

## Advice Note 01: HCV – HCSA Assessments

Date: 21 October 2019

### Integrated Quality Assurance Advice Note Series:

HCVRN ALS conducts the quality assurance of integrated HCV-HCSA assessment reports. In November 2017, the HCV-HCSA assessment manual was published and in 2018 the ALS started to receive the first integrated assessment reports for evaluation. Integrated assessments and their evaluation are still relatively new, where all parties are learning with experience. As the ALS receives more integrated reports, the ALS is working together with the HCSA Technical Panel to address practical questions and to provide clarity and interpretation guidance where needed. We have therefore started this Advice Note Series to provide clarifications on interpretation of requirements in the HCV-HCSA assessment manual or HCSA toolkit and quality assurance as it arises.

The information in this advice note represents the current HCSA interpretation of various topics related to the quality assurance of HCV-HCSA assessment reports. Assessors and report evaluators may reference and follow the advice note, where it differs from information in the HCSA Toolkit and/or ALS documents (i.e. integrated manual and reporting templates and associated guidance). Over time, the experience gained during the evaluation of integrated reports and the discussions leading to new advice notes will contribute to training materials and updated guidance and requirements for integrated assessments.

### Topics covered in this advice note:

1. Use of national land cover classification systems
2. Number and location of forest inventory plots
3. Due diligence requirements
4. Local people's lands for food security and livelihoods

#### 1. Use of national land cover classification systems:

*HCSA Toolkit Module 4 (p.16) states: The land cover classification must follow the system specific to the country in which the analysis is being conducted. However, in practice, can assessors use other land cover classification systems?*

**HCSA Interpretation:** Aside from (or in addition to) the national land cover classification system, the assessor may use other land cover classification systems that are ecologically and/or politically meaningful. All land cover classes must include descriptions of qualitative factors. In all cases, a table must be included in the report which cross-references the land classification system used with the HCS forest classes to be accompanied by text explaining how the classification system used is compatible with the HCS forest classes (as the cut-offs may not be the same).

## 2. Number and location of forest inventory plots

### 2.1 Number of forest inventory plots

- The assessor should derive an estimate of the number of plots required using the equation provided. (Module 4 p.27). Note: this requires an assessment of probable error (E), expressed as a percentage of the estimated mean value *that can be assessed during the initial stages of forest inventory*.
- The minimum number of plots should be sufficient to attain a 90% confidence interval equal to  $\pm 10\%$  of the average carbon stocks for each stratum. However, variability within one vegetation class (for instance, within the HDF category) may exceed the 90% precision target, provided that in the final analysis the classes are statistically different from one another.
- The assessor is free to measure more plots than the minimum and we recommend an extra 10% of plots provides a good safety margin.

The minimum sample size for Forest, YRF and Scrub classes using the equation in the toolkit is demonstrated in the box below.

$$N = t^2 s^2 / E^2$$

where:

N = samples to estimate mean to  $\pm E$

t = t-value from students t-test table for 90% confidence interval

s = standard deviation estimated based on existing data sets from similar forest types. Government forestry departments often have relevant data.

E = probable error, expressed as a percentage of the estimated mean value

#### Example of sample size calculations

| Land Cover Type | t value | Variance (s <sup>2</sup> ) | E       | N  |
|-----------------|---------|----------------------------|---------|----|
| Forest          | 1.66    | 2000                       | 120*10% | 38 |
| YRF             | 1.66    | 1000                       | 70*10%  | 56 |
| Scrub           | 1.66    | 200                        | 25*10%  | 88 |

Note: Estimates of standard deviation and probable error are required to complete this equation. These should be sourced from pre-surveys or secondary data sets.

**HCSA interpretation:** The key pass / fail factor for following the methods is proving significant difference between forest (HDF/MDF/LDF/YRF) and non-forest (Scrub). Scrub and YRF are the key target strata for inventory because YRF is the forest class most at risk of conversion because of the challenges with correct identification.

