



## PT HILTON DUTA LESTARI – LANDSCAPE PROTECTION PLAN

**Disclaimer:**

The numbers represented in this plan are derived from 2021 and various historical sources. Numbers are indicative and local environment relative to 2021 year's context and may therefore change over time.



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## 1. &GREEN's TRANSACTION INTO HDL

### 1.1. The objective of the transaction and of PT HDL's LPP

PT Hilton Duta Lestari (HDL) is a palm oil plantation business operating in West Kalimantan (Indonesia) since 2010. HDL owns and manages two adjacent blocks, which include 5,388 ha of mature palm oil plantation.

Supported by &Green's financing, HDL will construct a mill to process FFB into crude palm oil (CPO). The CPO mill will have a capacity of 30 tons/hour. In addition, HDL commits to develop its environmental and social management system and capacity in alignment with the IFC PS and RSPO principles and criteria (P&Cs) to support the long-term performance of the business. HDL has no plan to expand cultivated areas and intends to receive FFB from third parties—primarily smallholders—to meet the required feedstock of the mill.

By investing into a mill and into HDL, the proposed loan will generate clear transformational impact, at the level of the company, for the surrounding communities and ecosystems that support both groups. At a sector level, the transaction presents an opportunity to create a model for financing an independent CPO mill, which sources sustainably produced FFB, which is socially inclusive and deforestation-free. The landscape protection plan (LPP) presented in this document reflects HDL's long-term sustainability strategy and describes the environmental, social, and transformational impacts to be generated during the financing period.

### 1.2. The project area: the scope of HDL's landscape protection plan

The scope of HDL's landscape protection plan reflects the areas which are expected to be impacted by the project. They can be classified based on the degree of influence and control that HDL will exercise on land use and land users.

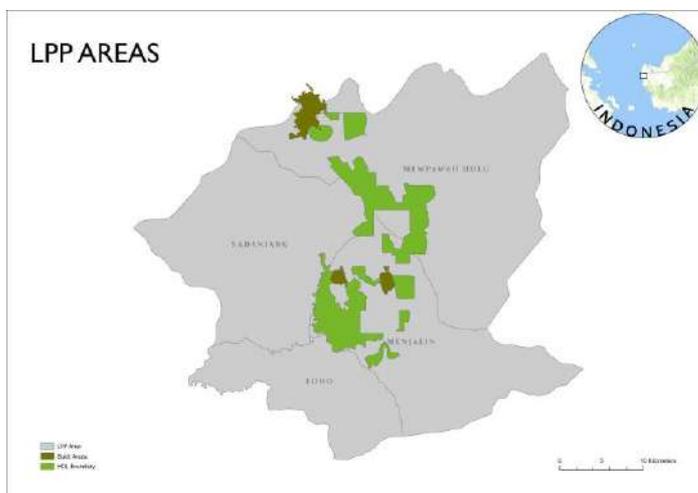


Figure 1: PT HDL's Landscape



Firstly, the areas that will be directly impacted by the project, as they relate to assets and land directly managed by HDL. HDL's assets include the palm oil plantation and the mill. HDL's concession is located around 100 km to the north of Pontianak, West Kalimantan's capital. Administratively it is located in Menjalin and Mempawah Hulu sub districts, Landak district. The total concession area (based on the location permit granted by the government) is 13,551 ha. The proposed mill, which will require a total of 62 ha of land, will be located within the concession boundaries of HDL.

Secondly, the areas that will be indirectly impacted by the project: they include areas occupied by communities living around the plantation who are indirectly impacted by the plantation's operation and who will also be associated with the future supply chain of the mill. HDL's proposed mill will process 30 tons/hour of FFB and potentially 45 tons/hour FFB in the coming years. The volumes produced by the plantation will need to be supplemented with FFB purchased from third parties to ensure the mill operates at the optimal design capacity. There are about 37,000 ha of smallholder palm oil and 14,000 ha of commercial palm oil planted within a 30km radius of HDL's mill site, spread across 4 sub-districts (i.e. Mempawah hulu, Menjalin, Sadaniang and Toho). Together they provide a large pool of supply for HDL to integrate into its supply chain.

Direct and indirect areas are together understood as the 'landscape' in which HDL operates and are the scope of HDL's landscape protection plan.

## 2. LANDSCAPE'S E&S BASELINES AND PT HDL'S E&S CAPACITY

### 2.1. Environmental and social baselines for the landscape

As per the government spatial plan, the landscape includes four land use classifications implying different land use functions and governance systems. The majority of the area is classified as APL (i.e. 75%) – which purposes it for non-forestry agriculture production. 13% is classified as production forest (HP) and commercial forestry production (HPK) – purposed for forestry plantations such as rubber for instance. Lastly, there are about nine protected forests areas, accounting for about 12% of the landscape. HDL's concession is located in APL designated areas, but is directly adjacent to two forest protected areas.

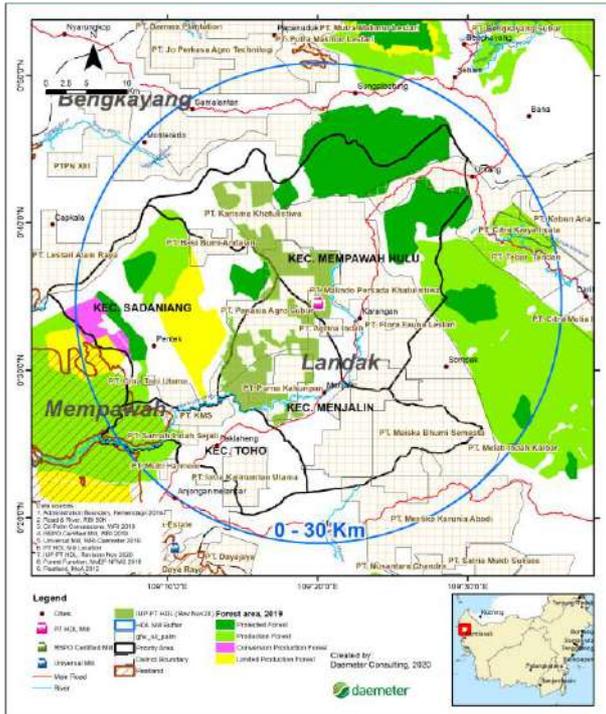


Figure 2: Map of land use classification. Source: PT HDL

The landscape is mainly characterised as marginal lands based on the topography and soil quality. The area is hilly with inland valley swamps between the hills, all of which are cultivated for rice. There are 23 hills within and around HDL’s concession alone, with slopes up to 15 degrees.<sup>1</sup> Soil are class 4 under the Indonesian classification (where 5 is the most non-fertile and 1 is highly fertile).

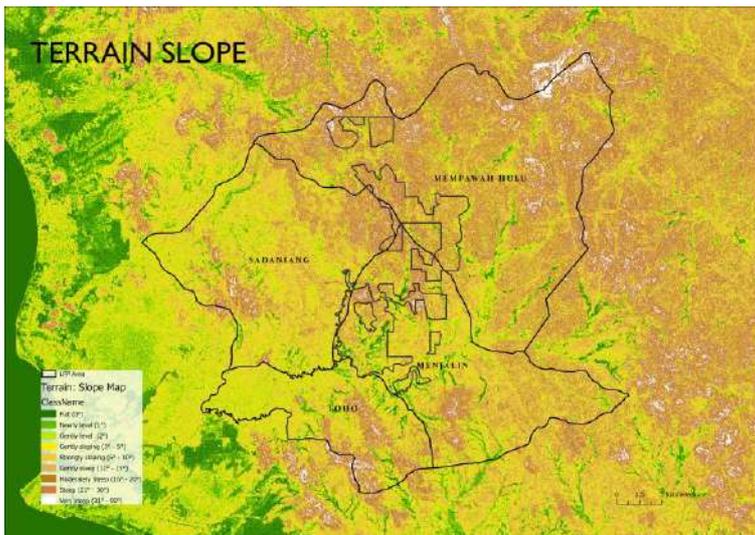


Figure 3: Topographical map of the landscape. Source: SAIL

<sup>1</sup> As a reference point we note that the Roundtable on Sustainable Palm Oil (RSPO) for instance recommends planting oil palm on terraces where slopes are up to 25 degrees and planting on the contour below 10 degrees.



**From an ecological perspective**, there are about 7,501 ha of forest left within HDL's landscape, mostly secondary forest. The largest forested areas can be found within the Sadaniang subdistrict and in Mempawah district and are classified as secondary forest. HDL's HCV/HCS assessment (2021) confirms that PT HDL's area is located in the Kalimantan lowland rain forest<sup>2</sup>. Currently, HDL's IUP area is dominated by cultivated land, i.e., palm oil plantations, rubber plantations, farm land and mixed gardens. Forest covered land is found on the top of the hills, spreaded in patches, classified as secondary or young regenerative forest. The majority of the landscape is consists of two ecosystems: mixed dipterocarpace forest or hills on metamorphic rocks and sandstone upper lowland forest. Peat swamp forest has not been found to exist within HDL's concession, but is observed to be present in the Mempawah Hulu district, at the south west side of HDL's landscape.

**In terms of biodiversity**, the HCV-HCS assessment confirmed that HDL's IUP is not a priority area for biodiversity, based on the overlay of PT HDL's area boundaries and maps of the center of Kalimantan's (Borneo) biodiversity (such as Important Bird Area (IBA)-Endemic Bird Area (EBA), Site Ramsar, the distribution of orangutans and Intact Forest Landscapes). The IUCN Red List for Rare, Threatened or Endangered (RTE) Species suggests the presence of two critically endangered vegetation species and five vulnerable vegetation species within the concession (Gonystylus bancanus and Aquilaria malaccensis Lamk.). In terms of fauna, we find the Sunda Pangolin (Manis javanica), a Critically Endangered (CR) species, as well as the Nycticebus coucang (Kukang) and the Hylobates muelleri (Owa Kalawat)- two Endangered (EN) species. Five mammals and one bird listed as Vulnerable (VU) are also present.

The HCV-HCS assessment further indicates that a total of 6,209.66 ha of HCV is found within HDL's concession (table 1), although classifications can overlap with one another (figure 4). Most of the high conservation areas within the concession relate to HCV 4 and HCV 1. HCV 1 and 3 are present and function as valuable habitat for RTE species, although these are in a rather fragmented state, situated next to forest protected areas or as part of the HCV 4 areas, in the form of mix agroforestry with other crops such as rubber.

