HIGH CARBON STOCK APPROACH

HCSA PEER REVIEW REPORT

Company Name: Bumitama's Subsidiary

HCS Assessment Area: PT. Hungarindo Persada

Date Published: 15 May 2019

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, Bias Berlio Pradyatma is a registered practitioner under the Registered Practitioner Organisation of Aksenta.

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

Yes, Bias Berlio Pradyatma is a registered practitioner under the Registered Practitioner Organisation of Aksenta.

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

Yes, Bias Berlio Pradyatma and Resit Sözer are the HCS team member who are registered practitioners under Aksenta.

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).**

Yes, the HCV report of PT Hungarindo Persada is judged Satisfactory by HCVRN ALS.

Final report result: Satisfactory

Date final results published: **November 29, 2018**
Size of Development Area (in ha): **3,700.00**

- HCV area identified (in ha): **290.35**
- HCV management area (in ha): **290.35**

HCVs identified: **HCV 1, HCV 3, HCV 4, None**

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Questions for peer reviewers
(Peer Review Panel: Tri-Sugiyanto, Ario Bhirowo)

1. Peer Review Summary

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

Finding:
Reviewer found some activities are being conducted on 2017, such as: FPIC, SIA, PM, HCV and HCS. Community have options whether to accept or reject compensation from company. Company was compensating (GRTT) on 2500 hectare in the same time as HCS study is being conducted. There is only a patch identified as HCS and connected to riparian buffer zone. Wildfire on 1998 and community farming has been reduce forest cover on PT HDP. It does not mention specifically about land use planning for agriculture of 0.5 hectare of each person.

Reviewers Recommendation:
PM of boundary mapping need to be added in the report. HCV 3 shall provide in a table (according to the HCV 3 result), within information to other unidentified HCV. Needed of management and rehabilitation plan that collaborated both of social and environment problems together with community, especially at damaged riparian buffer zone caused of mining activity by community.

Company Responses:
- It is not clearly understood what boundary from PM that the reviewer is questioning. However, a map showing the boundary of the related villages in the concession area based on consultations will be provided. It is based on assumption that the reviewer is questioning the corresponding map.
- Amendment in correspondence with the HCV 3 findings will be made.
- All the riparian buffers in the assessment area have been identified as HCV area and HCVMA. A matrix of recommendations on its management and monitoring which involves collaboration with communities, NGO, and government has been provided.

Final Reviewers Recommendation:
Village boundaries were quite representative. Reviewers notice that there are still many land / areas outside of the license boundaries. Ideally, the village boundaries are presented as polygons (even though it is noted that the village boundaries are not yet final, but it is acceptable to use), hence it allows the reviewer to see that community still have access to other land / areas outside of the concession boundaries, and inside of their village area. Point 1 to 3 of company response are fulfilled.

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

Finding:
Yes. Based on review, the assessor have good expertises on FPIC, SIA and HCV. Remote sensing and statistic (anova) test analysis, remain unclear.

Reviewers Recommendation:
Needed of continually statistic analysis training, and skill development and understanding in remote sensing.

Company Responses:
It is acknowledged that the reviewer may find lack and/or fault in the summary and it is the reviewer's task to provide comment and recommendation on its finding to improve the quality of the report and the summary.

However, referring to reviewer's recommendation:
"Needed of continually statistical analysis training, and skill development and understanding in remote sensing."

It is unclear, whether the reviewer recommends the assessor to join a training course or to make amendment in the report to explain about the remote sensing process involved in the analysis?

Assuming that the reviewer is recommending amendment to the summary, as it is the most reasonable mean as a report peer reviewer, more detailed elaboration on the remote sensing process in the analysis will be provided.

Final Reviewers Recommendation:
To use remote sensing technique for interpretation, it is key to analyse the image – to see if there are clouds, haze, to see any slopes and different type of ecosystem etc. It is recommended to use a supervised interpretation with training area which represents certain type of land cover or use visual interpretation where multiple multi-temporal images are used as reference.

Complete statistic information needs to be provided in the report.

The assessment team appeared to have adequate skills and experience to undertake the HCS survey and report.

Generally, the summary report has been updated to be more complete.

1.3.   What elements of the HCS Approach still need to be completed in order to create a final land use and conservation plan? Are there aspects which you feel need to be re-done?

Finding:
HCS study resulted only one HCS patch of 18 hectare and connected to HCV area. Steps of activity plan of monitoring and protecting HCV and HCS area is well explained.

Reviewers Recommendation:
N/A.

2.   Social Issues

2.1.   Does the summary provided in Section 3.1 adequately represent and explain the community engagement, FPIC processes, and participatory mapping activities carried out?