The assessor must include the inventory sampling plan in the report, including a step by step calculation of the target number of plots. Separate sampling estimates should be prepared for each stratum. Combining the LDF/MDF/HDF strata into a single forest stratum is acceptable if reasonable justification is provided.

A fewer number of plots is only acceptable in small areas (less than 100 ha of potential HCS forest), or in forest classes higher than YRF. At a minimum, there must be statistical difference shown between the YRF and Scrub strata. Evidence and justification should show that YRF forest and above (denser forest classes) have been correctly identified for conservation, even if the plot data does not provide statistically significant distinctions between those forest classes

The key pass / fail factor is proving significant difference under the Scheffé<sup>1</sup> test between forest land cover classes identified (YRF/LDF/MDF/HDF) and any non-forest land cover classes identified (Scrub and bare-land). Insignificant difference under the Scheffé test between forest types e.g. YRF, LDF, MDF, HDF is not necessarily a failure, unless there is some other contributing factor such as poor stratification or sampling design.

We note that not reaching the targets is particularly common for the scrub stratum for several reasons including:

- The  $\pm 10\%$  of the mean C/ha confidence limit range is narrower for low stocked strata
- In some cases, the scrub stratum may be small in total area and consists of scattered small patches, making inventory planning difficult and plotting time consuming. The issue with the equation is that it does not factor in hectarage, which means sometimes it is impossible to reach the target number of plots if a strata's hectarage is very small.
- Land identified as scrub stratum in remote sensing work is frequently reallocated to farmland or YRF based on field work results.

If the minimum (according to the formula) number of plots was not reached, or if significant difference among forest classes was not proved, then justification must be provided. The key points are firstly that the assessor presents a clear and logical sampling plan. Secondly that if targets were not met then the assessor can give a clear explanation as to why. However, if no clear sampling plan is provided, targets were not reached, and justification is not clear, the assessor must provide this information as part of a resubmission.

Common causes of not reaching minimum sampling size include:

- One of the sampled strata has a limited area (e.g. less than 100 ha) and / or consists of scattered small patches.
- Changes in forest classification as a result of field work, leading to a change in the numbers of plots in each stratum.
- Inability to visit areas in the field because of difficulties in the weather, access conditions or community objections.
- The forest stratum having much greater levels of variation than expected or is usual. Very small plots can be challenging in highly heterogenous tropical forests, leading to high variation between plots. In these cases, a larger plot size (with fewer total plots) may be more appropriate. The HCS Toolkit's recommended forest inventory plot size in Module 4 is 500 m<sup>2</sup> (circular plot). The Indonesian government uses 100m x 100m (50m x 50m for swamp forests and mangroves) clusters (with multiple circular plots for each vegetation strata within the cluster) for a generic forest inventory (for planning purposes). Production forests (natural forest) still follow the 20m x 125 m plots for the periodical full inventory.
- A high level of forest fragmentation makes plotting time consuming.

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<sup>1</sup> See HCSA Toolkit Version 2, Module 4 Page 39

## 2.2 Location of forest inventory plots

### ***Can plots from outside of the Aoi be used?***

In general, forest inventory plots should be set up *inside* the development area and the AOI. However, plots from outside the AOI can be included in the analysis if clear and reasonable justification is provided as to why some plots cannot be located within the development area and AOI. For example, the use of plots outside of the AOI may be justified where:

- Permission is not granted to sample some areas
- Data are available from the same landscape or watershed, and the same forest type
- The areas to be sampled are physically difficult to access

There is no limit or cut-off as to the number of plots from outside the AOI that can be included in the analysis. However, at least some plots must be from inside the AOI. Further, in cases where the assessor uses forest inventory plots located outside the AOI, the report shall explain why data from outside of the AOI were used and how these plots are compatible/comparable with or similar to those inside the AOI. A summary of the inventory process used to generate carbon stock figures for plots outside of the AOI shall be provided (e.g. as an annex to the report), including the locations and maps of those plots taken outside the AOI. The assessor must explain how data from outside the AOI was used to produce a meaningful statistical analysis for the above-ground carbon estimation and HCS forest identification. There must still be enough samples taken to ensure statistically significant difference between Scrub and YRF classes. Where the inventory dataset includes data from outside the AOI described in the report, then a separate Scheffé test must be conducted for matching stratum in different AOIs. If there is no statistical difference between the matching stratum (from inside and outside the AOI), then the inventory data can be combined for reporting of carbon stock estimates.