HCV classification	Findings	in Ha
HCV 1: Species diversity Concentrations of biological diversity including endemic species, and rare, threatened or endangered species, that are significant at global, regional or national levels.	Present	1,560.23
HCV 2: Landscape-level ecosystems, ecosystem mosaics and Intact Forest Landscapes Large landscape-level ecosystems, ecosystem mosaics and Intact Forest Landscapes (IFL), that are significant at global, regional or national levels,	Not present	-

<sup>2</sup> Kalimantan's lowland rainforest is a Sundaland Biodiversity Hotspot, which is the center of Dipterocarpaceae species diversity (267 species of which 155 species are endemic to Kalimantan), globally renowned for having a wealth of 380 bird species and 10,000 plant species, and home to two key endemic species, the Bornean Orangutan and Bekantan (Proboscis Monkey).



and that contain viable populations of the great majority of the naturally occurring species in natural patterns of distribution and abundance.		
HCV 3: Ecosystems and habitats Rare, threatened, or endangered ecosystems, habitats or refugia	Present	210.40
HCV 4: Ecosystem services Basic ecosystem services in critical situations including protection of water catchments and control of erosion of vulnerable soils and slopes	Present	3,610.88
HCV 5: Community needs Does the assessment area or surrounding landscape contain sites and resources fundamental for the necessities of local communities or indigenous peoples?.	Present	608.42
HCV 6: Cultural values Sites, resources, habitats and landscapes of global or national cultural, archaeological or historical significance, and/or of critical cultural, ecological, economic or religious/sacred importance for the traditional cultures of local communities or indigenous peoples, identified through engagement with these local communities or indigenous peoples.	Present	219.73
<b>Grand Total</b>		<b>6,209.66</b>

Table 1: High Conservation Value Areas in HDL's concession. Source: Daemeter

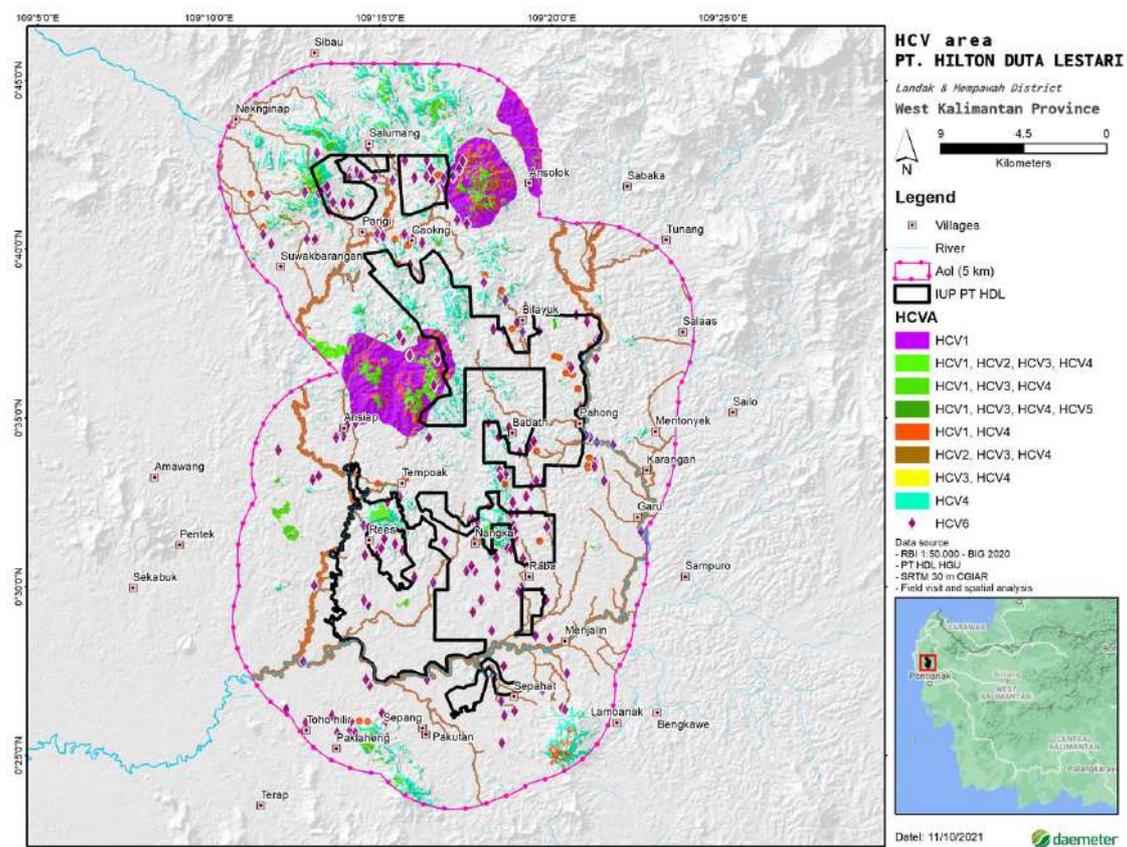


Figure 4: HCV map of HDL's concession. Source: Daemeter Consulting

The area is relatively densely populated as there are about 39 villages within HDL's landscape, hosting a total of approximately 85,000 inhabitants. 19 of these villages are located within or directly adjacent to HDL's concession. While official information on village



territory does not always accurately present the actual size, historical data suggests that villages have experienced high population growth over the last 10 years (> 2%/year).

**The majority of the inhabitants of the villages are Dayak (95% of the population). Dayaks are considered to be indigenous to the area.** Besides Dayaks, other ethnic groups such as Melayu, Java, Bugis, Chinese, Nias, Padang, Batak, Madura, and Flores also live in these villages and are identified as transmigrants. Although most of the population is Catholic, there is a strong practice of the customary rituals and ceremonies (“Adat” heritage), which relies on the forested ecosystems within the landscape (including, for instance, hunting, fruit collecting and spiritual rituals). The community considers the hills present in and surrounding the concession (i.e. “Bukit Ohak” and “Bukit Sepatutn”) as a customary forest, used to preserve the water source and for cultural events. These have been considered as HCV 5 and 6 under the HCV-HCS assessment (Table 1 above).

**Land ownership has historically been recognized by the opening of land for shifting cultivation activities as well as Adat or customary (informal) rights to land,** which are recognized within the community. Governance heavily relies on this customary rule, based on a strong sense of ownership by the Dayak population over the land and its resources. Formal government “freehold” titles are less common and most farmers have a letter from the village head to document their land tenure/rights. Coupled with the fact that there has been limited dissemination by the district government about the spatial plan and rules linked to various categories of land use, this results in limited knowledge by the communities of the existing spatial plan. Village land use decisions are mainly made based on village level processes.

**The livelihood activities of the population has historically been a mix of agriculture and use of forest resources;** rice is grown for household consumption - in many cases using irrigation for the rice fields. The majority of villagers were rubber tappers in the past, inheriting rubber plantations from parents and ancestors and approximately 36,000 hectares of rubber plantation are still present in the landscape. Today, many have switched to rice cultivation (classified as ‘Agriculture’ in table 2) and other forms of livelihood such as oil palm farming (37,726 ha) and livestock/fish farming (also classified as ‘Agriculture’).

No.	Land cover	LC2020
1	Secondary dryland forest	5.236
2	Secondary swamp forest	1.214
3	Shrub	35.351
4	Rubber	36.010
5	Industrial Oil Palm	<b>14.208</b>
6	Agriculture	19.960
7	Open land	6.365
8	Water	500
9	Smallholder Oil Palm	<b>37.726</b>
<b>Total</b>		<b>156.570</b>

Table 2: land use classification of the landscape (2020). Source: Daemeter Consulting



## 2.2. PT HDL history and assessment of current practices

HDL initiated its operations in 2010, following the issuance of its original location permit in the same year<sup>3</sup>. The land acquisition process took place between the years 2010 – 2014, following an FPIC process and did not require any physical or economic displacement of communities<sup>4</sup>. The lands purchased by HDL were in fact small parcels undesired by farmers and who retained better land for their own farming. Today approximately 33,236 people (with a large range of 1,200 – 3,700 per village) still live in and around the concession. Land is still being cultivated by smallholders within the concession – including rice paddies, mixed forestry, etc. While HDL's procedure with respect to its grievance mechanism has been inadequately implemented, consultation with communities and desk review indicates that there has been no incidence of land dispute as a result of the land acquisition process.

Individuals that sold land to HDL have been given opportunities to benefit from the plantation development. Under their agreement with HDL, former landowners are eligible to receive a portion of the company's net revenue. This is implemented through a profit-sharing (or plasma) scheme which dictates that 30% of the company's net profit is allocated to those eligible, through cooperatives. Unlike most palm oil plantations there is no separation between inti and plasma areas; the entirety of the planted area is considered plasma. HDL must report on the performance of the business to the cooperative representatives and disburse the share of the profit on a monthly basis. Cooperatives are responsible for distributing individual shares of the compensation to eligible individuals. Today, 2,055 individuals are eligible under the company's profit sharing scheme.

Following land acquisition, HDL initiated the development of its plantation from 2011 and finalized its last planting in 2014. Results from the recent Land Use Cover Assessment carried out by Daemeter Consulting (2021), confirmed original results (from previous AMDALs) that the lands that were cleared for the plantation were classified as modified habitat: the concession area has experienced fragmentation before HDL started its operations and is today dominated by land covered with mixed rubber and agriculture (table 3). Based on &Green biodiversity framework (developed using the IFC Performance Standard), no net loss / net gain requirements are therefore not applicable for HDL.<sup>5</sup>

No.	Land use	2005	2007	2009	2012	2014	2021
1	Agriculture	1,413.05	1,249.52	1,330.14	1,085.39	939.17	905.85
2	Degraded forest	197.73	197.73	197.73	197.73	197.73	197.73
3	Grass swamp	4.77	4.77	4.77	4.77	4.77	4.77
4	Mix rubber	10,704.67	10,690.29	10,625.50	8,732.29	7,080.84	6,705.64

<sup>3</sup> The original location permit was for an area of 20,223 ha. Since 2010, the permit has changed three times and today it represents an 13,55-ha area.

<sup>4</sup> While PT HDL did not have any 'formalised' FPIC policy at the time, documentation demonstrates that communities were consulted prior to the land acquisition process and the price compensation was based on mutual agreement. The process was documented and distributed to communities, including the agreement and compensation payment.

<sup>5</sup> This conclusion will be confirmed upon finalisation of the biodiversity framework of &Green in 2022.



