

Updated: 20 December 2019



HIGH CARBON STOCK APPROACH

HCSA PEER REVIEW REPORT

Company Name: Cargill Tropical Palm Holdings Pte Ltd

HCS Assessment Area: PT Andes Sawit Mas

16 June 2021

Dear peer reviewers:

Thank you for agreeing to review this HCS study. As you know, we are asking you to do a desk review of the material provided and to highlight any concerns you have about the land cover classification, land-use planning, or consultation processes. We have invited you as an expert in your field, and hope that you will bring your own experience and knowledge to this review to help the company improve its study. We are not asking you to provide a pass/fail decision, just to give your honest opinion and suggestions for changes to the company's plans or activities to ensure that the HCS Approach methodology is implemented correctly. Please refer to the latest [HCSA Toolkit](#) as reference.

Some of the issues raised in the review may be complicated and long-standing, especially those related to land tenure and historical conflict with communities. It is not within the scope of the review for you to do hours of research and determine who is at fault, or to examine stakeholder activities outside of the particular concession or plantation which is the subject of the review. Rather we ask that you call attention to topics that need further research or more information from the company, to improve community relations in the future or to reassure external stakeholders that the intent of the HCS Approach is being followed.

Background information to be provided by the HCSA Secretariat:

- 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, M Sayidina Ali from Daemeter led the HCS assessment.

- b) Was the HCS Team Leader a Registered Practitioner?**

Yes, M Sayidina Ali was the HCS Team Leader.

- c) Were at least two (2) HCS team members Registered Practitioners?**

Yes, M Sayidina Ali and Bukhari were Registered Practitioners.

- d) Was the HCV assessment judged 'satisfactory' (highest rating) by the HCV Resource Network (HCVRN) Assessor Licensing Scheme (ALS)? (See <https://hcvnetwork.org/reports/find-a-report/>).**

Yes, satisfactory.

Questions for peer reviewers

(Peer Review Panel: Jules Crawshaw)

The estimated time to complete each section is noted in parentheses.

1. Peer Review Summary (2 hours, Lead Reviewer)

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

Please refer to the peer review results in this report.

Finding: In general, this assessment has been well executed. Most of the findings of the review require more details being added to the summary report to make it more clear to a reader that does not have access to the data sets that were provided to the reviewer.

Reviewers Recommendation:

Follow the recommendations made by the reviewer below. The company has clearly made a very good effort to address all the reviewer's points. There are still a few outstanding issues, though these are quite minor.

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

Please refer to Section 2 of the Summary Report.

Finding: The team must be made up of at least 2 registered HCS practitioners. The Team Leader and the GIS expert are both registered practitioners.

Reviewers Recommendation: No recommendations

- 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?

Please review Section 10 of the Summary Report and the peer review results in this report.

Finding:

There are no aspects that need to be redone.

The company has provided an HCS study that integrates with an HCV study. What has resulted is a conservation area that is made up of a lot of small conservation areas (fragments of forest that appear to be in a degraded condition – based on what the reviewer can ascertain from the satellite imagery). Also the conservation area is made up of river buffers that have a large “edge”. Added to this it seems (though not clearly stated anywhere) there is a lot of area owned by the community in this landscape. So to develop an ICLUP the company will have to work together with the community to protect all these conservation areas. Which the reviewer considers to be a very difficult task! Working out detailed conservation management and monitoring plans in conjunction with the community will be required to create an ICLUP.

Reviewers Recommendation:

1. The map of the company owned areas and the community owned areas with the conservation areas overlaid has now been provided in Gambar 28 of the summary report. This shows that much of the conservation area is owned by the community. This highlights the issue of developing an effective conservation management plan where much of the conservation area is owned by the community. This concern is also reflected by the community in table 14.

2. **Social Issues** (4 hours)

Please review Section 3 and Section 4 of the Summary Report and please also look at the full HCV report (Section 4) for how HCVs 5 and 6 were assessed. The HCSA Toolkit provides more information on the expected quality of community consultation and FPIC procedures.

- 2.1. Does the summary provided in Section 3 adequately represent and explain the community engagement, FPIC processes, and participatory mapping activities carried out?

