HIGH CARBON STOCK APPROACH

HCSA PEER REVIEW REPORT

Company Name: Toba Pulp Lestari
HCS Assessment Area: PT Toba Pulp Lestari (Perkebunan Kayu Rakyat)
30 May 2022

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, Remark Asia led the HCS assessment.

b) **Was the HCS Team Leader a Registered Practitioner?**
Yes, Adi Wijoyo was the HCS Team Leader.

c) **Were at least two (2) HCS team members Registered Practitioners?**
Yes. There were 2 HCS team members who are Registered Practitioners (Cecep Saepuloh & Adi Wijoyo)

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: Neville Kemp)

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: This is much improved report and provides accurate identification of High Carbon Stock forests in the landscape.

There are a few editing issues with lost references to other parts of the document that made reading and cross-referencing difficult.

Components of the report are missing and detailed in the summary of recommendations below. However, any omissions from the report have been evaluated to not significantly affect the outcome and mapped HCS forest in the landscape are of high quality.

Reviewers Recommendation:
The company should consider including
1.   All scene number and date of acquisition of satellite images used.
2.   Initial vegetation classification map and spatial data.
3.   Summary table of sample / plot intensity calculations per strata and assumptions used in calculations.
4.   Photos of each vegetation strata

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 had registered lead assessors and demonstrated they had the adequate access to expertise to undertake a quality HCS assessment.

Reviewers Recommendation: No further 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: No elements now require completion beyond participatory validation in the field and stakeholder engagement as proposed in section 9 of the report

Reviewers Recommendation: No further recommendations beyond final editing and completing components that are expected to be included in a HCS report.

2.   Social Issues (4 hours)

Please review Section 3 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 3.1 adequately represent and explain the community engagement, FPIC processes, and participatory mapping activities carried out?

Finding: The social processes are explained in the report and as this HCS assessment is for community owned and run plantations, the FPIC process and participatory mapping are an integral part of defining the areas for potential planting and very appropriate for the HCS assessment. Evidence of the community engagement process and participatory mapping has been provided in detail.

Reviewers Recommendation: No further recommendations

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

Finding: Land tenure is an integral part of developing agreements with individuals interested in joining the community wood plantation (PKR) scheme. Participatory surveys were conducted by the land owners, customary (adat) stakeholders, and village government representatives for each area and therefore can be considered as being vetted. Examples of agreements and maps signed by parties including government and adat representatives is provided. It is unlikely that the use of external social experts would add rigor or be able verify results of participatory surveys already conducted.

Reviewers Recommendation: No further recommendations

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 participatory mapping was not provided as a shapefile that could later be used as part of the HCSA Patch analysis. It is assumed here that all areas were available for planting and development as the engagement process has now been detailed.

Information discussing food security has been provided. The landscape is dominated by agriculture (dry land and rice) and produces a large amount of food for export to regional towns and cities. The PKR scheme is implemented where communities identify areas that they wish to plant to provide pulp wood to PT Toba Pulp Lestari Tbk. The decision to plant and provide pulp compared to planting with food crops is an individual's decision. The assessors have evaluated the availability of land in the 45 villages and found that 9 fall below the threshold. While the use of the 0.5 hectares in this case may be less relevant compared to a situation where a company is using lands designated by the government, the assessors have provided recommendation to the company to address these issues in the villages that have limited land for food security.

Reviewers Recommendation: Examples of participatory maps have now been provided. No further recommendations

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: Community engagement and consultation with communities for the PKR, HCS report and concerns that the community had are represented. In addition, the HCV report contains documentation for the HCS (and HCV) surveys and agreement by communities.

Reviewers Recommendation: Documentation demonstrating the engagement process (such as examples of engagement materials, meeting attendance lists, agreements and maps signed by both parties) has been provided. No further recommendations

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: This review question is not really tailored for schemes such as PKR. As individuals request to the company to join the PKR scheme, plans to develop come from the community and not from the company developing plantations. Owners therefore always have the right to not join. As there were no documents found that illustrate agreements made between TPL and PKR members it is difficult to evaluate the terms of agreements and whether members are allowed to freely leave the program or if there are special terms for them to do so**.**

Reviewers Recommendation: No recommendations

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

Finding: Section 4 is now complete.

Reviewers Recommendation: No further recommendations

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: Information about HCV found is provided and adequately represents findings

Reviewers Recommendation: Size of maps have been increased and shapefiles are available. No further recommendations

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?

The HCV Report can be found in the SharePoint.

Finding: The report has undergone its second re-submission. The second resubmission report has not been provided so all comments refer to the first re-submission report.

It is very difficult to understand the scale and scope of this HCV report. There is information on both TPL and the PKR which confuses the reader. Information describing the number of individuals (disaggregated by village) would be useful to gauge the scope of this assessments. This is also important to understand issue such as tenure.

As the delineation of HCV uses forest for the identification of HCV 1 and HCV 2 (as well as riparian areas) and so there should be a good similarity between HCV areas and the HCS forest identified. The HCS, now provides a more accurate assessment of forest cover and can serve as a valuable proxy for identifying many HCV 1-4 areas. There is now a similarity between the reports and between data provided for HCS forest and HCV areas.

Reviewers Recommendation: There is now a reasonable similarity between HCS / LC 2017 and HCV areas.

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?

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: A medium-forested landscape. RBA not conducted in LPPs. The report states the RBA was not done as all MPP patches were connected to HCV areas.

Reviewers Recommendation: No further recommendations

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: Template *Version 2.1* covers management activities under section 9.