No.	Land use	2005	2007	2009	2012	2014	2021
5	Palm oil	-	-	-	2,645.70	4,388.08	5,207.83
6	Open land	96.4	129.84	118.52	116.7	510.95	71.06
7	Settlement	6.57	6.57	6.57	6.57	8.73	14.04
8	Shrubs	1,121.26	1,267.21	1,266.72	760.8	391.54	438.14
9	Water	6.73	5.24	1.22	1.22	29.36	6.11
<b>Grand Total</b>		<b>13,551.17</b>	<b>13,551.17</b>	<b>13,551.17</b>	<b>13,551.17</b>	<b>13,551.17</b>	<b>13,551.17</b>

Table 3: Land cover change in HDL's IUP. Source: Daemeter Consulting

Using a 2005 cut-off date—aligned with RSPO guidance, the LUC-Assessment indicates that there has been no clearance of forest within the concession since 2011. HDL cleared a total of 4,388.08 ha of vegetation – mixed rubber/forestry land cover which contained tree-based systems of which more than 50% comprised rubber.<sup>6</sup> Applying RSPO's vegetation coefficient of 0.4 to the total clearance leads to a liability of 1,865.95 ha to be compensated by HDL<sup>7</sup>. In addition, review of the government's spatial plan and forestry map by ERM in 2019 further indicates that approximately 32 ha of protected forest area adjacent to the west side of HDL's plantation appears to be previously cleared by HDL. This is mainly due to the fact that HDL's location permits have changed a number of times since 2010 and that the hilly contours of the land do not support a straight delineation of the concession boundaries, in line with spatial plans. Nevertheless, the 32 ha have now been excluded from the plantation and will be remediated.

The fact that HDL inherited largely undesired lands from communities, left the company with fragmented blocks of land that are more difficult to exploit (i.e. steep slopes) and which demonstrates poorer soils. HDL has developed its plantation through the terracing of land to accommodate the hilly contour and to manage soil erosion, but that also means that topsoil is moved and soil quality is further deteriorated. In some cases, HDL has planted on steep slopes (177.61 ha), as well as in riparian buffer areas (263.05 ha). Planting in riparian areas and steep slopes is prohibited as per the RSPO; based on the the latest LUC-Assessment, HDL has an environmental remediation of 440.66 ha of oil palm planted in these prohibited areas (in addition to the 1,865,08 ha to be compensated)<sup>8</sup>.

For the aforementioned reasons, HDL's plantation is relatively difficult and high-cost to manage. Reasons for HDL's high costs include costs associated with high road density, high maintenance costs, low planting density and high field maintenance costs. Management time tends to also not be utilised effectively because plantation blocks are widely distributed (the distance from one end of the plantation to the other is 60 kilometres). Whilst the palm trees are expected to reach their peak yields based on maturity, their actual yield profile remains low: 13 tons/ha at peak. The topography, soil type and terracing lead to a low planting density and an uneven palm growth. High-cost and lower than expected

<sup>6</sup> An additional 343,47 ha of degraded forest was cleared between 2005 and 2021 but this was not carried out by HDL.

<sup>7</sup> HDL's final compensation liability is subject of final submission of the HCV-HCS and LUCA and approval by the HCVN. It may therefore be subject of change.

<sup>8</sup> HDL's final environmental remediation liability is subject of final submission of the HCV-HCS and LUCA and approval by the HCVN. It may therefore be subject of change.



yields have affected HDL's capacity to invest in optimising its FFB production, further diminishing the yield potential and profitability of the crop. Due to a shortage of cash for instance, the company had to cut back its fertiliser programme until 2020, when it was partially reinstated. Lack of investment has also caused fruit losses because of poor road access to some areas in wet weather and because some field activities are not up to date (including for instance, reduced pruning, reduced road maintenance, etc.).

In terms of forest and biodiversity management, HDL generally lacks a comprehensive HCV/biodiversity management system to protect and conserve HCV, but has made some relevant improvements in terms of capacity since 2019. Most notably, the company has taken steps to identify areas recognized as customary forests by IP communities, which are in and around HDL's concession. These areas are currently identified by HDL as "set aside" areas within the concession. HDL has followed customary processes with the sub-district customary leaders and IP communities, to commonly agree to areas assigned as customary protected (these are referred to as Bukit Patutn, Bukit Ohak, and Bukit Sampuro). Provided that 95% of the population is Dayak, such actions have been valuable in securing their cultural heritage and maintaining their access to land and water within these set-aside areas. Apart from risks related to access to basic resources and to the maintenance of their cultural heritages, no other significant risks have been identified related to Indigenous People, in spite of their large share of the population.

To support local development and, in addition to its plasma scheme, HDL's hiring strategy has mainly focused on hiring local people and creating local business opportunities. HDL operations currently involve a total of 824 workers, consisting of 42 direct employees and managers, and 782 indirect workers (i.e., temporary and contract labor). All of its workforce are hired locally, with exception of the company's top management (i.e. 5 staff). Contractors are managed as part of the existing cooperatives, which the Company has encouraged to consider developing as a business activity.

It is actions such as these that underpin HDL's concerted effort to generate local economic opportunities for growth. While HDL's engagement has been mainly ad-hoc and unstructured, the company's top management's respect for local communities enable the company to developed a positive rapport with them and has secured its social license to operate. The company's sustainability performance, specifically, reflects one that is limited by an under-resourced team whose focus has been on managing the plantation's operations to keep the business afloat. Most environmental and social matters, including compliance with legal E&S regulations, are managed by the General Manager. Since 2020, the company has hired 17 additional E&S staff and has restructured its organisation to integrate the additional sustainability functions required. All of HDL's new staff have been hired locally, making up a highly motivated and dynamic team who has strong ownership and good rapport with local communities. The team does not, however, will require training and guidance by experienced E&S experts to fulfil various commitments under the &Green loan.



High integrity in terms of respecting the local context and local population, a good common sense and a high work-ethos greatly helped the team in establishing the plantation. Yet, as the business starts growing (through the construction of the mill), the lack of an structured E&S management system means that HDL runs the risk of facing increasingly higher challenges, impacting its business and its operating environment. Key risks present in the landscape are described in the subsequent section (section 3).

### 3. DEFORESTATION IN THE LANDSCAPE AND BAU IN THE SECTOR

#### 3.1. Deforestation risks in the landscape

Landak is West Kalimantan's second-highest production region after Ketapang. Over 100,000 ha of forests have been lost between 1990 – 2018 due to conversion to agriculture production<sup>9</sup>. HDL's landscape, in particular, has featured high levels of deforestation between 2006 and 2007, 2011 and 2014.

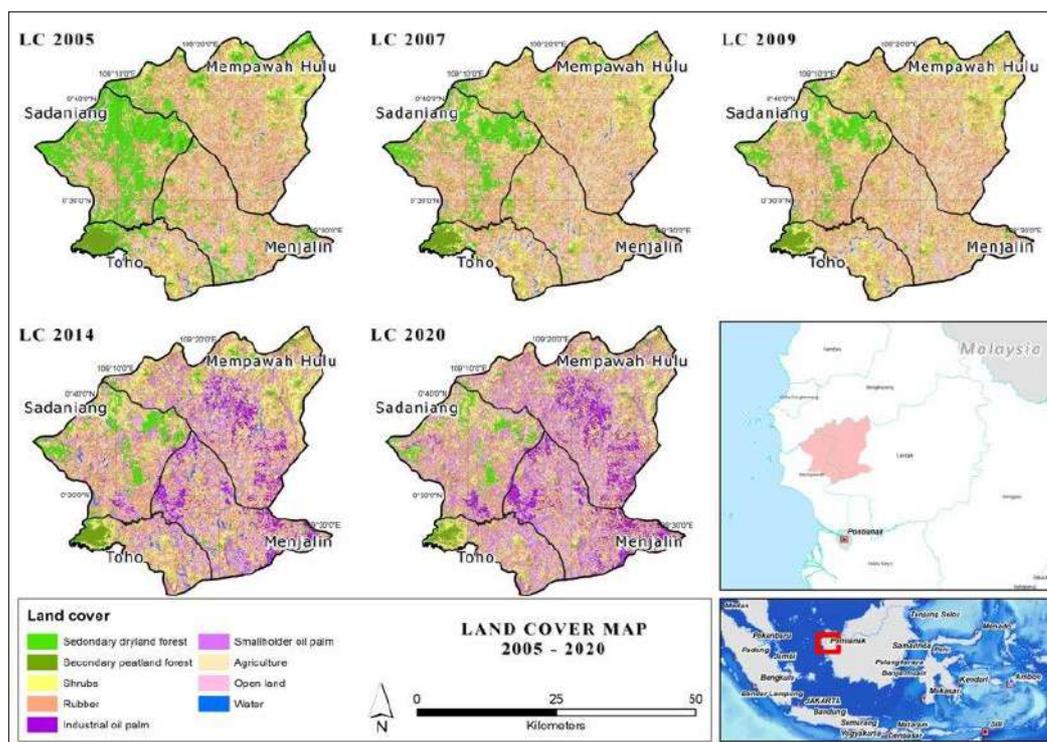


Figure 5: land use change dynamics in the landscape. Source: Daemeter Consulting

The subdistricts of Mempawah Hulu and Toho have experienced a fairly constant, low level of deforestation. Both sub-districts had relatively little forest cover remaining in 2005, due to past logging. Toho sub district still had significant remaining forest in 2005 and little has been cleared since 2005. Menjalin has a similar trend, but experienced a brief spike (which

<sup>9</sup> The Biodiversity Consultancy, 2020



coincides with the start of the operations of HDL). The Sadaniang subdistrict (also in Mempawah district) had the largest remaining forest cover in 2005, and has since seen consistent forest clearing - a total of 8,144 ha. Despite this significant loss of forest cover it still has over 12,000 ha of remaining forest cover. These trends lead us to today's landscape - 7,501 ha of remaining forest in a fairly fragmented state which spreads across various sub-districts and villages.

