Draft HCV-HCSA Assessment manual 2022

### Change History

|  |  |  |
| --- | --- | --- |
| **Version number** | **Effective date** | **Description of changes** |
| To be completed | To be completed | Link to the detail of changes |

### Associated Documentation

| **Document Reference** | **Document Type** | **Document Name & Reference** |
| --- | --- | --- |
| ALS\_02\_J | B | HCV-HCSA Assessment Report Template |
| ALS\_02\_K | B | HCV-HCSA Assessment Report Template with guidance |

### The update process.

This document was updated following the [“Procedure for development and update of ALS controlled documents”](https://www.hcvnetwork.org/library/development-and-update-of-als-controlled-documents-procedure-2022).

A draft developed by the HCVN Secretariat staff was shared for consultation with the HCSA Steering Group? ALS licensed assessors, Quality Panel members, training providers, external partners, public, etc.). The final version has been approved by the HCSA EC? and the HCVN Management Committee.

Improvements that could not be incorporated in this version will be taken into consideration for the next update.

Transition time: 6 months for reporting under this version of the Manual. Specific dates to be added.

Enforcement: from date of publication. Specific dates to be added

Contents

[Change History 1](#_Toc127967394)

[Associated Documentation 1](#_Toc127967395)

[The update process. 1](#_Toc127967396)

[Contents 3](#_Toc127967397)

[List of acronyms 6](#_Toc127967398)

[Glossary 8](#_Toc127967399)

[Introduction 11](#_Toc127967400)

[Purpose and structure of the manual 11](#_Toc127967401)

[What is an HCV-HCSA assessment 11](#_Toc127967402)

[When an HCV-HCSA assessment should be conducted using this manual? 12](#_Toc127967403)

[Complementary documents 12](#_Toc127967404)

[Who can conduct an HCV-HCSA assessment? 14](#_Toc127967405)

[Engaging and contracting with a client 15](#_Toc127967406)

[Conflict of interest 15](#_Toc127967407)

[Exchanging information 16](#_Toc127967408)

[Signing a contract 18](#_Toc127967409)

[PART 1 - The HCV-HCSA Assessment Process 18](#_Toc127967410)

[Working with the Organisation 19](#_Toc127967411)

[Key principles and concepts in assessments 19](#_Toc127967412)

[Meeting minimum preconditions 19](#_Toc127967413)

[Free, Prior and Informed Consent 20](#_Toc127967414)

[Consideration of risk to HCVs 21](#_Toc127967415)

[Precautionary approach 21](#_Toc127967416)

[Proportionality and practicality of HCV management and monitoring recommendations 22](#_Toc127967417)

[Significance 22](#_Toc127967418)

[Criticality 23](#_Toc127967419)

[Independence from land planning decisions 23](#_Toc127967420)

[Wider landscape consideration 24](#_Toc127967421)

[1.2. Pre-assessment 25](#_Toc127967422)

[1.2.1. What must be done? 25](#_Toc127967423)

[1.2.2. What information is collected 30](#_Toc127967424)

[1.3. Scoping Study phase 33](#_Toc127967425)

[1.3.1. What must be done? 33](#_Toc127967426)

[1.3.1.1. Consultation with affected communities 34](#_Toc127967427)

[1.3.1.2. Consultation with stakeholders and Organisation’s staff 35](#_Toc127967428)

[1.3.1.3. Ground-truthing of the preliminary land cover map (to produce the final land cover map) 36](#_Toc127967429)

[1.3.1.4 Preparing for the full assessment. 37](#_Toc127967430)

[1.3.2. What information is collected/produced 40](#_Toc127967431)

[1.4. Full Assessment 40](#_Toc127967432)

[1.4.1 What assessor must do 40](#_Toc127967433)

[1.4.1.1 Field work 40](#_Toc127967434)

[1.4.2. What information is collected/produced 47](#_Toc127967435)

[1.4.3. Preliminary management and monitoring recommendations 48](#_Toc127967436)

[1.4.4. Final consultation of the preliminary findings 49](#_Toc127967437)

[1.4.5 Analysis and reporting 51](#_Toc127967438)

[PART 2: Reporting requirements 52](#_Toc127967439)

[Sworn declaration 52](#_Toc127967440)

[Reporting scope 53](#_Toc127967441)

[Transparency 53](#_Toc127967442)

[List of required supplementary materials 53](#_Toc127967443)

[Key Issues in reporting 54](#_Toc127967444)

[Description of the AOI 55](#_Toc127967445)

[Image analysis and land cover classification 55](#_Toc127967446)

[Identification of HCVs 59](#_Toc127967447)

[ HCV 1: Concentrations of biodiversity 59](#_Toc127967448)

[ HCV 2: Large landscapes 60](#_Toc127967449)

[ HCV 3: Rare ecosystems 60](#_Toc127967450)

[ HCV 4: Ecosystem services in critical situations 60](#_Toc127967451)

[ Peat 61](#_Toc127967452)

[HCS forest 61](#_Toc127967453)

[HCVs 5 and 6 and other community areas necessary for future livelihoods and food security 63](#_Toc127967454)

[Patch analysis decision tree 64](#_Toc127967455)

[Stakeholder consultation 69](#_Toc127967456)

[Management and monitoring recommendations 69](#_Toc127967457)

[Annex 1 - Sworn Declaration 70](#_Toc127967458)

### List of acronyms

AA Assessment area

AGB Above ground biomass

ALS HCV Assessor Licensing Scheme

AOI Area of Interest

CITES Convention on International Trade in Endangered Species of Wild Fauna and Flora

COI Conflict of Interest

DEM Digital Elevation Model

EIA Environmental Impact Assessment

FPIC Free Prior and Informed Consent

FSC Forest Stewardship Council

GIS Geographic Information System

HCS High Carbon Stock

HCSA High Carbon Stock Approach

HCV High Conservation Value

HCVN High Conservation Value Network

HPP High Priority Patch

IBA Important Bird and Biodiversity Areas

ICLUP Integrated Conservation and Land Use Plan

IUCN International Union for Conservation of Nature

KBA Key Biodiversity Area

LiDAR Light Detection and Ranging (a remote sensing method)

LPP Low Priority Patch

LT&U Land Tenure and Use (Study)

M&MR Management and monitoring recommendations

MPP Medium Priority Patch

MOU Memorandum of Understanding

MU Management Unit

NGO Non-governmental organisation

NTFP Non-timber forest products

SEIA Social and Environmental Impact Assessment

SIA Social Impact Assessment

UNESCO United Nations Educational, Scientific and Cultural Organization

### Glossary

**Affected communities:** indigenous and local communities and inhabitants with legal and customary ownership and/or usage rights over any of the land and resources that may be affected directly or indirectly by the planned development.

