HIGH CARBON STOCK APPROACH

HCSA PEER REVIEW REPORT

Company Name: SIPEF

HCS Assessment Area: PT. Agro Kati Lama

Date: 18 January 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?**
Riyan Karida Pratama from Aksenta led the assessment.

b) **Was the HCS Team Leader a Registered Practitioner?**
Yes. Riyan Karida Pratama is a Registered Practitioner.

c) **Were at least two (2) HCS team members Registered Practitioners?**
Yes. The team has 3 Registered Practitioners – Riyan Karida Pratama, Riswan Zein, Harry Kurniawan

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/).
Not applicable. Assessment prior January 2015.

Questions for peer reviewers

(Peer Review Panel: Kimberly Carlson and Cynthia Chin)

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 HCS Assessment Report was very clearly written and followed best practices outlined in the Toolkit. The land cover mapping approach was particularly well done, and the company should be commended on their commitment to following best practices in the land cover classification. Substantial and substantive information was provided to support the report, and the company also provided complete and well-organized material to the peer reviewers. There was only one apparently major issue in this assessment; the patch analysis seems to contain a mistake related to distance of HCS patches from other (HCV) patches. Also, it is important to note that the ICLUP does not include any within concession community lands because the company expects to continue negotiating with community members to acquire these lands.

Reviewers Recommendation:

1. Revise the patch analysis so that it correctly deals with distances between patches and between patches and HCVs and update the final maps and ICLUP accordingly.

2. Address the individual reviewer recommendations below.

The company revised the patch analysis, although it is unclear if this led to perfect concordance with the decision tree. Nevertheless, the final map of areas to be conserved appears robust. All other specific recommendations were fully resolved.

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 included ten individuals, including those with expertise in remote sensing, carbon stock assessment, HCS patch analysis, plant identification, FPIC, participatory mapping, socio-economic analysis, and biodiversity conservation. While their expertise is stated, their credentials (e.g., # of years working in this area, degrees, or certifications) are not fully available. Provision of such credentials would better support the argument for why this team is qualified.

Reviewers Recommendation: Add credentials for each team member

The company added relevant expertise and experience to the report in section 2.1 The recommendation is resolved.

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: Beyond correction of the patch analysis (described above and below) the company still needs to delineate HCS and other conservation boundaries in the field *after* a robust and collaborative consultation with the community regarding the ICLUP and with individual community members who have lands that intersect with the conservation areas. They also need to undertake the steps outlined in Section 9.1.

Reviewers Recommendation: Re-do the patch analysis and then follow the activities outlined in Section 9 of the assessment report.

The company revised the patch analysis.

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: Yes. A thorough introduction to the communities in the AOI was given, as well as methods, dates, and engagement details. Engagement was conducted in 2011, when social impact assessment was done and over a period of six months in 2018-2019, including desktop studies, consultations, focus groups, analysis of data, and sharing of results. Information and details of these were in the appendices. Engagement appeared to be thoroughly done, with sessions to share the results and to obtain feedback.

Reviewers Recommendation:

1. Add information on any dissent or resistance to the project, if any.

2. Include an estimate of the proportion of the community members who were supportive/not supportive

The company has added relevant information on the above in Section 4.3 of the main document. This recommendation is resolved.

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

Finding: A section on land tenure was included. At the time of assessment, local communities were still working parts of the AOI, which comprised community land still. Consultations and interviews were conducted and revealed that mixed gardens made up most of the area worked by communities. Tenure information was satisfactory.

Reviewers Recommendation: None.

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 engagement was clearly described, and a map was developed from the results.

Reviewers Recommendation: None.

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: Yes. However, it was not completely clear whether the communities nominated their own representatives.

Reviewers Recommendation: State or describe representative nomination if this information is available.
Company added information that the village head appointed representatives.

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. There was mention of communities who agreed and those who disagreed. Extra information is available in the appendices and other documents.

Reviewers Recommendation: None.

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

Finding: Generally, the FPIC process was well described and appears to be thoroughly conducted. Plans to engage and involve the communities were clear.

Reviewers Recommendation: None.

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 HCV assessment was conducted in 2011. However, descriptions of the assessment and HCVs found present were adequately described. HCVs 1, 2, 4 and 6 were found to be present.

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 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 assessment report details clearly desktop research, field methodology and the steps towards identification of HCVs. Maps were developed as well as a clearly tabulated management plan.

Reviewers Recommendation: None.

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: Pre-RBA was carried out based on the fact that the final land cover analysis showed that the forest cover at landscape level was below 30% and therefore classified as low. Based on the results of the Rapid Biodiversity Assessment, 23 low priority patches are in areas that are not significant for biodiversity.