Finding: Table 6 describes the community engagement, FPIC and participatory mapping processes that were undertaken for this assessment. This was divided into a preparation, scoping and full assessment stages, this follows the HCSA guidance. The write up describes the methods that were used. What is lacking is that there is no discussion of the findings / results. There is no mention of a Social Background Study having been undertaken. However, in the materials provided to the reviewer a SIA is provided. This SIA covers most of the requirements of the SBS.

Reviewers Recommendation:

1. Provide a brief discussion of the results of the community engagement, FPIC and participatory mapping. A good discussion of the results has been added in section 3.1.6. This highlights a suite of issues that will feed into the management and monitoring plan e.g. ensuring the integrity of conservation areas where the conservation area is owned by the community, ensuring the rivers don't overflow onto the farm lands, overlaps between neighbouring villages' perception of their boundaries.
2. Reference the SIA and discuss how it fulfils the requirements of the SBS. It is a small point, but in the timelines (table 16) provided it should state that the SIA done in 2015 covers all the requirements of the SBS. Currently there is no mention of the SBS in the report and an SBS is a requirement of an HCSA.

Company's Response:

Already added in this section:

Tabel 15 Kegiatan-Kegiatan PT ASM yang Melibatkan Partisipasi Masyarakat

No.	Tahun	Kegiatan	Referensi
1	2007	Sosialisasi rencana pembangunan perkebunan kelapa sawit di Desa Priangan, Deranuk, Tangerang, Teluk Runiai, Runiai Jaya dan Riam Batu Gading	Berdasarkan wawancara dan FGD
2	2-3 April 2009	Sosialisasi rencana pembangunan yang dilaksanakan di Kecamatan Jelai Hulu dan Marau	Risalah Pertemuan, Absensi dan
3	2015	Penilaian Nilai Konservasi Tinggi	Dokumen HCV
4	2015	Penilaian Dampak Sosial	Dokumen SIA*
5	2019	Sosialisasi rencana penilaian HCS	Berita Acara Pertemuan dan izin untuk penilaian HCS
5	2020	Pemetaan Penggunaan Lahan	Peta Penggunaan Lahan

Catatan: * SIA yang dilakukan pada tahun 2015 mencakup semua persyaratan SBS untuk HCS Assessment

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

Finding: There is mention of a tenure study having been carried out (in timeline section 2.2). The study has been included in the materials provided to the reviewer. Based on the requirements of a LT&LUS described in the HCSA Social Requirements (SR1) the study provided by Cargill appears relatively thorough.

Reviewers Recommendation:

1. A summary of the methods and findings of the Land Tenure Study should be added to section 3 of the report. A very comprehensive discussion of land ownership and land use in the area has been added. There is also mention of potential land conflict and how it can be avoided (especially relating to the GRTT process).
2. The Land Tenure Study should be referenced in section 3. This is now referenced in section 1.6.

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: The Summary Report on mentions that participatory mapping was undertaken. No results are provided and there is no reference to a separate PM report.

Reviewers Recommendation:

1. Review Advice Note 1 Section 4 (Local people's lands for food security) and ensure all the requirements of this Advice Note are fulfilled. A good discussion has now been added (section 3.1.5) which addresses all the requirements of the Food Security section of Advice Note 1.
2. If there is a separate PM report this should be provided to the reviewer. A separate LTLU study has been included which includes a LU map. In the summary report there is a description of the results of PM.

- 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: The concept of “Affected Communities” has not been unambiguously addressed in this report. The affected communities must be identified in the Land Tenure and Land Use Study. It is stated “Berdasarkan wawancara dan FGD pada saat penilaian SKT dengan masyarakat di desa-desa sekitar ijin lokasi” – a list of 6 villages (“Desa Priangan, Deranuk, Tanggerang, Teluk Runjai, Runjai Jaya dan Riam Batu Gading”) are mentioned in a socialisation that took place in 2007. The LTS mentions 7 desa (the same list as before plus Desa Perigi). Perigi is described as a desa in the HCS and LTLU report and a dusun in the HCV report. However Ds Perigi does not seem to be included in the HCS assessment (From pg 13 “Penilaian dampak sosial dilakukan selama 7 hari dan telah mengunjungi 6 desa (Desa Periang, Tanggerang, Deranuk, Teluk Runjai, yang termasuk ke dalam wilayah Kecamatan Jelai Hulu, Desa Runjai Jaya dan Riam Batu Gading yang termasuk kedalam wilayah Kecamatan Marau).”)

