

HCSA Peer Review Report

Musim Mas – PT. Globalindo Alam Perkasa

Background information:

- a) Did a Registered Practitioner Organisation lead the HCS assessment? If not, has the organisation which led the assessment started the process of registration?
Yes, Jules Crawshaw is an independent assessor listed under the Registered Practitioner Organisation qualified to lead the HCSA assessment.
- b) Was the HCS Team Leader a Registered Practitioner?
Yes, Jules is the HCS team leader and a Registered Practitioner with HCSA.
- c) Were at least 2 HCS team members Registered Practitioners?
Yes, the two HCS team members Registered Practitioners are Jules Crawshaw and Indrawan Suryadi.
- d) Was the HCV assessment judged ‘satisfactory’ (highest rating) by the HCV Resource Network (HCVRN) Assessor Licensing Scheme (ALS)? (See <https://www.hcvnetwork.org/als/public-summaries>).
Yes, The HCV assessment was judged Satisfactory by HCVRN ALS since 2 May 2018.

87	High Conservation Value Full Assessment PT Globalindo Alam Perkasa, Indonesia	PT Globalindo Alam Perkasa	RSPO (5.2)	Jules Crawshaw Fully licensed	07/12/2017	Satisfactory 2	Click here	02/05/2018
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Questions for peer reviewers
(Peer Review Panel: Michael Pescott, Cynthia Chin)

1. Peer Review Summary

1.1. What are the major findings and recommendations from the peer review?

Finding:

The vegetation is highly degraded including by recent fires which posed significant challenges with image analysis and HCS field sampling, while it appears additional field plots could've also improved accuracy of results, particularly around rubber vs. non-rubber vegetation. Participatory mapping was carried out, while the company are to further detail an ICLUP including any additional participatory planning and mapping as per HCSA requirements.

Reviewers Recommendation:

Company to develop an ICLUP as the next step of planning.

1.2. Did the HCS assessment team include or have adequate access to relevant expertise to undertake the HCS assessment?

Finding:

In general yes.

Reviewers Recommendation:

Further clarification of capacity/qualification with GIS and species identification requested.

Company Responses:

Covered in Section 5.2 below.

- 1.3. What elements of the HCS Approach still need to be completed in order to create a final land use and conservation plan? Are there aspects which you feel need to be re-done?

Finding and Reviewers Recommendation:

See 3.4, 5.1, 6.2.

2. Social Issues

- 2.1. Does the summary provided in Section 3.1 adequately represent and explain the community engagement, FPIC processes, and participatory mapping activities carried out?

Finding:

A table of dialogues and engagement was given, stating the record of consultation and parties involved as well as topics discussed during each consultation. FPIC processes are also embedded in the company's standard operating procedures (SOP).

- 2.2. Has a tenure study been completed and has it been vetted by independent social experts?

Finding:

No tenure was undertaken because:

“- There was no communally owned land within the PT GAP concession boundary.

- Compensation (*ganti rugi*) has been paid for all the planted areas. This involved identifying owners, mapping their lands and obtaining land titles before the payments were made.

- Most of the unplanted areas have had ownership mapped out and the purchase is still in-process.” (P. 32 of Summary Report)

The company has mapped out their land during the purchase process. Most unplanted areas with ownership has been mapped out and the remaining areas are undergoing negotiation and finalisation.

- 2.3. Is there a participatory land use map and does it contain the key components of community land use including the minimum requirement of 0.5 ha per person for future garden areas?

Finding:

A participatory map and table summary were provided in Section 10.1.2 and detailed in supplementary report 'PM PT GAP Final'.

- 2.4. Is there a record of consultation with affected communities and FPIC processes on the proposed development, the HCS Approach and issues/concerns they raised? Did the community nominate their own representatives?

Finding:

Records show that most participants were supportive of the project, although it is unclear the process by which community identified their representative. Reference was made to these representatives being village 'leaders' and other 'interested people', and focus groups such as women were 'encouraged' to attend (see appendices in the background documents: SIA and HCV assessment reports).

Invitations were sent to each village to inform participants of the meeting (p. 189 of the HCV assessment report) to include as many stakeholders as possible.