**Area of Interest (AOI):** the assessment area(s) + the wider landscape

**Assessment Area (AA):** Is the area within the Organisation’s management unit(s)- MUs that has been included in the assessment. Often these are identical, however, there are situations where the assessment area only covers partially the MU(s), for example when a portion of the MU(s) is excluded because consent to conduct the HCV-HCS assessment was not obtained by the Organisation from the relevant affected communities.

**Assessor:** An expert meeting the requirements for leading HCV-HCSA assessments; leads in engagement with the organisation, coordinates the assessment’s methodological design, participates in the full assessment, leads the analysis of results and participates in consultations. The assessor is responsible for submitting the report to HCVN for quality assurance and for the quality of the report.

**Assessment team:** Two or more experts with different roles and responsibilities throughout the assessment process, including context analysis, methodological design, data collection and analysis, engagement and consultation, and writing of some sections of the report.

**Community consultation**: a fair, representative and non-discriminatory two-way communication and information sharing process involving active participation and joint decision-making by the affected communities and all their subgroups, where the assessment team shares information about the assessment and assessment results in an adequate manner (language, clarity, location) to gather information for identification of values and needs and to request feedback and validate the results. Not just the passing of information from assessment team to community member(s).

**Community subgroups:** defined by their gender, age, ethnicity, origin, economic status and activities, organisations and power, these need to be engaged in assessments since their knowledge and basic needs may be different from the rest of the community.

**Preconditions verification:** Rapid verification that the Organisation commissioning the assessment has rights to the assessment area, is committed to environmental and social safeguards and to moratorium of land clearing/development until ICLUP (or equivalent) completed, and that if there are affected communities, these have given their FPIC to the assessment process.

**FPIC:** a process and way of doing business where affected communities are at the centre of land use assessment, planning decisions and conservation priority setting pertaining to their lands and resources. See Module 2 of the HCSA Toolkit for a list of FPIC resources.

**HCV area:** the area where a value is found (i.e. the habitat for an RTE species, a threatened ecosystem, the forest areas used for sustainable subsistence hunting, a sacred site).

**HCV Management area:** the area needed to protect the identified HCVs. It includes the HCV area, but also additional areas (including, often, already developed areas) where certain practices or procedures will be required to avoid impacting the HCVs. For example: plantation areas used as HCV1 species corridors; buffers surrounding RTE ecosystems (HCV3) and HCV4 related to water provision, or community access paths to continue visiting sacred sites (HCV6), etc.

**Management Unit(s):** a legally owned or delegated and geographically identifiable area delineated for silviculture or agricultural purposes, allocated to the organisation commissioning the assessment.

**Organisation commissioning the assessment (organisation):** the assessor’s client (the entity responsible for commissioning the HCV-HCSA assessment; this can be considered synonymous with operator, project developer, company, etc.)

**Participatory Mapping:** Participatory mapping is a tool for identifying and mapping indigenous and local community use, rights and ownership of land and natural resources. It is a method based on local knowledge and establishes local people as the key stakeholder group in mapping. In HCV-HCSA assessments participatory mapping is always required when there are affected communities with rights within the assessment area. In such cases, participatory mapping is used for the identification of HCVs (4, 5 and 6), other current community land use (including, where applicable, swidden areas) and to inform the discussion of future land and resource needs (i.e. identification of areas for future livelihood needs). Participatory mapping must be GIS-based so that the maps can be overlaid with other assessment results.

**Precautionary approach.** Applying explicit and effective measures when there is a threat of severe or irreversible damage to the environment or a threat to human welfare, to prevent the damage and reduce the risks. These measures are applied even when the scientific information is incomplete or inconclusive, and when the vulnerability and sensitivity of values are uncertain[[1]](#footnote-2).

**Precautionary approach in HCV identification[[2]](#footnote-3).** When there are reasonable indications that an HCV is present, the assessor must assume it is present, unless there is clear and credible evidence of its absence. The use of the precautionary approach is even more important in land conversion developments, which are likely to pose more severe threats to HCVs than developments with limited habitat disturbance/ degradation/loss and no displacement of local peoples’ resource use.

**Primary information**: resulting directly from the HCV-HCSA assessment activities, it forms the basis for HCV identification, HCS forest classification and identification of local peoples lands.

**Rights holders:** those with legal or customary rights to the land and/or resources found in the assessment area.

**Secondary information:** Social, environmental and geospatial data and resources that are credible (from recognised sources), robust (methodology available and sound), thematically relevant and recent and hence can be used to support the assessment design and analysis of findings. This includes information obtained from social and environmental experts in the country/region. Use of secondary information must follow the precautionary approach, particularly when there is insufficient or no primary data collected. Secondary information older than three years is required to be validated for relevance. When available, the newest sources must be used.

**Stakeholders:** Any individual or group with an interest, information or authority relevant to the assessment area and/or the wider landscape.

**Wider landscape:** area surrounding the assessment area that is relevant to the social and/or environmental aspects of the assessment.

# Introduction

## Purpose and structure of the manual

This manual is the official technical reference document for HCV-HCSA assessments[[3]](#footnote-4) and assessment reporting.

It details the steps involved in an HCV-HCSA assessment and the HCVN quality assurance requirements for HCV-HCSA assessment reports. This Manual is intended for users of the HCV and HCS approaches conducting HCV-HCSA assessments[[4]](#footnote-5) (in this Manual, referred to as assessors).

This document has 2 parts:

Part 1 is about conducting the assessment: what the assessor is expected to do and what data the assessor must collect and document at each step.

Part 2 is about reporting requirements: what contents the assessor must include in the report and what should be considered in the analysis of the information collected.

## What is an HCV-HCSA assessment

An HCV-HCSA assessment is a participatory process for identifying social and environmental values which need to be conserved in production landscapes. The process consists of gathering and analysing information collected through field surveys, satellite imagery interpretation, participatory mapping (when applicable), interviews (with relevant experts, the Organisation and other interested stakeholders), review of credible secondary data and other methods.