There is record of consultation with these communities in the LTS – a description of the meetings and attendance lists are provided.

In this situation the HCS study has been undertaken over an existing operation (not a greenfields development). The concept of HCSA was socialised to the community. There is mention about communication with various parties within the community in order to avoid problems. Though there was no specific mention of issues and what the assessors did to overcome these issues.

There is no formal mention of the community nominating their own representatives. However, the Kepala Desa and various other positions are elected by the community to represent the village on a range of issues.

Reviewers Recommendation:

1. Provide a table and a map of the villages that are considered “Affected Communities”. This should be unambiguously labelled “Affected Communities” and describe how these communities fit the HCSA definition¹ and how other communities do not fit it. The company has provided a table of 7 communities with the description “desa-desa sekitar IUP PT ASM” – however it is still not stated that these are “affected communities”. How these communities meet the definition in the footnote below should be explained.
2. Explain why Desa Perigi was not included in the HCS assessment even though it was identified in the LTLU Study. This was an error – this village was not included in the SIA “Penilaian dampak sosial dilakukan selama 7 hari dan telah mengunjungi 6 desa (Desa Periang, Tanggerang, Deranuk, Teluk Runjai, yang termasuk ke dalam wilayah Kecamatan Jelai Hulu, Desa Runjai Jaya dan Riam Batu Gading yang termasuk kedalam wilayah Kecamatan Marau).” – it

¹ The SRs are applicable to all the communities in the vicinity of the proposed development that would be affected by it, including indigenous peoples as well as other long-term residents and other users, referred to throughout as ‘affected communities’ will need to interact with, and to what extent, depending on how they are likely to be affected and the nature of their land rights. All communities that are likely to be affected directly and significantly by the proposed development, i.e. those with land holdings and usage rights within the affected area, must be included in the assessment and FPIC process. Other communities that are likely to be affected only indirectly, such as by possible longer-term changes to ecosystem services provision due to the water usage of the operation for example, also need to be taken into account.

should be explained why Perigi has been missed out.

3. Mention briefly how the village already has elected positions for people whom the village chooses to represent them. The following statement has been added “Responden yang terlibat dalam kegiatan SKT dinilai sudah mewakili berbagai kelompok kepentingan sebagai informan, meliputi: perangkat desa , PJ Kades, Sekdes, BPD, Ketua RT, Linmas, Tokoh Agama, Tokoh Adat, Tokoh Pemuda, Tokoh Perempuan, Pemilik Lahan, Warga Desa dan Perwakilan Tokoh Masyarakat lainnya. Disamping itu jumlah responden yang diwawancarai dan terlibat dalam kegiatan SKT ini sudah mewakili suku, agama, jenis kelamin, dan mata pencaharian, sehingga pengambilan kelompok kepentingan sebagai informan dalam kajian SKT dianggap cukup mewakili.” SR2 states “Developers pro-actively inform indigenous peoples, local communities and land users that they have the right to choose their own representatives before undertaking any actions on the ground.” In the statement, it is not clear whether the company or the community has chosen these representatives whereas it needs to be explained how the “community” choose the representatives.

4. Provide examples of specific issues that the community raised and how the management plans were altered to address these issues.

Company’s Response:

1. From FGD result in scoping study, the stakeholders we involve in the assessment both in the FPIC, PM and FGD processes have represented (perangkat desa , PJ Kades, Sekdes, BPD, Ketua RT, Linmas, Tokoh Agama, Tokoh Adat, Tokoh Pemuda, Tokoh Perempuan, Pemilik Lahan, Warga Desa, Perwakilan Tokoh Masyarakat lainnya, termasuk di dalamnya tokoh adat/temenggung).
2. A total of 7 villages were included in the HCS Assessment from the initial stages of scoping, full assessment, and public consultation (Table 14 in the HCS Assessment summary report). The description of the villages included in the HCS Assessment has also been submitted in the summary report in section 3.1.1. Social Background Information.
3. The company has informed the villages around PT ASM that there will be an HCS assessment. From the meeting, it was identified representatives from the community who could be involved in the HCS assessment meeting. the scoping stage, the team identified representatives appointed by the community to represent the PM and FGD meetings at the Full Assessment and public consultation.
4. Community palm oil sourced from hcv land due to a lack of community understanding. Solution; the company must provide socialization to the surrounding community about the understanding of maintaining HCV including the implications of their palm oil products coming from HCV