- 2.5. Were their views addressed and reflected in the plans and implementation of the plantation? Is there specific reference to the customary owners being made aware that they can say no to the development and they have the right to independent legal representation with regard to their agreements before they sign (to meet the 'prior informed' test)?

Finding:

The company and assessors carried out community engagement to collect and address community views. Section 3 of the HCS summary report describes the FPIC process in the company, mentioning that the community's decision must be respected.

- 2.6. What recommendations do you have for any improvements regarding community consultation and negotiation of Free, Prior and Informed Consent?

Finding:

FPIC processes, SIA and community engagement processes were clearly outlined and results reported back (see 2.1-2.5 above).

3. *Ecological and Conservation Values (4 hours)*

3.1. Does the summary provided in Section 4.1 of the Summary Report adequately represent the findings of the HCV study?

Finding:

The area of interest (AOI) is highly degraded due to fires and community logging. The focus of the HCV was to link what natural areas remain to form a connected network. In addition, natural areas outside the concession were also included, in relation to the watershed and its protection (see Section 1.3 of the HCS Summary Report)

3.2. If the HCV assessment was not judged satisfactory (highest rating) by the ALS scheme of the HCVRN (as noted in the introductory information from the HCS Secretariat – please see page one of this document), please do a cursory review of the HCV report as it relates to HCVs 1-4. Do you have any general comments on the quality of the site description, the analysis of the landscape and national or regional context, or the methods used to undertake the HCV study? Were the determinations of the absence/presence and extent of HCVs 1-4 well-justified? Are the HCV management and monitoring maps accurate?

Finding:

The HCV assessment was deemed satisfactory by the HCVRN. The AOI is obviously degraded. The approach of the HCV assessment was sound and the steps towards identifying the HCVs and the recommendation of a network of connected natural areas is logical.

3.3. Please review Section 9.2 of the Summary Report. Was the methodology used for the Pre-RBA and the Rapid Biodiversity Assessments (if any) satisfactory? Did the RBA(s) reveal any significant biodiversity values that should have been captured in either the HCV assessment but were not, or warrant protection?

Finding:

Only two types of patches present; these were (1) Medium Priority High Risk Patches and (2) Low Priority High Risk Patches. Both required a pre-RBA. Adequate considerations were given to the assessment of the pre-RBA and RBA.

3.4. Are the forest conservation management and monitoring activities outlined in Section 10.3 adequate? Do they take into account forests and protected areas outside the concession?

Finding:

Threats from fires to the addressing of RTE species were addressed, with recommendation prescriptions that ranged from establishing 'Fire Free Villages' and hot spot indicators to species monitoring, committee management platforms and the compensation mechanisms ('*ganti rugi*') (Tables 12 and 14 in the HCS Summary Report).

The significant areas of swamp and peat area, including 263.93 ha of peat not HCV or HCS, as in Table 13. Section 10.3 does not include specific reference to peatland management. However, all peatland is immediately a conservation area as part of PT GAP's commitments. The other remaining non-peatland areas that were swamps had 2 m deep and quite wide (>3 m wide) drains dug through them at regular intervals. So their actual function of providing environmental services was severely compromised (*information from the assessor*). The assessor spent a lot of time in these areas looking at the provision of environmental services and eventually decided that the areas had been considerably modified that their function in terms of environmental services was negligible. Another important consideration is that these swamp areas, which would have been permanently wet 20 -30 years ago, now become a fire risk in dry season. The whole landscape has basically dried out as a result of agricultural development.

Reviewers Recommendation:

Further consider how to maintain and enhance wetland/swamp areas for ecosystem services, including reducing the fire threat. This might include re-wetting / stop draining of some areas to prevent further degradation.

4. *Image Analysis*

4.1. Please review Section 6.1 of the Summary Report. Was the Area of Interest correctly identified?

Finding:

Yes using 1km buffer around the concession boundary.

4.2. Please review Section 6.2 of the Summary Report. Were the images used of adequate quality, including resolution and date?

Finding:

Sentinel 2 (2016 and 2017) and Landsat 8 (2017) were used.

