first. Creat FPIC plans through key stakeholder engagement. Among others: Establish communication and consultation mechanisms as a guide in communicating effectively to the community Determine FGD

	development and	meetings to collect
	processing unit	information relating
	3. Unclear status of	to level of public
	plasma land,	perception towards
	unclear	the company
	ownership by	Periodic analysis
	farmers (relating	against developed
	to proof of	strategic issues
	ownership)	within the
		community resulted
		from FGD results or
		community
		perceptions surveys
		 Adopt an
		accountable
		Community
		development
		program, such as
		donations of religious
		activities,
		communication and
		coordination
		assistance, superior
		fruit seed support,
		national day activities
		assistance, provision
		of working capital
		such vegetable carts,
		community economic
		improvement in the
		form of women
		group assistance, fish
		farming assistance ,
		home finance
		management
		training, educational
		assistance, assisting
		women's groups in
		home industry
		products, indigenous
		activities assistance,
		financial assistance
		for youth
		organization

							3. Building public trust	
							back through	
							socialization and/ or	
							community activities	
							prior to plantation	
							development plan at	
							PT PU is commenced	
							4. Establishment of a	
							committee to resolve	
							the status of plasma	
							land	
							5. Transparency and	
							socialization of	
							plasma location	
							development plan	
							(location map).	
	Dormit	NA	NA	NA	NA	NA	NA	NA
	Permit	INA	NA	NA	NA	INA		INA
	Land acquisition process	1. Sosial capital:	1. Financial capital:	Relatively large,	All affected	Plan to change	Implementation of FPIC	During land
		increase social	where people get	although the	villages	community livelihood	to:	acquisition
		problem conflicts.	additional income	intensity of land	U U	pattern (traditional to	1. Develop a	process is
		2. Decline local	from land	disputes is still		modern).	participatory	undertaken.
		community's	acquisition by the	quite high, which		There are areas at	mechanism in	
		cultivated land,	company.	comes from land		stake	handling conflict /	
		potential disturbance	2. Physical capital:	acquisition,		Unclear land	complaints.	
		of ecosystem and	the resumption of	unfinished dispute		acquisition system	2. Socialization, FGD.	
		environment due to	plantation	resolution, threats		Implemented	3. Participatory	
		land clearing plan	development plan	identified against		community	mapping during land	
		(natural capital)	means the opening	the company is		development	acquisition including	
		(natural capital)						
			access road areas	still weak due to		program	joint review for HCV	
			which previously	lack of supporting		Plasma program that	determination & SIA	
			are inaccessible.	data and others.		is not transparent.	review.	
							4. Transparent land	
							acquisition process	
							5. Implement an	
							accountable	
							community	
							development	
							program.	
							6. Preparing the	
							community for the	
							changes that will	
							occur and their	
							implications	
		•	•	•	•	•	•	

				7. Plans/ system / model of lasma division	
Nursery	cause soil erosion due to land clearing for the nursery area and employee housing site.end or co 	ation of ployment Nursery activities portunity and siness for rounding mmunities*). man capital: reased local mmunity skills in ms of plication of good palm nursery toctices. Skill is popted by local mmunity who rk in the mpany. <i>Woman</i> <i>verment is on of</i>	All affected villages Land acquisition issue for nursery site will be an important issue in the community. Development can create employment and business opportunity for the community in the surrounding areas, such as opening a coffee shop, groceries, workshop and become company's partners (contractor).	 Informing nursery jobs to affected villages in accordance with skills and expertise required. For local people who are not recruited to work in the company, can be developed through the community empowerment program through improving self-skills training and soft capital loans Establishing environmental management aspects, policies and procedures. Environmental management and monitoring are conducted periodically including HCV/ flora fauna studies prior to land clearing for nursery Ensuring that the aspects of OHS & environment management are properly implemented and monitored. Environmental programs that can be applied such as road 	During nursery activities undertaken.