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: There is no mention of the community having their views addressed and reflected in the plans and implementation of the plantation. There is no specific reference to the customary owners being made aware that they can say “no” to development. There is the statement ‘Tanggapan masyarakat

pada saat sosialisasi terbagi dua, sebagian masyarakat setuju dan menerima kehadiran PT ASM dan sebagian lagi menolaknya' – which implies that the community had the right to say no. This element of FPIC is best addressed through using the FPIC SOP.

Reviewers Recommendation:

1. Present the company's FPIC SOP and show how these features of FPIC are included in the SOP. From there provide examples of how the company followed the SOP with the development of the plantation. The FPIC SOP was not provided for review, though the GRTT process has been described in detail and this approach appears very thorough.
2. If the company supported the community in getting independent legal representation, this should be stated. This may have been getting advice from an NGO or the local government.

Company's Response:

1. The principles of implementing FPIC are not provided in a separate SOP, but are applied to the SOP land acquisition and SOP Receiving Information, Complain and Conflict Settlement.
2. In the location permit and IUP issued by the Ketapang government authorities, one of the points is that the company applies involvement and respects community rights in the land acquisition process.

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

Finding: The report currently discusses the methods. None of the findings and practical implementation of FPIC are addressed. Once information is provided about the findings and results the reviewer will be able to make comment.

Reviewers Recommendation:

Provide information on the findings and practical implementation of FPIC. A comprehensive description of FPIC has been added in section 3.1.6.

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

- 3.1. Does the summary provided in Section 5 of the Summary Report adequately represent the findings of the HCV study?

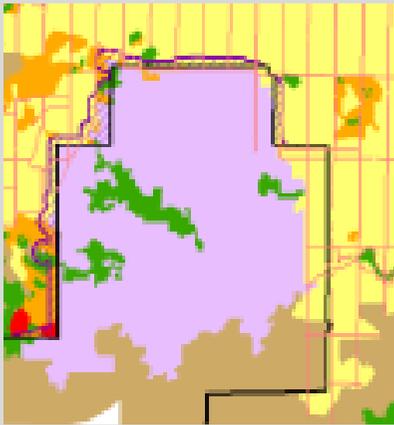
Finding: The report provides an area statement and a map of the locations of the HCV areas. It also provides a link to the summary report. However, the purpose of the summary report is to provide the reader with a summary all in one place without having to find a suite of other files.

Reviewers Recommendation:

1. Describe briefly the reasons for the mapping of each of the 6 HCVs as either being present or not present. Tabel 19 has been added which provides a good summary of the presence / absence of each HCV.
2. The map provided should include the HCV areas that extend into the AOI from the concession area. The mapping of the HCV areas has not extended into the AOI – an example of HCV 4.1 – where the swamp (purple area) is not marked as HCV 4.1 outside the concession.

Company's Response:

The HCV map has been revised and depicted on the AOI landscape (Figure 10 – Figure 15).



- 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 HCSA 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?

The HCV Report can be found in the SharePoint.

Finding: The HCV was judged satisfactory.

HCV Cargill Tropical Palm Holdings Pte Ltd, PT Andes Agro Investama, PT Andes Sawit Lestari, Indonesia

RSPO Existing Plantation

Closed

Indonesia

Felicia Lasmana

Reviewers Recommendation: No recommendation

3.3. Please review Section 8.2 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?

Note that this is a check of procedures, not outcomes. The HCSA Toolkit provides more information on the expected quality of the RBA and the Pre-RBA.

Finding: There is no discussion about the pre-RBA check nor the RBA methodology. Also, it is not stated whether this is a low or medium forest cover landscape – if it is a medium forest cover landscape, no RBA is required for LPP.