Finding:

Yes. FPIC process was involving impacted community of village within the concession. Participatory mapping has been done by company and community, especially on compensation (GRTT) process. FPIC and SIA studies has been conducted on August 2017. SIA document provide recommendation to reduce social impacts.

Reviewers Recommendation:

Participatory mapping which related to compensation (GRTT) have not resulted village boundary, which further it is important to be considered to measure the concession area. Also, participatory mapping has not explained about production area, either manages by community or company; and protected area. Furthermore, it is necessary to provide participatory mapping result that can describe existing land use in particularly village.

Company Responses:

- In the most case, PM for GRTT is not directly related with the boundary of village. GRTT is based on land ownership/right of utilization which sometimes can be verified with certificate of ownership, reference letter (SKT) from the village government, or without any document (only with evidence in the field that the land is utilized). Thus, to presume that the PM for GRTT would results mapping of village boundary is not entirely true for the most case, as it is not in the study area. However, a map showing the boundary of the villages in the concession area will be provided. It is by assuming that the reviewer is questioning the corresponding map.
- PM to identify land ownership as part of GRTT process has been carried out by the company and it was a separated process from the mapping of the village boundary. Though map of village boundary was used for annex of the report (berita acara) of the PM for GRTT as it is also explained in the FPIC report.
- Reviewer's statement that the village boundary, in the further is important to be considered to measure the concession area is not clearly understood. The concession and its boundary, which is the Izin Lokasi, have been defined by the Regent Decree of Ketapang Regency. It is located in the villages' areas, however, the size (measurement) is not predetermined by the village boundary.
- Map of community land use will be provided.

Final Reviewers Recommendation:

Point 1-4 are fulfilled. For further understanding, food security has to be ensured, means that ensuring community still have their future land for farming activity, that area is excluded from GRTT.

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

Finding:
Yes. Land tenure study has been conducted at once within compensation process (GRTT) by company, also it was explained in SIA report independently.

Reviewers Recommendation:
N/A.

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:
No. Based on FPIC verification report (page 12), PM has been conducted on August 2016. Meanwhile, PM result have not delivered in summary report.

Reviewers Recommendation:
Has to be added PM result and maps in the summary report.

Company Responses:
PM that the reviewer is referring to is the PM of land ownership for the purpose of GRTT (land compensation). Result of the PM has been provided in the summary report as the progress of land compensation/GRTT (in hectarage). It is acknowledged that the result provided in the summary is not a map. It is because mapping of land ownership is considered sensitive for the owner of the land as the matter of personal's property, thus, to protect the landowner's rights, GRTT map is not provided in the summary.

Final Reviewers Recommendation:
Participatory mapping is a tool for identifying and mapping indigenous and local community ownership of land and natural resources, as well as land use in their villages. Local communities still have farmland for their current and future livelihoods and 0.5 ha per person is minimum requirement for future

farmland areas. Company is expected to provide information re the livelihood source of the community whose land have been compensated / GRTT – do they have other livelihood source or other job to make their living?

Final Company Responses:
The Company has identified the livelihood source of the community around the location of PT Hungarindo Persada, as stated in the report section 3.2 Ikhtisar Penilaian Dampak Sosial/ SIA (jika ada), paragraph 2, page 11: "Mata pencaharian utama masyrakat di lokasi kajian terdiri dari bekerja sebagai karyawan di perusahaan kelapa sawit, bekerja di perkebunan kelapa sawit pribadi, dan bekerja di perkebunan karet pribadi di sekitar desanya." It is clearly stated that their rubber plantations are located around the village, which is closer with the community's settlements.

The location of the company is mostly sandy and ex-mining land that is not suitable for food crop cultivation. In addition, in the HCV document it was stated that the community did not fundamentally depend on food source in the location of PT HPD and this was proven by the absence of HCV 5 in all PT HPD area. The company will carry out the monitoring and if there is a need from the communities, we will be work with them to get a good solution for all parties.

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. FPIC process has been explained in summary report, in the process it was involving impacted community. The report does not mention specifically that community propose themselves to get their compensation.

Reviewers Recommendation:
N/A.

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. In the socialization process, community have rights whether to preserve their land or willing to be compensated (GRTT). It is well explained in SIA report.

Reviewers Recommendation:
N/A.

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

Finding:
Methodology is appropriate with the case, and FPIC report was summarized structured and completed. Company gets support from community and also, social management plan has been socialized on public consultation.

Reviewers Recommendation:
N/A.

3. Ecological and Conservation Values

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

Finding:
No. In summary report mentioned there are solely HCV 1 and HCV 4, nevertheless in HCV PT HPD report (page 32) mentioned there is also HCV 3.

