Background information:

a) Did a Registered Practitioner Organization lead the HCS assessment? If not, has the organization which led the assessment started the process of registration?
   Yes, Aksenta is a Registered Practitioner Organisation.

b) Was the HCS Team Leader a Registered Practitioner?
   Yes, Bias Berlio Pradyatma was the HCS Team Leader and a Registered Practitioner.

c) Were at least 2 HCS team members Registered Practitioners?
   Yes. Bias Berlio Pradyatma and Risa Desiana Syarif were 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).
   The assessment was not submitted because it was completed in 2010.
Questions for peer reviewers
(Peer Review Panel: Jules Crawshaw, Andiko, SH.MH)

1. **Peer Review Summary**

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

<table>
<thead>
<tr>
<th>Finding:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The study area was only a subset of the whole concession and there was no 1 km buffer included around the concession.</td>
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<tr>
<td>2. The full HCV review report does not include clear justifications of the presence/absence of HCVs.</td>
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<tr>
<td>3. The inventory methods, land cover mapping to HCS land cover categories and patch analysis do not follow the method described in the HCS toolkit.</td>
</tr>
<tr>
<td>4. Regarding the social aspects of the HCS report. Insufficient information was provided to draw many conclusions. Specifically, there was no information provided on the company’s approach to FPIC, e.g.:</td>
</tr>
<tr>
<td>- the options offered to the community</td>
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<tr>
<td>- no information was provided about the tenure study (so how did the company know the extent of peoples’ land and they did in fact own the areas that they claimed to own).</td>
</tr>
<tr>
<td>- safeguards to ensure that once they sold their land they still had sufficient area for gardens</td>
</tr>
<tr>
<td>- there was no documentation of community meetings (minutes of meetings and attendance lists)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reviewers Recommendation:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The study area should be expanded to the whole concession and a 1 km buffer should be included. It is stated in the summary report that the scope has been expanded to include the whole concession plus a 1 km buffer. However, this is not reflected in the HCS report provided.</td>
</tr>
<tr>
<td>2. Information about the findings of the HCV report have been provided.</td>
</tr>
<tr>
<td>3. In undertaking the forest inventory, land cover mapping to HCS land cover categories and patch analysis; ensure the HCS toolkit methodology is followed.</td>
</tr>
<tr>
<td>4. The English within the summary report needs to be improved. Although the reviewer could understand it, poor English makes the work appear unprofessional.</td>
</tr>
<tr>
<td>5. Regarding the social aspects of these reports. There needs to be considerably more information provided addressing each of the dot points above. There is very little information provided about social engagement that has taken place so far. This needs to be strengthened.</td>
</tr>
</tbody>
</table>
1.2. Did the HCS assessment team include or have adequate access to relevant expertise to undertake the HCS assessment?

**Finding:**
The team, as described in the HCS report, has an appropriate mix of skills to conduct a HCS assessment.

**Reviewers Recommendation:**
No recommendation.

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:**
1. A final land use plan is presented in section 10.2 of the summary report. Currently this it is not stated how this is compiled (e.g. the union of community areas, HCS and HCV). It appears this has not been presented to the community yet.
2. Regarding aspects that need to be redone, as described in section 10.1 above the inventory methods, land cover mapping to HCS land cover categories and patch analysis does not follow the method from the HCS toolkit and may have to be redone.

**Reviewers Recommendation:**
Provide a description of how the final land use plan is derived.
Provide a timeline of activities both completed and planned, because it is quite hard to follow what stage the company is up to with many of the activities. There is nothing in section 10 of the summary report that mentions any of the activities described in the company responses below.

**Company’s Response:**
- The land cover classification and patch analysis has been redone.
- According to the result from the meetings with the communities, they explain that they are no longer traditionally utilize the land within the concession since road access and job opportunities around the villages are available. However, the compensation on community land which are located within the proposed area to be developed by the company will still be undertaken.
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:**  
This report started with socialization with the community. The socialization model received a lot of criticism due to lack of sufficient prior information in the decision making. The summary report already put several meetings with parties in page 19.