Based on the report it appears that the pre-RBA was not undertaken at all. However, in the shapefile data the pre-RBA was undertaken. There seem to be some inconsistencies e.g. In table 7 in the report there are 78 patches but in the corresponding patch analysis shapefile there are 189 patches. It appears the methodology for RBA is, if the patch is HCV then it is conservation. However, this is probably OK for HCV1-3 but not if it was HCV 4-6.

Reviewers Recommendation:

1. State whether this is a low / medium forest cover landscape. It is assumed this is a low forest cover landscape because LPP go to a pre-RBA. However, this should be stated in the report.
2. State the methodology for undertaking the pre-RBA in this report. Mention the specific outcomes (e.g. the fragments of forest remaining were there because they couldn't be developed because they were swamps – something like this). This is adequately addressed in the description field of table 35.
3. State the methodology for undertaking the RBA in this report. This is adequately addressed in the description field of table 35.

Company's Response:

1. It's been clarified in section 9.1.

3.4. Are the forest conservation management and monitoring activities outlined in Section 9.1 adequate? Do they take into account forests and protected areas outside the concession?

Finding: The management and monitoring activities seem very generic. One of the clear requirements of HCSA is to involve the community in developing a conservation plan. Many of the HCV areas, especially riparian areas traverse mixed agriculture areas. HCV and HCSA involve formulating a joint conservation plan with the community – is there any plan to do restoration planting in the area.

Also other issues emerge such as where the community has been promised areas for plasma development and the area ends up being conservation area. How are issues like this resolved. It is mentioned that signs be put up in front of conservation areas – what if it is privately owned land – would the owner want a Cargill HCV area sign in front of their land?

Reviewers Recommendation:

The reviewer is sure that many issues would have come up in the consultations with the community and the company regarding the development plan for the area. However, the management and monitoring section is very generic and does not reflect the concerns and issues raised in the meetings. More detail has been added in section 10.3 – especially addressing the issue of community land that is deemed to be a conservation area.

4. **Image Analysis** (6 hours, including land use planning/Decision Tree Section 6 below)

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

The HCSA Toolkit explains how the AOI should be identified.

Finding: The AOI has been mapped with a 5 km buffer around the concession. The minimum is 1 km, therefore the AOI has been correctly defined.

Reviewers Recommendation: No recommendation

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

The HCSA Toolkit describes the expected quality of the images.

Finding: The images that were used were Sentinel – 17/3/2020 and Landsat 30/8/2020. The survey started in September 2020. On pg 15 of Module 4 it states “Images must be no older than 12 months and have a minimum spatial resolution of 10 m unless this resolution is not available”. The Sentinel image is 10 m resolution and 10 m resolution. It is largely cloud free. Therefore, it is suitable.

Reviewers Recommendation: No recommendation

4.3. Please do a quality check using the images provided in 6.2. 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?

The HCSA Toolkit provides more information regarding the expected quality of the image analysis.

Finding:

Differentiating between mixed rubber and natural forest is extraordinarily difficult and the classification must rely on ground truthing (which is supposed to be done in the scoping study- pg 15 mod 4 “The collection of a sufficient amount of in-situ ground truthing samples is mandatory to assess the accuracy of the final land cover classification”). However, based on the text, it appears there was no ground truthing done. Although in gambar 7 there are ground truthing points which are labelled “lokasi surveyutupan lahan” – though it seems a lot of the points are located in the oil palm. One would expect the company would already have a map of their planted areas and would have used that as the OP landcover.

To the reviewer’s eyes the classification appears reasonable. There are a few errors such as rivers classified as OP. See image and classification below (the

yellow area is classified as oil palm, but it is in fact a river).

By intersecting the land cover it is clear that the HCS plots were not used for ground-truthing. E.g. there are plots that were classified as Karet campuran and the land cover is belukar.

The areas by landcover in the area statement look reasonable, though the reviewer cannot check these because the concession boundaries have not been provided.