Reviewers Recommendation:
Summary table of HCV information shall construct as result report (table 10, page 32) and included HCV 3 findings.

Company Responses:
Updates to the HCS Approach Assessment Report and its summary will be made accordingly with the changes and updates in the satisfactory HCV Assessment Report and Public Summary.

Note: The HCS Approach Assessment Report and its summary were prepared and first submitted for the peer review when the HCV Report was in process of evaluation with the HCVRN. Several changes and updates in the HCV Assessment Report and Public Summary have occurred in the evaluation process with the HCVRN.

Final Reviewers Recommendation:
N/A. Summary report has been updated.

3.2. If the HCV assessment was not judged satisfactory (highest rating) by the ALS scheme of the HCVRN (as noted in the introductory information from the HCS Secretariat – please see page one of this document), please do a cursory review of the HCV report as it relates to HCVs 1-4. Do you have any general comments on the quality of the site description, the analysis of the landscape and national or regional context, or the methods used to undertake the HCV study? Were the determinations of the absence/presence and extent of HCVs 1-4 well-justified? Are the HCV management and monitoring maps accurate?

Finding:
HCV study has been conducted on July until October 2017. Methodology and assessment of each HCV and landscape were well explained. Threat identification, management plan, and monitoring were well explained for both HCV 1 and HCV 4.

Reviewers Recommendation:
Has to be added HCV 3 findings, identification, management plan and monitoring.

Company Responses:
Summary has been amended and the findings on HCV 3 will be provided.

Final Reviewers Recommendation:
N/A. Summary report has been updated.

3.3.   Please review Section 9.2 of the Summary Report. Was the methodology used for the Pre-RBA and the Rapid Biodiversity Assessments (if any) satisfactory? Did the RBA(s) reveal any significant biodiversity values that should have been captured in either the HCV assessment but were not, or warrant protection?

Finding:
Pre-RBA and RBA has not been conducted as of HCS area has connected with HCV area.

Reviewers Recommendation:
N/A.

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:
Yes. HCS area going to be protected and monitored from damage and lost threat. There is no forest patch surrounding the concession as of wildfire attacked on previous years.

Reviewers Recommendation:
N/A.

4.   Image Analysis

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

Finding:
AOI already include 1 km buffer to be able to identify the surrounding land cover and its connectivity with the area inside of AOI.

Reviewers Recommendation:
N/A.

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

Finding:
The assessment already used the most updated satellite imagery from 2018.

Reviewers Recommendation:
N/A.

4.3. Please do a quality check using the images provided in 6.3. Was the initial vegetation classification done properly? Do the land cover areas in the tables in Section 6 look reasonable? Are there any obvious errors in classification?

Finding:
There's a gap identified in the visual digitation process.

Reviewers Recommendation:
Suggest tidying up the digitation process by merging together the land cover that are similar.

Company Responses:
According to the question number 4.3., the reviewer was asked to check the classification process and to conclude whether the classification is adequate or need improvement.

The reviewer came up with finding that simply states, "There's a gap identified in the visual digitation process." but not describing what kind of gap it is and in where the gap is found. Thus, it remains unclear what is necessary to be done in the analysis and in the report to fill the gap that is mentioned by the reviewer.

Furthermore, the reviewer recommends merging the features of the same land cover class in the land cover classification shapefile. The recommendation is reasonable as to receive shapefile data in its simplest form. However, the merging would not fill any gap.

Assuming that the reviewer finding about gap is related with the brief elaboration in the first draft of the summary, more detailed elaboration will be provided in the land cover analysis section of the summary.

Final Reviewers Recommendation:
Made for make polygon simpler.

5.   Forest Inventory

5.1.   Please review Sections 7.1 and 7.2 of the Summary Report. Were the sample plots selected, set up, and measured properly? Please check the inventory plot layout for adequacy.

Finding:
Yes. Plot sample is shaped as square and its area is according to the requirement of standard minimum. Nonetheless, it does not explain the calculation methodology of sample and methodology of sample location. In Section 7.2 maps of sampling distribution is available.

Reviewers Recommendation:
In Section 7.2 it is needed to provide technique for sample count, calculation shall provide with the formula or the table (example: using of winrock calculator, etc). Also needed to explain about determination to methodology (example: stratified, random, purposive, systematic sample, etc). Has to be added of plot sample Shapefile and tally sheet.

Company Responses:
Shapefile and recap of tally sheet (in MS excel format) will be provided.

Number of samples was not determined systematically with particular formula. It was determined purposively in the field. It was because the preliminary land cover analysis shows that the assessment area is dominated by bare land, thus the sampling was determined to be purposively focused on the area covered by vegetation (i.e. bush, shrub, and YRF). In addition to that, sampling plots were distributed in stratified random manner. The distributions were based on the land cover class and randomly placed in the area of each land cover class. More elaboration explaining the sample distribution will be provided in the summary.

