HCSA Peer Review Report
Korindo Group - PT. Papua Agro Lestari POP-F (PT. PAL)

Background information:

a) Did a Registered Practitioner Organization lead the HCS assessment? If not, has the organization which led the assessment started the process of registration?

   Yes, BIOREF is a Registered Practitioner Organisation.

b) Was the HCS Team Leader a Registered Practitioner?

   Yes, Arif Prasetyo lead the assessment and is a registered practitioner.

c) Were at least 2 HCS team members Registered Practitioners?

   Yes, the registered practitioners on the team are Arif Prasetyo, Ahmad Faisal Siregar and Varian Triantomo.

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).

   On the HCVRN website, as at 10 August 2018, the evaluation status is **NR - Report not ready for Quality Panel review. The IC identified problems and the assessor has been asked to make corrections.**

83	HCV Assessment in the Area of PT Papua Agro Lestari Merauke District – Papua, Indonesia	PT Papua Agro Lestari	RSPO NPP / ISPO	Ahmad Faisal Siregar Provisional	30/10/2017	NR With assessor since 07/12/2017

Questions for peer reviewers
(Peer Review Panel: Alex Thorpe, Triagus Sugiyanto)

1.   Peer Review Summary

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

Finding:

1. FPIC and PM activities related to the HCS study have not been carried out.

2. There is no broader landscape identified or analyzed.

3. HCV report and Summary Report is lacking detail regarding justification of findings related to HCV1 and HCV 2.

4. Imagery used for the land cover assessment is > 1 year old.

5. Land cover strata use in the report is not consistent throughout the analysis - confusing.

6. The split between medium and low density forest does not appear to be justified either by remote sensing or inventory (given very small sample size). The two classes appear very similar. The medium density area matches HCV 1 area boundary.

7. Recommendations regarding final HCS area in Sections 10.1 and 10.2 of the report should be revised to follow the toolkit. Any lack of community consent for HCS conservation should be demonstrated through an FPIC process, not be assumed by assessors.

8. There are no HCS area management and monitoring plan recommendations.

Reviewers Recommendation:

1. FPIC and PM process related to the HCS study must be done with the existing approach.

2. Need to identify and justify the assessment landscape following the toolkit.

3. Update the land cover assessment using more recent imagery and ensure the land cover strata use is consistent throughout the analysis.

4. Review the allometric equation selection.

5. Provide more complete excel file of inventory data that includes data processing and summary tables.

6. Provide shp file of inventory plot locations that includes plot number, strata and carbon stock per ha for each plot.

7. Provide shp files and excel files of patch analysis workings (core, connectivity, risk) and results.

8. Prepare recommendations for HCS area management and monitoring plans.

Company Responses:

1. The Company has carried out FPIC process related to the HCS and HCV studies as discussed in the Public Consultation with land owner, LMA, Head of village and Head of Sub-district i.e. utilizing the HCVA and HCS as hunting ground and resource of medicinal plants. Livelihood recovery and improvement will be carried out by maintaining the sago areas and conducting work/vocational training for small business activity.

2. Broader landscape analysis was not mentioned in HCSA toolkit version 1. It is used in HCVRN common guidance 2013 to analyze HCV 1-4. HCV report has been reviewed by Ruth Sylva and team with a result of report not ready for quality panel status.

3. The land cover has been updated using Landsat Satellite Image with acquisition date on March 19, 2017.

4. The allometric equation is suitable enough to be applied in this study. Besides it is widely used by a number of researchers in Indonesia, this allometric is also recommended by RSPO to use in measuring the value of carbon stock and it is stated in supplementary material page. (https://rspo.org/key-documents/supplementary-materials)

5. It will be provided.

6. It will be provided.

7. It will be provided.

8. It have been mentioned in the 1st summary report.

Final Reviewers Recommendation:

The Participatory mapping has already mapped the clan's boundaries inside the Company's area, but not by personal ownership of the land. How many hectares each does everyone have? What is the utilization? Still need to do PM and land tenure mapping in detail and depth.