Reviewers Recommendation:

1. It's clearly too late to do ground-truthing now but in future the ground truthing should be done at the scoping stage. Otherwise a description of the groundtruthing should be provided (i.e how the location of the GT points was decided) and provide a shapefile of the ground truthing points. The company has provided 173 points that were used for the "accuracy assessment". However, this is a different process from "ground truthing", which requires a person to go physically to a particular point and note the landcover at that point. This is required to be done at scoping. See the commentary above. The company has stated below that a GT exercise was undertaken (land cover validation) – but the GT points have not been provided and there is no description of this process.

2. As a very minor point, in the title of table 2 should make it clear that these areas are for the concession only and do not include the 5 km buffer. The title of now table 27 has not been changed "Tabel 27 Luasutupan lahan berdasarkan kelas potensial SKT"

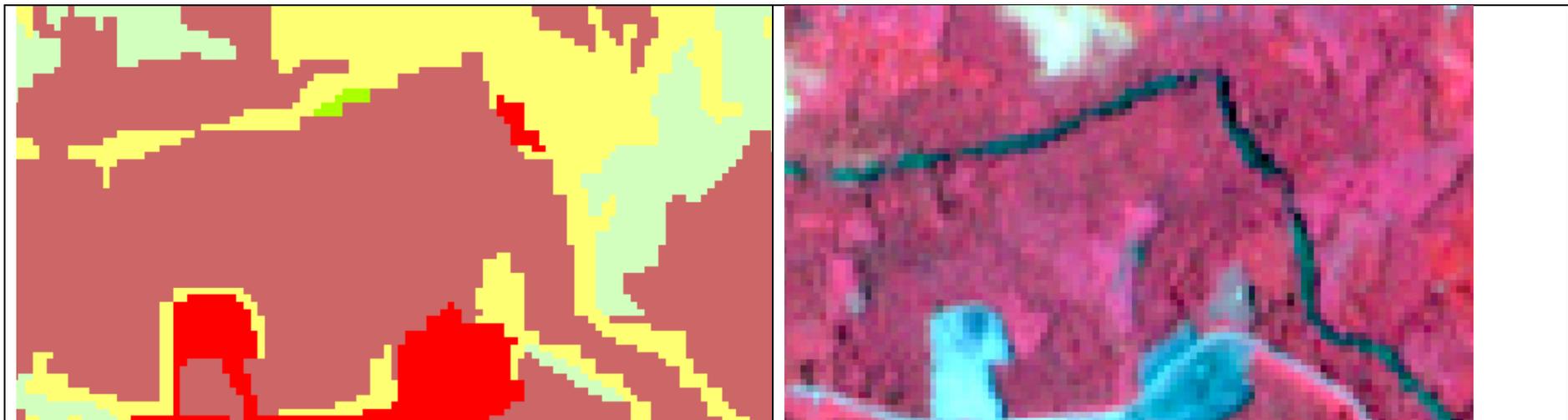
Company's Response:

2. Already adjusted table 27.

Tabel 27 Luas tutupan lahan akhir pada wilayah PT ASM

Kelas Tutupan Lahan	Total	Persentase dari total luasan %
Kelas Potensial SKT:		
Hutan Kerapatan Rendah (HK1)	161,27	1,29
Hutan Regenerasi Muda (HRM)	443,53	3,54
Sub-total	604,80	4,83
Kelas Non SKT, cth.:		
Belukar (B)	568,26	4,54
SH (Karet Campuran)	3.390,65	27,09
AGRI (Ladang dan Tanaman Kelapa Sawit)	7735,67	61,81
Lahan Terbuka	103,06	0,82
Lahan Terbangun	34,91	0,28
MINE (Tambang)	568,26	4,54
Sub-total	11.910,45	95,17
TOTAL	12.515,25	100

* Luasan berdasarkan software



5. Forest Inventory (4 hours)

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.

The HCSA Toolkit describes the expected quality of the forest inventory process.

Finding: The description of the measurement process follows that of the toolkit. Table 3 shows that the number of plots that were measured was more than double what was required using the method in the TK. It does not state how the plots were located in the field (i.e using a grid or CreateRandomPoint function)

Reviewers Recommendation:

State how the plot location were located prior to going to the field. The statement below addresses the question – it should be added to section 7 of the summary report.