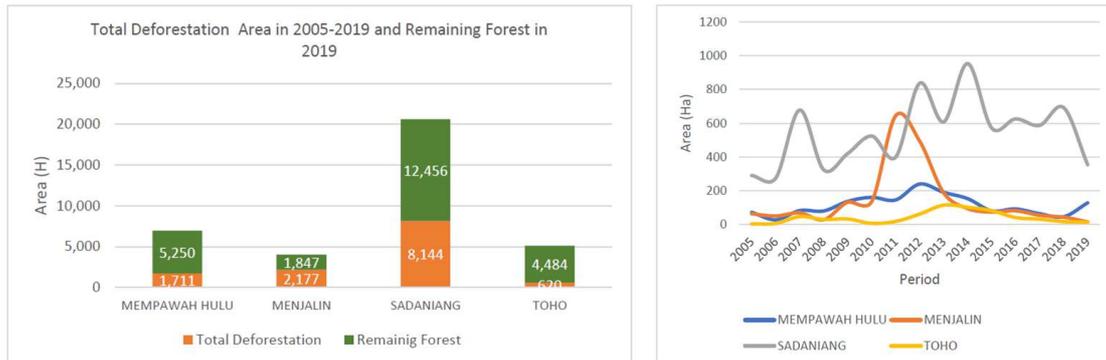


Figure 6: deforestation trends by sub-districts. Sourcing: Daemeter Consulting

Agricultural expansion has typically taken place through clearing of forests for commercial agriculture, based on government incentives and programs. The Indonesian government has historically encouraged the growth of the rubber industry and the land conversion dynamic in the landscape as primary forest has been cleared to make space for rubber plantations. Over the last decades, industrial palm oil started taking a more vital role in the government's agenda, who recognised the industry as a catalyst for local development. Based on 2018 government data, West Kalimantan has issued approximately 453 permits of palm oil plantation in the province, representing a total area of 4,484,237 ha (30% of the total land). Of the entire province, Ketapang, Sintang, and Landak were the districts with highest issuance of permits. Within HDL's vicinity, 52 permits have been issued—accounting for 510,586.85 ha of land that can legally be converted into palm oil.

However, the actual development of oil palm concessions has been slower than anticipated. Within a 30km radius of HDL, there are at least 21 oil palm concessions, ten of which have planted less than 1,000 ha. In some cases, companies have not started operations at all. Other companies have planted part of the plantation but then ceased activities. In both cases independent farmers eventually started to exploit these areas, arguing that it is on their land and that the companies are no longer active. This trend has been noticeable from 2009 onwards, and especially in the Menjalin and Mempawah Hulu sub districts, where oil palm smallholder plantations have expanded more prominently. This has led to some deforestation as well as to a conversion from rubber into oil palm plantations. Out of 51,934 ha of palm oil planted in the landscape, only 14,208 ha is managed by concessions (40% of which is owned by HDL). The remaining 37,726 ha (or 73%) has been planted and is managed by smallholders independently.

Oil Palm Cover, 2020	Other Use Zone (ha)	Protection Forest (ha)	Production Forest (ha)	Production Forest that can be Converted (ha)	Total
Industrial Oil Palm	14,199	8	0	1	14,208
Smallholder Oil Palm	29,820	4,486	3,044	376	37,726
<b>Total</b>	<b>44,019</b>	<b>4,494</b>	<b>3,044</b>	<b>378</b>	<b>51,934</b>

Figure 7: Oil palm planted in the landscape. Source: PT HDL

Today, these smallholder plantations are scattered across the landscape, and they do not necessarily follow governmental spatial plans. Approximately 4,486 ha of smallholder oil palm plantations are encroaching on forest protected areas, whilst approximately 3,422 ha are found within areas dedicated for production forests. The lack of coordination between district government and village government has not resulted in land use conflicts but rather in limited compliance to spatial planning and land use management regulations. An example of lack of dissemination about spatial plans and forest designation is the limited socialization and sign boards for protected forests. This is also partly to do with the insufficient resources and capacity of decentralized government to enforce the law.

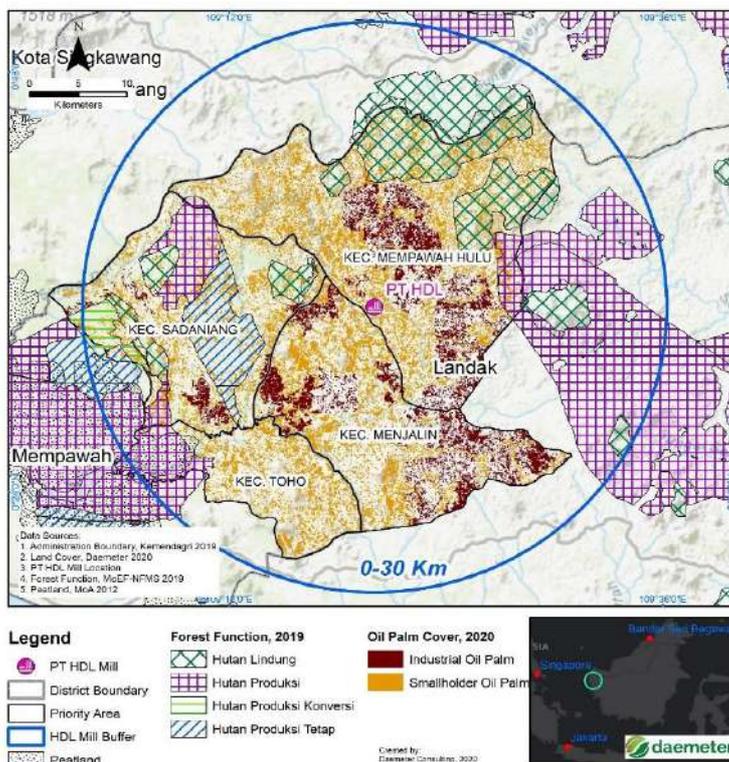


Figure 8: Map of oil palm planted in the landscape. Source: Daemeter Consulting

Most smallholder farmers in the landscape have relatively limited crop productivity, with an average crop maturity estimated to produce average yields of approximately 0,5



FFB/Ton/Ha<sup>10</sup>. Low productivity is likely due to the fact that palm oil cultivation is relatively new to the villagers and they are not receiving any agricultural support (i.e. inputs, agronomical trainings, etc.). For example, when it is applied, the fertilizer used is that provided under government subsidy programs for rice cultivation. While smallholders may receive financial support, farming advice and market access from large companies, in this case, the independent smallholders in the landscape have limited resources at their disposal and no integrated producers of any size other than HDL in the vicinity.

The closest palm oil mills able to receive FFB production from the area are located 50 km to 120 km away. Distance has led to the development of a long and inefficient supply chain, characterised by a multi-layered trade network. In some villages the chain starts with a trader who buys the FFB at village level. The middleman is next who may buy FFB from either one or several villages. Finally, the FFB is sold to the palm oil mill via a Delivery Order (DO) holder. The many actors between the oil palm smallholders and the palm oil mill, results in significant deduction to the price received by the smallholders. Some farmers bypass this system and transport their own FFB directly to the mill. However, this is only possible if the person has connections with the DO holder. Many local smallholders who have recently entered the oil palm sector may not have these connections yet.

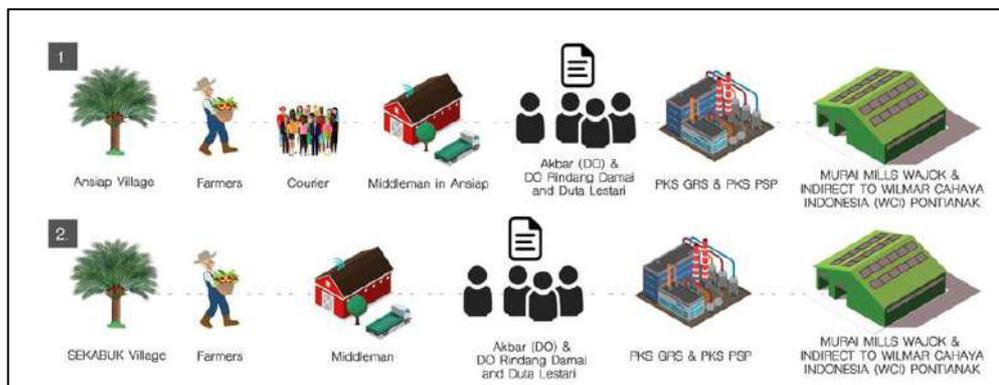


Figure 9: Example of smallholder supply chain from 2 different villages in HDL landscape. Source: SIAR

Additionally, none of the closest mills is publicly committed to international sustainability standards (i.e. RSPO) nor do they have established programs and incentives for enabling a closer link to these smallholder producers to secure 'clean and clear' FFB. Instead producers are operating indendently and with limited leverage vis-à-vis the mills in terms of bargaining power, access to finance, good inputs and education. **The FFB they sell is also not subject to legal, environmental or social conditions for producers**, and therefore non-exclusive for the smallholders that have planted outside APL areas.

<sup>10</sup> SIAR, 2019

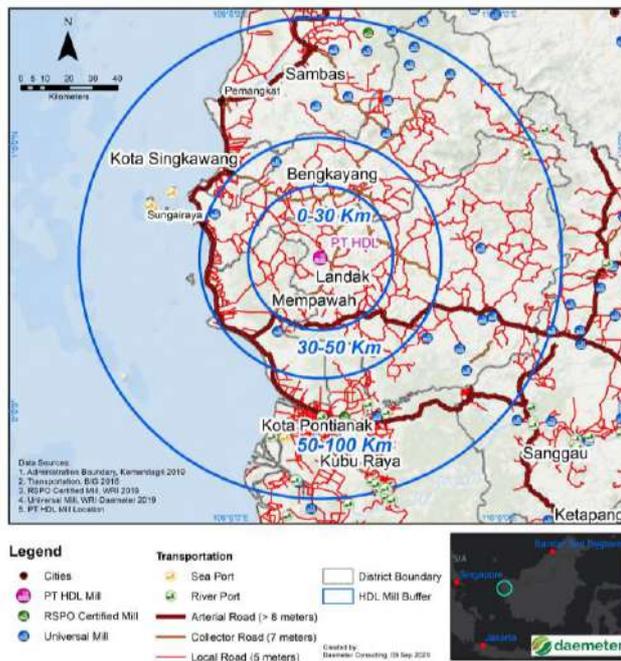


Figure 10: Map of roads and CPO mills, West Kalimantan. Source: Daemeter Consulting

The quality of the road infrastructure and networks is overall sub-standard; 100 km distances typically require up to 5 hours or more of driving. This results in transportation costs and logistics for both smallholders and palm oil concessions in the landscape.