The land use plan has been revised from the previous version. Significant forest areas remain allocated for development, including those areas erroneously allocated to non-HCS (See Section 6.2) for inti plantations, and also two long fingers of HCS land which are allocated for plasma. PT PAL clearly has an issue with existing plasma commitments. However, the proposed land use plan cannot be viewed as in line with the toolkit.

The assessor is proposing an exception to the toolkit. The assessor should first present the result based on the toolkit, and then subsequently present the alternative land use plan, explaining the area impacted by the changes and the justification for the changes.

This proposal would then need to be considered by the high forest landscape working group. (see Section 6.4).

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

Finding:
Yes.

Reviewers Recommendation:
None.

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:
1. As mentioned above, FPIC and PM on HCS Assessment need to be redone. No feedback at all has been captured at all from communities with regard to the draft conservation plan.
2. HCV report has weaknesses. As the report is under review by ALS we assume these will be addressed during that review.
3. The final steps of the patch analysis toolkit have not been followed.

Reviewers Recommendation:

1. FPIC and PM process related to the HCS study must be done with the existing approach.

2. The patch analysis needs to be reworked to follow the toolkit. Any additional discussion on the outcome should be presented subsequent to presentation of the results of the toolkit.

Company Responses:

FPIC analysis has been carried out by IPB, Faculty of Forestry on May – August 2017 to analyze the compliant and implementation of FPIC principles. The report of FPIC Analysis is available for company internal purposes since the company is not a RSPO member yet.

Final Reviewers Recommendation:

Still need to do PM and land tenure mapping in detail and depth.

The patch analysis is still not in line with the toolkit. Any additional discussion on the issue of land for plasma should be presented subsequent to presentation of the results of the toolkit.

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:

No. Coverage on FPIC process in the report summary are FPIC related to the opening of new plantations area. We did not find any notice of FPIC and PM activities related to the HCS study.

Reviewers Recommendation:

FPIC and Participatory mapping needs to be carried out to seek consent for the HCSA work, describe HCSA process and company's commitment to no deforestation, identify community use of land and forest, analyse food security issues, and carry out consultation/seek consent on the draft forest conservation plan, as set out in the toolkit used (HCSA toolkit PM v1).

Company Responses:

Company has conducted participatory mapping and implemented the FPIC principles before and during the establishment of palm oil plantation which involved local community and related stakeholders. Participatory mapping and FPIC was conducted together with the head of clan and clan members. Company area is inside the local community land of Marind tribe, sub tribe of Bian Anim who lives in Muting and Kindiki (Merauke Regency) and sub tribe of Inggyash who lives along the Fly River (Mutumangge village) and PNG. As it was stated by all of the head of Clan (Mahuse clan, Mahuse Milafo clan, Basik-basik clan, Gakuin clan, Maikuin clan, Koula clan, Doukuin clan and Basikuin clan), the company has informed their plan to establish palm oil plantation, as well as the inflicted benefit and risk, and to accept positive and negative feedbacks. Company has also involved Local Government, Local Community Board (*Lembaga Masyarakat Adat*, LMA), Church Council (Cleric of Muting, Cleric of Asiki, Cleric of Getentiri and Merauke Bishop), NGO (WWF, Pusaka), and Merauke University to receive their feedback and opinion in order to manage and resolve the arising issues in the Social Management Plan according to the RSPO Principles and Criteria. Company will also improve the work of Community Complaint Center for a better communication and response for all stakeholders.

Final Reviewers Recommendation:

The PM has already mapped the clan's boundaries inside the Company's area, but not by personal ownership of the land. How many hectares each does everyone have? What is the utilization? Name of land ownership? Still need to do PM in detail and depth, mapped land area should be person by person.

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

Finding:
Yes, but coverage study in summary report is only related to the opening of new plantations area. No evidence of vetting.

Reviewers Recommendation:
Verify existing tenure data during the FPIC and PM processes.

Company Responses:
Tenure study has been carried out within the Social and Environment Impact Assessment (SEIA) conducted by IPB, Faculty of Forestry on May – August 2017. The tenure study involved all the head of clan and their clan members who live in the concession area located inside the community land. Interview and focus group discussion were used in this study.

See SEIA Report and FPIC Analysis report.