Reviewers Recommendation: None

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: Management recommendations included: delineation of conservation areas on a map, putting up signage of conservation areas on the ground, education and awareness activities, collaboration with communities for protection of conservation areas, clear documentation of processes, on-going FPIC , land acquisition in consultation with communities as well as monitoring activities. All are elements of sound management practices. Adaptive management is assumed.

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: The company used a 1 km buffer around the PT AKL boundary for the mapping. They also consider the broader landscape <5 km from the boundary in the connectivity analysis. The AOI is not aligned to natural or administrative boundaries as suggested by the toolkit, but it appears sufficient given the amount and coverage of apparent forested areas in and around the concession.

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: The assessment used Sentinel-1 imagery from November 2019. The imagery is 10 m resolution, cloud free in the study region, and aligns well with the fieldwork campaign timing, thus meeting the recommendations in the Toolkit.

Reviewers Recommendation: None

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: The initial vegetation classification - which is dominated by oil palm and rubber - appears to be largely robust in a comparison between the satellite imagery and initial classification. As most, if not all, lands in the area were previously cultivated, it is difficult to visually discern secondary regrowing forest from rubber and agroforests. Such discernment requires training based on field data.

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 necessary number of plots was generated for low density secondary forest and mixed garden areas using an approach to estimate the necessary number of plots given an expected variance and necessary confidence value for each land cover class. Then, the plots were distributed using a combination of random and non-random methods depending on the size of the land cover polygon. The company used a nested circular plot approach with the larger plot being 500 m2. The approach appears robust and rightly focuses on the land cover that is most likely to be confused with HCS forest (kebun campuran).

Reviewers Recommendation: None.

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: The vegetation inventory team consisted of an individual with expertise in plant identification, as well as three others who have expertise in carbon stock assessment. It is not clear whether the plant ID individual can "identify the majority of trees to species level and less common species to genus level" as stated in the Toolkit.

Reviewers Recommendation: Provide more information on the qualifications of the plant ID team member, specifically their training in tree identification.The company added relevant expertise and experience to the report in section 2.1 The recommendation is resolved.

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 company selected 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 original article states that this equation is suitable for use in secondary forests in Sumatra. 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.

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 forestry data and statistical analysis appear robust. The carbon values in each of the focal land cover classes (hutan regenerasi muda/young regenerating forest (YRF), kebun campuran/mixed garden) are statistically separable but do show some overlap at the plot level (e.g., the lowest carbon density for a young regenerating forest is less than the greatest carbon density for mixed garden), which reflects the heterogeneity of these land covers. Also, there tend to be more fruit and commodity trees in the agroforest plots, but these species are sometimes present in the young regenerating forest plots. This all speaks to a realistic dataset that really reflects on-the-ground realities but nevertheless tries to separate actively managed agroforests from regrowing forests that are less managed. The results, both carbon densities and land cover classification, align with my interpretation of the land cover image. The carbon densities (40 tC/ha in YRF, 27 tC/h in mixed gardens) are in line with other work in the region that has measured carbon in *younger* agroforests and rubber gardens (e.g., Guillaume et al. 2018 Nature Communications).

Reviewers Recommendation: None.

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: Exploration of the shapefiles provided by the company indicates that the initial map was modified based on ground-truthing and forest inventory plots, so that more than 50 polygons in the initial land cover map were re-classified to the final land cover, including at least 7 polygons from mixed garden to young regenerating forest. No young regenerating forest polygons were reclassified as another class. Thus, the adjustments resulted in a slight increase in the total young regenerating forest are in the final map. However, these changes were not apparent from the description in Section 6.4 but required analysis of the information provided by the company.

Reviewers Recommendation: Revise Section 6.4 to clarify that polygons were reclassified based on the ground-truthing and forest inventory plot data to produce the final map.
Company clarified that the initial land cover was reclassified according to the results from validation. The recommendation is resolved.

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 were no community lands that would not be compensated and released to the company by community members that overlapped with the HCS forest patches. The company correctly included patches outside the plantation in the Decision Tree. The patch analysis shapefile provided did not contain polygons outside of the concession boundary, so I could not fully assess whether the patch decision tree was applied correctly. However, there seem to be some issues with the connectivity analysis: Step 4 & 5 - the report states that several low priority patches were within 200 meters of HCV areas (Gambar 26 in the report), but my own analysis suggests that they were not.