The government has been promoting the establishment of cooperatives and more recently the formation of village enterprises (Badan Usaha Milik Desa, BUM-Des), in an attempt to support independent communities.<sup>11</sup> In practice, the village enterprises promoted by BUM-Des have had limited impact, mainly due to a lack of continuous support to strengthen the organisation and managerial capacity of the officials. While such institutional structure could provide the right models for supporting smallholder farmers, their capacity in practice is very limited.

Low yields, high supply chain and transport costs all reduce smallholders' incomes and opportunities for local development. Low income in turn can be a significant driver for the expansion into forests and peatlands as a way to increase total cultivation area to supplement incomes. Farmers who do not have the capital or knowledge to invest in the improvement of their existing plantation are more likely to encroach into forested areas. If not carefully managed this could lead to a continuation of palm oil expansion in protected or unprotected areas, albeit without necessarily leading to significant economic benefits for smallholder communities.

<sup>11</sup> The BUM-Des is an official government programme, aiming to generate a sustainable source of income for the village government; it can receive some initial capital from the village development budget (Alokasi Dana Desa).



### 3.2. Business as usual in the palm oil sector

The situation in HDL's landscape relatively accurately reflects the situation at a broader sector level and the underlying risks linked to the environmental and social sustainability of the sector.

From a global industry perspective, the Roundtable on Sustainable Palm Oil (RSPO) plays an important role in establishing internationally accepted guidance on sustainability, through its certification scheme. Yet, the palm oil supply chain currently functions as parallel NDPE (RSPO) and non-NDPE (non-RSPO) segments as less than 20% of CPO produced is RSPO certified. Among smallholder farmers—who are responsible for about 45% of the total planted palm oil area in Indonesia—only about 33,000 ha has been certified under RSPO.<sup>12</sup> This is less than 1% of the estimated 6 million ha of oil palm managed by smallholders. With the standards established for industrial operators, smallholders are hopelessly under-resourced to attempt to comply with either ISPO or RSPO standards for certification.

**Smallholders** operate with limited leverage in terms bargaining power for pricing, access to finance, good inputs, education, etc. in exchange of market access.<sup>13</sup> Non-compliance with national regulation is also relatively widespread, mainly because of the complexity involved in navigating the legal systems and also because of the insufficient resources and capacity of decentralised government to enforce the law.

**Smaller yields reduce smallholders' incomes and are also a major driver of expansion into forests and peatlands to expand their total cultivation area or to supplement their incomes with other, sometimes illegal activities.** Today, thousands of smallholders are managing old palm oil plantations, where productivity is declining. Most farmers who do not have the capital to finance replanting will likely encroach into forested areas to supplement the lost income from declining yields.

**On the other hand, poor rural infrastructure (roads, river ports and sea ports) allows the farmer-agent-supplier-buyer model to persist, often with multiple layers of participants in each stage.** This structural issue and the poor regulation of mill licensing requirements lowers the barriers to entry for pure-play processors, which can co-locate near smallholder farms. Limited access to working capital, variable milling margins and poor-quality supply, often results in these mills accepting non-NDPE compliant FFB, which incentivizes smallholders to encroach and deforest in illegal areas. The threat of 'side-selling' (farmers taking their FFB to a competing mill while accepting extension services), and the ubiquity of non-NDPE mills increases the risk for financiers, corporate buyers and mill owners willing

<sup>12</sup> RSPO; WWF; October 2019, chain reaction research, future smallholder deforestation: Possible palm oil risk.

<sup>13</sup> October 2019, chain reaction research, future smallholder deforestation: Possible palm oil risk.



to adopt NDPE compliant sourcing policies, to strictly implement them and support farmers simultaneously.

## 4. HDL'S SUSTAINABILITY STRATEGY

### 4.1. &Green Vision for the sector and PT HDL's commitments

&Green's vision is to demonstrate – through its loans – that collaboration among supply chain and landscape participants can drive rural economic development, create jobs and safeguard resources and biodiversity. Moreover, palm oil, as the largest export commodity for Indonesia, can shift the narrative for destructive land-use by adopting transparent models of supply chain sourcing at scale, using patient capital paired with committed buyer-owners and small-scale producers who are empowered by downstream players committed to purchasing only NDPE-compliant oil.

To support this vision, the objective of the HDL loan is to transform the sourcing of FFB from smallholder farmers in Indonesia: from a model characterized by opaqueness, poor productivity and lower incomes for smallholders to one that is inclusive, drives higher productivity, improves transparency and ultimately supports better livelihoods. Starting from a discrete region with limited competition, but ample production, HDL can secure and source above 60% of its future CPO mill capacity from smallholders, making this transaction a model for replicating finance for independent mills across Indonesia.

HDL's ability to successfully implement the model and demonstrate its commercial viability, is dependent on the company's ability to effectively design and implement a strategy for establishing its independent NDPE-compliant mill, while supporting local development through promoting sustainable and deforestation-free production. The focus of &Green's transaction is on the company's effort to develop a blueprint for establishing its CPO mill and supply chain. **HDL's sourcing strategy is detailed in section 4.2.**

In addition, the delivery on such a blueprint is also supported by the improvements that HDL will make with respect to its internal environmental and social management systems—following international sustainability standards, such as the IFC PS and RSPO. **These improvements are detailed in section 4.3.**

### 4.2. Establishing an inclusive, NDPE-compliant mill

#### 4.2.1. HDL's NDPE policy: a commitment to inclusive and deforestation free sourcing.

Through its Landscape Protection Plan and partnership with &Green, HDL commits to adopting and implementing an NDPE policy that aims for 100% compliance at the start of the Mill operation (i.e by 2023). The key principles of HDL's policy align with &Green's NDPE requirements and with international guidance on NDPE, such as RSPO and the AFI.



HDL's commitment to implement an NDPE applies to its plantation as well as to all FFB suppliers. HDL will ensure, through screening and monitoring procedures, the following:

- Compliance with the legal requirements that apply to palm oil plantations and hold a valid permit as required by the Indonesian government;
- Commitment to no clearance in HCS forest, HCV area, and peatland within their palm oil plantation;
- Ensuring no burning for the development of palm oil plantation;
- Promoting fair treatment, non-discrimination, and equal opportunity of workers through all employment process; and
- Respect for the local community and Indigenous Peoples' rights.

A 2021 cut-off date will be applied at a minimum to HDL's suppliers with respect to their compliance with the requirements on deforestation, peat exploitation and no burning. An 2005 cut-off date is applied to its own plantations (following the RSPO standard requirements).

To achieve its NDPE commitments, HDL commits to build a supply chain that is 100% traceable and 100% compliant to the NDPE, at the start of the mill's operations. Traceability specific to palm oil is defined as traceable production to the level of the third-party supplier's plantation or smallholder's plantation. Supporting commitments to achieve this goal are identified as:

- **Conducting suppliers' identification** and risk assessments through a sustainable sourcing strategy to identify the risk of non-compliant suppliers and smallholders against the legal, environmental and social commitments of HDL.
- **Engaging with suppliers** to promote the NDPE policy commitments and build the capacity as needed and possible to ensure compliance, especially of the more vulnerable and high-risk suppliers. In line with its commitment to social and economic inclusion, HDL will use its best efforts to support compliance of smallholder farmers supplying its mill.
- **Develop and implement the supplier due diligence mechanism** (including compliance criteria) to monitor and verify compliance of its supply base against the NDPE policy and perform risk mitigation measures. Should the supplier group or individual be found to be non-compliant, HDL will engage actively with these suppliers to explore mitigation measures for compliance.
- *If there are suppliers who are unwilling to transform, continuously fail to meet the compliance criteria, or carry out major non-compliances, HDL will suspend or stop doing business with them. Upon exclusion they may become suppliers again, only after they agree to enter into one-off negotiations and a change management program.*

To support the development of its sustainable sourcing strategy, HDL has worked alongside supply chain, environmental and social experts (SIAR, Daemeter Consulting), International and local NGO's (IDH, the sustainable trade initiative and FORTBASI, respectively). HDL



commissioned three studies to support the development of its sourcing strategy: an initial supply base mapping (SIAR), a more detailed sourcing assessment (Daemeter), and an ESIA for the future Mill (Daemeter). Through this process, HDL consulted with local and district government, local communities and future suppliers.

HDL's strategy relies on a two-step approach linked to (a) profiling risks of suppliers at a village level, and (b) developing an engagement strategy based on the village level risks. HDL's strategy allows it to trace its suppliers and prioritize support programs where the risks are the highest to ensure the farmers have an opportunity to be included in the supply chain over time.

#### 4.2.2. Assessment of supply potential and risks at a village level

Given the deforestation trends and risks present in the landscape, as well as HDL's NDPE policy, assessing the villages in the landscape based on the relevant indicators has been key for HDL to develop an appropriate strategy that can prioritize and engage smallholder suppliers based on their expected supply, compliance and strategic importance.