Final Reviewers Recommendation:
Land tenure study should be done for mapped land ownership person by person in clan's area or village.

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:
Participatory mapping has not been done.

Reviewers Recommendation:
Carry out FPIC and PM and in accordance with HCSA toolkit V1 (as mentioned in 2.1).

Company Responses:
Participatory mapping has been carried out together with all the head of clan and their clan members who live in the concession area located inside the community land, as well as with Local Community Board (*Lembaga Masyarakat Adat*, LMA), Head of Village and Head of Sub-district since 2013.

See the SEIA report and FPIC Analysis report.

Final Reviewers Recommendation:
The PM has already mapped the clan's boundaries inside the Company's area. But no information about "minimum area of 0.5 ha per person for future farm land" and also their location on the map. Future farm land should be analysis and mapped the allocated area.

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:
No.
1. The consultation carried out is related to land release for the planned plantation development. Consultation with the local community related to the HCS study has not been done.
2. No evidence regarding nomination of representatives.

Reviewers Recommendation:
Carry out FPIC and PM and in accordance with HCSA toolkit V1 (as mentioned in 2.1).

Company Responses:
Consultation has been carried out in the SEIA study involving the Local Government (Head of village, head of sub-district, Natural Resources Conservation Center/*BKSDA*, Wasur National Park, Public Works and Landscape Service, Agricultural Service, Regency Environment Board, etc), Local Community Board (*Lembaga Masyarakat Adat*, LMA), Church Council (Cleric of Muting, Cleric of Asiki, Cleric of Getentiri and Merauke Bishop), NGO (WWF, Pusaka), and Merauke University to receive their feedback and opinion in order to manage and resolve the arising issues. See SEIA report and FPIC Analysis report.

Final Reviewers Recommendation:
OK. No comment.

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:
Yes, but the study conducted, there were no reports of land owners (ulayat land) that agreed or disagreed with the development of the Palm oil plantation.

Reviewers Recommendation:
Carry out FPIC and PM and in accordance with HCSA toolkit V1 (as mentioned in 2.1).

Company Responses:
The Company has already implemented the FPIC principles before and during the establishment of palm oil plantation involving all local community and related stakeholders. Participatory mapping and FPIC were conducted together with the head of clan and clan members. Company area is inside the local community land of Marind tribe, sub tribe of Bian Anim who lives in Muting and Kindiki (Merauke Regency) and sub tribe of Inggyash who lives along the Fly River (Mutumangge village) and PNG. As it was stated by all of the head of Clan (Mahuse clan, Mahuse Milafo clan, Basik-basik clan, Gakuin clan, Maikuin clan, Koula clan, Doukuin clan and Basikuin clan), the company has informed their plan to establish palm oil plantation, as well as the inflicted benefit and risk, and to accept positive and negative feedbacks.

See SEIA report and FPIC Analysis Report.

Final Reviewers Recommendation:
OK. No comment.

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

Finding:	
FPIC process must be done with the existing approach.	
Reviewers Recommendation:	
Prepare the team	Prepare work plans and implement FPIC, create documentation and reporting
Pre-identification of community rights	Review information related to land ownership, indigenous peoples' existence, utilization of Forest Resources, communities and cultural sites to be affected
Preparing socialization materials	Includes: Size of area, scope, and purpose of the activity
Socialize with the local community	Explains the company's workplans and discussions, verification and validation of the results of the identification of community rights.
Local community forum	The community discussed and decided to make a deal with the company
Agreement	Conclude and sign a mutual agreement between the community and the company
Socialize the agreement	Delivering the agreement to the local community and tradition, village and the wider community in the study area
Documentation	documentation of FPIC processes and activities in the form of reports, photographs and absences of participants

Company Responses:

The customary land deliverance process conducted by the company, is equipped with:

a. The clan genealogy and its heir.

b. Letter of customary land ownership.

c. Statement of price warranty.

d. Field Inspection Report concerning the rights over customary land.

e. Letter of agreement over boundaries of customary land rights between clans.

f. Statement of customary land rights deliverance.

g. Minutes of compensation payments for the deliverance of customary land rights.

h. Receipts.

i. Map.