**Reviewers Recommendation:**  
No further recommendation.

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

**Finding:**  
Not available. Based on 2.2, Source of Data and Information, there is no mention of the tenure study document being referenced.

**Reviewers Recommendation:**  
The question is if the SOP of land acquisition and land dispute countermeasure being reviewed by independent social experts? The summary report in page 12 only mentioned that “Afwan Afwandi as the expert in - Community Forestry, Social Impact Assessment, Social Survey, Community Socio-economic, FPIC, Participatory Mapping”. Maybe he is an Independent Tenure Expert, but company mentioned “Specific tenure study was not conducted”.

**Company’s Response:**
Special land tenure study “beyond the HCS Approach Assessment” involving independent social experts has not been conducted by the company before the HCS Approach Assessment is Carried Out. However, land tenure study and FPIC verification on the company’s SOP of land acquisition and land dispute later has been done as the “FPIC study and participatory mapping” part of the HCS Approach Assessment. This study involved Afwan Afwandi as the social expert.

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:
This report focuses on environmental aspects of HCV 1-2-3-4 and not 5 & 6 thus no discussion is found related to minimum requirements of 0.5 ha per person for future garden areas.

Reviewers Recommendation:
Please put the HCV Review and Update in 2016 in summary, especially HCV 5-6. After reviewing the Summary Report, especially on social part, it doesn’t meet the minimum requirement of “0.5 ha per person for future garden areas”.

Company’s Response:
Brief description of the HCV Review and Update are provided in the summary report. However, the historical and present situation of the livelihood of the communities are described in the section 3.1. It describes that the communities have left their subsistence land utilization and utilize their land for rubber production. However, the declining of rubber price has brought the community to abandon their rubber garden due to its cost, which is not feasible to be managed. During this period, the lands are not productive.

The communities are willing to give their land for the new development to “re-utilize their lands” so they can get more incomes from their land. Furthermore, the communities will also get their plasma plantation in which, though the location and the size would be different with their own land, would be their own private property in the future. However, though they have to wait until the oil palm reach its productive age to get their income from the plasma scheme, and they will have to share the income to compensate the development cost in their lands which is
covered by the company in advance, the plasma land will be certified as private property of the land owner, and the production from the plasma land will be taken by the company.

Including or excluding communities’ future garden needs to be very carefully considered. It really depends on what would the communities do with their future garden. In this case, according to the interviews, the communities are looking forward to oil palm as their new source of income.

Setting aside communities’ uncompensated yet land as their future garden as stated in the toolkit would cause their land to be not comply with the no deforestation standard, which is applied by the company and would be most of the companies in the future. It means, if they are developing their un-assessed lands into oil palm plantation, the company would not be able to receive their production. It will cause the community another problem of selling their products.

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 public consultation document is available in the Appendix and description on how the FPIC verification was conducted has been included in the summary report (page 19)

Reviewers Recommendation:
However, please explain more about who is community representative (representing for himself or Kepala desa/adat as representation of community).

Company’s Response:
Meetings with the communities involved the peoples from the villages representing land owners and as part of the community and also the Kepala Desa/Adat representing their community.
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 report does not specifically address the topic of the question.

**Reviewers Recommendation:**
Customary Ownership in concept but still has relation with Indigenous People. The study team doesn't meet with indigenous people in the field. Please put in the report that there is no Indigenous People.

**Company’s Response:**
Customary ownership in the study is referring to the process how land ownership in the study area is formed. It might resemble with how land ownership in Dayak indigenous people is formed, it might happen because the system has occurred since a long time ago by the older generations and been followed by the newer generation and also the immigrant residence to have their own garden to fulfill their needs. However, though the system is still applied by the communities, there are no indigenous people in the study area. Their lands has never been occupied or given to any other inhabitant. In fact, the immigrant residences in the area is living accordingly with norms that have been applied by the native residence.

