Toba Pulp Lestari

Forestry Operational Activities Impact on Environment and Climate Risk

PT TPL has identified several operational activity that has impact on the environment. An Environmental Aspect and Impact Assessment (EAIA) was performed to further understand the impact to elevate the forest management plans. Based on the aforementioned, assessment report some key impactful activities are:

1. Land clearing Activity;
2. Harvesting eucalyptus woods; and
3. Emissions from the use of fossil fuels for machine and transportation equipment.

The EAIA report established that TPL's operation has minimal or close to zero direct impact on climate risk. However, as part of our sustainability strategy, risk and/or opportunity mitigation plans have been establish and constantly being monitored, and managed to incremenally reduce our impact on the environment over time.

No.	The type of environmental impact being monitored	Actions taken	Frequency	External Verification
I. Protected Areas				
1	Germplasm Preservation Area (NRIC)	Security areas	1x2 month	ISO14001, PHPL, IFCC
		Wildlife, protection, and habitat	1x1 year	ISO14001, PHPL, IFCC
		Vegetation and protection status		ISO14001, PHPL, IFCC
		Components of germplasm		ISO14001, PHPL, IFCC
		Non-Timber Forest Products		ISO14001, PHPL, IFCC
2	River borders	Security areas	1x2 month	ISO14001, PHPL, IFCC
		Wildlife, protection and their habitat	1x1 year	ISO14001, PHPL, IFCC
		Vegetation and protection status		ISO14001, PHPL, IFCC
		Components of germplasm		ISO14001, PHPL, IFCC
		Non-Timber Forest Products		ISO14001, PHPL, IFCC
3	Green Belt (Animal Corridor)	Security areas	1x2 month	ISO14001, PHPL, IFCC
		Wildlife, protection and their habitat	1x1 year	ISO14001, PHPL, IFCC
		Vegetation and protection status		ISO14001, PHPL, IFCC
		Components of germplasm		ISO14001, PHPL, IFCC
		Non-Timber Forest Products		ISO14001, PHPL, IFCC
4	Buffer Zone (Protected forest buffer zone)	Security areas	1x2 month	ISO14001, PHPL, IFCC
		Wildlife, protection and their habitat	1x1 year	ISO14001, PHPL, IFCC
		Vegetation and protection status		ISO14001, PHPL, IFCC
5	Slope >40%	Security areas	1x2 month	ISO14001, PHPL, IFCC
6	Biodiversity Area	Security areas	1x2 month	ISO14001, PHPL, IFCC
		Wildlife, protection and their habitat	1x1 year	ISO14001, PHPL, IFCC
		Vegetation and protection status		ISO14001, PHPL, IFCC
7	Peat Protected Area	Security areas	1x2 month	ISO14001, PHPL, IFCC

No.	The type of environmental impact being monitored	Actions taken	Frequency	External Verification
II. Areal Not Effective For Production				
1.	Location of the nursery	Plant pests and diseases	Every attack	ISO14001, PHPL, IFCC
		Sedimentation	1x6 month	ISO14001, PHPL, IFCC
		Wastewater quality		ISO14001, PHPL, IFCC
		River water quality		ISO14001, PHPL, IFCC
		Plankton, benthos and nekton		ISO14001, PHPL, IFCC
2.	Office Area, Warehouse, Workshop, Housing, Base Camp, and Quarry	Soil erosion rate (stakes method)	1x3 month	ISO14001, PHPL, IFCC
		Genset emissions	1x1 year	ISO14001, PHPL, IFCC
		Wastewater quality	1x6 month	ISO14001, PHPL, IFCC
		River water quality		ISO14001, PHPL, IFCC
		Drinking water quality	1x1 year	ISO14001, PHPL, IFCC
3.	Office Area, Warehouse, Workshop, Housing, Base Camp, Genset Room	B3 waste balance	1x1 month	ISO14001, PHPL, IFCC
4.	Livelihood area	Potential and security	1x1 year	ISO14001, PHPL, IFCC
		Utilization of results	1x1 month	ISO14001, PHPL, IFCC
5.	Area of Genetic Resources (ASDG)	Potential of seed stands (mother tree)	1x1 year	ISO14001, PHPL, IFCC
6.	Permanent Measurement Location (PUP) of Public Forest	Growth Forests	1x1 year	ISO14001, PHPL, IFCC

No.	The type of environmental impact being monitored	Actions taken	Frequency	External Verification
III. Effective area for production				
A. Physical Chemistry				
1.	Air Quality: Dust	Dust Content	1x1 year	ISO14001, PHPL, IFCC
2.	Soil :	Soil erosion rate (stakes method)	1x3 month	ISO14001, PHPL, IFCC
	a) Soil Erosion	USLE method	1x1 month	ISO14001, PHPL, IFCC
	b) Soil fertility	Soil fertility	1x6 month	ISO14001, PHPL, IFCC
	c) Soil density	Soil density		ISO14001, PHPL, IFCC
	d) Top Soil Thickness	The level of thickness of top soil soil		ISO14001, PHPL, IFCC
	e) Land Surface Rockies	Level of Land Surface Rockness		ISO14001, PHPL, IFCC
	Hidrology :			ISO14001, PHPL, IFCC
	a) River discharge	River Discharge	2x1 month	ISO14001, PHPL, IFCC
	b) Sedimentation	Sedimentationi	1x6 month	ISO14001, PHPL, IFCC
	c) River Water Quality (Swapantau)	River water quality parameters	1x2 month	ISO14001, PHPL, IFCC
B. Biology				
1.	Vegetation: Potential Stands HTI	Riap forest plantations	Routine	ISO14001, PHPL, IFCC
2.	Wild animal	Diversity of wildlife species in the HTI area	Every encounter	ISO14001, PHPL, IFCC
3.	Plankton, Bentos, Nekton	Individual density and species diversity	1x1 tahun	ISO14001, PHPL, IFCC
4.	Plant pests and diseases	Types and potential for HPT disorders	Every attack	ISO14001, PHPL, IFCC
5.	Non-Timber Forest Products	Utilization by the community	Routine	ISO14001, PHPL, IFCC
6.	Forest Fire	Forest fire area	Every incident	ISO14001, PHPL, IFCC

No.	The type of environmental impact being monitored	Actions taken	Frequency	External Verification
III. Effective area for production				
C. Socio-Economic Culture				
a. Social Economy				
1.	Safety	Number of local workers (permanent and OTC)	2x1 year	ISO14001, PHPL, IFCC
2.	Business opportunity	Number of local partners / contractors		ISO14001, PHPL, IFCC
3.	Community income	Community income level		ISO14001, PHPL, IFCC
4.	Economy	Regional economic level		ISO14001, PHPL, IFCC
5.	Land transportation	Utilization of roads by the community		ISO14001, PHPL, IFCC
b. Socio-Culture				
1.	Historical heritage / culture	Number of cultural historical relics	1x1 year	ISO14001, PHPL, IFCC
2.	Public perception	Public perception of the company		ISO14001, PHPL, IFCC
c. Environmental Health				
1.	Safety	Work accident rate	1x1 month	ISO 45001, ISO 14001, PHPL, IFCC
2.	Health	Occupational disease rates		ISO 45001, ISO 14001, PHPL, IFCC
3.	Public health	Public health level		ISO 45001, ISO 14001, PHPL, IFCC