The entire document has been legally endorsed by the LMA, village authority, and sub-district authority. Besides the compensation for the land, company and ulayat owners were also agree to give compensation for the timber harvesting in every clan's land. Related to the customary land rights deliverance, the complete documents are owned by the company. It is examined and verified through discussions and interviews with stakeholders.

Proof of visit, list of participants and meeting documentation can be seen in appendix 17 - appendix 26 in SEIA Document.

See FPIC Analysis Report.

Final Reviewers Recommendation:

Boundaries of clans or villages and also the land use outside the company HGU should be mapped to identify availability of land for local community.

3. *Ecological and Conservation Values*

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

Finding:

Somewhat. The summary of the HCV report does provide an overview of the HCV study in the concession site, but it needs some more detailed information.

Reviewers Recommendation:

Include the name of RTE Species in the summary report, this make the consideration that there is HCV 1 contained in the concession area. Add the identified HCV Categories to the final HCV map in detail and complete. Write down document link of the Summary HCV report if it has been submitted to RSPO, so that the public can easily access the document.

Company Responses:

RTE Species found, were already mentioned in page 8. For fauna category Rusa timor (Rusa timorensis), Kanguru hutan (Thyloagale brunii), Kasuari gelambir-ganda (Casuarius casuarius) and Mabruk selatan (Goura scheepmakeri) were found. Meanwhile for flora category, Kantong Semar (Nepenthes mirabilis) was found. However, the HCV document is under revision based on feedback from Ruth Sylva (HCVRN). It will be updated and will be easily to access after the revision is done.

Final Reviewers Recommendation:

Noted, waiting response form HCVRN.

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:
HCV summary report should be promptly fixed in accordance with input and correction of HCVRN.

Reviewers Recommendation:
1. In assessing the existence of HCVs with the presence / absence approach, it has not been done in detail in explaining the existing data, for example: it has not yet explained in detail the value of the diversity and richness of the existing species in consideration of HCV 1 criteria, and the justification for absence of HCV 2 is not well justified (there is no evidence of logging activity on satellite imagery).
2. Primary data collection methods have not explained in detail the methods used, considerations in taking, selecting and determining the number of samples and sample locations.
3. Summary report has not included supporting data to be attached in accordance with guidelines published by HCVRN.
4. The preparation of the management and monitoring recommendations still does not refer to the published format of HCVRN, for example: identified threats to existing HCV values and management recommendations from existing threats, not yet written in full in the document.
5. Making maps of HCV Management and Monitoring with detailed information in accordance with the existence of HCVs.

Company Responses:
HCV report has been reviewed by Ruth Sylva and team with a result of unsatisfactory status. Ruth Sylva recommended to revise the report and it will be revised and resubmitted to HCVRN.

Final Reviewers Recommendation:
Noted, waiting response form HCVRN.

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:
No, the patch analysis process with the decision tree has not been clearly described and conformed to the method contained in HCSA Toolkit. So the patches that need to be done Pre RBA and RBA processes are not identified in the map.

Reviewers Recommendation:
Analyze patches according to the decision tree in HCSA Toolkit V2 to find out which patches to do pre RBA and RBA activities.

Company Responses:
Patch analysis will be revised according to HCSA Toolkit version 1.0. When this study was conducted, HCSA toolkit version 2 was not published and applied yet. Therefore, it will be revised according to HCSA Toolkit version 1.0 with updated satellite image.

Final Reviewers Recommendation:
Noted.

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:
No. There are Management and Monitoring recommendations for HCV areas but not yet available for HCS Areas.

Reviewers Recommendation:
Refine the patch analysis process with the Decision tree to obtain a final HCS map containing information and data related to HCS and non HCS areas. Prepare recommendations for HCS area management and monitoring plans based on the Final HCS map.

Company Responses:
Final HCS map will be provided according to HCSA toolkit version 1.0.

Final Reviewers Recommendation:
Noted.

4. *Image Analysis*

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

Finding:

No.

1. The land cover assessment is limited to areas within the concession boundary only.
2. There is no broader landscape identified or analyzed.