## 3. Due diligence requirements

This section focuses on the responsibility of the assessor to provide evidence or information on four preconditions as part of a desk top due diligence exercise. These preconditions are part of the Preparation Stage (and therefore, in theory, companies must have demonstrated that they have met the preconditions before the Assessment Stage). The explanations provided here apply to all ongoing and future integrated HCS-HCV assessments until future guidance is issued or the HCSA Toolkit or HCV-HCSA Assessment Manual are updated.

The four preconditions are:

| Precondition   | Interpretation  |
|--|---|
| 1. Commitment to environmental and social safeguards   | This only required for the commissioning organization and their subsidiaries (if relevant to the assessment). It is not required for smallholders included in the assessment.   |
| 2. Moratorium on any land clearing or land preparation until the proposed Integrated Conservation and Land Use Plan (ICLUP) has been completed | In the case where an integrated assessment was conducted as a requirement of RSPO NPP, it is not enough for the company commitment to refer to a moratorium on land clearing until the approval of the NPP. Instead, the assessor must seek to find commitment by the company |

|   |  |
|---|--|
|   | <p>to respect a moratorium on land clearing that meets the principles embodied in the ICLUP concept, even if their land use plan is not called an ICLUP. These principles include protecting HCS forests, HCVs, peatlands, and the rights of local peoples to agree to the use of their lands via an FPIC process. Companies which are HCSA members meet this requirement because they must have a commitment to implement the HCS Approach across operations.</p> |
| <p>3. Demonstrated legal right over or permission to explore Area of Interest</p>   | <p>In practice, the company is likely to have demonstrated legal right or permission only over the assessment site/proposed development area, but not necessarily the entire AOI.</p> <p>The assessor must check and attach samples of legality documents, as well as explain how these documents meet this precondition (at the pre-assessment stage) – and note if anything is missing/not available and to be followed up.</p>                                  |
| <p>4. FPIC process has been initiated with full disclosure of the proposed project with all potentially affected communities and stakeholders, and the process for negotiation and consent going forward has been agreed, with representatives appointed through a fair process</p> | <p>The company should have initiated the FPIC process and must have secured FPIC for the integrated assessment to take place (or at least for a scoping study to take place). In practice, <i>all potentially affected communities and stakeholders</i> may not yet have been identified during the preparation stage. The role of the assessor is to document/explain what has been undertaken by the company during the preparation stage.</p>                   |

Section 2.2. of the integrated manual states that: “If any of the...preconditions have not been fulfilled (at least satisfactory preliminary information), the assessor must not proceed with the HCV-HCSA assessment.” However, in practice companies and assessors are not familiar enough with the HCS Toolkit (Social Requirements), and in some cases they have moved forward to complete assessments and submit reports to ALS without having met all the preparation stage requirements (e.g. social background study, land tenure study) and preconditions.

**Interpretation on preconditions:** In general, preconditions apply to the company commissioning the assessment. If, however, the assessor was unable to collect sufficient information on the preconditions *before* beginning the assessment, then the assessment report can still be submitted as long as the assessor provides information on the four preconditions in the final report. If it is found during an evaluation, that the report is missing information on one or more of the four preconditions, the assessor can provide the additional information during a resubmission. The report will not fail because the order (pre-assessment and then assessment) was not necessarily followed. However, upon publication of this Advice Note the ALS will inform assessors of the cut-off date for when this retrospective provision of information will no longer be acceptable. During the scoping study, the assessor must verify that all the four preconditions are met using triangulation approach (additional document review, sampled interviews, and direct observation). If it is found during the scoping study that any of the four preconditions has not been met, then the assessment must not proceed. The assessment could either be cancelled or paused until the company provides evidence of having met the four preconditions.