These patches include ID19, ID28, ID27, ID29, ID34, and ID37 (see screenshot below - the buffer is 200m).
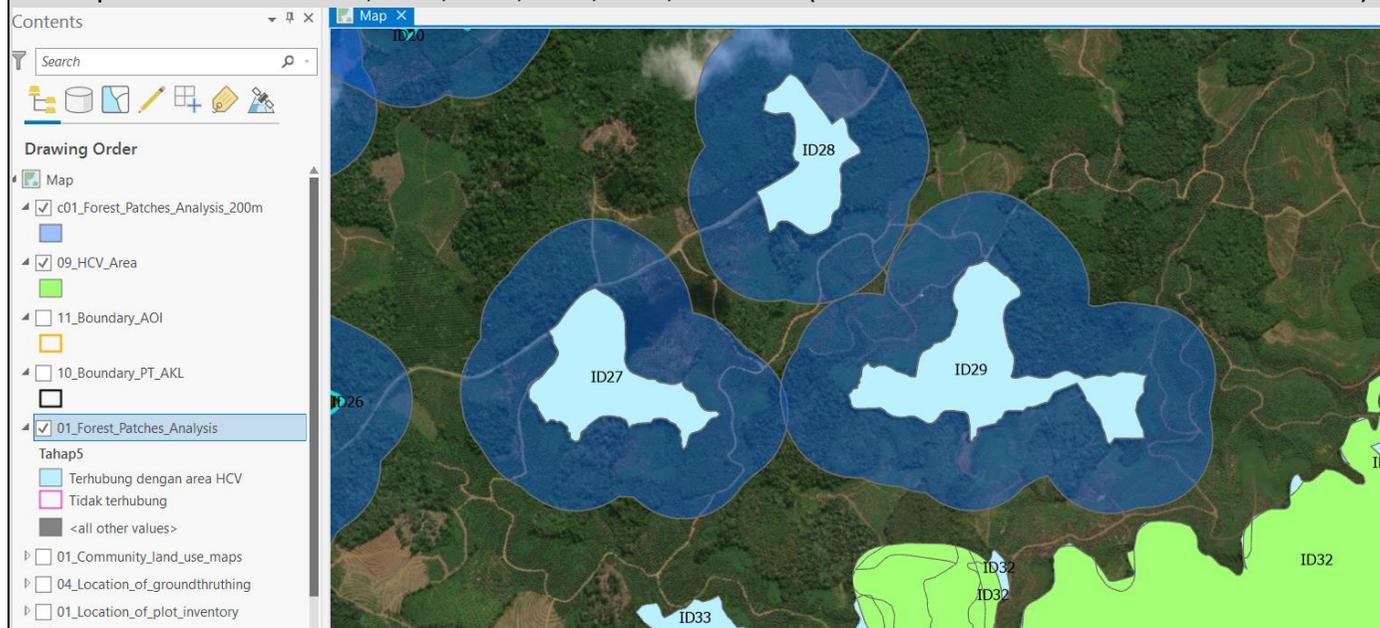
Reviewers Recommendation:

1. Provide a shapefile to reviewers including the out of concession patches that are connected to or near within concession patches

2. Re-do the decision tree to correctly account for distance between patches and other landscape features (e.g., HCV areas)

The company did not provide an additional shapefile that included the out of concession patches. In the updated report there seems to be a re-numbering of the patches, and what were previously patches 34 and 37 (now patches 40 and 32) remain indictive conserve apparently because they are connected to other HCS areas in the landscape outside of the concession. The other problematic patches are now indicative develop. It is impossible to diagnose whether this change was correct without an associated shapefile, but overall the final map of areas designated for conservation (Gambar 33) appears to be robust in that conservation areas are connected and/or large, and cover areas that have substantial HCS forest core area.

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 company identified 23 patches with low priority. After an RBA (due to being in a <30% forest cover landscape) and consideration of potential connectivity across the wider landscape, they concluded that these patches should be indicative develop. They completed a give-and-take processes to designate an equivalent area around indicative conserve HCS areas. Except the potential issue with the patches distant from other HCS and HCV patches, the patch analysis seems correct.

Reviewers Recommendation: None.

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: Yes, the company did incorporate HCV, HCS, peatland, riparian, and community lands into the final ICLUP. There are no peatlands. The company clearly intends to continue negotiating with the community to acquire as-yet unreleased areas and develop the full concession outside of HCV and HCS areas as plantation, because they do not report any community lands in the final ICLUP. They do state that they need to carry out the land acquisition processed based on FPIC for the conservation area, but they do not discuss collaboration with the community around the plan. The list of management and monitoring activities is sound, except that it does not include or refer to development of a grievance mechanism, needed for resolution of possible disputes.

Reviewers Recommendation:

1. The company should not only conduct outreach to the community but also ensure that the community understands and supports the overall ICLUP; in other words, they need to garner support of the community for the plan.

2. The company should develop of a grievance mechanism to resolve disputes that arise with respect to HCS areas or refer to an already-existing mechanism.

The company has added information to Section 9.1 with regards to 1. And 2. These recommendations are deemed resolved by the reviewer.