Reviewers Recommendation:

Need to identify and justify the broader landscape to be analyzed following the toolkit.

Company Responses:

There is no explanation about wider landscape analysis in HCSA toolkit version 1.0. We consider it as unnecessary to do. Broader landscape analysis has to be done in HCV Study, particularly to discuss about HCV 2, HCV 3 and boundaries of ecological study.

Final Reviewers Recommendation:

In toolkit 1 decision tree, patch core area and connectivity is calculated including forest patches outside the boundary. However in the case of PT PAL, most of the forest area is high priority so it has no impact on the final result.

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

Finding:
No.
The imagery used is Landsat 8 Path 100 /Row 65, with capture date 22nd September 2015. The HCS report is issued June 2017. The imagery is therefore almost 2 years old. However, having said that, the image is clear (0% cloud). As the report is prepared under the 2015 toolkit, there is no issue with resolution of the imagery.

Reviewers Recommendation:
Update the land cover assessment using more recent imagery.

Company Responses:
It will be provided as a revision of land cover map from Landsat satellite image with acquisition date of 19 March 2017.

Final Reviewers Recommendation:
Sudah diperbaiki dengan mengupdate Satellite imagery dan Land cover tahun 2017.

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:

Somewhat. There is inconsistency in classification.

1.   Table 8 and the land cover shp received are in agreement (even though strata names used are different). However, Figure 11 uses a different stratification - there is a single "secondary forest" strata (Table 8 has Low Density and Medium Density forest). Also, the non-forest strata found in Figure 11 (Semak, Rumput, Lahan terbuka) do not match those in the table or shp file.

2.   The split between medium and low density forest does not appear to be justified either by remote sensing or inventory.   The two classes appear very similar. The medium density area matches HCV 1 area boundary.

Reviewers Recommendation:

1.   Remove inconsistencies in classification. Figure 11 should match the other data sent.
2.   Justify the stratification of the forest into low and medium density classes.

Company Responses:

It will be provided in the revision of summary report.

Final Reviewers Recommendation:

There is still inconsistency between Figure 12 & 13, Table 8 and the shp files delivered. Figures 12 & 13 use the updated LC stratification (2017) with total area of 28,622 ha, but strata displayed are not the standard HCS classes. Table 8 uses the old LC stratification (2015) with total area of 28,309 ha, but strata are the standard HCS classes. Actually the 2017 land cover shp files contain the data needed to update the above maps and table, but it still hasn't been done!

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:

No.

1.   No description or justification for the number of plots measured or the plot location method is included.

2.   Plot size is not the standard circular HCS plot but it is suitable/adequate.

3.   Plot map (Figure 12) shows plot locations but does not show land cover so it is difficult to review the plot layout. Also, as no shp file of plot locations and plot numbers provided, so it is impossible to review plot layout using GIS.

Reviewers Recommendation:

1.   Describe and justify the number of plots measured and the plot location method.

2.   Plot location map should show land cover strata.

Company Responses:

It will be provided in the revision of summary report.

Final Reviewers Recommendation:

1. Plot inventory sudah di update dengan landcover 2017.

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

Finding:
Yes. Team Leader Arif Prasetyo, S.Hut is certified for HCS Approach.

Reviewers Recommendation:
None.

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

Finding:
No.
1.   The Allometric equation used is Kettering (2001) which was developed using a sample of 29 trees with diameter range 8-48cm in Jambi.
i.e. this is a local equation based on a small sample. It is not really suitable for southern Papua conditions.
2.   If suitable diameter only based allometric equation is not available, then it would have been better to measure heights and use a pan regional diameter-height allometric model.

Reviewers Recommendation:
Review the allometric equation selection.

Company Responses:
The allometric equation is suitable enough to be applied in this study. Besides it is widely used by a number of researchers in Indonesia, this allometric is also recommended by RSPO to use in measuring the value of carbon stock and it is stated in supplementary material page (https://rspo.org/key-documents/supplementary-materials)

Final Reviewers Recommendation:

Our opinion above still stands. Agree to disagree.