**As the manual states:** It is recommended that assessors use one contract for the scoping study and another contract for the full assessment. If this is not possible, then the contract must have a clause that will allow the assessor to exit the contract after the scoping study if results show that a full assessment is not appropriate (e.g. FPIC not properly initiated, consent not given for full assessment, etc.).

#### **Do the preconditions apply to scheme smallholders?**

The onus is on the company to provide evidence on the four preconditions, i.e. the four preconditions are applied to the commissioning/partnering company only during the due diligence phase. If scheme smallholders are present in the AOI, then the company should provide evidence and explanation of their agreements or commitments with smallholders. The assessor should verify a sample of these smallholder agreements/arrangements whilst in the field during the scoping study and/or full assessment and include those results in the report.

#### **4. Local people's lands for food security**

The responsibility of developers (companies) is to ensure that local livelihoods and food security are not adversely affected by their operations and instead are maintained or strengthened. Concerning applicability to scheme smallholders, see point below on modification of the 0.5ha figure through FPIC. The role of the assessor is to do the following:

- Present a discussion of the current livelihood activities and land utilisation of population directly affected by the production project.
- Provide geo-referenced participatory mapping data on current land use in the assessment site.
- Consider projected future changes in population and potential changes in livelihood choices and patterns. Document discussions with communities about future land-use and other resource needs.
- Calculate the minimum amount of land to be allocated for food security based on the requirement that 0.5 ha of farmland per person shall normally be allocated for food production. The assessor should state the number of hectares necessary to meet this requirement based on population size. The assessor must then provide a brief analysis of the feasibility of allocating the minimum amount of land for relevant populations. Discuss where a minimum land allocation may be (tentatively) allocated (e.g. in the AOI, adjacent with or overlapping with the AOI, and/or outside of the AOI). This should be linked to draft maps whenever possible.

A community can modify this figure (0.5 ha per person) through an FPIC process, however it is not expected that this will occur during the integrated assessment or that the assessor will validate such choices/agreements.

The following topics should be discussed with local people during this process, as applicable:

- Any regulations that have specified a certain allocation to local communities.
- The role, if any, played by farming in safeguarding food security, in settings where local communities no longer grow the bulk of their own food and are more reliant on outside food supplies.
- The most effective way to ensure current and future food security in settings where population densities of customary communities are such that the minimum allocations are not achievable.
- The role of the minimum land allocations for essential livelihoods based on activities other than farming, such as fishing, hunting or the collection of non-timber forest products, which may also be affected by the proposed development.

- The expected forms and scale of positive and negative economic impacts of the proposed development, including in terms of employment and other opportunities, as these may also affect the amount of land required for ensuring food security through farming.
- Potential negative impacts on water quality and availability
- Expected impacts of the commodity production operation on the local food economy and agricultural production, including the substitution of food crops with market produce, and any increased pressure on food sources as a result of inward migration.
- Recommendations for the company to take forward as part of the ICLUP.

**About this HCSA Advice Note:**

The purpose of this document is to respond to technical queries that arise from the implementation of the HCSA methodology and the evaluation of HCSA and HCV-HCSA assessment reports. Queries are gathered through HCSA or HCVN and centralised in a query tracker. Then, subject area experts propose a response. Next, the query and draft response are shared with the HCSA Technical Panel for input. Finally, the advice note is updated accordingly and published.

If you have a technical query, please contact the HCSA Quality Assurance team:  
[qa@highcarbonstock.org](mailto:qa@highcarbonstock.org)

If your query is related to an HCV-HCSA assessment currently under ALS evaluation, contact the ALS Quality Manager: [qualitymanager@hcvnetwork.org](mailto:qualitymanager@hcvnetwork.org)