Whenever HCV-HCSA assessments are conducted in areas owned or used by affected indigenous and local communities, their free, prior and informed consent (FPIC) is required to conduct the assessment and they have the right to participate in the assessment activities including participatory mapping and the final consultation. In these cases, local people’s lands for current and future livelihoods are also identified.

Results from HCV-HCSA assessments conducted in high-risk scenarios are to be submitted to HCVN for desk-based quality assurance.

## When an HCV-HCSA assessment should be conducted using this manual?

This manual must be used to conduct assessments in scenarios with high probability of HCV presence and where existing conditions or planned developments pose a risk to HCVs, HCS forests and local peoples’ lands.

When used in the context of certification, the requirements of the specific certification scheme determine when to conduct this type of assessment.

This manual can be used in any commodity context. However, it is primarily targeted at contexts where there is one large Organisation with rights to develop the land and where the area consists of fragmented (< 80% forest cover) tropical forests. This Manual is intended for Management Unit(s) level assessment and may not be suitable for other contexts such as smallholder context without further adaptation (unless the proposed development will take place in a scenario of high risk to HCVs), nor to a high forest cover landscape context.

The HCV Network recommends this manual is used in combination with other tools as applicable, such as the landscape level screening tool, the Common Guidance for Management and Monitoring of HCVs, the Forest Integrity Assessment tool and the Nature Positive Farming guidance.

## Complementary documents

This manual is designed to be used in combination with other **required reference documents** (Box 1).

The assessment team is expected to read these documents in detail before embarking on the assessment. Visit the HCVN and the HCSA websites before starting an assessment for current versions of all documents.

|  |
| --- |
| **Box 1: Reference documents**   1. **Required for assessments.**   **Common Guidance for HCV Identification**: This document provides an explanation of the six HCV categories and gives examples of useful secondary data sources, methods and possible HCVs. This document also lists all the HCV attributes required to be assessed. The current version of the HCV definitions can be found on the HCVN website.  **Common Guidance for HCV Management and Monitoring**: This document provides guidance on field methods for HCV monitoring, threat identification and general management recommendations. It also provides guidance on principles of management and monitoring, and on how to plan and implement such activities. This document must be used when conducting the threat assessment and providing HCV management and monitoring recommendations.  **HCS Approach Toolkit**: The Toolkit is comprised of seven modules, including social requirements, forest stratification and patch analysis, with guidance and references provided on topics such as FPIC and participatory mapping. Note many of the Toolkit requirements are relevant to the organisations commissioning the assessment, not to the assessment team.  **HCSA Social Requirements Implementation Guidelines**: Section 2 Assessment stage (particularly steps 2.3 and 2.5) and the Annex 3 on Participatory Mapping (assessment stage) are directly relevant to the HCV-HCSA assessments. Note many of the other requirements are relevant to the organisations commissioning the assessment, not to the assessment team.  **HCSA Advice Notes**: Published on the [HCSA website](https://highcarbonstock.org/documents/), these provide clarifications or interpretations of requirements in the HCSA toolkit and HCV-HCSA assessment manual to respond to technical queries that arise from the implementation of the HCSA methodology and the evaluation of HCSA and HCV-HCSA assessment reports.   1. **Required for assessments and reporting (as long as consistent with above)**   **National Interpretations:** Documents developed by multi-stakeholder collectives to interpret the general HCV definitions and adapt them to a national or regional context, allowing everyone to use the same framework – a key to enable standardised and cost-effective practices.   1. **Required for reporting.**  * HCV-HCSA report template * HCV-HCSA report template with guidance * Checklist of required contents for HCV-HCSA assessment report.   **Note on alignment between Manual and References**  Updates to the manual may not be simultaneous to those in key HCVN and HCSA references (above), which may take longer to be updated.  Manual updates reflect learning about assessing and reporting and are approved by the HCSA Executive Committee and the HCVN Management Committee. When discrepancies/inconsistencies are found between the references above and this manual, **the assessment process and reporting must follow the requirements of the latest document.** |

## Who can conduct an HCV-HCSA assessment?

HCV-HCSA assessments require the engagement of experienced professionals from social and environmental sciences with a good understanding of the HCV and HCS approaches and ideally familiar with the region where the proposed assessment area is located, including practical knowledge of local languages, if applicable.

Currently the HCSA Executive Committee, HCVN and some certification schemes require specific qualifications for experts leading and/or participating in this type of assessment, but these may change overtime. **The latest requirements should always be verified on the websites of HCSA, HCVN and relevant certification schemes**.

The requirements (see [Reporting](#_PART_2:_Reporting) section) valid at the time this Manual was updated are:

* Assessment lead qualifications: must be an HCVN ALS licensed assessor (provisional or full licence).
* Assessment team qualifications: at least two members must be registered HCSA practitioners (including the lead assessor).
* Assessment team composition: at least one GIS and remote sensing expert, one social expert (including in relation to community facilitation and participatory mapping) and one environmental expert.
* Assessment team required profile[[5]](#footnote-6):
  + must be able to communicate appropriately (i.e., respectful of local cultures, using appropriate methods, using language interpreters) and effectively with a range of stakeholders.
  + must have a clear understanding of FPIC principles and how to use them during the assessment.
  + when the team includes interpreters, these must be recruited ensuring they are independent from the organization commissioning the assessment, are able to communicate appropriately (see above) and have received an introduction to FPIC so their work is aligned with its principles.

Assessment teams must meet these requirements; compliance is included in a sworn declaration completed when submitting a report for quality assurance (see [Reporting](#_PART_2:_Reporting) section).

## Engaging and contracting with a client

### Conflict of interest

Assessors must identify any potential conflict of interest (COI) that may affect the conduct of an assessment. As much as possible, assessors must refrain from conducting assessments where current and/or previous connections with the individuals and organisations involved may cause a potential COI.

Whenever a potential COI has been identified, the assessor must take adequate measures to remove or manage the COI, ensuring the integrity of the assessment before agreeing to conduct it. All potential COI and the measures taken to manage it must be disclosed (see [Reporting](#_PART_2:_Reporting) section).

Examples of COI include: the assessor producing studies that will be validated to be used as secondary data for the full assessment (LT&U study, SEIA, SIA, soil study, peat study).