						on the village roads	
						that are located	
						within company	
						immediate vicinity	
						and often used by the	
						company as access	
	A Not of control to a	A First state sector	Balatinal James If		1	road.	D. day
Land clearing	1. Natural capital: has	1. Financial capital:	Relatively large if	All affected	Land clearing will	Implementation of FPIC	During land
	the potential to	Creation of	land clearing	villages	encourage shift in	for:	clearing
	cause soil erosion	employment and	program is not		social and	1. Ensure that the	activities
	and /or land fires	business	integrated with		environmental order	community has a	undertaken.
	due to land clearing	opportunities for	environmental		in the society. The	perceptual	
	for oil palm	surrounding local	aspec impact		existence of groups	understanding of	
	planting, damage	people. *)	management.		from community	land clearing plans.	
	and/ or loss of	2. Human capital:			activities such as:	2. Local communities	
	biodiversity (flora	Increased local			Farmer groups,	accept land clearing	
	fauna), exploitation	community skills in			smallholder's	plan. 3. Conduct HCV	
	of river water	terms of			cooperative groups,	& SIA studies prior to	
	resources,	application of good			local contractors that	land clearing.	
	potentially causing	land clearing			supply logistic to the	3. Develop program and	
	environmental	practices. Skill is			company and store	mitigation plan of	
	pollution (land,	adopted by local			traders.	social impact arising	
	water & air)	community who				from land clearing.	
	resulting from the	work in the				4. Strengthening local	
	operation of	company.				institutional capacity	
	company vehicles	*) Woman				and intensive	
	and heavy	empowerment is				assistance for the	
	equipment.	on of Gender					
	2. Physical capital:	Programme form.				local organizations.	
	Reduced					5. Land clearing	
	community's					activities are done in	
	cultivated land.					stages	
	3. Social capital: high					6. Ensuring the aspects	
	social interaction is					of OHS &	
	also a source of					environment	
	conflict within the					management are	
	community in the					properly	
	form of public					implemented and	
	unrest due to					monitored.	
	workforce					Environmental	
	recruitment that					programs that can be	
	does not come					applied such as road	
	from the					watering, especially	
	surrounding					village roads that are	
	•	-	•	•	•	•	

	I	1	I		I	1	
	villages will have					located within	
	implication on OHS					immediate vicinity of	
	issue for local					company's location	
	people working in					and often used by the	
	the company.					company.	
Planting	1. Natural capital: has	1. Financial capital:	Relatively large if	All affected	Local community also	Implementation of FPIC	During
	the potential to	Creation of	land clearing	villages	want to have their	for :	planting
	cause soil erosion	employment and	program is not		own oil palm	1. Developing a	activities
	and /or land fires	business	integrated with		plantation.	program and	undertaken.
	due to land clearing	opportunities for	environmental		F	mitigation plan social	and chancer
	for oil palm	surrounding local	aspec impact		Homogeneity of oil	impact, one of which	
	planting, damage	people. *)	management.		palm will bring pests	is counseling,	
	and/ or loss of		managementi		and diseases	socialization	
	biodiversity (flora	Increased local			problems in crops	2. Strengthening local	
	fauna), exploitation	community skills in			that are now the	institutional capacity	
	of river water	terms of			community has	and intensive	
	resources,	application of good			developed	facilitation for local	
	potentially causing	land clearing			developed	organizational	
	environmental	practices. Skill is				independence	
	pollution (land,	adopted by local				3. Ensuring the aspects	
	water & air)	community who				of OHS &	
	resulting from the	work in the				environment are	
	operation of	company.				implemented and	
						monitored properly	
	company vehicles and heavy	empowerment is				monitored property	
	equipment.	on of Gender					
	2. Physical capital: has	Programme form.					
	the potential to	Programme jorm.					
	cause occupational						
	accident and						
	reduce level of						
	public health and						
	environment.						
	3. Social capital: high social interaction is						
	also a source of						
	conflict within the						
	community in the						

	 Social capital, where the occurrence of social interaction is high due to the process of employment can lead to new social problems such social jealousy in the layers of society, jeopardize the safety and health aspects of workers 						
Harvesting and transportation of FFB's	 Social capital, where the occurrence of social interaction due to the process of employment can lead to new social problems such as social jealousy in the layers of society, jeopardize the safety and health aspects of workers Natural capital, air pollution potential due to operation of FFB's transporting vehicle and from hazardous waste management. FFB's transportation is critical point that can create negative 	 Financial capital: Creation of employment and business opportunities for surrounding local people. Human capital: Increased local community skills in terms of application of good land clearing practices. Skill is adopted by local community who work in the company. 	Relatively large, if harvesting and transportation of FFB's do not implement best management practices consistently.	All affected villages	Oil palm upkeep activities by the company can absorb labours extensively. Has the potential to environmental degradation due to air and hazardous waste pollution?	 Company should have clear working procedures on harvesting and transportation of FFB's Socialization and training activities for workers. Ensure good environmental management and monitoring including the provision of environmental management infrastructure. Provision of PPE to all workers. Installation of traffic signs on estate and residential roads. 	During the operations of the company
Estate infrastructure construction	impact. 1. Physical capital: Reduced community's cultivated land for building estate infrastructure.	 Financial capital Creation of employment and business opportunities for 	Relaitvely large due to massive project that affect both environment and social.	All affected villages	 Social jealousy due to external contractor operations. Uninformed job opportunities to 	 Give priority to local workforce and contractors. Employment opportunities are informed to villages 	During the operations of estate