4.3. Please do a quality check using the images provided in 6.3. Was the initial vegetation classification done properly? Do the land cover areas in the tables in Section 6 look reasonable? Are there any obvious errors in classification?

Finding:

Quality aspects were unclear from the HCS report however the assessor added: Sentinel-2 images (October 2016 and February 2017) were downloaded from U.S. Geological Survey (USGS) at EarthExplorer (<http://earthexplorer.usgs.gov/>). The bands that which used are 11-8-2 represent Short Wave Infrared-Near Infrared-Blue which suitable for vegetation mapping. This composite imagery has 10 m x 10 m pixels.

As part of image pre-processing step, geometric and radiometric correction were conducted for the segmentation process. The classification process was conducted using an object-oriented based classification method. The training regions for the classification were defined based on examination of high resolution Google Earth images of the area and also the assessor's experience with mapping of land cover elsewhere in

Kalimantan. After the field visit, in-field observations, and in consultation with company staff, post classification was undertaken based on the actual condition.

5. Forest Inventory

- 5.1. Please review Sections 7.1 and 7.2 of the Summary Report. Were the sample plots selected, set up, and measured properly? Please check the inventory plot layout for adequacy.

Finding:

The full HCS report acknowledges on page 46 “The reality out in the field was quite different to how it was initially mapped, which lead to major revisions to the land cover map. Within the concession it was actually very hard to find trees to measure at all.” and “In summary, Daemeter had to resort to putting plots wherever there were trees to measure, rather than focus on a statistically correct sampling strategy.” 16 plots were measured including 1 in YRF, 3 in Scrub and 2 in LDF, vs. the initial 21 planned using Winrock calculator and initial classification (page 45). No statistical difference between classes was observed. Most of the areas that were mapped as YRF and LDF turned out to be Jungle Rubber when we arrived at the plot location. So rather than put in 2 -3 plots in the location (as initially planned) Daemeter decided to go to somewhere else that was mapped as forest. This subsequent location, in turn, was jungle rubber also– so the problem perpetuated. So, in an effort to change the plan in the field Daemeter ended up with too few plots. However, the number of plots was based on initial mapping of a forest area of 199 ha. Subsequent mapping reduced this to 120 ha.

Overall the initial land cover classification was limited by too few sampling plots and deliberately locating plots ‘wherever there were trees’ rather than ‘systematic’ or ‘random’ sampling.

The jungle rubber appears to have 4 plots (Table 7.8) although the plot data only shows 2 plots with Hevea (rubber). It was also stated on page 63 that the Jungle Rubber or Mixed Rubber “If not further disturbed, secondary forest species would emerge *e.g. Cratoxylum, Camptosperma, Litsea*. These will eventually overtop the pioneer species (as well as the rubber) and out-compete them.” The report implies the area classified as rubber (jungle and mixed) includes area >50% basal area of rubber and therefore non-HCS, which appears to be the case but only based on limited plot data.

Reviewers Recommendation:

Include within the ICLUP further consideration of the ecological (>50% basal area is in fact rubber for areas mapped as rubber) and social value (future use) of the rubber areas to regenerate to natural forest and provide local income. Unlikely this would lead to any changes in land use plan from that in the HCS-HCV report, although some further field verification would be prudent.

5.2. Please review Section 7.3 of the Summary Report. Was the forest inventory team qualified?

Finding:

Jules Crawshaw and Indrawan Suryadi have Forestry degrees. The following as added to the annex:

“Kursani is an Indonesian field ecologist with a special expertise in the identification of trees in Kalimantan using reliable field botany characters. He has worked since 1989 for a number of research and conservation projects in Central Kalimantan, including the Barito Ulu research project (operated by the Wildlife Research Group, University of Cambridge), BOSF (Borneo Orangutan Survival Foundation) and the Orangutan Tropical Peatland Project (OuTrop). Kursani has a broad range of field experience, including tree identification, habitat classification, and behavioural research of gibbons, orangutans and red langurs. He now works as a botanical consultant, specialising in trees and shrubs of wetland and dryland forests in Kalimantan. He is highly proficient in the use of Latin nomenclature and botanical keys and is also familiar with local names in a number of regional dialects.