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

**Finding:**
The overview is too brief.

**Reviewers Recommendation:**
The report has already included the complaint mechanism. However, could include also the FPIC SOP.

**Company’s Response:**
FPIC is not considered as an activity but as a principle that have to be followed in the process of engagement and making agreements with the community. In fact the SOPs were designed to ensure all the that process are comply with FPIC standards.

SOPs were checked to verify it they comply with the FPIC standards. Implementations of the SOPs during the engagement with the communities were verified with interviews with the communities.

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:**
Whilst the text description is an accurate representation of the HCV study, it requires a map to support the text. Mention of a list of place names is almost impossible to interpret unless the reviewer knows the area very well.

The reason for the differences in HCV area between 2010 and 2016 do not correspond. In the HCV report it is stated: “Penambahan luas area indikatif HCV dikarenakan intensitas kajian HCV pada area landbank di KMA bagian Utara. Pada kajian sebelumnya intensitas kegiatannya lebih banyak dilakukan di bagian Tengah dan Selatan.” Whilst in the summary report it is stated “Identification of potential new HCV area due to the vegetation succession during the period when the development is halt especially in North KMA Division.” Really neither of the explanations make sense, it seems most remiss to not map HCV around a river the size of Sungai Kementing in the initial assessment. Similarly, “growth” of belukar does not justify the presence of HCV. The team must have found RTE plants or similar in the area to justify mapping this area as HCV.

**Reviewers Recommendation:**
1. A map of the HCVs has been provided. It does not have land cover as a background (as suggested by the reviewer previously). Consequently, it is very hard to interpret. A consistent and plausible reason should be provided for the difference in the HCV area between the 2 reports.
Justifications for the presence of each HCV should be provided in the HCV report. The following statement is made - “The initial HCV Assessment identified 136.68 ha of HCV area, consists of HCV 1.2, HCV 1.3, HCV 3, HCV 4.1 and HCV 4.2. According to the report, each type of the identified HCV represents presence of endangered species, habitat of endangered or protected species or species with limited distribution; presence of rare ecosystem of endangered ecosystem; unique water source for daily use; important area to prevent erosion and sedimentation. Detailed information of the identified HCV areas and the map are presented in Table 6 and Figure 7.” If a “unique water source for daily use” is present, then it raises the question as to why HCV 5 is not present?

2. The caption of Figure 9 is “Map of the HCV Management Areas according to the initial HCV Assessment” yet the area presented on the map is for the revised HCV assessment. This is very confusing for someone reading the report.

**Company’s Response:**

1. It is acknowledged that “unique water source for daily use” is stated. It is referring to the river within the concession as they are the upstream of the main river (outside the concession) that is used by the communities as the source of water. Therefore, the upstream rivers are identified as HCV 4 as they are functioning to maintain the quality of the water which is used in the downstream. However, the upstream rivers can’t be identified as HCV 5 because the use by the community is occurred in the downstream.

2. HCV Management Area is referring to areas that have to be managed as HCV either it is HCV or not HCV (areas supporting HCV Area). Therefore, map of the HCV Management Area includes the HCV Area and some other area that determined to be managed to support the HCV Area.
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?