Oil palm planting activities	 Social capital: has the potential to cause work accidents and reduce the level of public health and the environment as well as high social interaction is also a source of conflict in the community in the form of public unrest due to the use of contractors in the development of estate infrastructure. Has impact on social capital where community perceptions 	Surrounding local community. 2. Physical capital: addition of transporation means and/or other facilities will lead to improved community governance pattern. Financial capital Creation of employment for	Relatively small impact by developing	All affected villages	local communities 3 3. Employment opportunities will invite minors to work. 4. Local communities do not understand occupational safety standard. 5. Work contract is not undertsood	 Company's policy not to employ minors (SOP). Company's policy in relation to OHS and employment contract. (SOP) Approaches are conducted intensively both personally, 	During estate operations undertaken.
	are considered untrustworthy by the company.	employment for surrounding local community. With the company's direct management system, it also helps the condition of the community around the company, in terms of increased sense of security.	developing personal, interpersonal and group approaches through community		each vinage.	interpersonally and in groups through community representation.	ungertaken.
Transportation and equipment management.	Negative impacts on this activity at its core are included in the part of the company's work program such as land clearing, planting, production, infrastructure development involving the use of transpotation and equipment	Enhancement and development of positive impacts are in line with impacts management at company's operations area.	At medium to large scale if the management does not implement best management practices standard including effective social approaches.	All affected villages	 The company has resources in terms of procurement of transportation means and equipment. Communities require the use of more of these resources for 	 Company should have clear working policies and procedures pertaining to technical operations and/ or handling of social problems. The socialization program must be conducted 	During estate operations undertaken.

Type of Activities (impact source): Mill activities: Impact source): Mill activities: Imp						improvement of	periodically and	
Type of Activities (impact source): Mill activities: 1. Financial capital: Large. Impacts All affected 1. Pollution and accountable commental impacts source): Mill activities: Torre of Activities (impact source): Mill activities: 1. Financial capital: 1. Financial capital: Large. Impacts All affected 1. Pollution and accountable commental quality and social impacts through an accountable community. mill 0. Social capital: 1. Financial capital: Large. Impacts All affected 1. Pollution and degradation of genome time acquisition process to popertunities boild and services, with same acquisition process to coupstional a cacidents, declining worker and increase occupational status. Large. Impacts All affected 1. Pollution 1. Implementing sustainability spect 2. Natural capital: rowsker and and increase occupational status. 1. Status. 2. Physical & howe and increase of and incre						their welfare	simultaneously	
Type of Activities (Impact source): MIII activities: Implementation of any accountable of any accoun							3. Management and	
Type of Activities (Impact source): Mill activities: Impact source): Mill activi								
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111		environmental health	taxes.				3. Ensuring the legality/	
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Potentially to cause erosion around the mill construction site due to land clearing, decreased biodiversity sources, degrading environmental quality (ambient air and emissions) due to operations of vehicles and milling machines.		2. Natural capital:	development of				environmental	
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and milling machines. 6. Improving the			modern pattern.					
		and mining machines.						
mill operators							mill operators	

		1	1			1	
						7. HSE Policies &	
						Programs are applied	
						and communicated	
						intensively to both	
						workers and	
						communities.	
Transportation and 1.	Social capital:	Financial capital:	Relatively large.	All affected	Local community	1. Companies must	During mill
acceptance of FFB	Social interaction due	Increased local	Impact resulted	villages.	wants to fully	have clear working	operations
including the purchase	to employment	community's income	potentially affect		manage product	procedures on	
of community FFB	recruitment process	who work as	environmental		transportation.	transportation	
	can lead to new social	contractors for	quality and social			activities.	
	problems in the form	transporting FFB's and	value.			2. Socialization and	
	of social jealousy in	create employment				training to workers.	
	the community layer,	opportunity for				3. Ensuring	
	besides the	surrounding				environmental	
	competition between	community.				management and	
	local contractors and					monitoring are	
	migrant contractors					implemented well.	
	are individual					4. Provision of PPE to all	
	concentration areas					workers.	
	in impact					5. Installation of traffic	
	management and					signs at estate and	
	potential aspects of					residential roads.	
	workers' safety and					6. Relevant Community	
	health and traffic					development	
	accidents are					program such as road	
	potentially large.					watering and road	
2.	. Natural capital:					repair/ road	
	potential pollution to					hardening.	
	the environment and					7. Implementation of	
	the dangers of					effective, transparent	
	hazardous and toxic					and mutually	
	waste at the time of					benefitting	
	activities on progress.					cooperation model	
						with the community	
						8. Developing	
						cooperation through	
						cooperative model	
						9. Socialization of	
						cooperation system	
						and registration of	
						FFB's potential	
						suppliers	
						10. Timely payment.	

