HIGH CARBON STOCK APPROACH

HCSA PEER REVIEW REPORT

Company Name: PT Agro Rawas Ulu
HCS Assessment Area:202.5 hectares (90.4 included under HCV Areas)
23 February 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?**

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

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

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).**

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:** A quality report. All data required for peer review was accessible and accurate. The level of detail within the HCS report follows elements of the integrated HCV-HCS report (not usually found in HCS reports) and provides a detailed overview of the landscape, especially for socio-economic aspects. Mapping was accurate and the Patch Analysis applied conservatively - where many companies would opt for development of small patches, PT ARU and the assessors have opted to conserve patches that are connected to production forests (even though large areas of these 'production forests' are no longer extant). This is precautionary and considering potential long-term restoration of these forest estate areas bordering the concession.
>
> **Reviewers Recommendation**: All minor amendments clarified, and additional documentation provided. No further action required for the assessment.

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

Finding: No aspects of this assessment need to be repeated.

Reviewers Recommendation: None

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: Yes. The report provides good information about community engagement, FPIC and participatory activities that they carried out by both the community and the assessors before the forest inventory.

Reviewers Recommendation: None

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

Finding: Tenure is verified through the compensation process (GRTT) with legitimate landowners when acquiring land for development. Land acquisition is still ongoing. It is acknowledged that all land is owned by individuals and they are free to accept or decline offers by the company. There were appropriate consultations with local stakeholders to verify that no communal land exists in the AoI. The company has clarified that the GRTT process involves government officials (village and sub-district) at several stages of the GRTT process to vet and verify land tenure and agreements to ensure that the correct owner is being compensated and land conflicts are avoided.

Reviewers Recommendation: Given clear information on the process, no further clarification required.

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 was carried out. Mixed agriculture (agroforestry) containing a mixture of fruit trees / rubber were mapped accurately. The cut off 0.5 hectare per person has not been applied per se. There are issues applying this threshold in this instance. With more than 35K people living in and around the Area of Interest is very difficult to define exactly which individuals derive majority of their livelihoods from the land that is in the process of acquisition. With a FPIC process in place where individuals have the right to refuse a deal, the 'community land use' can be said to have been considered within this. In addition, socio-economic information detailed in the report explains that much of this land is untended due to the low price of rubber whilst other tend their land intensively. Those tending land intensively are less likely to relinquish to the company and individual owner's right to refuse offers made by the company.

Reviewers Recommendation: None required

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 FPIC process for development as well as HCSA approach to take place was documented. Land is owned individually - owners can represent themselves for compensation agreements. No concerns about the HCSA assessment were encountered. Many individuals still have concerns about development by the company and the SIA summary lists recommendations for mitigating these concerns.

Reviewers Recommendation: None required

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

Finding: The test for FPIC has been documented. As land acquisition is based on negotiated agreements plans for implementation does reflect individual's views. There are still many land owners that have not agreed and thus the right to refuse the company and development is clearly demonstrated. While "independent legal representation" is not detailed, given the context of land ownership in this case (primarily acquired and cultivated many years ago but without formal ownership until recently) and a GRTT process where many layers of stakeholders are including (neighbouring landowners, village and sub-district chiefs) there is opportunities for land owners to seek advice.

Reviewers Recommendation: No further clarifications requested.

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

Finding: Please see points for clarification above.

Reviewers Recommendation: None

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: Yes. Detailed summary of the HCV has been provided

Reviewers Recommendation: None

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: HCV was not submitted to ALS. Comments on the report below

Reviewers Recommendation: 4 main areas for improvement could be done to improve the report and the Company Response duly noted.

1. As is probably expected in complex mosaic landscapes, the ecosystem map is not very accurate with much of the secondary forest in the HCV report identified mostly as mixed agriculture (agroforestry) in the HCSA assessment. Some of these mixed agricultural lands were however, considered HCV habitat whilst other potentially similar patches of the mixed agriculture not. It is usually good practice to indicate all similar vegetation classes as an indicative HCV 1-3 whether visited or not and carry out a RBA type assessment in these areas to improve the HCV mapping. Fortunately, the HCSA assessment resolves this very well.