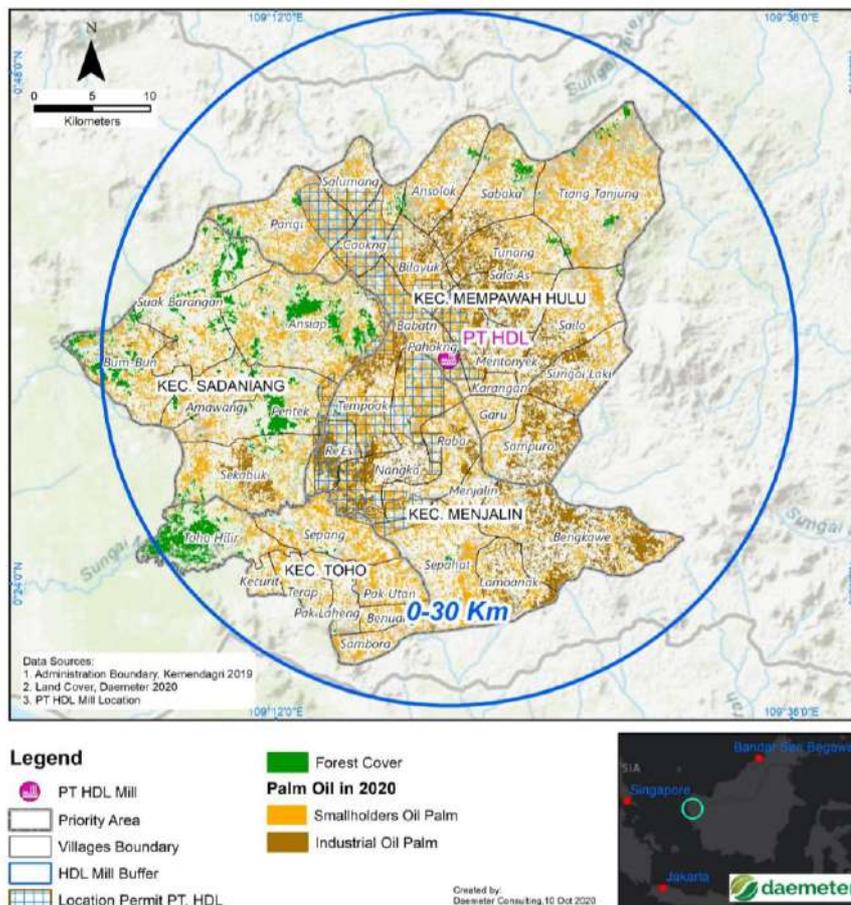


Figure 11: Village level boundaries and oil palm plantation. Source: Daemeter



**Village-level assessment has been based on three key criteria:**

- **Assessing villages base on their potential oil palm supply base:** Table 3 below gives the indicative hectarage of smallholder oil palm in each village territory (defined as oil palm outside of known concession areas).
- **Assessing villages against risks associated with their supply:** Oil palm planted in the state forest zone is technically illegal. The spatial analysis indicates that there is 7,907ha of smallholder oil palm inside state forest. Additionally, presence of remaining forest in village territories can be both seen as a risk or an opportunity. Five villages in Mempawah district still have relatively large areas of remaining forest, from 700 ha to nearly 1,500 ha. Forested areas inside state forest, amounting to over 5,000 ha, should be protected from oil palm conversion.
- **Assessing villages based on their strategic position:** HDL can consider purchasing FFB from certain villages as a strategy to develop and maintain relations with strategic villages, (e.g. because a part of the HDL concession and many of its workers are in that village territory or the village is located along a vital transport corridor). In those cases, HDL still needs to be aware of the associated risk and develop a strategy to address and/or mitigate the identified risks.

Other risks such as human rights abuses has also been considered – but did not lead to significant red flags that would require special attention and a differentiated approach to risk-mapangement.

Table 4 below summarizes supply potential and risk profile, with villages highlighted in Green categorized as low risk, orange for medium risk, and red for high risk<sup>14</sup>. Village-level profiling has enabled HDL to classify villages into 3 clusters:

- **Cluster 1: High FFB potential, low risk (15 villages): Babatn, Bilayuk, Garu, Pahokng, Bengkawe, Lamoanak, Menjalin, Nangka, Parigi, Raba, Re'es, Sepahat, Salumang, Tempoak, and Sepang:** This cluster features limited short-term risks.
- **Cluster 2: High FFB potential, high risk, important due to closeness to PT HDL concession: Ansolok, Caokng, Sabaka, Sailo, Tiang Tanjung, Ansiap, Bum-bun, Pentek, Sekabuk, Suak Barangan, and Toho Hilir (11 villages):** This cluster is the area where conservation opportunities are concentrated, and early stage engagement should be planned accordingly to avoid triggering palm oil expansion into remaining forest areas.
- **Cluster 3: Low FFB potential: include villages:** this cluster covers villages where no or little oil palm is currently cultivated.

<sup>14</sup> For example: The Ansolok village has a total of 1,008ha planted with smallholder oil palm. This consists of 345ha in the Other Use Zone (designated for agricultural development) . Of this 345ha in 2005 8ha was still forested while the remaining 337ha in 2005 already were no longer covered in forest. There is 664ha of smallholder palm that is planted in the State Forest Zone (where oil palm development is not allowed). This consists of 48ha that were still covered in forest in 2005, while 616ha had already been deforested by 2005. In 2020 there is still 95ha of forest remaining in the village area, of which 93ha is outside that area designated as State Forest Zone and 2ha is in the State Forest Area that is classified as Production Forest



Sub-district	Clusters	Villages	Total Smallholder Oil Palm	Smallholder in APL designated areas		SH OP Inside State Forest		State forest zone		Outside state forest (ha)	Total remaining forest (ha)
				Forest loss (Baseline, 2005)	Non-Forest	Forest loss (Baseline, 2005)	Non-Forest	Protection forest (ha)	Production forest (ha)		
Mempawah Hulu	2	Ansolok	1,008	8	337	48	616	93		2	95
	1	Babatn	1,306	27	1,279					148	148
	1	Bilayuk	887	1	870	2	14	1		48	49
	2	Caokng	1,099	228	798	30	43	62		75	137
	1	Garu	443	15	428						
	3	Karangan	245	2	243						
	3	Mentonyek	226		226						
	1	Pahokng	680	8	672					19	19
	1	Parigi	1,902	453	1,431	9	9		52	147	198
	2	Sabaka	1,195	4	300	127	764	182			182
	2	Sailo	1,100	8	567	7	518	12	15	12	39
	3	Sala'as	483	22	432		29	-		4	4
	1	Salumang	739	24	714					30	30
	3	Sampuro	605	10	596						
	3	Sungai Laki	638	3	427	3	205		4		4
	2	Tiang Tanjung	3,067	5	1,344	215	1,502	260			260
	3	Tunang	892	7	765	18	102	56		0	56
Menjalin	1	Bengkawe	788	34	754					14	14
	1	Lamoanak	568	63	504						
	1	Menjalin	219	6	213					2	2
	1	Nangka	1,917	66	1,852					288	288
	1	Raba	1,133	37	1,096					176	176
	1	Re'es	385	34	351					80	80
	1	Sepahat	2,023	249	1,774					78	78
	1	Tempoak	1,274	101	1,173					189	189
Sadaniang	3	Amawang	753	31	362	89	271	47	56	6	109
	2	Ansiap	2,351	687	676	698	290	444	292	587	1324
	2	Bum-Bun	1,033	160	377	106	390	9	462	259	730
	2	Pentek	1,054	58	466	200	331	13	710	12	735
	2	Sekabuk	1,457	249	659	171	378		147	39	186
	2	Suak Barangan	1,279	263	425	275	316	134	550	129	813
Toho	3	Benuang	372	20	352						
	3	Kecurit	212	31	180					1	1
	3	Pak Laheng	406	11	395					14	14
	3	Pak Utan	768	45	722					0	0
	3	Sambora	659	30	629						
	1	Sepang	1,571	137	1,433					32	32
	3	Terap	474	15	458					2	2
2	Toho Hilir	518	77	309	63	68		1,482	11	1,493	
<b>Total Area (Ha)</b>			<b>37,726</b>	<b>3,229</b>	<b>26,591</b>	<b>2,064</b>	<b>5,843</b>	<b>1,313</b>	<b>3,770</b>	<b>2,406</b>	<b>7,489</b>
<b>Total Area (%)</b>			<b>100</b>	<b>8.6</b>	<b>70.5</b>	<b>5.5</b>	<b>15.5</b>				

Table 4: supply potential and risk profile of villages in the landscape. Source: Daemeter

#### 4.2.3. Risk calibrated approach for engaging with suppliers as to manage risks and promote inclusivity.

The three clusters identified become the foundation for designing HDL's sourcing strategy. HDL plans to engage differently with each cluster and to prioritise sourcing based on risk and expected compliance level.

**The engaging of HDL with cluster 1** will focus on institutional and technical capacity building, development of clear zonation plans as a basis of supply agreements, and effective traceability systems to ensure there is no "leakage" allowing non-compliant FFB into HDL's supply chain. A phased approach can be taken to support the engagement:

1. Carry out a rapid inventory of existing oil palm, including some of the challenges / problems that smallholders face. This step assists in further verification of any previously unknown issue that many need to be addressed to align with NDPE commitment and will help HDL develop its supplier data-base.



2. **Engage in participatory planning of village zonation** to outline production and protection areas, to be endorsed by a village decree and formalised in an MoU<sup>15</sup>.
3. **Provide institutional capacity building:** Particular attention will be given to organisational development and support of collective structures (cooperatives, Farmers groups, or BUMDES) to ensure adequate management capacity is in place.
4. **Initiate (technical) capacity building training program for interested smallholders:** training can focus on technical questions and problems that smallholders face and on palm oil sustainability (i.e. crop diversity and resilience), NDPE, and if desired, on certification. One training cycle typically takes 3 – 6 months.
- \*5. **Depending on the number of smallholders and interest in training, provide a second cycle of similar training.** If low numbers, training should be oriented towards farmer organisation and institutional strengthening.

**Engaging with cluster 2** entails engaging and collaborating with villages immediately, because they are adjacent to HDL and present the biggest risks and opportunities to a landscape approach. However, the issues that must be addressed in order to start procurement will likely be time-consuming and certainly need collaboration with the district government. To support this process, the stepped engagement process required defines:

1. **Early engagement activities** will at a minimum cover socialisation of HDL's plans. The engagement will also focus on the opportunity to source FFB from the 8,005 ha in the APL areas, as they do not present legality issues. Conditions linked to purchasing will be made clear upfront, with a specific emphasis on the need to delineate forested areas, land rights and forest management models and commit to support forest protection.
2. **Require village zonation plans** for village onboarding to ensure clarity over palm oil sourcing areas and conservation areas, as a basis for traceability and onboarding.
3. **Conduct survey and mapping of each plantation**, to know the exact acreage which assists in estimating the likely yield.
4. **At the same time, discussions on palm oil legality will be required, and ideally intermediated by the local plantation agency.** Two main policy instruments are available: Agrarian Reform Objects (TORA) and social forestry.<sup>16</sup> HDL's also plans to couple land regularisation efforts with its technical capacity building training program to interested smallholders.

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<sup>15</sup> Developing village zonation plans, endorsed by village decrees have become a legal requirement under 'PERDA Tentang Tata ruang Wilayah Kab Landak' regulation, since 2015. HDL can play a role in align with and support local government programs related to spatial planning, specifically by supporting data collection, farmer mapping and registration processes.

<sup>16</sup> Areas in forest estates that were already deforested before conversion into oil plan, and probably traditionally used in farming rotation systems (ladang), could become candidates for TORA. TORA would excise those areas from state forest, and the FFB produced in those areas would therefore become "legal" and could also become RSPO compliant. For areas that were deforested for conversion into oil palm, social forestry can provide a way out. A social forestry plan, under which the current production cycle is acknowledged and integrated into a transition plan towards forest commodities production would "legalise" palm oil production; however, the FFB produced would not comply with RSPO requirements.