<table>
<thead>
<tr>
<th>Finding:</th>
</tr>
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<tbody>
<tr>
<td>1. This report has not been assessed by the HCVRN. Furthermore, it is not an HCV assessment, rather a review of an HCV assessment that was done on 2010.</td>
</tr>
<tr>
<td>2. Site Description and Landscape Analysis included:</td>
</tr>
<tr>
<td>- Maps of the concession within Indonesia. At the time of the HCV assessment (2016) 46% of the area had been planted with oil palm.</td>
</tr>
<tr>
<td>- The steps in acquiring the concession license.</td>
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<tr>
<td>- The status with respect to the RTRWP. Most is APL, although there is a significant area that is still HPK.</td>
</tr>
<tr>
<td>- There was a short discussion on a HCV assessment that had been done in 2010 and the management and monitoring activities.</td>
</tr>
<tr>
<td>3. However, there are many aspects required by the HCVRN that are absent from the landscape description section and the national or regional context. These include:</td>
</tr>
<tr>
<td>- Boundaries of assessment landscape</td>
</tr>
<tr>
<td>- Land use surrounding the assessment area (e.g. settlements, forestry, agriculture, infrastructure)</td>
</tr>
<tr>
<td>- Demographic and socioeconomic context</td>
</tr>
<tr>
<td>- Presence and condition of protected areas in the landscape (does the assessment area provide a vital supporting function to a protected area?)</td>
</tr>
<tr>
<td>- Key Biodiversity Areas in the landscape – note there is some discussion around mammals but no discussion around extant vegetation.</td>
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<tr>
<td>- History of land use and development trends, including future plans (e.g. spatial planning maps of the MU and surrounding landscape, development initiatives and existing/proposed commercial exploitation and production licences)</td>
</tr>
<tr>
<td>- Biodiversity characteristics (e.g., biogeographic zone, known features of biodiversity concern, major ecosystems, land cover, biophysical data, etc.)</td>
</tr>
<tr>
<td>- Occurrence of known populations of species of global concern and migration corridors in the landscape</td>
</tr>
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</table>
- Ecosystem services (e.g. hydrology, erosion risk, etc.)

4. A key input that is missing is a landcover map. It is very hard to review the presence / absence of each HCV without that. There is no justification provided for the initial HCV mapping nor any justification for the changes.

**Reviewers Recommendation:**
1. A brief summary of the presence of the HCVs has been provided.
2. At the very minimum two things should be provided; (1) a landcover map and (2) justification for the presence / absence of each HCV alongside a map of the location of each HCV.

**Company’s Response:**
It is acknowledged that the summary of HCV is brief. It was considered that the history of the HCV assessment and review and update and the update of the HCV areas are the more necessary as it is important for the patch analysis rather than reviewing the justification of HCV presence or absence. The justifications are provided in the HCV reports.

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:**
Regarding the RBA the following statement was made: “Pre-RBA and RBA patch are found as small patches YRF. Most of these patches are located near to the proposed conservation area which have significantly more dense vegetation and more compact. According to the filed survey and HCV assessment, these patches are not significantly support wildlife population at the concession”

However, the toolkit states “The purpose of the Rapid Biodiversity Assessment is to determine if any of the following elements are present in the patch:
1. Species which are:
   1.1. On the IUCN Red List as Near-Threatened, Threatened, Endangered, or Critically Endangered
   1.2. Listed under the CITES convention
   1.3. On any national or regional list of rare, threatened or endangered species
   1.4. Identified in the HCV assessment as being of concern.
2. Habitat that would normally host one of the species listed under point 1, even if the particular species was not observed during the HCV or the RBA itself;
3. Any concentrations of, or habitat of, regionally or locally rare or uncommon species, or simply representative areas that contain concentrations or combinations of local species and their habitat; and
4. Rare habitat as identified in the HCV assessment.”

There appears to be no link between the criteria used for determining whether RBA patches should be classified as HCS and the criteria for making this determination which is documented in the toolkit.

**Reviewers Recommendation:**
Please repeat the RBA using the criteria specified in the toolkit. There is a table provided at the end of section 10.4. Regarding the patches that require RBA check, these are all MP and LP patches.

**Company’s Response:**
Result of RBA was not provided in the HCS Approach Assessment Report and Summary Report since it was not carried out together with the assessment. In fact, the RBA has been conducted in November-December 2017. However, the analysis and reporting are now still in process.
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:**
1. It is stated that the management and monitoring plan for the HCS areas has not been developed yet. However various points to be considered in development of the management and monitoring plan are listed.
2. All the points on the list make sense but considerably more detail is required. E.g. “Socialization of the conservation areas to the community”, how would this be done and how would harvesting of trees be stopped if the community had always sourced wood for construction from the forest and considered that they had no other option.
3. No HCS areas are considered outside the concession and no protected areas are mentioned.