Company's Response:

Added on page 58

Tabel 28 Jumlah Plot Inventarisasi Hutan SKT

No	Tutupan Lahan	Hektar	Referensi CStok	t	STDEV.S	Minimum Plot	Realisasi Plot
1	Hutan Kerapatan Rendah (HK1)	173,38	83,93	1,66	1,51	2	6
2	Hutan Regenerasi Muda (HRM)	443,53	56,29	1,66	12,02	13	19
3	Belukar	568,26	31,32	1,66	3,22	3	8
4	Lahan Terbuka (LT)	38,88	13,00	1,66	1,10	2	4
5	Karet Campuran (ISH)	3.378,54	30	1,66	8	10	36
Total Plot		4.602,59				30	73

Sebelum tim melakukan kunjungan lapangan, pada tahap awal tim menyiapkan rencana distribusi plot dan jumlah setiap kelas tutupan lahan SKT potensial yang diwakili berdasarkan tutupan lahan awal. Dalam penempatan plot, tim mempertimbangan aksesibilitas dan kondisi sosial. Dari Tabel 28 jumlah plot minimum yang di ambil adalah 30 plot (2 plot HK1, 12 plot RM, 3 plot belukar, 2 plot lahan terbuka, dan 10 plot karet campuran). Peletakan plot inventarisasi, dibuat berjarak 100 meter kedalam dari batas patch. Informasi yang dicatat dalam kegiatan inventarisasi pada tally sheet atau buku lapangan meliputi; nama perusahaan, koordinat lokasi, tutupan lahan, nama local, diameter dan kondisi sekitar plot. Dari kegiatan inventarisasi oleh tim, total plot inventarisasi yang terealisasi adalah 73 plot yang terdiri dari Hutan Kerapatan Rendah (6 plot), Hutan Regenerasi Muda (19 Plot), Belukar (8 plot), Semak (4 Plot) dan Karet Campuran (36 plot). Adanya penambahan plot pada masing-masing kelas untuk menegaskan setiap kelas.

5.2. Please review Section 2.1 of the Summary Report. Was the forest inventory team qualified?

The HCSA Toolkit describes the expected qualifications of the forestry team.

Finding: Both Suriyanto Efendi and Abdul Mukti are biology graduates. It is stated that in the toolkit the team leader is required to be “Graduate forester with inventory experience”. It is assumed both meet this requirement.

Reviewers Recommendation: No recommendation

5.3. Please review Section 7.6 of the Summary Report. Was the allometric chosen adequate?

The HCSA Toolkit provides more guidance on choosing an allometric equation.

Finding: The authors used an equation presented by Ketterings et al. 2001, which uses tree DBH and average site wood density to calculate tree biomass and which was calibrated for mixed secondary forests in Sepunggur, Sumatra, Indonesia with DBH ranging from 8-48 cm. The company states that this equation is suitable for use in secondary forests in the tropics, although the original article states that it is suitable for use in secondary forests in Sumatra. Since Sumatra and Borneo are floristically similar, and because the forests in this HCS study can be categorized as secondary and/or agroforest, it seems reasonable to use this equation for this HCS study.

The only reservation is that Kettering was developed from a very small dataset (approximately 30 trees) so should really be used with more robust equations such as Chave.

Reviewers Recommendation: None.

5.4. Please review Sections 7.3, 7.4, 7.5, and 7.7, 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?

The HCSA Toolkit provides more guidance on what statistical analysis should be used.

Finding: The raw forestry data is presented in a word document. So it is impossible to review. It should be presented in excel in a single table. Any calculations should have the equations in the cells. This will enable the data to be checked.

There is no scheffe test result presented

Reviewers Recommendation

1. Present the plot data in a spreadsheet, in a single table. No spreadsheet of the plot data has been provided.
2. All the calculations should be presented as equations in the spreadsheet. No spreadsheet of the plot data has been provided.
3. Present the results of the scheffe test in the report. This has now been added in table 31, the main point is that there is a significant difference between YRF and scrub.

Company's Response:

- 1.Updated in section 7.8
- 2.Updated in section 7.8

6. Land use planning (6 hours with Image Analysis above)

- 6.1. Please review Section 6.4 of the Summary Report. Was the initial vegetation classification map adequately calibrated and adjusted to take into account forest inventory results?