Mill processing	1. Affecting natural	1. Financial capital:	Large: due to	All affected	1. Pollution and	1. Implementation of	During mill
init processing	capital, potentially	Labor absorption,	impact mainly	villages	degradation of	Good Manufacturing	operations
	degrade	creating business	affects		environmental	Practices by	undertaken.
	environmental	opportunities both	environmental		quality, especially	implementing	
	quality (ambient air	formal and	quality.		waste and odors	sustainability aspect.	
	and emissions),	informal sectors for	quanty		2. Community's	2. Socialization to the	
	ground and surface	goods and services,			expectation to be	community on mill	
	water quality due to	increase per capita			able to work at	construction and	
	the operations of	income and			the mill.	operations plan	
	vehicles and milling	increase local				3. Ensure that all mill's	
	machines.	taxes.				operating procedures	
	2. Social capital:	2. The absorption of				are prepared	
	potentially causeing	labor from local				4. Improving the	
	occupational	community as the				competence of all	
	accidents, decrease	operator in the mill				mill operators	
	the level of workers'	will increase the				5. HSE Policies &	
	safety and health and	skill / quality in				Programs are applied	
	environmental if not	terms of operating				and communicated	
	managed well.	machines and mill				intensively to both	
	0	processing through				workers and	
		training activities				communities.	
		held.					
Transpotation of CPO/	1. Affecting social	Financial capital:	Relatively large if	All affected	Potentially reduce	1. Company must have	During mill
CPKO product.	capital where the	creation of	transportation of	villages	the environmental	clear working	operations
	occurrence of social	employment and	CPO/ PKO does		quality especially	procedures on	undertaken
	interaction due to the	business opportunities	not implement		from air pollution and	transportation	
	process of	for surrounding	Besa		hazardous and toxic	activities.	
	employment can lead	communities*)	Management		waste sources.	2. Socialization and	
	to new social		Practices			training to workers.	
	problems such as		consistently			3. Ensuring	
	social jealousy in the					environmental	
	layers of society,					management and	
	jeopardize the safety					monitoring are	
	and health aspects of					implemented well.	
	workers, traffic					4. Provision of PPE to all	
	accident risks are					workers.	
	potential to occur.					5. Installation of traffic	
	2. Natural capital,					signs at estate and	
	potential of ambient					residential roads.	
	air pollution due to						
	CPO transporting						
	activities include the						
1							

	hazardous and toxic						
	waste management.						
	These are critical						
	points that can create						
	negative impact.						
Palm Oil Mill Effluent POME) management.	These are critical points that can create	Natural capital: Increased plantation's soil fertility therefore increasing productivity.	Relatively large. Impacts potentially contributes to environmental pollution which very sensitive to trigger social conflict.	All affected villages	The company is not serious in handling waste.	 Establishment of policies in environmental management. Ensure that all aspects of management have been accommodated in environmental documents (AMDAL, RKL-RPL, UKL-UPL), understood and implemented according to applicable regulations. Establish a PIC in environmental management and monitoring. Coordination and intensify communication with related institutions in environmental management and monitoring. Socialization and training for workers6. Socialization involves relevant institutions 	During mill operations undertaken.
						to communities relating to environmental management and handling of aspects	
						and impacts.	
						7. Accountable	
						community	
						community	

		Bulking and CPO and PK	I shipping of NA O		NA	NA	NA	NA	clean assistance	such as water e program olic health	NA
4	Soil and Topography	Table 7. So Map Symbol	oil suitability & Soil Series	fertility in the Slope (%)	e study Area of PT PU Br	ief Description		Sustainabilit Palm (Main Li	-	Total Ha	Extend %
		Sdg/3	Serdang	Rolling (12-24)	Deep (>100 cm) brov sandy clay loams. W friable. Patchy claysk over sandstones.	/eak medium su	bangular block	e y; Suitab	le	832	8,4
		Kbg/3	Kush Davas	Rolling (12-24)	Moderately deep (50-100 cm) brownish yellow to strong brown fine sandy clays. Moderate medium subangular blocky; friable to firm. Patchy clayskins. Moderately well			ar (Low fertility,	moderate	2.039	20,6
		Kbg/4	Kuala Brang	Hilly (24-38)	drained. Soils deve sandstones.	loped over sha	les with mine	or Margir (Soil erosic fertility, mo depth	on, low oderate	733	7,4
		Nmi/3	Nami	Rolling (12-24)	.2-24) friable. Patchy clayskins. Weathered rocks around 70 cm depths. Well drained. Soils developed over sandstones with minor shales. Hilly Hilly		y; (Low fert m soil eros	tility, son,	5.880	59,4	
		Nmi/4		Hilly (24-38)			Margir (Soil erosic fertility, mod depth	on, low erate soil	119	1,2	