**Reviewers Recommendation:**
1. Document management and monitoring activities in a sufficient level of detail to give the reviewer confidence that the M&M plan is well thought out and able to be executed given the resources and commitment of the company. A list of activities has been provided for management and monitoring.
2. HCS needs to be extended beyond the concession boundary and there needs to be discussion of protected areas nearby. There is still no mention of connectivity of HCS patches outside the concession.

**Company’s Response:**
1. The detailed HCS management and monitoring plan is not provided in the Report and Summary Report because it will be designed and integrated with the HCV Management and Monitoring Plan. The integrated management and monitoring plan will be prepared after the field delineation and demarcation of the conservation areas (HCS and HCV) is finalized.
2. Connectivity of HCS patches within and outside the concession is discussed with high resolution maps in the sections 1.6 and 6.1. In addition, the AOI in section 8.1 also includes the HCS patch outside the concession. However, there are no protected areas around the concession.
4. **Image Analysis**

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

**Finding:**
There are a number of contradictions in the summary report. It states that the AOI is “The Area of Interest (AOI) considered in the analysis was the PT KMA concession and also includes a 1 km buffer as recommended by the HCS Toolkit.” However, in the HCS report the study area (Wilayah Kajian – which is assumed to be the AOI by the reviewer) is only 3700 ha. Compared with the whole of the PT KMA concession of 13,380 ha. The scope is stated as including the whole concession plus a 1 km buffer.

**Reviewers Recommendation:**
The summary report and the various underlying reports should be consistent.

**Company’s Response:**
It is acknowledged that the scope of assessment was amended during the reporting and review process. Due to the limited timeline of the review process, amendment of summary report was made in advance after the reanalysis conducted, the amendment of the full report was submitted after the summary report. Therefore, there was a period in the review process when the revised summary report submitted without an underlying report. However, both of the revised versions were now submitted. (The final revised full report was submitted after the peer reviewers were finalising the review and thus not reviewed during this peer review process).

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

**Finding:**
1. Two Landsat 8 images dated 9 April 2016 and 27 July 2016 were provided to the reviewer. Both images were relatively cloud free. When used in conjunction, the cloud covered areas from the July image could be used in augmented with the April image. Higher resolution google
earth images were also provided to the reviewer. The combination of these 3 data sets are of adequate quality, resolution and date (the survey took place June -August 2016).

2. The report only mentions that the April image was used (section 2.3.1).

**Reviewers Recommendation:**
Report to include all images was subsequently updated to include all images and is now satisfactory.

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:**
1. The land cover areas provided in section 6 cannot be reconciled with the HCS report (no area table was provided).
2. Regarding the quality of the images used for land cover classification. A combination of the images provided in the fig 8 & 9 of the summary report appear reasonable. Fig 8 has a lot of cloud cover in the south and fig 9 has cloud cover in the north. By stitching the images together, cloud cover can be excluded. However, there is no mention of the use of this technique.
3. A landsat image has been provided
4. Regarding the initial vegetation classification. See the images and maps below.

**Reviewers Recommendation:**
1. The land cover classification does not appear to be accurate. Manual classification has been undertaken. It is recommended that supervised classification is used. This technique should give more consistent results.
2. A table of area by land cover has been added but this appears inconsistent with the maps (e.g. there is no area of secondary forest in this table, even though there is secondary forest mapped).
3. An extremely brief description of the stratification method has been made.

**Company’s Response:**
1. Supervised classification was undertaken in the initial land cover classification. However, according to the field data, it was known that particular areas were misinterpreted especially in the belukar and hutan sekunder areas, and the semak and oil palm areas. Supervised classification accordingly with field data was also undertaken to produce the final classification, however, the result was still misinterpret the land cover in particular areas. Therefore, combination of a small interval supervised classification and manual visual interpretation was undertaken to delineate the final classification.