Reviewers Recommendation: None

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:** Given the very wide area that the individual PKR plots cover and the small size of individual plots, a 5km radius around each plots is acceptable and a good choice for defining the AOI.
>
> **Reviewers Recommendation:** No recommendations

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 date of imagery was provided but the scene number was not. Cloud-free Sentinel scenes could not be accessed for the area from the date stated, so the date of imagery could not be validated. The quality of the scene was very good, totally cloud free for the AOI and of very good resolution (10m).
>
> **Reviewers Recommendation:** The report should contain the scene number and date of acquisition. If several scene was used, all scene numbers should be provided.
>
> **Company's Response:** We provided the scene number and date of acquisition in sub bab. 1.5. Tabel 3. Data relevan dalam penilaian SKT

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?

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

> **Finding:** Initial land cover data layer has not been provided. The data layer available in Lampiran 4 includes Land cover (SNI categories) that have been reclassed as HCS strata. From the land cover data provided (assumed to be a final land cover data layer), the accuracy is good.
>
> Note: The segmentation has shifted polygons to the east by 3.3 metres and south by a metre or so *but this will have an insignificant effect on accuracy*.
>
> **Reviewers Recommendation:** Submit initial vegetation data (shp)
>
> **Company's Response:** We provided the initial vegetation data (shp), in Lampiran 4. Daftar Meta data (we put the dropbox link)

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**: Based on the shapefile provided (assumed to be the final land cover classification, and excel file with initial classification of plots, sampling design was set up throughout the AOI and in focused adequately on forest areas, as well as sampling marginal HCS/non-HCS areas to measure carbon stock and provide data for an accurate final land cover classification.
>
> A summary table for number of plots for each strata based on the Winrock calculator has still not been provided, so the adequacy of number of plots cannot be verified. Information that should be presented here includes values used in the formula (mean carbon stock, assumed standard deviation, z value and sources of data or assumptions etc.).
>
> **Reviewers Recommendation:** Provide summary information about number of plots per strata and data used in the Winrock calculator with all values / information / assumptions needed so reviewers can assess whether the number of plots has been determined accurately. Note that the equation used in the toolkit requires previous samples but is easy to use and provides an acknowledged estimate for sampling strata adequately. Provide justification for the error value of 20% that was presumably used.
>
> <u>A Note on Company's response</u>: the summary of results after the field sampling (information about number of realised plots per strata displayed in section 7.7) is not the same as sampling design. HCSA requires that each strata is sufficiently sampled to give a rigorous carbon stock average and the calculation of this is based on the mean and variation of carbon stock in each strata and not the overall accuracy of the satellite interpretation.
>
> **Company's Response:** We already put the calculation of plot in Bab 7, sub bab 7.1

5.2.   Please review Section 7.3 of the Summary Report. Was the forest inventory team qualified?
The HCSA Toolkit describes the expected qualifications of the forestry team.

Finding: Team members have appropriate qualifications and training.

Reviewers Recommendation: No further recommendations

5.3.   Please review Section 7.4 of the Summary Report. Was the allometric chosen adequate?
The HCSA Toolkit provides more guidance on choosing an allometric equation.

Finding: The allometric equation used is appropriate for Sumatra and has been applied with used of basic wood density.

Reviewers Recommendation: No further recommendations

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

Finding: The carbon stock has been calculated correctly, forestry data was been presented well and complete, and statistical analyses were conducted correctly.

No photos were presented demonstrating each strata.

Note: plots containing >50% BA of Eucalyptus could be classified as "HTI" (plots nP24 and P23/122).

Pinus merkusi been a used extensively for reforestation projects in North Sumatra and Aceh (a native species). All plots / areas with 100% *Pinus merkusi* were classified as natural forest (YRF, LDF, MDF etc) which is a precautionary approach.

Reviewers Recommendation: The report should be enhanced by presenting photos of each vegetation strata.

Company's Response: The photos of each vegetation strata provided in Bab 7.4. Deskripsi Kelas Tutupan lahan

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

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?

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

Finding: No initial vegetation classification map was provided. It can be seen from plot data (in excel file) that there was an initial vegetation cover map produced as there is a field "*Stratifikasi Awal*" and adjustment of the after carbon stocks were correctly calculated.

On analysis of the land cover classification (file name LC_PKR_2017.shp) the plot results were used to finalize the vegetation classification map. This has been done according to results of the forest inventory and conservatively capturing potential HCS forest.

Reviewers Recommendation: No further Recommendations

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?

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

Finding: See section above on participatory maps above in 3.2. Community areas proposed for HTI development have gone through a FPIC process and the community maps envisaged by the HCSA are not required here. Patches were merged correctly, Core identified correctly, and connectivity conducted correctly

Reviewers Recommendation: No further recommendations

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?

The HCSA Toolkit explains how to prioritize patches and go through the Decision Tree.

Finding: The Decision tree was conducted correctly will priority patches identified for conservation conducted according to the Patch analysis.

Reviewers Recommendation: No further Recommendations

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: Section 9.1 and 9.2 are very brief but in line with the general spirit of HCSA. No final ground verification was reported. Finalizing the development areas and avoiding HCV and HCS areas together with the community was suggested as the main approach for finalizing the ICLUP together with field verification and stakeholder engagement.

Reviewers Recommendation: No "give and take" was proposed and the company may wish to evaluate the proposed draft ICLUP through a participatory process with land owners to validate and finalize the ICLUP in line with the draft ICLUP guidelines (https://highcarbonstock.org/wp-content/uploads/2021/06/03-HCSA-ICLUP-singlepages.FinalDraft.pdf). This will result in a more viable ICLUP with the support of stakeholders and also result in a more practical design for development and conservation in this fragmented landscape.

Company's Response: The company will produce draft ICLUP as a follow up