	B	C	D	E	F	G	H	I
22	Higuchi & Carvalho	1994	Biomassa e conteúdo de carbono de espécies arbóreas da Amazônia.	$FW = 4.06D^{1.76}$ $FW = 400.32 + 39.99D + 0.97D^2$ $FW = 318.09 + 38.12(D^2)H + 0.03D^2$ $FW = 350.69 + 55.50D + 2.25(D^2) + 0.09(D^2)H$ $FW = 175.83 + 0.79D^2 + 0.07(D^2)H$ $FW = 533.26 + 130.22D + 51.00H$ $FW = 0.026(D^{1.529})H^{1.747}$	Dense tropical moist forest	Latin America	Brazil (near Manaus, Amazonas State)	Developed using 335 trees randomly selected. Not seen (cited in Araújo et al., 1999)
23	ICRAF	2009	Estimating carbon footprint from biofuel production from oil palm: methodology and results from 2 pilot areas in Indonesia	$AGB = 0.0976H + 0.0706$	Oil palm	Southeast Asia	Indonesia (Kalimantan and Sumatra)	Equation from the destructive sampling from two sites, involving 144 palms from Site 1 (Sumatra) and 100 palms from Site 2 (Kalimantan), with the palms of different age classes, on both mineral and peat soils. Cited in Hairiah et al. (2011)
24	Kenzo et al.	2009	Allometric equations for accurate estimation of above-ground biomass in logged over tropical rainforests in Sarawak, Malaysia	$AGB = 0.1535 \times D^{2.34}$; $AGB = 0.1083 \times (D^2H)^{0.80}$	Lowland tropical rainforests (logged over)	Southeast Asia	Malaysia (Sarawak)	ABG = aboveground biomass (kg/tree); D = dbh (cm); H = height (m). Not seen. Cited in Stas (2011).
25	Ketterings et al.	2001	Reducing uncertainty in the use of allometric biomass equations for predicting above-ground tree biomass in mixed secondary forests	$AGB = 0.66(D)^{2.59}$; $AGB = 0.11\rho(D)^{2+0.62}$	Mixed secondary forests	Southeast Asia	Indonesia (Sepunggur, Jambi, Sumatra)	Forests dominated by human-introduced Hevea brasiliensis, and naturally occuring wood species (*Mallotus*, *Eugenia*, *Mastixia*, *Styrax* and *Dactylocladus* spp.) and fruit species (*Phitecellobium*, *Parkia* and *Artocarpus* spp.). Data consisted of 29 trees from 14 genera with dbh of 7.6-48.1cm. AGB in kg; D = dbh (cm); ρ = wood density (kg dm^{-3})

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:

Need more data to answer this question.

1. Although raw plot data is provided in excel format, none of the workings or summary tables calculating carbon stock have been provided so it is difficult to draw conclusions. Also there is no plot shp file so we cannot cross check on imagery.

2. The number of plots measured for scrub, YRF and LDF are very low (6, 6 and 5 respectively). Although overall the precision in the samples is good, and carbon stock figures look reasonable, as mentioned above the basis for stratification of LDF and MDF looks questionable.

Reviewers Recommendation:

1. Provide all files showing the workings of the carbon stock calculation.

2. Provide shp file with plot location, plot number and carbon stock/ha in each plot.

3. Provide a plot summary table in the report showing the plot no, strata and carbon stock in each plot.

4. Include Scheffe's analysis as per the toolkit.

Company Responses:

It will be provided in the revision of summary report.

Final Reviewers Recommendation:

1. Tabel plot, strata dan carbon stock serta Scheffe test sudah ditambahkan ke dalam summary report section 7.9 serta rekap data masing masing sudah ditambahkan. Sesuai dengan shp plot yang diberikan.

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:

Somewhat.

1. The study area consists of a large contiguous block of forest so there is really not much need for calibration.
2. Land cover strata used in Section 8.1 (Figure 18) are not consistent with Sections 6.5 and 6.5.
3. The only question mark is regarding the split of LDF and MDF as described above.

Reviewers Recommendation:

Need to use systematic land cover strata in all maps and tables – its quite confusing.

Need to justify the stratification of the forest into low and medium density classes.

Company Responses:

It will be provided in the revision of summary report.