Misinterpretation of oil palm area was identified by the reviewer. It is acknowledged that the area was once cleared and planted with oil palm. However, according with the field observation and information from the plantation management, the area was abandoned since 2015 due to the no deforestation policy. The company stopped its operation in newly developed and its expansion and plan to fulfil the requirements of the no deforestation policy, including the HCS Approach Assessment. However, the assessment was finally conducted in 2016, letting the newly developed areas to naturally grow through a vegetation succession process into a bushes-shrubs land. Therefore, the areas were reinterpreted as bushes instead of oil palm.

Unclear delineation basis of old shrubs and secondary forest was also identified by the reviewer. It is most likely happened because the reviewers reviewed the final classification side by side with the landsat image. However, the indications of secondary forest is more visible in the supervised classification image in the section 6.5.

2. The secondary forest was classified together with the thickets accordingly with the carbon calculation process. Both are not showing significant different of carbon stock though distinct plant composition was present. Therefore, the land cover area of secondary forest and thickets were calculated as in a class.

3. It is acknowledged that the description is brief. It was considered enough as a summary. The more detailed description of the stratification can be referred to the company’s response point 1 in the peer review report section 4.3.
The area classified as belukar is in fact oil palm.

The lime green areas are mature oil palm.

The purple / green areas are newly planted oil palm.

Even though this is a poor image – oil palm and roads can be seen in the area classified as semak.
Belukar
Secondary Forest

There doesn’t appear to be any difference between the belukar and the secondary forest.

Areas appear similar despite different classifications.
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:**

In chapter 4 of the toolkit the method for laying out the plots is a circular plot. Whereas the method used in this assessment was a square plot. The methodology applied seems reasonable, but the reviewer believes that laying out square plots in a forest would be reasonably difficult practically and result in a lot of edge effect, as such would be inherently less accurate than circular plots.

Regarding the allocation of plots to landcover classes; this appears reasonable at a glance. It would make it a lot easier if the assessor used HCS landcover classes (e.g. LDF, YRF) rather than bush, thicket etc. The distribution of the plots seems rather unusual with 11 of the 12 plots in the secondary forest area being very close together. Although the reviewer accepts that access in such areas can be very difficult, it seems strange to do so many plots in the same area. The report states “Sampling plots are randomly distributed in each land cover type.” But looking at figure 115 it is obvious there is no randomization. Many of the plots are located right next to each other.

**Reviewers Recommendation:**

1. Provide more information on how plot allocation to landcover classes was made.
2. Provide a translation table for Aksenta land cover classes to HCS landcover classes.

**Company’s Response:**

1. See company’s response for section 4.3.
2. Land cover table with HCS land cover translation has been provided in the section 6.6 in the summary report.
5.2. Please review Section 7.3 of the Summary Report. Was the forest inventory team qualified?

**Finding:**
The inventory team had a background in remote sensing, carbon stock calculation and forest inventory. This appears adequate.

**Reviewers Recommendation:**
No recommendations.

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

**Finding:**
The equation used for calculation of tree biomass was Brown (1997) – this is based on the HCS report. This equation is acceptable, though considered outdated. This contrasts with the Summary report that states “Tree biomass allometric used in the assessment is according to Krisnawati et al (2012).”

**Reviewers Recommendation:**
The HCS report and summary report should consistently report the allometric used. It is updated in the summary report that the tree biomass was calculated with allometric equations according to “Monograf Alometrik untuk Pendugaan Biomassa Pohon pada Berbagai Tipe Ekosistem Hutan di Indonesia” (Krisnawati et al, 2012) but the HCS report provided (pg 17) for review still mentions the use of Brown “Nilai biomass pohon diperoleh melalui persamaan allometrik yang dihitung berdasarkan data variabel diameter pohon yang diukur di lapangan (Brown 1997).”

**Company’s Response:**
The methodology chapter in the report has not been updated since Brown’s Allometric Model was used to derive preliminary result of the land cover carbon stock. The final carbon stock information was then referring to the Carbon Stock Assessment which the calculation was according with the “Monograf Alometrik untuk Pendugaan Biomassa Pohon pada Berbagai Tipe Ekosistem Hutan di Indonesia” (Krisnawati et al, 2012).
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:**
No raw data is provided in the HCS report.