### Exchanging information

At this stage, the assessor needs to evaluate the preparedness of the organisation and some preconditions must be verified (in red below). Before signing a contract for an HCV-HCSA assessment the assessor and potential client must exchange information, including but not limited to:

* Information about the potential client:
  + location and type of proposed development: *this helps the assessor understand the scale, intensity and risk (to HCVs and HCS forest), which must be considered when estimating the cost/level of effort needed in the scoping and potential assessment.*
  + reason why the assessment is being commissioned: *to validate the need for the assessment, the assessor must know who is requiring it, and with what specific clauses (for example cut-off dates for different types of assessments)*
  + Precondition: rights/permission to assess the land proposed for development: *key information to decide if an assessment can be conducted or not.*
  + existing deadlines expected to be met (such as deadlines of certification schemes, commitments with buyers, pre-existing agreements with affected communities, etc.): *to decide if there is enough time to conduct the assessment and submit its results to HCVN assurance without causing conflict for unmet expectations.*
  + Precondition: any potential impediments to initiate an assessment such as: land conflict, indications of recent or ongoing deforestation, incomplete preparatory stage and related processes (FPIC initiation) or pending studies (Social Background, Land Tenure and Use Study). *If any of these issues emerge, the assessor shall not engage in the assessment.*
* Information about HCV-HCSA assessments including:
  + The client’s responsibility for the preparatory stage (before the commencement of the full assessment). *So the client is aware of steps to be completed before the assessment can begin.*
  + The process and activities involved in an HCV-HCSA assessment. *So the client understands the assessment plan and the needs for coordination and logistic support.*
  + Key principles for assessing and reporting: FPIC, precautionary approach, independence from land use planning decisions, etc (refer to section below for the complete list). *So the client understands how the assessor will collect and analyse the data and accepts the findings and recommendations.*
  + The client’s responsibility for implementing HCV and HCS forest management and monitoring activities based on the assessment results. *So the client is ready and committed to ensure the protection of HCVs and HCS forests.*
* Information about HCVN quality assurance,
  + Evaluation fees and penalties: *So the client knows the likely final cost of conducting the assessment and understands that causing delays/resubmissions will increase the costs.*
  + Evaluation timeline: *So the client is aware of deadlines and plans any processes depending on the publication of the assessment report accordingly. This may include informing other relevant parties (i.e. local communities /cooperatives/ smallholders/ outgrowers / certification scheme / buyers, etc).*
  + Invoicing and payments for evaluation fees: is done by the licensed assessor (not by the client). *To avoid companies requesting to pay directly for quality assurance services.*
  + Client’s contact person for quality assurance. *So HCVN can inform the client of progress in the evaluation on a timely manner.*
  + Use of the HCVN website to monitor the status of report evaluations. *So the client can monitor progress in quality assurance process directly.*
* Information about claims
  + Claims by the client can only refer to reports listed on the website and to their public status (ongoing evaluation, satisfactory, unsatisfactory, cancelled or withdrawn). *So the client does not make any claims that may be challenged by the public or contested by HCVN.*

### Signing a contract

Assessors and their potential clients are advised to:

* Use one contract for the preparatory phase and scoping study and another contract for the full assessment and quality assurance. If this is not possible, then the contract should have a clause allowing 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, ongoing land clearance, etc.).
* Include a clause about disagreements related to the assessment outcome, allowing for a) withdrawing the report from evaluation without penalty to the assessor, or b) paying in full for reports published as satisfactory (even if the client disagrees with the outcome).

# PART 1 - The HCV-HCSA Assessment Process

The context for each HCV-HCSA assessment is different and it will determine the order of activities, types of studies needed and number of field visits.

It is mandatory to follow the order of the three main phases of the assessment (pre-assessment, scoping study, full assessment), however within those phases, the order and timing of different activities is left to the discretion of the assessment team.

Ideally, social field work and participatory mapping should be completed prior to the environmental field work and data collection for a variety of important and logical reasons:

* Ensuring affected communities (if applicable) have had the opportunity to gain an understanding of the assessment (purpose and activities, for both social and environmental aspects)
* Engaging affected communities’ representatives in planning and ideally accompanying the biological and biomass data collection teams during the field work.
* Avoiding environmental surveys in sites with prohibited-entry due to cultural or religious reasons.
* Designing surveys to support collection of additional social information (mapping of more distant sites that are critical for basic needs, cultural reasons or future livelihoods, such as hunting and gathering areas, swidden areas).
* Identifying additional needs such as local guide(s) who can help the assessment team to navigate through the difficult terrain and provide valuable information in making logistic arrangements.

### Working with the Organisation

It is common for the Organisation staff to support the assessment team with planning and logistics during the full assessment, and it is recommended for the assessor to discuss any practical arrangements such as access to the sites, health and safety rules, logistics, both before and while on-site with the Organisation staff.

Nevertheless, the assessment team must ensure the Organisation’s support does not interfere with data collection and with the robustness of consultation processes. This should be done by systematically requesting the affected communities’ consent before including company staff in any of the assessment activities.

Regardless of the context, all assessments must follow a set of basic principles.

## Key principles and concepts in assessments[[6]](#footnote-7)

### Meeting minimum preconditions

Assessors are expected to avoid conducting assessments in risky contexts (no legal rights, no social/environmental safeguards, deforestation and lack of FPIC, where applicable). Whenever there is indication of such risks, the assessment must stop.

HCV-HCSA assessments may be implemented in different contexts. If within certification, checking of preconditions is focused on:

* Legality: The assessor checks and documents if the organisation can show documented legal rights to assessment area
* Land clearing: The assessor checks and documents if the organisation can show a statement declaring a moratorium of land clearing/development until ICLUP (or equivalent) is completed.
* Free, Prior and Informed Consent (FPIC): if there are affected communities, there is evidence that the Organisation has initiated the FPIC process, and there is consent to the assessment, with mechanisms of representation and participation agreed.

If outside certification, in addition to the above points, the assessor must also check and document if the organisation has a commitment to social and environmental safeguards.

### Free, Prior and Informed Consent

Whenever HCV-HCSA assessments are conducted in areas owned or used by indigenous and local communities (affected communities), their FPIC is required to conduct the assessment and they have the right to participate in the assessment activities including participatory mapping and the final consultation. In these cases, local people’s lands for future livelihoods are also identified.