Final Reviewers Recommendation:

There is still inconsistency between maps and area tables (Section 6.5 and 8.1). However, the map in Section 8.1 appears generally correct.

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:
No.
1. There is no evidence of any PM being carried out in relation to HCS areas.
2. No shp files or excel files demonstrating the patch analysis process or results have been provided, so we cannot check GIS steps. However the following findings can be made:
3. Patches connected to high priority patches have not been correctly identified, and connectivity to forest areas outside the boundary has not been considered. This refers to areas partially cleared (note these areas have already been cleared now).
4. From Figure 19 and the other data provided, it looks like almost all the forest area in the concession is connected in 1 single high priority patch.
5. Rivers inside the PAL area probably do not constitute a risk as they are small (not used for transport) and there is no history of smallholder expansion along these rivers.

Reviewers Recommendation:
1. Provide shp files of patch analysis workings (core, connectivity, risk) and results, with each patch given a patch id no.
2. Provide an excel table listing all patches and the proposed land use for each patch based on the patch analysis procedure in the toolkit.
3. Revise risk analysis to recognize realistic risks along rivers.

Company Responses:
It will be provided in the revision of summary report.

Final Reviewers Recommendation:

Reviewers finding no 3 above has not been addressed. Patches connected to high priority patches have been incorrectly allocated to non HCS. These are the patches where block roads have been built but forest not logged or cleared. These patches are connected (using the 200m rule) to the main patch further south, so following the decision tree should be allocated for conservation regardless of their core size/priority.

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:
Need more data to answer this question - no shp data provided.

Reviewers Recommendation:
Provide patch analysis workings as described above.

Company Responses:
It will be provided in the revision of summary report.

Final Reviewers Recommendation:
Patch Analysis has not been done according to the HCS Approach Decision Tree – see 6.2 above.

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:

No.

1.   The final recommended HCS boundary follows the HCV 1 boundary. Of the 24,744 ha main high priority forest patch identified, only 5,835 ha are included in the final HCS area identified in Section 10.2 (Figure 20). The justification for removing parts of the forest area identified are set out in Section 9.2 and revolve around legality and socio-economic justifications.

2.   Regardless of the potential validity of the assessors reasoning for removing forest areas from the final HCS area, the toolkit procedure has been ignored and therefore the result cannot be viewed as in line with the toolkit.

Reviewers Recommendation:

1.   Recommendations in Sections 10.1 and 10.2 of the report should be revised to follow the toolkit.

2.   Any lack of community consent for HCS conservation should be demonstrated through an FPIC process, not be assumed by assessors.

3.   Other reasoning the Assessor may wish to bring forward for revising the land use plan should be addressed in a final step once the results of the toolkit process itself have been described. In this way all facts are set out clearly and can be debated transparently.

Company Responses:

1. It will be provided in the revision of summary report.

2. All land owner from all clans who live in the concession area located inside the community land, already give their agreement through official letter acknowledged by head of village, head of sub-district and Local Community Board (LMA) regarding to the establishment of Palm oil plantation belonging to PT PAL.

3. The decision of land use planning has been mentioned in the revision of summary report.

Final Reviewers Recommendation:

The land use plan has been revised from the previous version. Significant forest areas remain allocated for development, including those areas erroneously allocated to non-HCS (See 6.2 above) for inti plantation, and also two long fingers of HCS land which are allocated for plasma.

PT PAL clearly has an issue with existing plasma commitments, with agreed plasma areas located in HCS forest. However as recommended in the first review, regardless of the potential validity of the assessors reasoning for removing forest areas from the final HCS area, the proposed land use plan cannot be viewed as in line with the toolkit. The assessor is proposing an exception to the toolkit. The assessor should first present the result based on the toolkit, and then subsequently present the alternative land use plan, explaining the area impacted by the changes and the justification for the changes.

There are two long fingers of high priority HCS land recommended for plasma development. The assessor should perhaps consider changing the alternative land use plan to conserve these areas, and limit any proposed additional development to areas where blocking has already been done, and where the purpose is purely for fulfilling plasma commitments. This proposal would then need to be considered by the high forest landscape working group.