**5. Regular monitoring or land-cover dynamics in cluster to rapidly identify indications of forest loss.** Indications of forest loss should be rapidly reported to local government agencies and mediated with local communities.

Once the approach for cluster 2 is nearing completion, smallholders can be engaged in similar fashion like for cluster 1.

**Villages in cluster 3** may not be FFB suppliers but should also be integrated into HDL's landscape plan. A similar approach, including socialisation on spatial zonation and HDL's policy and regular monitoring of land-use change should be developed in the short-term. In parallel, it is critically important to leverage support from local stakeholders (government, CSOs) to support livelihood programs in those areas.

**1. The first step would be to conduct socialisation that HDL will start operating a CPO mill in the area,** and to outline the compliance criteria and sustainability commitments of HDL, and its practical implications for smallholder oil palm producers.

**2. The second step would be to continue engagement with the community and support them in developing a Participatory Land Use Plan.** HDL could support the local Forest Management Unit for example, by providing accurate baseline maps and facilitating outreach with NGOs operating in the area.

HDL's mill will be operational by mid-2023. The mill's commercial viability is contingent on its ability to process FFB at its start and to therefore to be able source from suppliers that are compliant with its NDPE policies. As a result, the timeline for sourcing FFB prioritise high supply potential and low-risk villages (cluster 1) in the shorter term, whilst the company supports farmers in high-risks villages – who will be able to sell to HDL only once they are compliant.

HDL will prioritise villages in cluster 1 in terms of FFB purchasing, but its commitment to support inclusivity means it will start engaging and socialising its NDPE strategy at the same time for all clusters before the mill starts operating. Second, HDL intends to develop the zonation plans for villages in both clusters 1-2 before the start of the mill's operation. Smallholder survey and mapping will be completed in cluster 1 villages before mill starts operating, and then gradually carried out to cluster 2 villages until end 2023. Lastly, depending on capacity, HDL will aim to start supporting compliance of farmers as soon as possible, through its capacity building programs.

#### 4.2.4 Partnerships:

Implementing this strategy will require significant support from relevant institutions to address capacity and legality related issues. As a small-scale player like HDL, alignment with public, private and expert institutions is essential to help the company engagement with smallholders which would otherwise not be feasible with the capacity and scope of its own operations. The LPP calls for partnerships with farmer and civil society organizations, private sector, and joint actions with the local government. Below are some of the key relevant stakeholders for HDL to implement its LPP and reach its ambitions.



Partnerships	Objectives and scope of engagement
<b>Cooperatives</b>	
Tuah Binua Menjalin cooperative And Binua Mitra Sejahtera cooperative	These are the two cooperatives which are already working with HDL under the smallholder profit-sharing / plasma scheme. Collective organising is important to ensure scale, effective logistics, bargaining power, and the ability to effectively provide support to members. Certification schemes also all require that smallholders operate within a group or cooperative, which can assist its members with administration, liaising with the organisation providing support and the certification bodies. HDL should explore investing in improving the institutional capacity of the cooperatives and collaborate with them regarding smallholder engagement.
Other cooperatives	The Landak district government acknowledged that there is a large number of cooperatives, but many are not active and have been closed. HDL should further explore which cooperatives are still active and could present opportunities for collaboration.
<b>Governmental Agencies</b>	
District Estate crop agency	The mandate of this technical agency is to obtain information and monitor progress of estate crop development in the district, both by companies and smallholders. This agency is responsible for providing support to smallholders. At a minimum, HDL will aim to receive information on the procedure for smallholders to register and district government support programmes for oil palm smallholders. This information will indicate if there are opportunities to obtain (technical) support for smallholders, depending on what if any smallholder programmes the district government has.
District Planning agency	BAPPEDA coordinates the district level planning process, which used to include the spatial planning. Since 2008 this responsibility has been delegated to the Public Works and Spatial Planning agency. At a minimum, HDL will aim to receive information on which agency is leading the Agrarian Reform process, which agency is responsible for disseminating information on district spatial plan, and if there are actual activities for dissemination and monitoring of spatial planning implementation. If there is a positive response, HDL can discuss opportunities to engage the technical agency in sub-district or village level activities to disseminate information about the current spatial plan, and on identification of areas potential for agrarian reform.
Agency for Cooperatives and Micro-entrepises	This agency is responsible for supporting cooperatives and micro enterprises, starting from dissemination of information & training, to official registration and supervision. At a minimum, HDL will seek support of the agency towards cooperatives, and



	get information on programmes that the agency has to support cooperatives. If the agency has plans for practical support for cooperatives, HDL can discuss possibility for it to provide technical support or supervision to the two HDL cooperatives.
Provincial Forest Agency	This agency is responsible for all forestry related issues in the whole province, including supervision of the Forest Management Units (KPH). HDL will, at a minimum, seek to coordinate information on status and program of relevant Forest Management Unit in the landscape and get introduced to the head of FMU and to BPHK (below). HDL will also aim to discuss the technicalities of the Agrarian Reform process, eligibility criteria and progress to date, and opportunities for social forestry that may be relevant to the communities in the landscape
Forest Management Unit	Explore synergies for social forestry development and conflict resolution. HDL will plan to discuss the FMU's workplan and explore opportunities to support community involvement in forest management and plans for forest rehabilitation, environmental services, agro-forestry based economic activities.
<b>Non Governmental Organisations</b>	
IDH, the sustainable trade initiative (IDH)	IDH has already played a very active role in supporting HDL in the development of its sourcing strategy, understanding the possibilities of land reform and navigating the landscape of public agencies. IDH's existing PPI Compact in Kubu Raya is located further south from HDL and already comprises larger forestry and palm oil sector companies. While there is currently no immediate strategy for extending this PPI Compact to Landak to encompass the HDL production area and supply chain, such an opportunity would greatly support HDL in engaging with the government and aligning with other private sector partners.
Yayasan Forum Petani Kelapa Sawit Berkelanjutan Indonesia/Indonesia Sustainable Oil Palm Smallholder Forum (FORTASBI)	FORTASBI is a platform created by a number of Indonesian NGOs and Independent Smallholders (Group Managers) to expand the scope of sustainable palm oil through the implementation of best institutional, agricultural and environmental practices in smallholder groups in Indonesia. FORTASBI has already been supporting HDL with the identification of SH-challenges and designing the on-boarding strategy. HDL has extended its partnership with FORTASBI until 2023, to get guidance and support on smallholder engagement and training for both smallholder, cooperatives and HDL's team.

### 4.3. Alignment with international sustainability standards

Although prospects for a new CPO mill generate positive expectations regarding the economic resilience of HDL and the local community, they add considerable complexity and E&S risks. While the focus of &Green's transaction is on the company's effort to establish



an NDPE-compliant and inclusive supply chain—delivering such blueprint and securing long term impacts can only be delivered if HDL’s foundation in terms of environmental and social performance becomes robust.

#### 4.3.1 Commitment to IFC PS and RSPO compliance

In line with &Green’s requirements, HDL commits to achieve compliance with the IFC PS within the first five years of the loan tenor.<sup>17</sup> In addition, the company is also committing to becoming RSPO certified by 2025. To deliver on its commitment, HDL aims for a gradual year on year increase of its IFC PS compliance levels, as per the milestones included in the ESAP.

Increasing compliance against all IFC PS’s entails actions that range from the establishment of policies, to the development of specific tools and delivery of technical items. Special attention from HDL’s strategy in the coming 1-2 years will be provided to the following key building blocks:

#### 4.3.2 Development of a comprehensive Environmental and Social Management System

As the foundation for the long-term management of the E&S risks and impact, HDL is required to design and formalise its Environmental and Social Management System (ESMS).

Based on the identification of risks and impacts uncovered by the various assessments, HDL’s ESMS will review and develop the necessary sustainability policies, the related operating procedures and tools to address risks and impacts associated with plantation and the mill. Supporting management programs and targets will be defined against these. HDL’s monitoring and review processes will be designed as well to support assessment of performance and alignment with monitoring requirements authorities and of &Green. Additionally, the ESMS will clarify the updated organisational capacity of HDL, and the respective roles and responsibilities for E&S management. HDL’s existing plan regarding Emergency preparedness and response will also be incorporated, and possibly updated if required.

As an essential step for completing its ESMS, HDL will complete a comprehensive **Stakeholder Engagement Strategy (SEP)**. This will be critical for the realisation of HDL’s sourcing strategy and continuation of its social license to operate with communities. The SEP will:

- Describe the requirements for public consultation and disclosure.
- Identify and prioritize key stakeholder groups, focusing on Affected Communities.

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<sup>17</sup> Compliance with the IFC PS is assumed to be achieved based on an 90% compliance level for all applicable Performance Standards.



- Provide a strategy, schedule, and timeline for sharing information and consulting with each identified stakeholder or group.
- Describe resources and responsibilities for implementing stakeholder engagement activities.
- Describe how stakeholder engagement activities will be incorporated into HDL's management system.

Furthermore, HDL will create a grievance mechanism that will comprehensively describe the process for dealing with public grievances. Ongoing public consultation activities and dialogue will continue throughout the loan period.

HDL's current sustainability team will require guidance and training on the IFC PS in order to be able to successfully design and adopt a new ESMS. As part of &Green's requirements, HDL will be required to get external support by an IFC PS consultant.

#### 4.3.3 Protecting its HCV and its biodiversity and achieving Net Gains.

HDL is in the process of completing its HCV-HCS assessment that will confirm the key HCV areas available for conservation purposes within its concession. Preliminary information indicates that there are 462 ha of forest within HDL's concession which the company commits to conserve and protect. In addition, HDL commits to align with &Green's Biodiversity framework regarding Net Gain requirements, as they apply. Preliminary assessments based on the latest HCV-HCS study however indicate that Net Gain (or No Net Loss) requirements do not apply in HDL's case since it operates in predominantly Modified Habitat, constituting agriculture and mixed rubber forestry land cover.

As a planning step for delivering on these commitments, HDL will develop a Biodiversity Action Plan (BAP) that will detail the implementation plan for conserving its HCV areas. The BAP will also include a detailed implementation plan for achieving forest conservation targets in the concession, and a monitoring plan for monitoring the amount and status of forests within the concessions over the loan period. The plan will also include the remediation of 440 ha of land that has been previously planted with palm oil, as well as the 32ha of protected forest area previously planted on. Lastly, as part of its RSPO commitments, HDL will develop and implement an RSPO-approved RaCP to compensate for its past deforestation liabilities.