The following practices are required to comply with the FPIC principles:

* Proceed with assessment activities (e.g., participatory mapping, forest inventory) only once there is documented evidence that consent has been granted by the affected communities to conduct the assessment.
* Whenever an affected community withholds consent to proceed with the assessment, the land owned and/or used by the community must be excluded from the assessment.
* Affected communities with ongoing boundary conflicts must not be included in the assessment unless all parties involved in the conflict agree to proceed.
* Engage with all the affected communities and their appointed representatives (and advisors, if applicable) following the agreed consultation and coordination mechanisms.
* Gain informed consent from the affected communities before entering their farms or (communal) forested lands to conduct any fieldwork. Engage the designated representatives of the affected communities to accompany field teams wherever possible. This applies to field/community visits during all steps of the assessment.
* In preparation for, and during participatory mapping, consultations and discussions with the affected communities, provide information in a timely, clear and easy-to-understand manner.
* Present for consultation the preliminary HCV-HCSA areas and HCV management areas, and their proposed management and monitoring recommendations.

### Consideration of risk to HCVs

The assessment level of effort (scope and time dedicated to field work, consultations) in identifying distribution, sensitivity and vulnerability of HCVs, must be proportionate to the level of risk:

* planned developments with large scale (spatial or temporal) and/or intensity (severity of the impact) may pose a greater risk to HCVs.
* some HCVs are intrinsically more vulnerable (i.e. RTE species with already diminished populations, ecosystems already significantly reduced in scope, cultural and economic activities of minorities facing displacement, resources critical for basic needs that are already diminishing) and hence their risk is high.

### Precautionary approach

The precautionary approach consists of actively avoiding irreversible damage to the environment or to human welfare. HCV-HCSA assessments are used to inform land use planning and development, hence a set of practices emerging from the precautionary approach must be applied in their conduct:

* Assessments must be designed to confirm presence or absence of - at least - a sub-set of common and identifiable HCV attributes.[[7]](#footnote-8) This is even more important in land conversion developments, which are likely to pose more severe threats to HCVs than developments with limited habitat disturbance/ degradation/loss and no displacement of local peoples’ resource use.
* When there are reasonable indications (from field work or credible secondary sources) that an HCV is present, the assessor must assume it is present, unless there is clear and credible evidence of its absence. For example, a Key Biodiversity Area or a national protected area will qualify as HCV 1 if there is no further information as to the quality of its flora and fauna.
* Limitations of assessments must be acknowledged with all parties, so shortcomings are addressed later by the organisation commissioning the assessment. Some potential HCVs may only be identified at certain times of the year because of the seasonality of their presence (migratory species) or because of the unpredictable presence of the affected communities supplying their basic needs with resources in the area assessed (such as nomadic hunter-gatherers or pastoralists). Other potential HCVs may be insufficiently known (pollinators) or too costly to be surveyed in detail (insects, fungi, aquatic micro- organisms). Final consultations must disclose limitations and gather feedback insights for follow up measures.

### Proportionality and practicality of HCV management and monitoring recommendations

Assessments must result in HCV management and monitoring recommendations (M&MR) for the Organisation, aimed at ensuring the identified values are protected an enhanced. These must reflect the vulnerability of the values and be proportionate to the level of risk posed by the proposed development and to other existing threats. And as much as possible, must consider feasibility and cost-effectiveness of implementation.

### Significance

Significance is a criterion to designate an HCV. Significant values are those recognized as being either unique, or outstanding relative to other examples in the same region, because of their size, number, frequency, quality, density or socio-economic importance, on the basis of existing priority frameworks, data or maps, or through field studies and consultations undertaken during the HCV assessment.

HCV 1, 2, and 3 need to be significant at a national or regional scale (or higher), while HCV 4, 5, and 6 are significant to the affected communities (or to a sub-group within each affected community) that rely on them – so they are not relative to any scale but absolute in their irreplaceability to that community or sub-group.

For HCV1, 2 and 3 identification, significance is declared on the basis of any one of the following processes:

* A designation, classification or recognized conservation status, assigned by an international agency, (e.g. IUCN Red List, UNESCO World Heritage Site, Key Biodiversity Area(KBA))
* A designation by national or regional authorities (e.g. nationally-recognised protected areas and national lists of protected species), or by reputable non-governmental organisations (NGOs)
* Designations of specific values through field studies or expert consultation
* A designation (e.g. by a forestry or agriculture organization), on the basis of available information and consultations about known, suspected or reported values, even when not officially recognized by other agencies.

### Criticality

Following FSC[[8]](#footnote-9), *“the concept of criticality […] relates to irreplaceability and to cases where loss or major damage to this HCV would cause serious prejudice or suffering to affected stakeholders. An ecosystem service is considered to be critical (HCV 4) where a disruption of that service is likely to cause, or poses a threat of, severe negative impacts on the welfare, health or survival of local communities, on the environment, on HCVs, or on the functioning of significant infrastructure (roads, dams, buildings etc.). The notion of criticality here refers to the importance and risk for natural resources and environmental and socio-economic values.”*

### Independence from land planning decisions

HCV-HCSA assessments gather information to inform land use planning decisions, but are not in their own a decision-making tool, so assessors must be careful to conduct the assessment independently of any governmental, private or local land development plan or ambition.

The assessment results (findings on HCVs, HCS forest, peat and local peoples lands) as well as the management recommendations will be informed by consultation but must be consistent with the data collected and credible secondary sources.

Results from assessments do not impose on nor affect the capacity of organisations/land-owners/users to decide freely what activities conduct in their lands.

Land development decisions resulting on the destruction of HCVs identified through an assessment with a report published on the HCVN website cannot be claimed to follow the HCV approach.

### Wider landscape consideration

Most HCVs (wide-ranging species, RTE ecosystems, terrestrial and aquatic wildlife corridors, watersheds, designated conservation areas, areas providing ecosystem services critical to satisfy basic needs of local communities, etc) occur across broad landscapes encompassing multiple land holdings and the associated users and right-holders.

Because of this, maintenance and enhancement of many HCVs is unfeasible at the assessment area level alone, and connectivity to/among HCV protection areas is crucial for their long-term persistence.

Hence, considering the wider landscape context – both in its social and environmental dimensions - is crucial to protect HCVs inside and around the assessment area, because:

* HCVs potentially present in the wider landscape will need to be protected from any direct or indirect impacts from the proposed development, through adequate management and monitoring measures (including the delineation of buffers within the AA to protect adjacent HCVs, such as community lands or protected areas).
* It allows for identification of potential allies to protect HCVs at a more meaningful scale, particularly through the implementation of measures to reduce threats that increase the risk of habitat fragmentation or impact directly some HCVs.