Kuh/4	Kuah	Hilly (24-38)	Shallow (<50 cm) brownish yellow to strong brown fine sandy clays. Moderate medium subangular blocky; friable to firm. No clayskins. Weathered rocks around 40 cm depth. Moderately well drained. Soils developed over shales with minor sandstones.	Marginal (Shallow, soil depth, soil erosion, low fertility)	119	1,2
Gck/2	Gong Chenak	Undulating (4-12)	Deep (>100 cm) brownish yellow to light gray fine sandy clay. Moderate medium subangular blocky; friable to sticky with depth. Patchy clayskins. Imperfectly drained, occasional flooding. Soils on Sub-Recent Alluvium.	Suitable (Low fertility, minor flooding)		1,8
					9.900	100

Table 8. Managemen plan for soil conservation

Objective(s)	Action(s)	Timeline
Based on significant impact evaluation results indicate that impact parameters on occurrence of disruption on surface flow in which the impact is negative and direct due to micro and macro flow cut off on natural surface during cut and fill process.	 Carry out land clearing for plantations road network in a planned and efficient manner. Constructing culvert at each intersection equipped with drainage ditch with appropriate size. Creating bridge on areas with river flowing. Conduct routine maintenance on bridges and culverts constructed. 	Once during road network construction and evaluated once a year for improvements against damaged sections or material.
Erosion Rates	 Development of Estate Emplacement. Implementation of estate emplacement development should be carried out in a planned manner and does not allow open land to be neglected for long term. Land clearing carried out to construct estate emplacement should be done in a planned manner and according to the needs. Immediately plant land cover crops on areas cleared for emplacement. 	Once during work on progress and evaluated once in 6 months.

 On sloping area with gradient > 8% should have terraces to avoid erosion prone areas.
Road network construction
 Land clearing should be done in a planned and efficient manner.
 Construct terraces on runoff areas near river riparian.
 Immediately plant land cover crops on areas cleared.
Surfacing the road with coral mixture.
Preparation of nursery site
Establish nursery site on sloping area.
 Development of nursery land should be conducted in
a planned and efficient manner.
 Setting the pre-nursery site that cuts the slope.
Immediately plant land cover crops on nursery site
that have been left.
Preparation of planting site
 Land preparation should be conducted in a well and planned manner.
 Land clearing remnants should be stacked lengthwise
and cut into the slope.
Immediately plant oil palm & LCC on areas planned.
Do not carry out land clearing by burning.
Preparation of mill site
 Land clearing should be conducted in a planned and
gradual manner.
Land clearing should be carried out during dry season.
Do not carry out land clearing by burning.
Immediately commence construction activities after land clearing completed
land clearing completed.

	• Immediately conduct reforestation on surrounding area of the ste with fast-growth plant type and LCC to minimize erosion.	
Based on significant impact evaluation results indicate that impact parameters on occurrence of land cover decreased in which the impact is negative, significant and direct. Impact intensity that exceed environmental quality standard can cause further impacts in the form of increased erosion rate and wildlife migration.	 Environmental management activities for estate emplacement development, road network construction, Preparation of nursery site, preparation of planting area and preparation of mill site. Planting area preparation should be done gradually and planned according to the needs. Land clearing is conducted only on areas designated for estate emplacement development (± 18,06 Ha), road network construction (± 9,06 Ha), preparation of nursery area (± 30 Ha), Preparation of planting area (± 8,819, 755 Ha), preparation of mill site (± 20 Ha). Enriching and maintaining conservation areas. Warning board installation to prohibit hunting on protected wildlife and land clearing on protected areas. Immediately plant the areas cleared with LCC. Employee training by incorporating environmental impact control programs. Slope maintained at 8% on road network construction. Road signs installation according to the needs. Maintain road surfacing to prevent slippery road. Protect trees that can be protected as home for wildlife. 	Once a year, conducted gradually adjucted tol and cleared on each división and evaluated twice, first evaluation at the age of 6 months and second at the age of 1 year to obtain sucess rate.

		 Land reclamation activities are carried out after the location permit has expired. Immediately undertake reclamation by conducting reforestation on the location. Land that has been restored is surfaced with top soil then planted with LCC. Conducting land regeneration with plant spacing of 3x3m on areas that have been restored with fast growing plant species. On regeneration areas need to be planted with local fruit rambutan, cempedak, durian etc. Plants maintenance and fertilizing include: Plants maintenance and fertilizing include: Plants movind by for the string slow solution is to solve a string slow solution is to solve a string slow solve a stri
5	GHG	The objects of mitigation and monitoring within the scope of new plantations are divided into three categories, namely (1) land clearing, (2) use of fuel, and (3) use of fertilizers. Land clearing is one of the mitigation objects because potential lands for new plantations (land that have

not been planted) have potential for biomass carbon stocks, especially on lands covered with forest and scrub. The use of fuel and fertilizers is also the main object of mitigation because they are a significant source of GHG emissions. In the calculation, the production rate of fresh fruit bunches (FFB) per hectare is obtained from data from surrounding companies (Group Rea Kaltim), which is on average 14-15 tons-FFB/ha. Explanation of the mitigation object, as follows:

Plantations scope:

No

1. High Carbon Stock (HCS) and High Conservation Value (HCV) areas

Biomass carbon stocks on potential lands for new planting were identified through the HCSA assessment and high value areas were determined from the HCV assessment results. Low-medium density secondary forest (HKR) is the area with the highest AGB carbon stock in the PT PU area, followed by young regeneration forest (HRM) or Shrubs. Meanwhile, open land (shrubs and inland swamps) is the area with the lowest AGB carbon stock. In the GHG emission mitigation plan, the company's management unit decided to exclude areas of conservation value and high carbon stock from the development plan (defined as non-development areas). This mitigation plan is embodied in the land use plan in the field for new developments and conservation.

2. Projected fuel use in plantation area

GHG emission mitigation plans through fuel use planning are carried out based on projections of fuel use based on the planned area of new plantation development. The amount of fuel used is a variable in plant maintenance that depends on the area of the new plantation. Therefore, land use plans in GHG mitigation efforts have a direct effect on the projection of fuel use.

Table 9. Projected fuel use in plantation areas

No	Fuel Type	Usage per Year per Hectare (liter/ha)	Total Usage per Year (liter)*	Projected GHG Emissions (ton CO₂e/Year)
1	Diesel	99.37	571,780.87	1,784
2	Premium	1.88	10,817.63	30

3. Projected use of fertilizers in plantation areas

The GHG emission mitigation plan through fuel use planning is carried out based on the projected use of fertilizers based on the types of fertilizers used and the area of new plantations. Like the projected use of fuel, the amount of fertilizer use is also directly and directly proportional to the area of land use for new plantations.

Table 10. Projected use of fertilizers in plantation areas

Projected GHG Emissions (ton CO₂e)

	Fertiliser Type	Usage Per Year per Hectare (ton/ha)	Total Usage oer Year (ton)*	Transport	N₂O Emissions	CO ₂
1	Urea	0.314	1,806.8	2,861.75	5,152.21	1,324.97
2	RP	0.203	1,168.1	971.72	-	-
3	MOP	0.321	1,847.1	819.91	-	-
4	Kieserite	0.149	857.4	380.58	-	-

Milling scope:

PT PU does not plan to build a palm oil mill. The results of the FFB will be brought to the nearest PKS, namely Perdana POM. Therefore, GHG mitigation originating from mill s is not under the authority PT PU, but in the management of the Perdana POM unit. The amount of emission from this mill depends on the contribution of FFB supplied by PT PU's plantation. The parameters used in estimating GHG emissions from the scope of palm oil (CPO) production are presented in **Table 11**.

Table 11. Available data from Perdana POM

Mill Pro	Mill Profile						
1.1.	Mill names	:	Perdana Palm Oil Mill (PT. REA Kaltim Plantations)				
1.2.	Address	:	Pulau Pinang Village, Kembang Janggut District, Kutai Kartanegara Regency, East Kalimantan				
1.3.	Coordinate	:	00°15'27.5"; 116°09'00.1"				
1.4.	CPO's production (Ton)	:	66,016.47(OER 21.7%)*				
1.5.	PK's production (Ton)	:	14,88.22 (KER 4.89%)**				
1.6.	Export of electricity to grid (KWh)	:	5,645,361				
1.7.	Export of palm kernel shell (Ton)	:	21,298.2				
1.8.	Export of EFB (Ton)	:	69,981 (EFB/FFB 23%)***				
Mill Op	erations Data						
2.1.	FFB's processed (Ton)	:	304,264.61				
2.2.	Fuel usage for FFB's transportation from estate to mill	:	N.A				
2.2.1.	Diesel (liter)	:	847,027.77				

2.2.2.	Premium (liter)	:	2,708	
2.2.3.	Other fuel	:	N.A	
2.3.	Distance estate – mill (km)	:	+/- 57 km	
2.4.	Grid electricity (KWh)	:	1,553,050	
2.5.	Mill diesel usage (liter)	:	62,207	
2.6.	Water usage (M3)	:	477,766	
2.7.	Lubricant usage (Liter)	:	2,326	
2.8.	Cycle-Hexane suage (kg)	:	385	
2.9.	Soda Ash usage (kg)	:	26,150	
2.10.	Coustic Soda Liuid usage (L)	:	51.450	
2.11.	Natrium Hidroksida usage (kg)	:	N.A	
2.12.	Asam Klorida usage(kg)	:	25,850	
2.13.	Calcium Karbonat usage (kg)	:	N.A	
2.14.	NaCl usage (kg)	:	N.A	
2.15.	Fosfat usage (kg)	:	N.A	
2.16.	Sulphite usage (kg)	:	N.A	
2.17.	Alum usage (kg)	:	34,835	
POME				
3.1.	POME production (m ³)	:	192,232 (POME/FFB 63.1%)	
3.2.	POME distributed to Methane Capture (m ³)	:	192,232	
3.3.	POME distributed to Composting (m ³)	:	0	
3.4.	COD yang dikurangi oleh Kolam Terbuka (ton/m³)	:	0	
_	on and monitoring plan ssions strategic			