Moreover, though the sample calculation was not carried out systematically, statistical analysis of the carbon stock results per land cover class (i.e. ANOVA and Scheffe Test) shows that the carbon stock results per land cover class are significantly different to each other. Results of the statistical analysis of carbon stock results per land cover will be provided in the summary.

Final Reviewers Recommendation:
N/A. Summary report has been updated.

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

Finding:
Forest inventory team documented in table by name, expertise and role.

Reviewers Recommendation:
Shall be added about education and experience history. Information about company and community representatives that being involved in sampling process have to documented by name.

Company Responses:
Resume of the forest inventory team members and list of persons from the company and community will be provided.

Final Reviewers Recommendation:
N/A. Summary report has been updated.

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

Finding:
Sample methodology that being used is nested square plot and diameter calculation at breast high (dbh). The allometric refers to allometric result by Krisnawati et al, 2012.

Reviewers Recommendation:
Need to be added the formula of allometric into Section 7.7 and reasons why choose the formula.

Company Responses:
List of allometric formula will be provided.

Final Reviewers Recommendation:
N/A. Summary report has been updated.

5.4. Please review Sections 7.5, 7.6, 7.7 and 7.8 of the Summary Report, and do a cursory review of the forestry data and statistical analysis. Are there any obvious errors in the raw forestry data? Are there any flags where a result does not seem consistent with your rough interpretation of the land cover image? Do the final carbon classes seem accurate given what is known about other forests in the region?

Finding:
Saved carbon counted by 0.47 times biomass accordingly to IPCC (Section 7.5). There is availability of vegetation photographs in plot sample (Section 7.6). The analysis was appropriate (Section 7.7). Saved carbon stock is sensible for vegetation type in dry land in confidence level 90% (Section 7.8).

Reviewers Recommendation:
Shall be added vegetation photographs from 5 points (northern, eastern, southern, western, and canopy). Table result in each plots and photographs have not provide. Shall be added of Anova test in Section 7.8, if it is not available, it should be explained with the determination.

Company Responses:
Analysis of variance (ANOVA) and Scheffe Test on the results of average carbon stock per land cover has been provided.

Sample photographs provided in the summary to show the characteristic of vegetation cover in each land cover are considered sufficient. It is acknowledged that the toolkit suggests taking the standard 5 directions photograph, however, such presentation would show similar appearance especially for the old shrub (YRF) and shrub land cover in the assessment area. Therefore, photographs that show the overall appearance of each land cover to show the differentiation of each were considered more sufficient.

Final Reviewers Recommendation:
N/A. Summary report has been updated.

6.   Land use planning

6.1.   Please review Section 8.1 of the Summary Report. Was the initial vegetation classification map adequately calibrated and adjusted to take into account forest inventory results?

Finding:
The classification map has been calibrated adequately, using the 2016 – 2018 time series data. Initial vegetation class using land cover data source from KLHK on 2016 (Section 6.5), while final vegetation class in Section 8.1 using data source from imagery analysis on 2016. Nonetheless, both of maps seems unrelated.

Reviewers Recommendation:
N/A.

6.2.   Please review Section 9 of the Summary Report. Was participatory mapping data used in step one to identify community lands that should be enclaved? Were patches merged correctly? Was the core area correctly identified? Was the connectivity analysis done correctly?

Finding:
Participatory mapping has been carried out and used in determining patches.

Reviewers Recommendation:
N/A.

6.3.   Please review Section 9 of the Summary Report, and select a few sample patches to test that the Decision Tree was used correctly. Were the patches correctly identified as High, Medium, or Low Priority? Was the Patch Analysis done according to the HCS Approach Decision Tree?

Finding:
Patches are identified in accordance with the toolkit – low priority and is merged with HCV area (riparian).

Reviewers Recommendation:
N/A.

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:
HCV assessment has been carried out in integration with HCS assessment, which resulted to land use plan map. However, map to identify the prioritized land use management needs to be developed.

Reviewers Recommendation:
Suggest developing the map of prioritized land use, this should be developed based on the threat / potential threat towards conservation area.

Company Responses:
Map of prioritized land use is not clearly understood.
Assuming that the reviewer is suggesting to set priority for conservation area based on its threat, all of the conservation area is rivers and its riparian (the small HCS patch for conservation is also part of riparian). They are HCV Areas with multiple HCV values. All is facing similar threats and therefore to protect and conserve all of them is priority as they are now under the same threat.

Final Reviewers Recommendation:
Yes, potential threats can be made based on the conservation area and I think it's good and right.