## 1.2. Pre-assessment

The pre-assessment is a desk-based step consisting of **gathering information**, **beginning the analysis of secondary data and planning the scoping.**

The objective of this stage is to:

1. confirm the minimum conditions to conduct a scoping study are met (Preconditions)
2. propose a preliminary definition of the area of interest.
3. produce the preliminary land cover classification.
4. produce a scoping plan detailing sites, activities, human and logistical resources needed and dates.

### 1.2.1. What must be done?

#### Conduct Preconditions check and verify compliance with other HCSA requirements (studies and processes)

The assessor should have started checking the pre-conditions before signing the contract so at this point additional information may be requested to the Organisation only if considered necessary (see next subsection for detail of key information).

The pre-conditions to document are that the Organisation:

* has rights to the AA
* is committed to environmental and social safeguards (applicable if the assessment is conducted outside certification),
* has made a commitment to moratorium of land clearing/development until ICLUP (or equivalent) is completed,
* **if there are affected communities**, the Organisation has initiated the process to gain their FPIC to the assessment process and mechanisms for engagement and representation area (being) agreed.

**NOTE:** if the process is only initiated, checking pre-conditions related to FPIC must be included as an activity in the next stages of the assessment (scoping and full assessment) and the documentary evidence must be collected.

The other key HCSA requirements to verify are that the Organisation

* Has completed the Social Background Study and the Land Tenure and Use Study (LT&US) no more than three years before the start of the assessment. The LT&US must include results of preliminary participatory mapping, which must be validated during the scoping and full assessment. The land tenure assessment needs to clarify which institutions have authority over lands, and who controls how lands are acquired, inherited and transferred.
* Has a list of potentially affected communities

#### Propose a preliminary definition of the area of interest.

The assessment team shall collect enough information to propose a preliminary definition of the AOI for the assessment, because this information is needed for the preliminary landcover classification and for planning the scoping.

This AOI includes the Assessment Area (AA) and the wider landscape adjacent to the AA.

The AA is the area within the Organisation’s management unit(s) – MU(s) that has been included in the assessment. Often AA and management units(s) are identical. However, there are situations[[9]](#footnote-10) where the AA only covers partially the MU(s), for example when a portion of the MU(s) is excluded because consent to conduct the HCV-HCS assessment was not obtained by the Organisation from the relevant affected communities. Areas within the MU but excluded from the assessment area due to extraordinary circumstances must be considered part of the Wider Landscape (of the assessment area) and must be marked as “not-assessed” at all relevant steps of the assessment (see Final Consultation).

The boundaries of the AOI shall be defined by any of the following criteria, but regardless of the option chosen, in all cases must include a 1km buffer around the AA boundaries (to meet requirements for the Patch Analysis), and must include all affected communities (the entire village area, not only the centre point):

* Natural boundaries

1. aligning with identified areas and boundaries of watershed(s); or
2. aligning with the geographical land unit containing a cluster of interacting ecosystems; or

* Arbitrarily defined boundaries

1. selecting a unit size that encompasses the AA and a surrounding buffer; or
2. using a radius of 5 km from the centre-point coordinates of the assessment area, or
3. using existing administrative boundaries.

A combination of natural and arbitrarily defined boundaries is allowed.

**NOTES:**

* The definition of the AA and the AOI may be refined after scoping, and even during full the assessment, for example if an affected community decides to withdraw their consent to participate in the assessment.
* If the resulting AOI includes non - affected communities this must be disclosed during the assessment (consultations) and in reporting (see [Reporting](#_PART_2:_Reporting) section).

#### Produce the preliminary land cover map (LCC)

The GIS/remote sensing specialist must produce the preliminary land cover and prepare an initial vegetation classification based on the selected satellite images to be used in the vegetation classification process remote sensing analysis, following the requirements of HCSA Toolkit 4 page 15. Resulting from this initial vegetation classification, a preliminary draft land cover map is produced. The steps to do this are:

**Step 1. Image Acquisition.** First **acquire images** of the AOI using appropriate sensors and platforms, and meeting the following image requirements:

* No older than 12 months since the commencement of HCV-HCSA assessment process.
* Have a minimum 10-meter resolution.
* Have less than 5% of cloud cover within the AOI

**Step 2. Pre-processing.** These images are **pre-processed** to prepare them for further analysis. The goals of pre-processing are correcting any errors or distortions in the images, enhancing features of interest, and making the image more suitable for the intended analysis.

The pre-processing process typically includes several steps:

* Radiometric correction: correcting errors in the image caused by differences in sensor calibration, atmospheric conditions, and other factors.
* Atmospheric correction: correcting the effects of the atmosphere on the image, such as haze, smoke, and atmospheric scattering.
* Geometric correction: correcting geometric distortions in the image caused by the sensor, platform, and terrain.
* Image enhancement: by adjusting the contrast, brightness, and other image properties to make features of interest more visible.
* Sub-setting: cropping the image to the AOI.

**Step 3. Object-based Land Cover Classification**

Object-based land cover classification is a method of image analysis used to classify remote sensing images into different land cover classes. Unlike traditional pixel-based classification methods, object-based classification segments the image into multiple segments or "objects" based on image features such as texture, shape, and size. Each object is then classified based on a set of predefined rules and decision trees using a variety of image-derived attributes and ancillary data.

**Step 4. Accuracy assessment of the preliminary land cover classification**

Once the preliminary land cover classification is completed, the remote sensing specialist must design the accuracy assessment process. The accuracy assessment will cross-check the processed image against samples using a variety of methods, such as visual interpretation, comparing with data of land cover class(es) that have been ground-truthed in a same or similar land cover class (including areas outside the assessment area and/or AOI), through comparison with other processed image(s) obtained from other satellite(s) with high resolution (i.e., planet/nicfi). It is required that the preliminary land cover classification reaches an accuracy of at least 70%.

If the accuracy assessment shows under 70% of overall accuracy, the remote sensing specialist may need to increase the sampling size (number of points) and re-conduct the classification.

Based on the results, the remote sensing specialist must generate the sample points for the accuracy field assessment (ground-truthing) to be conducted in the field visits during the scoping stage and the related maps.