To ensure the protection of RTE species found within the concession, HDL will also review and improve its existing policies and procedures, develop targeted signboards and campaigns to socialise its policies to its staff and external stakeholders.

As part of its HCV management strategy HDL commits to secure and manage the preservation of the identified forest areas found within and around its concession, which are estimated to cover 462 ha of forest.



HDL has already delineated and recognized three customary forest areas within its concessions, which make up for 406 ha of the remaining forest in the concession (out of the 462 ha). These are located on three hills and are used by communities for rituals and for their water supply. Whilst the recognition of the areas as customary forests by local communities provides an good base for securing their protection, securing their long-term conservation should be futher strengthened through formal government recognition. Governmental recognition will mean the land is formally classified as Hutan Adat which grants an additional status for protection from commercial activities.

Legal procedures to classify land as customary forest area (i.e. Hutan Adat) require HDL to follow specific legal processes, including the engagement and approval from various public agencies and government officials, such as district and provincial government officials, administrative agencies specialised in forestry management and spatial planning.

Hutan Adat land status entails that the legal rights of the land be held by the government whilst the responsibility for the management of the area and of the forest shall be shared between local communities and HDL. Building on the existing steps taken with the communities to (informally) recognize these areas, HDL must agree on roles and responsibilities between HDL and local communities collectively (documented in the form of collective agreements).



Figure 1212: draft proposal of roles and responsibilities for the protection of customary forest areas. Source: HDL

HDL has already initiated its engagement with the communities and various public agencies, supported by an external consultant and IDH. As part of its recommendations, the Fund will support the extension of the partnership with IDH and with the consultant in order to finalise the legal and collective agreements with the government and the communities.

#### 4.3.4 Monitoring and Management of GHG emissions

The mill is anticipated to produce between 450 and 675 m<sup>3</sup>/day of Palm Oil Mill Effluent (POME)—an oily wastewater generated by palm oil processing mills, which pose significant environmental issues due to its large oxygen-depleting capacity in aquatic environments and to the GHG it generates. The operation of the HDL mill is expected to produce 74,113 tonnes of CO<sub>2</sub> equivalent per year – largely due to methane emissions that are a by-product of POME generation.



As part of its ESAP, HDL must develop a management and mitigation plan of POME discharge quality and release into the environment, as well as management and mitigation of POME-related GHG emissions. The mill design has factored in the need for waste-water treatment ponds. Future investment in methane capture may be possible to further lower emissions.

#### 4.3.5 Other E&S improvement programs

HDL will manage and mitigate these and other risks and impacts by strict adherence to national standards, and compliance with IFC PS 1 to 8. A priority requirement is completion of the ESAP priority requirements by qualified professionals, in order to manage risks and reduce potential impacts to acceptable levels, and to achieve full compliance with IFC Performance Standards.

## 5. KPIs and MRV

### 5.1. Quantification of impacts

&Green assesses its transaction with respect to the potential environmental and social impacts generated within the landscape boundaries defined in the landscape protection plan. Environmental and social impact, expressed as 'Environmental Return and Social Inclusion', can fall under four categories:

- 1) Forest Conserved: Area that meets national forest definitions of land use and crown cover.
- 2) Land sustainably intensified: productive land that demonstrates an increase in the total volume of agricultural production that results from a higher productivity of inputs.
- 3) Forest Restored: Area where crown cover is being increased to meet national forest definition.
- 4) Smallholders benefiting: Number of smallholder farmers (individuals) which benefit from the company's operations (directly or indirectly).

Contributions to the Environmental Returns and Social Inclusion can be realised from the areas of influence of the company towards land use change and towards the people. It is based on degree of control and level of assurance. As explained in the section 1.3 of the LPP, HDL's influence on land use (and forest protection) is reflected by the actions and degree of control that it will have on its suppliers.

The transaction's Environmental Returns are the sum of the results of HDL's actions (a) within its plantation boundaries and with respect to the areas under management and (b) with its suppliers, through its NDPE strategy.



The quantifiable ERs, cumulatively from direct activities, from partnership interventions and from its NDPE sourcing strategy are summarised below:

ER 1: Conserved forest	ER 2: Land sustainably intensified	ER 3: Forest restoration	SI: Smallholder farmers benefiting
Up to 7,501 ha	Up to 36,440 ha	472 ha	Up to 8,156 Smallholders

The contractually agreed ERs are generated by three key interventions: (1) the on-concession programs that HDL will directly implement on its concession, with respect to HCV-management; to fresh fruit bunches (FFB) production from its plantations; and to restoration, (2) on-concession management of customary forest areas which HDL will implement together with communities; and (3) the monitoring and control over its NDPE-compliant suppliers.

Details of each ER and Social Inclusion target and of these supporting activities are further described below:

*Commitment to hectares of forest conserved (Environmental Return 1)*

HDL commits to generate up to 7,501 ha of forest conserved through three interventions:

- 1) HDL will protect and manage 56 ha of forest located within its concession, through direct program and interventions.
- 2) HDL will protect and manage 406 ha of forest located in customary forest areas, through community-based conservation program and the legal land recognition by the government.
- 3) HDL will extend an NDPE policy to its FFB supplier, which will support forest protection in the landscape up to 7,039 ha.

ER 1 Target - summary table

ER 1: Forest Conserved			
Intervention	Direct forest protection within its concession	Community-based forest conservation program	NDPE policy to its FFB suppliers
Target: ha of forest conserved	56 Ha	406 Ha	Up to 7,039 Ha
Activities:	HDL will develop an HCV-Biodiversity management plan, develop SOP and socialised them amongst personnel and communities, clearly demarcate	HDL will consult with communities, carry out participatory mapping of the customary areas to be protected, agree on roles and responsibilities, finalise	HDL will engage with all villages identified in its sourcing strategy and socialise its policy and create zonation plans for demarcation of production and protection areas. Ultimately, HDL will only



	forest protected area, and monitor their protection.	the process of land status recognition and implement the plan collectively agreed with communities	purchase FFB from Suppliers that are compliant with its NDPE policy.
<b>Baseline (2021)</b>	<b>56 Ha</b>	<b>406 Ha</b>	<b>7,039 Ha</b>

*Commitment to hectares of sustainably intensified land (Environmental Return 2)*

HDL commits to generate 43,114 hectares of sustainably intensified land, through two interventions:

- 1) HDL will optimise fresh fruit bunches (FFB) production from its plantations
- 2) HDL will support smallholders in the landscape through the farmer support program described in the sustainable sourcing strategy.

ER 2 Target - summary table

<b>ER 2: Land sustainably intensified</b>		
Intervention	Area of land sustainably intensified	NDPE policy to its FFB suppliers
Target: ha of land intensified	5,388 Ha	Up to 30,560 Ha
Activities:	optimise fresh fruit bunches (FFB) production from its plantations.	Support smallholders in the landscape through trainings on good agricultural practices at a minimum.
<b>Baseline (2021)</b>	<b>5,388 ha</b>	<b>0 ha</b>

*Commitment to restore hectares of forest (Environmental Return 3)*

HDL commits to restore 472 hectares of forest restored, through direct interventions on its plantation, to remediate for past environmental liabilities<sup>18</sup>.

ER 3 Target - summary table

<b>ER 3: Forest restored</b>	
Interventions	Natural forest regeneration
Target:	472 ha
Activities	Set aside, physical demarcation, monitoring.
<b>Baseline (2021)</b>	<b>0 Ha</b>

*Commitment to smallholder inclusion*

HDL commits to support the inclusion of up to 9,600 individuals—plasma and independent smallholders—through its existing plasma profit sharing scheme; through the

<sup>18</sup> HDL's final compensation is subject of final submission of the HCV-HCS and LUCA submission and approval by the HCVN. It may therefore be subject of change. In turn, should there be a change, ER 3 will be adjusted subsequently.



implementation of its sourcing strategy; and through the farmer support program described in the sustainable sourcing strategy.

SI Target – summary table

<b>SI: Smallholder benefiting</b>				
Intervention	From Plasma profit-sharing scheme	From the smallholder capacity building program	From community services	From the extension of jobs
Target:	2,055 individuals	6,101 individuals	15,000 individuals	834 individuals
Activities:	Provide additional revenue streams through plasma profit sharing model	Support smallholders in the landscape through technical agronomical trainings, and land regularisation services at a minimum.	Improve and maintain infrastructure for the villages in and adjacent to HDL concession	Provide direct and indirect jobs (fte equivalent), of which 99% to local people, 16% women.
<b>Baseline (2021)</b>	<b>2,055 individuals</b>	<b>0</b>	<b>15,000 individuals</b>	<b>834 jobs</b>

## 5.2. HDL Reporting and Verification Framework

HDL’s reporting and verification framework with respect to &Green’s LPP and E&S Action Plan will be built with the objective to report on activity-based progress against the defined E&S Action Plan activities. To support monitoring of HDL’s progress, &Green will rely on a three-level MRV framework:

First, through HDL’s self-reported progress reports: Progress achieved against the agreed upon milestones will be monitored and self-reported on a 6-monthly basis during the first two years of the transaction, and annually for the remaining tenor of the &Green loan, until 2030. Templates for thde E&S (self-reported) progress report will be agreed during the contracting phase of the transaction. Templates might be updated during the loan period to ensure relevancy against progress achieved and recommended actions.

Secondly, through additional third party reports, provided by independent experts consultants that have been recommended to support HDL in the first 1 to 3 years of the transaction (i.e. on a quarterly or bi-annual basis). These report will be required to supplement HDL’s self-reported progress reports and to further clarify HDL’s progress on priority items included in the ESAP.

Lastly, third party external audits will be carried out annually to review the overall progress of HDL against the targets defined in the ESAP, linked to IFC PS compliance, NDPE implementation, ER/SI targets and E&S governance. An annual report should be prepared



to document annual progress towards completion of ESAP items, supported by an updated version of the IFC PS matrix. The later should be treated as “living documents”, and serve the purpose of supporting HDL in reaching its compliance targets (i.e., adding, omitting, modifying recommendations) as appropriate. The audit period should be defined as the standard calendar year from 1 January to 31 December of each year. Review/audit of ESAP items should therefore be performed in January of each year, corresponding to ESAP activities accomplished in the previous calendar year. At this time (November 2021), it would be appropriate for the next review/audit to take place in January 2023, and cover the 2022 calendar year plus any remaining time and activities performed in 2021.

Lastly, all annual third party audits will be disclosed on &Green’s website.