The GHG emission mitigation strategy is prepared based on practical achievements that can be realized as part of the company's operational activities. In addition, the GHG emission mitigation strategy also considers increasing productivity. In other words, an increase in productivity without an increase in the amount of significant emissions is also a form of reducing GHG emissions relative to the level of production, while a decrease in GHG emissions that causes a decrease in productivity will increase the amount of GHG emissions relative to the level of production.
Mitigation and monitoring plans can be divided into two, namely specific mitigation and monitoring plans, and general mitigation and monitoring plans. In the new plantation development plan stage, specific GHG emission mitigation plans are focused on land use as the main variable affecting the amount of emissions from other operational activities (the scope of FFB production and the scope of palm oil production). Mitigation plans for other operational activities are implemented through planning the use of measurable emission source materials. In other words, the implementation of specific GHG emission mitigation and monitoring plans can be carried out in a practical and measurable manner by following the land use plan and the amount of fertilizer and fuel use that has been determined.
A general mitigation and monitoring plan is made for components of GHG emission sources that cannot be projected by the company. In this case, the components of GHG emission sources from the palm oil production process. The company does not yet have a mill, so measurable measures to reduce GHG emissions from mill operational activities are not yet relevant.
General mitigation plan General GHG emission mitigation activities apply to all aspects within the company's operational scope. The successful implementation of general mitigation activities will be recorded in periodic records in management, for example the decrease in fuel use due to rearrangement of FFB transport routes, decrease in fertilizer use due to technology application, etc.
The success achieved in the implementation of a general mitigation plan can also be applied as a specific and measurable mitigation plan to be implemented in the next period. Therefore, recording in management is important. In simple terms, a general mitigation plan is an experimental space for companies to implement new innovations in an effort to reduce emissions, either directly or by increasing productivity. Some of the recommended general mitigation plans include: Arrangement of FFB transport routes in the plantation. Turning off vehicle engines when not in use for transportation. Save electricity consumption, especially those that are generated with fuel.
 Preventing fires. Maintain and manage conservation areas. Maintain and/or enhance oil palm growth. Implementing new technologies that support GHG emission mitigation efforts.

Table No		n mitigation and moni IG emission manager Indicator	c <i>i i</i>	·	le 12. oduction (plantations) for the pe Management Plan	riod 2022-2025* PIC
1		 1.1 Quality of stand canopy cover is maintained. 1.2 Number of disturbances 		1.1 There is no decrease in stand canopy cover area in the conservation area.	 1.1 Protecting the conservation area from disturbance (fire, encroachment, etc.) 1.2 Dissemination of conservation areas and their protection to workers, communities and land clearing contractors 1.3 Creation and maintenance of physical boundary signs (demarcations) and warning boards of conservation areas in the field. 1.4 Protecting the conservation area from contamination by maintenance activities in the plantation area 	Internal company: Estate
2	Oil palm plant biomass growth	2.1. Plant health 2.2. Number of plants (in blocks)	2.1. Palm oil principal survey data in each block2.2. Palm oil principal survey data in each block	 2.1. Pest and/or disease attacks are within normal limits 2.2. The dynamics of the principal amount in one block are within the normal threshold 	 2.1. Optimal plant maintenance 2.2. Prevention/and/or overcoming of pest and disease attacks in a responsive and effective manner 2.3. Thinning and/or insertion where necessary to optimize oil palm tree growth 	Internal company: Estate TSD Agronomy Dept, Surve Mapping Dept Relevant stakeholder: Dinas Perkebunan, palm o practitioner, University