**Reviewers Recommendation:**
The spreadsheet Data CSA.xls has been provided and shows calculations. Although the equations are different from those mentioned in the HCS report.

**Company’s Response:**
The methodology chapter in the report has not been updated since Brown’s Allometric Model was used to derive preliminary result of the land cover carbon stock. The final carbon stock information was then referring to the Carbon Stock Assessment which the calculation was according with the “Monograf Alometrik untuk Pendugaan Biomassa Pohon pada Berbagai Tipe Ekosistem Hutan di Indonesia” (Krisnawati et al, 2012).

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:**
1. There are some initial observations:
   - Why were there only selected islands within the concession included in the HCS study. Some of these islands included oil palm.
   - There was no land cover mapping undertaken beyond the study area boundaries. This is contrary to the guidance provided in the toolkit “At a very minimum, a zone of one kilometer beyond the concession borders is necessary to ensure forest cover in the landscape is taken into
consideration. Best practice would be to include even more of the surrounding landscape, for instance at the level of the water catchment area for the watershed or streams within the area of interest.”

2. There is no information provided in section 8.1 of the summary report of calibration of the land cover map based on the inventory results. In the HCS report it describes how to make a model which correlates spectral reflectance against carbon density from the plots. This is then applied across the whole area of interest to group areas as LDF, YRF or Degraded Land. This may be a reasonable approach but is not the approach that is described in the toolkit. The HCS report provided does not mention any expansion of the scope.

Reviewers Recommendation:
1. Provide some explanation as to why only selected areas were included in the HCS study (not the whole concession).
2. Repeat the exercise of incorporating the forest inventory results into the land cover map based on the approach described in the toolkit.

Company’s Response:

1. It is acknowledged that in the beginning, only certain areas were included as the scope of HCS Study. It was done accordingly with the potential land for development in the concession and scope of analysis of RSPO NPP Assessments. However, accordingly with the reviewers recommendations, the scope of HCS Approach Assessment was amended, it includes the whole concession and 1 km buffer as the minimum requirement in the toolkit. Re-analysis of land cover classification and HCS patch decision tree were done.
2. Land cover classification accordingly with the HCS Approach Toolkit has been made.

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:
Section 9 of the summary report does not mention anything about participatory mapping. The reviewer then went to section 4 of the HCS report and it was clear that no participatory mapping was done in step 1. However, it was mentioned that the land ownership was identified to the
village level not to the level of individual ownership. From what the reader can ascertain the community had abandoned this land and was happy to have it converted to oil palm. However, they were awaiting the outcome of this HCS study before any negotiations took place.

The key paragraph is the following:

“Pertemuan dan proses diskusi dengan masyarakat juga memberikan informasi bahwa seluruh komunitas masyarakat dari tujuh desa yang berkaitan dengan wilayah kajian telah setuju untuk melepaskan lahannya untuk pembangunan perkebunan kelapa sawit. Kondisi yang berlangsung saat ini adalah masyarakat dan perusahaan menunggu proses kajian-kajian yang diperlukan untuk memenuhi prosedur penanaman baru (NPP) di wilayah kajian termasuk FPIC. Proses ini kemudian akan mengawali proses perundingan dan pembebasan lahan antara masyarakat dan perusahaan untuk kemudian dibangun menjadi perkebunan kelapa sawit baru.”

So, the community agreed to give up “all the area” so there are no community areas to be enclaved. If this is the case it makes the job easy for the company. But it should be stated what is the company’s approach because it sounds like the company will not purchase land off the community that cannot be developed (i.e. HCS or HCV area). This would mean there is no protection given to such areas by the company.

Regarding the **patch analysis**:
Step 2 of the toolkit is supposed to group the land cover into HCS land cover categories (e.g. LDF, YRF etc) but step 2 of the report groups the area into HCV, LCS and HCS. In essence appearing to preempt the patch analysis process.
Step 3 Two crucial errors have been made:
1. Excluding the HCV area from analysis
2. Excluding the areas external to the study area from analysis.
Connectivity with such areas could push medium priority patches to high priority. Unfortunately, these errors so early on in the process mean that any subsequent analysis will be incorrect.