#### Produce a scoping plan.

The assessment team reviews and synthesises the information collected about the Organisation, the assessment area and the wider landscape (see next section and also checklist in Annex X) and conducts a gap analysis to identify remaining data needs. This information is used to produce a Scoping Plan including:

1. The dates and duration of the scoping (multiple visits may be required sometimes).
2. The capacity needed in the field (profiles of team members, including independent interpreters, if needed). Field work is generally conducted at least by two team members, including one familiar with the land cover map and able to ground-truth it and one with a social profile if there are affected communities in the AA.
3. The logistical considerations (size and accessibility of the site) and the Organisation’s support with logistics.
4. The sites for field visits to ground-truth the preliminary land cover classification.
5. The stakeholders to engage for additional information, insights into the development, potential values, threats, etc.
6. The Organisation’s field staff that may help understand preparatory processes or provide information only available on-site.
7. A representative sample of affected communities (if applicable) to be visited, ideally including:

• some whose land/areas of customary use will be impacted by the project (i.e. communities leasing land to the Organisation).

• some already engaged in FPIC process (according to information provided by the Organisation).

• some close to/overlapping with planned land cover classification ground-truthing sites.

### 1.2.2. What information is collected

Some of the information must be obtained from different sources, by the assessors themselves. Other information shall be provided to the assessor by the Organisation.

#### About the Organisation

* The type of organisation commissioning the assessment: it may be a company (with or without multiple developments in the country/region), a company subsidiary, a cooperative, a smallholders’ group with a group manager, a smallholders group associated to a mill/company, a community, etc. - *This will indicate stakeholders to contact, sample for social field visits.* This information is provided by the organisation.
* The organisation’s rights to the assessment area: Land tenure/use status (initial information on who controls/owns/uses the land). What is the type of lease or ownership arrangement? –*This will indicate if the Organisation has legal rights and help understanding links between changes in landcover and client’s (or other’s) responsibilities; also will inform about stakeholders to contact in scoping (if the land is owned or used by others than the client).* This information is provided by the organisation.
* The reasons for the assessment: is the Organisation a (subsidiary of a) member of a certification scheme/HCSA EC/ HCVN? Does the organisation have policies requiring the conduct of the assessment? Has the organisation committed to moratorium until ICLUP (or equivalent) are completed? Has the Organisation been the object of complaints or campaigns? Is the assessment part of a remediation process? - *This may indicate whether the organisation has awareness and resources (previous studies) that can be used to plan the scoping; whether the organisation meets the required commitment to moratorium, or it may stress the need to confirm minimum conditions for the scoping are met (no ongoing conflict, no issues with FPIC*)*, and verify potential deadlines for completing the assessment and assurance process.* This information is provided by the organisation but information on complaints/campaigns may also be available online.
* Studies required by HCSA: Social Background Study and Land Tenure and Use Study – LT&U (including preliminary participatory mapping results, reflecting the current situation and no older than 3 years, reflecting the current situation) completed by the Organisation. If these studies are not completed the assessor must not proceed to the scoping. *This information will indicate whether there are affected communities and any other stakeholder in the wider landscape (such as non-affected communities and other land-owners or concessionaires). If affected communities are present, scoping plan must include activities to validate the LT&US preliminary participatory mapping with a sample of affected communities.* This information is provided by the organisation.
* Processes required by HCSA: The assessor must gather information about the initiation of the FPIC process with the affected communities done by the Organisation (if these exist), including the agreements for participation and representation in the assessment process. *This information will inform the scoping planning with regards to community visits. If there are affected communities and these have not been identified, or if they have not consented to the assessment, scoping must not proceed*. This information is provided by the organisation.

#### The assessment area

At pre-assessment, **data** **analysis begins**, to understand the characteristics of the area proposed for the assessment and plan for scoping.

The following information must be obtained from the Organisation, publicly available credible sources, and/or produced through analysis:

* Name, location, area (ha) and coordinates of the assessment area(s). *This helps establish the location of the AA, and together with context information (see next section) will inform the definition of the AOI (assessment area + wider landscape).*
* Proposed extent and type of development activities (if applicable).*This will help gain insight on the scale of proposed development and the related likely impacts, which can be discussed in more detail with stakeholders during the scoping.*
* Information on certification status or ambitions (if applicable): *If the area is already certified, it is likely there is information relevant to the scope of the assessment and there may even exist previous HCV and/or HCSA assessment reports. These are a good secondary source to contrast with the current landcover and plan scoping field visits.* The organisation can provide information about this. The certification schemes’ databases can also be used.
* Other relevant social or environmental studies related to the proposed development: in some countries, SIA, EIA or SEIA studies may be required: *If the organisation has conducted any of these studies recently, it is likely they would include useful information to plan the scoping and also to further explore during the assessment, for example, results of food security surveys.*
* Satellite imagery of the AOI (See section [Image acquisition](#_1.2.1._What_must))*To produce the preliminary landcover classification*  *(pre-processing followed by object -based classification; refer to HCSA Toolkit, Module 4).* *The preliminary landcover classification and in combination with secondary information (land cover/use maps from LT&U study) will give an idea about the condition of the AA(s) and the wider landscape (developed, degraded, comparatively intact, etc.) and help decide on areas needing site visits during the scoping.* The assessor must obtain and analyse this information.
* Information about the social aspects in the wider landscape (ethnicity, economy, cultural and organisational aspects) as well as reliance on ecosystem services for livelihoods and available public services (healthcare, water, electricity, transport, markets): *This will provide indication of potentially present HCVs 4, 5 and/or 6 and will help planning the scoping community visits (it is advisable to choose a diverse sample).*
* Information about environmental features: land system maps, soil studies and maps, species, habitats and ecosystems that may be present, as well as any areas of importance for conservation (local, regional, national or global); including a recent peat study conducted by the organisation (if applicable). *This will provide indication of potentially present HCVs 1, 2 and 3.*
* Information about other land users in the wider landscape: *This will help identify potential threats but also opportunities to protect/manage HCVs in collaboration with neighbours.*
* HCV National interpretation: *Where National Interpretations exist, the assessor must become familiar with them and with their specific methodological requirements for the identification of HCVs, because in some cases this may influence what secondary data is required to be used as reference and even what methods and sampling should be applied during the full assessment.*
* Are there existing or planned policies/other developments that may affect for HCVs and HCS forest in the region? Are there any spatial planning maps?  *This will provide indication of evolving threats to HCVs that may need to be managed by the development.*

## 1.3. Scoping Study phase

### 1.3.1. What must be done?

The scoping study is a mandatory, mostly field based activity, conducted prior to the full assessment that helps understanding the terrain and gaining detailed knowledge of the social and environmental context.