3	Land fire prevention	3.1. Number of fires3.2. Burnt area	3.1. BA of the fire3.2. Data collection of areas/blocks affected by fire	Progressive to redu the number of f incidents from t previous year.	ire fire prevention and c	ontrol Safety prevention Dept, L patrol Mapping of purces in Relevant in the Governr t fires distric,	company: Estate, Dept, Conservation C&C Dept, Survey g Dept stakeholde: nent (distric, sub regency), Police, Dinas Perkebunan,
4	Use of fuel in plantation operations	4.1. Amount of fuel used for plantation operations	4.1. Amount of fuel used for plantation operations	4.1. Optimal use fuel in plantati operations productivity	of 4.1. Management of	fuel use Internal rations) Worksho ctivities to Dept use (see ctivities) Relevant Governr distric,	company: Estate, op & Transportation stakeholde: nent (distric, sub regency), tation contractor
5	Fertilizer use	5.1. Amount of fertilizer use	5.1. Fertilizer usage data	5.1. Optimal use fertilizers productivity	of 5.1. Optimal use of fertili	zers Internal TSD Agro Mapping Relevant Dinas Po	company: Estate, pnomy Dept, Survey
Table	13. Matrix of GH	IG emission monitori	ng activity plans in tl	ne scope of FFB pr	oduction (plantations) for	the period 2022-	
No	Objective	Indicator	Basic Data	Target	Monitoring Plan	PIC	Monitoring Schedule
1	conservation areas (high conservation value areas and	 1.1 Quality of stand canopy cover is maintained. 1.2 Number of disturbances 1.3 Condition of boundary markings and warning boards of 	boundary markings and warning boards of conservation areas in the field	 1.1 There is no 1 decrease in stand canopy cover area in the conservation 1 area. 1.2 Sustainably reduce to 	 Periodic monitoring of the condition of conservation area boundary signs and warning boards Monitoring land clearing activities adjacent to conservation areas 	Internal company Estate, Conservation Dept, LC&C, Survey Mapping Dept Relevant stakeholder: Government (distric, sub distric	

	Police, Dsibun,
1.4 Size of monitoring disturbances monitoring locations in NGO 1.4 Size of locations occurring in conservation areas occurring in conservation areas occurring threats 1.3 Minutes of conservation 1.4 Monitoring threats occurring in and disturbances to of 1.3 Minutes indings in 1.3 Land clearing conservation areas with occurring in	Dsibun,
conservation arealocationsoccurring in conservationconservation areas1.3 Minutesof disturbance1.4 Monitoring threats areasand 	
1.3 Minutesofconservation1.4 Monitoring threatsdisturbanceareasand disturbances tofindingsin1.3 Land clearingconservation areas with	
1.3 Minutesofconservation1.4 Monitoring threatsdisturbanceareasand disturbances tofindingsin1.3 Land clearingconservation areas with	
disturbance areas and disturbances to findings in 1.3 Land clearing conservation areas with	
findings in 1.3 Land clearing conservation areas with	
conservation does not regular patrols. This can	
areas (example: enter the also be done by involving	
fire, conservation workers in the garden and	
encroachment, area the community	
etc.)	
1.4 Mapping	
progress of land	
clearing	
2Oil palm plant2.1. Plant health2.1. Palm oil2.1. Pest and/or2.1. Regular basic healthInternal comp	any: Every 1 month
biomass growth 2.2. Number of plants principal survey disease surveys and reports on Estate, TSD	
(in blocks) data in each attacks are pest/disease attacks Agronomy De	
block within 2.2. Survey the number of Survey Mappi	ng
2.2. Palm oil normal limits principals on a regular Dept	
principal 2.2. The dynamics basis and the minutes of	
survey data in of the thinning / insertion of Relevant	
each block principal the principal stakeholder te	erkait:
amount in Dinas Perkebu	unan,
one block are palm oil	
within the practitioner,	
normal University	
threshold	
3 Land fire 3.1. Number of fires 3.1. BA of the fire Progressive to 3.1. Socialization of fire Internal comp	any: Daily hotspot
prevention 3.2. Burnt area 3.2. Data collection reduce the prevention and control Estate, Safety	
of areas/blocks number of fire 3.2. Fire hazard patrol Conservation	
affected by fire incidents from 3.3. Check the availability of LC&C Dept, Su	
the previous year. water in water Mapping Dep	-
reservoirs for	months
extinguishing Relevant	
3.4. Organization of fire stakeholde:	
records Government	
(distric, sub di	
regency), Poli	ce,

						BKSDA, Dinas Perkebunan, NGO	
4	Use of fuel in plantation operations	4.1. Amount of fuel used for plantation operations	4.1. Amount of fuel used for plantation operations	4.1. Optimal use of fuel in plantation operations for productivity	4.1. Recording of fuel usage4.2. Recording of plantation operational vehicles	Internal company: Estate, Workshop & Transportation Dept Relevant stakeholde: Government (distric, sub distric, regency), transportation contractor	Every 1 month
5	Fertilizer use	5.1. Amount of fertilizer use	5.2. Fertilizer usage data	5.2. Optimal use of fertilizers for productivity	 5.1. Monitoring and regulation of fertilizer use with reference to the amount of use that has been planned 5.2. Periodic recording of productivity dynamics (as an implication of the use of fertilizers) 	Internal company: Estate, TSD Agronomy Dept, Survey Mapping Dept Relevant stakeholder: Dinas Perkebunan, palm oil practitioner, University	Every 1 month

6	Acceptance of Management	Name of Person Responsible	Peter Bayliss
	Plans	Designation	Management Representative
		Signature	Peter Bayliss Management Representative) Date: 04 th July 2022
		Date	04 July 2022