**Reviewers Recommendation:**
1) State clearly whether the company intends to purchase the whole study area off the community or only the areas that can be developed for OP.
2) State why the company is waiting for the outcome of the HCS study before starting negotiations.
3) Describe land ownership in the area. Is it owned by individuals? Village boundaries should be shown on a map.
4) In the patch analysis section – tables should be presented so the reader can check the area statements (e.g., table 5.1 states that 2% of the area is 0 ha).

5) The patch analysis will have to be redone – HCV areas and forest areas external to the study area have to be taken into account also.

6) There is still no mention of participatory mapping in section 9. The description in section 9 is very brief and general. It cannot be determined from this description alone whether the patch analysis has generally been done in accordance with the toolkit.

**Company’s Response:**

Responding to the patch analysis issue, HCV is considered as high priority patches since the beginning of the analysis, therefore, the HCVs are grouped since the step 2 of the analysis along with the land cover grouping. Classifying the land cover in the whole area (not considering HCV areas in the early steps) would potentially result in lower priority for the HCV area or some part of it; and including the whole HCV area in the later steps would result in redundant activity in the analysis, because the connectivity is analysed in the step 3 and 4. Therefore, grouping HCV areas as high priority should be undertaken in step 2 (before the connectivity analysis).

1. Company has to engage the community to discuss agreement on community’s land. It can’t be generalized that the company would by the whole land, otherwise one by one approach with the community would be carried out to map the community’s land and discuss the decision would be agreed upon the land. However, it is obvious that the company would compensate if the owners give their consent accordingly with the development plan.

2. Further engagement would be carried out after the HCS study is completed because the decision of the land (conservation patch or developable patch) would have huge impact to the decision. It is also an issue that if a community’s land is an HCS patch, it might not be able to be managed and afford additional income for the owner. If a community decide to privately develop their HCS covered land, then the production can’t be distributed to the company according with the no deforestation policy. Therefore, further thought must be undertaken to address that problem. It will be much more manageable if the land use plan has been completed as land substitution might be the most feasible alternative.

3. Basically the land ownership is based on individual as it is derived from their garden. However, it shifts into communal ownership because majority of the community has their own land. Moreover, land substitution might most likely address the land compensation issues since community’s land may should be conserved due to its land cover. Village boundaries are not considered necessary since the land ownership is not based on it.
4. Tables are presented in the patch analysis section in the report. The 2% in table 5.1 in the report has been revised, it is now 267.1 ha.

5. It has been redone and includes all the forest land cover within 1 km buffer of the concession boundary.

6. It is acknowledged that the description in section 9 is brief. However, it is a summary of the patch analysis decision tree. The participatory mapping process is more detailed described in the section 3 in the summary report and in the chapter 4 of the report.

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:**
See 6.2 above. Initially, this has not been done correctly. The information in the Summary report is very brief and there is no mention of doing pre-RBA checks or analysis of the forest cover in the landscape. Looking at the information provided in the spreadsheet “result of decision tree.xls” taking line 48 as an example. A low priority patch is conserved because it is connected with an HCV area. However, this does not follow the toolkit. However, this was subsequently redone during the final review.

**Reviewers Recommendation:**
No further recommendation.

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:**
It appears that HCV, HCS, peatland, riparian zones, customary forest has been combined to create a final conservation map. Although this has not been socialized yet and no final ground verification has been undertaken.
Reviewers Recommendation:
Once the patch analysis has been repeated (see above); the outcomes should be socialized with the community to gain their acceptance of the plan. Wait for socialisation to take place before a review of this point can be undertaken

Company’s Response:
Amended land use plan according with the new analysis is now in the process of field delineation and demarcation. It involves community as well as a part of socialization of the company’s land use plan to the community.