2. While HCV are not evaluated normally in HCSA peer reviews, it is noted that HVC 5 identification was potentially weak. The community is largely consisting of farmers / rural communities and no areas that may have been critical to some of the community for sustaining livelihoods were identified. Whilst criteria in line with the Indonesia toolkit has been applied here a wider definition it would have been better to apply the HCVN Common Guidance HCV 5 definition "*[all] sites and resources that are fundamental for satisfying the basic necessities of local people. The role of the HCV assessment is to characterize the level of dependence on the resource and to provide management recommendations for how to mitigate negative impacts on local people's livelihoods*". The HCV report stated that 60% of some village's river water is a source of water during the dry season. More detailed Participative Mapping would have also illustrated land that is critical for some people. Again, the HCSA assessment has documented this (where some people are not interested in selling their land and still manage it intensively and other areas cannot be developed) and proper application of HCSA, demonstrating the FPIC process has caught potential weaknesses in HCV report.

3. Management recommendations are adequate although not very detailed. The three types of monitoring have been confused with each other and more work is needed here.

4. There are no HCVMA maps.

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: RBA was carried out in required plots.

Reviewers Recommendation: None

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: The management and monitoring recommendations are adequate although. The HCSA assessment consider a wide surrounding landscape**.**

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: Yes. A generous 5 km area around the concession was used. The landscape falls into a "low forested landscape" category (<30% forested)

Reviewers Recommendation: None

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: Sentinel-2A images used from an appropriate acquisition date. The image provided to the peer reviewer was at 20m resolution. Bands 11, 8 and 4 are available freely at 10 and 20m. Although improved 10m resolution could have been used, this would not have improved results as many samples and a very thorough field verification of initial mapping was carried out.

Reviewers Recommendation: No action needed

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: The quality of the initial vegetation classification was considered reasonably accurate. This is an intensely managed and highly mosaiced landscape of secondary forest, mixed agriculture / agroforest (*kebun campuran*) and rubber (some mature and mimicking forest on satellites images). No scrub classes were identified which is understandable is intensively managed productive landscape, and where low density vegetation was seen on the images, they were classified as rubber.

Reviewers Recommendation: None

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: Yes, the sampling was very thorough and exceeds the number of samples normally required in this size of concession

Reviewers Recommendation: None

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: Yes. A resume of qualifications is provided in the Appendices

Reviewers Recommendation: None

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: Yes. A local allometric equation ($AGB=0.11.p.D^{2.62}$) developed for Secondary mineral soil forest in Jambi was applied.

Reviewers Recommendation: None

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 data was provided as an appendix in Word format and a sample of 50 of the 135 plots reworked using the allometric equation and compared with the forest inventory summary table results. Wood density when cross-referenced with http://db.worldagroforestry.org/ was used accurately. The carbon calculation results achieved by the reviewer were very slightly different but only with a maximum +0.2 tons C/ha higher than those reported. This is not critical. Only one result (for P42) was found to be 50% lower by the reviewer than that reported by assessors (potentially due to incomplete / lost data provided in the Appendix Word document). This has been corrected (even though the results did not affect) the HCS results. The statistical analyses showed significant difference between the YRF and Agroforestry strata.

Reviewers Recommendation: No action required.

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: Yes. Results from the field verification and forest inventory were used. This resulted in some areas previously identified as mixed agriculture (agroforestry) being reclassified as young regenerating forest. The results of a carbon inventory showed no older denser forest present, or scrub (all low-density vegetation was placed in mixed agriculture (agroforestry) which is acceptable in this highly fragmented landscape.

Reviewers Recommendation: None

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: Participatory maps were used to identify areas which could not be transferred to the company. Patch were merged correctly, measured and connectivity identified correctly (see comment below).

Reviewers Recommendation: None

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: PA carried out correctly (very conservatively). Connectivity HCV forest, potential HCS patch outside the concession and to Production forest were identified for conservation. This is a very conservative interpretation of the PA. Other assessors would identify LPP for potential develop (pending RBA) based on actual forest extant in the landscape. Forest estate 'function' does not necessarily translate to 'forest status' (actually forested with trees or not). Scheduling these small areas for conservation is worthy of merit.

Reviewers Recommendation: None.

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: Yes. Logical give and take process with a small corner accepted for conservation with isolated small patches given over to development. Very conservative but achievable ICLUP. Good to see this quality of PA being employed.

Reviewers Recommendation: None