The HCSA Toolkit provides more guidance on how to incorporate the forest inventory results into the land cover map.

Finding: From the analysis done in 4.3 of this review it seems the HCS plots were not used for calibrating the land cover map.

Reviewers Recommendation:

1. Use the HCS plot points for calibrating the land cover map. The description of the process below where the land cover is based on the carbon value does not follow the toolkit. **The land cover must be assigned in the field.** Not based on a post inventory analysis. See the text below from page 22 of module 4.

The descriptions of each land cover category are relatively clear. On the ground, there is a spectrum of vegetation cover type from forest through to bare land and the cut-offs between vegetation types are sometimes difficult to ascertain in the field. Field assessment should take into account not only the conditions within the plot boundaries, but also in the areas immediately adjacent to the plot, when assigning vegetation classification. When a plot is located across clear vegetation cover boundaries, such as across the transition from forest to pasture land, then the plot should be relocated into one or the other vegetation type.

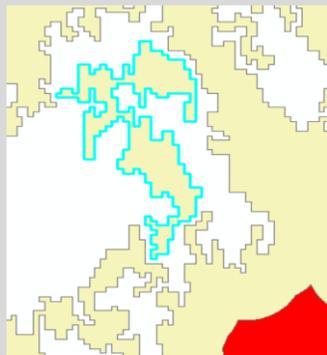
6.2. Please review Section 8 of the Summary Report. Was participatory mapping data used in step one to identify community lands that should be enclaved? Were patches merged correctly? Was the core area correctly identified? Was the connectivity analysis done correctly?

The HCSA Toolkit explain how to merge patches and identify the core area.

Finding: There is no description / discussion of the patch analysis process in the report, only the results are provided.

Regarding the core area. The reviewer checked patch FID = 37 with total area 695 ha. It had numerous cores with total area = 281 ha. The core and the merges had been done correctly.

Regarding the connectivity analysis. The reviewer checked patch FID = 38 (see highlighted patch below) which is a LPP with no core but it is within 10 m of a HPP therefore it should be integrated into the conserve areas. However in the attribute table this patch was progressed to RBA. Which is not following the decision tree.



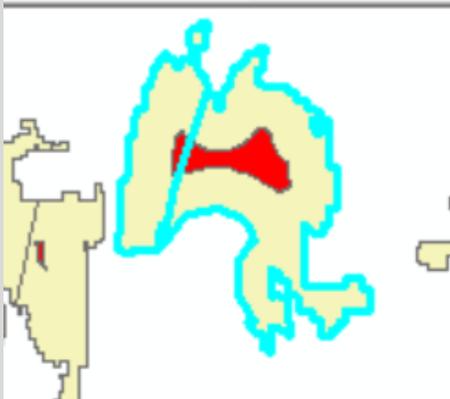
Reviewers Recommendation:

1. Provide a discussion of the methods at each step in the process. For example at step 1, the company should describe what categories of land it considered to be “community lands”. Table 35 has been added which describes the process of each patch being considered Develop or Conserve individually. This is a good approach.
2. Review the patch connectivity analysis based on the example provided above. This has been addressed.

- 6.3. Please review Section 8 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?
The HCSA Toolkit explains how to prioritize patches and go through the Decision Tree.

Finding:

The reviewer checked several patches which (other than the connectivity mentioned above) had correctly followed the decision tree. As a minor point the company has split patches that are inside / outside the concession boundary (or traverse the boundary) into 2 patches. These should not be split.



Reviewers Recommendation:

1. Merge all patches that were split as a result of traversing the concession boundary. The reviewer checked the patch mentioned in the core area is now correctly calculated.

- 6.4. Please review Sections 9 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 company has presented a plan that is the result of the completion of the patch analysis process. Which has been done correctly (other than a few minor things), this has resulted in a lot of small patches of conservation. See the map in section 10.2. This has resulted in a conservation area of a lot of small patches and river buffers with a lot of edge. This is going to make management of these areas very difficult. Furthermore, it is not clear what areas are owned by the company (and therefore has management control over) and which areas are owned by the community. In the community owned areas – how are the boundaries of these conservation areas going to be maintained? This is an issue for the next step – formulation of the ICLUP.

Reviewers Recommendation: No recommendation