Indrawan Suryadi has more than a decade of experience in spatial analysis, geo-information management and remote sensing application. He graduated from the Faculty of Forestry at the Bogor Agricultural University in 2002 and secured a scholarship from the Dutch Government to attend the Professional Course on Geo-Information Management in International Institute for Geo-information Science and Earth Observation (ITC) in Enschede, the Netherlands, in 2005.

Indra has previously worked on remote sensing, spatial analysis using GIS as well as geo-database management in various organizations, including the Center for International Forestry Research (CIFOR), the Nature Conservancy (TNC) in Kalimantan and Sulawesi, Tropenbos

International, and Daemeter. He also worked on MRV, working on issues including spatial analysis related to land cover monitoring, carbon accounting, and the development of reference emission levels in UNDP-REDD+ Task Force and FAO-UNREDD programme.”

5.3. Please review Section 7.4 of the Summary Report. Was the allometric chosen adequate?

Finding:

Chave 2005 was used and Zanne (2009) for density. Chave 2014 is an updated and more accurate option than Chave 2005, including tree height data.

5.4. Please review Sections 7.5, 7.6, 7.7 and 7.8 of the Summary Report, and do a cursory review of the forestry data and statistical analysis. Are there any obvious errors in the raw forestry data? Are there any flags where a result does not seem consistent with your rough interpretation of the land cover image? Do the final carbon classes seem accurate given what is known about other forests in the region?

Finding:

As in section 5.1. Insufficient number of plots led to non-statistically significant results. Otherwise the plot data looks accurate. Height data as used in Chave 2014 would improve accuracy. The assessor recognizes that rather than trying to move plots or relocate them to move out of rubber areas we should have stuck with the original plot locations. Fires had burnt randomly through the vegetation and killed most species, just leaving some species surviving as lone trees. All the natural areas were a very complicated matrix of jungle rubber, natural forest and rubber plantation. In most places if you walked in a straight line for 100 m you could pass through all three forest types.

Reviewers Recommendation:

The assessor recognizes how to improve accuracy in the future with more plots of systematic/random location, while the peer reviewer recognizes the challenges and unclear guidance within the HCS toolkit of this specific case in sampling design given highly degraded and heterogeneous state of vegetation.

6. Land use planning

- 6.1. Please review Section 8.1 of the Summary Report. Was the initial vegetation classification map adequately calibrated and adjusted to take into account forest inventory results?

Finding:

See Finding 5.1.

Reviewers Recommendation:

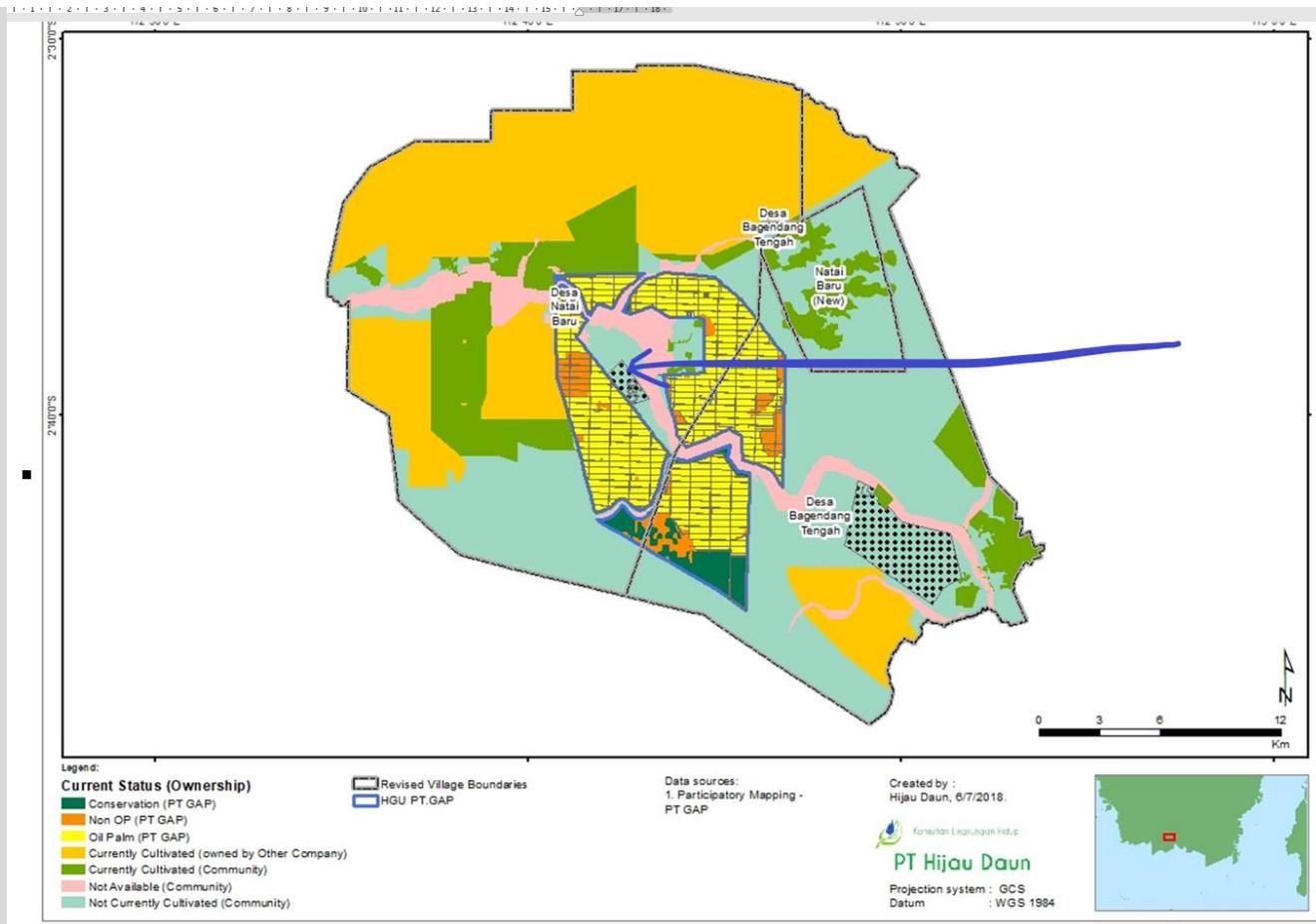
See recommendation 5.1.

- 6.2. Please review Section 9 of the Summary Report. Was participatory mapping data used in step one to identify community lands that should be enclaved? Were patches merged correctly? Was the core area correctly identified? Was the connectivity analysis done correctly?

Finding:

Participatory mapping was carried out and no community lands to be enclaved were found, although the assessor clarifies;

Some of the areas that the community identified for development are HCV areas and are unlikely to be suitable for community development (e.g. they are in swamps and would require a lot of expensive drainage that would be beyond the financial capacity of villagers). So really it would be necessary to go back to the village and point out that the areas earmarked by them for development are not suitable. This is the area that the community stated was planned for development. It is in the middle of a swamp (shown below).



The rubber areas have no customary claims associated with them. The community consulted appear very willing to sell these areas.

Reviewers Recommendation:

Carry out further participatory mapping as identified within the HCS-HCV report, as necessary.

- 6.3. Please review Section 9 of the Summary Report, and select a few sample patches to test that the Decision Tree was used correctly. Were the patches correctly identified as High, Medium, or Low Priority? Was the Patch Analysis done according to the HCS Approach Decision Tree?

Finding:

Patch analysis was completed accurately.

- 6.4. Please review Sections 10.1 and 10.2 of the Summary Report. Were the final integrated conservation and land use planning steps completed to maximize the ecological and social viability of the conservation areas (HCV, HCS, peatland, riparian zones, customary forest, etc)? Were the results of the final ground verification (if any) adequately incorporated into the land use plan and final HCS map?

Finding:

The main activity required from the HCSA report is to point out to the community of Rongkang that the area they have earmarked for development, being a swamp, is not suitable.

Reviewers Recommendation:

The company is to further develop ICLUP as per HCSA requirements.