It consists of gathering and reviewing additional information, making observations in the field, conducting preliminary in-person consultation with some of the relevant stakeholders, including the affected communities (where applicable) and planning for the full assessment.

The objectives of this stage are:

1. If there are affected communities: verify evidence that minimum preconditions to conduct a full assessment are met. If not, the assessment must stop until the conditions are met.
2. Complete the information needed to prepare for the full assessment, through preliminary consultation with stakeholders and the Organisation’s field staff
3. Produce the final land cover classification.
4. Preparing for the full assessment

The scoping study field work is conducted at least by one member of the assessment team. This can be the lead assessor, or another member of team with the relevant experience and expertise to conduct the scoping field work (including ground-truthing of the preliminary land cover classification and engagement with affected communities, if applicable). Support from local experts (e.g., language skills, facilitation, familiarity with local terrain) may be required sometimes to ensure the scoping is effective.

The scoping study encompasses at least the following activities:

1. Consultation with affected communities (if applicable)
2. Consultation with local/regional stakeholders and interviews /discussions with the Organisation’s on-site staff/workers to gain insights on the local context and conditions and to request documents only available on-site.
3. Ground-truthing of the preliminary land cover map (to produce the final land cover classification later)
4. Planning for the full assessment.

### 1.3.1.1. Consultation with affected communities

Whenever the Organisation has identified potentially affected communities in the AOI, the assessment team must carry out the following activities with a sample of the affected communities:

1. Explain the HCV-HCSA assessment objectives and activities including field visits, consultation steps, and the final consultation (stressing the right to consent or not) and discuss forests and resources in an appropriate (non-technical) way, so the members of the affected communities have a strong conceptual understanding of the HCV and HCS approaches, the assessment activities, and the implications for future land and natural resource use, including their role in management and monitoring.
2. Verify the status of the FPIC process reported by the Organisation. This must be done by triangulating information from document review, interviews and direct observation to determine whether the affected communities:
   * have been informed by the Organisation about the proposed project (location, scale and objectives) and its development and conservation dimensions,
   * have given their FPIC to the HCV-HCSA assessment going ahead.
   * have freely nominated their own representatives.
   * have been made aware that they can say no to the assessment, development or to conservation plans.
3. Verify the status of the social studies (SBA, LT&US) reported by the Organisation. If the LT&U study has not been conducted, then the full assessment must not proceed. This includes:
   * Validating that the affected communities participated in the LT&U study.
   * Validating the preliminary participatory maps developed for the LT&US; note good quality preliminary participatory maps should provide inputs to inform the discussion on local peoples’ lands and social HCVs.

**NOTE: If the social studies have not been completed, and/or if there are affected communities and the FPIC process has not been initiated, the assessment must stop and cannot be resumed until these conditions are met and verified by the assessment team, by repeating activities b and c above.**

### 1.3.1.2. Consultation with stakeholders and Organisation’s staff

These initial consultations allow gathering primary information on the social and environmental situation in the AA and wider landscape and identifying concerns and recommendations regarding the assessment and the potential impacts of the proposed development on HCVs, HCS Forest, and local peoples.

Initial consultations during scoping must include:

* Local non-affected communities (if applicable)
* Other private sector actors with interests in the area (concessionaires, other developers)
* Social and environmental experts who may join the full assessment team or who have data or information and/or concerns to share.
* National and local government
* NGOs and civil society
* Organisation’s staff on the ground (including those that may have been involved in previous social studies) that may provide information available only in field offices, about logistics (accessibility), local contacts, local calendar (so assessment activities avoid conflicting with local priorities) and health and safety provisions.

### 1.3.1.3. Ground-truthing of the preliminary land cover map (to produce the final land cover map)

A field survey is conducted during the scoping study to ground-truth the preliminary land cover classification, visiting the sample points selected by the remote sensing expert.

Following the HCSA TK module 4 (page 19), when choosing the number of samples to be collected in the field for the subsequent accuracy assessment, a balance between what is statistically sound and what is practically attainable must be found. General guidelines suggest collecting a minimum of 50 samples for each land cover class (Congalton and Green 1999). For larger areas (more than about 400,000 ha) it is suggested that a minimum of 75 samples should be collected per land cover class (Congalton and Green 1999). When ground-truthing, assessor should log the coordinate points, and take photos of the points for all compass directions, and the canopy.

Drones survey may be used for the ground-truthing of the land cover especially where access is difficult; it is recommended to establish five or more ground control points (pre-ground-truthed fixed points) prior to the survey.

Field survey conducted during the scoping study must focus on the ground-truthing of the preliminary land cover classification, which will result into the final land cover classification ([see Section final landcover classification](#_1.4._Full_Assessment)).

**The Final Land cover map**

The creation of the final land cover map involves refining the preliminary classification through the incorporation of additional information based on the result of the ground-truthing during the scoping study and further processing. The assessor must conduct accuracy assessment for the final land cover classification, resulting into a minimum 80% of overall accuracy. The availability of the final land cover map prior to assessment field work is essential to a) develop an effective HCS Forest Inventory plan that distributes plots focusing on scrub and regeneration forest to accurately differentiate between potential HCS forest and non-HCS forest, and b) to design biodiversity surveys that effectively samples all vegetation types identified.

If a final land cover map is not achieved prior to assessment field work, appropriate sampling for HCS and biodiversity cannot be ensured, and the assessor cannot therefore justify that the forest inventory and biodiversity surveys were well-designed.

### 1.3.1.4 Preparing for the full assessment.

The scoping study results and previously collected information will inform whether the conditions to proceed to the full assessment are in place and will provide inputs for the design and planning of the full assessment.

Planning includes:

1. **Consideration of timing for the full assessment**: The full assessment must commence no later than 6 months after the end of the scoping study field work; scoping may need to be fully/partially repeated if more than 6 months have passed (since conditions/consent may change). The full assessment may be conducted right after the completion of the scoping study. In this case, the assessment team shall do the analysis of the scoping study result on-site and ensure that all the necessary preparations and requirements are met before moving forward into the full assessment.
2. **Defining and contracting the technical capacity needed**

The composition of the assessment team, including their qualifications is crucial to the success of the assessment. Presence of affected communities will require a social team with the skill set to facilitate the field work with them. Specific expertise (e.g. bat identification) or ability to use specialist equipment (e.g. camera traps) should be considered when assembling a team.

1. **Determining what fieldwork is needed and developing the methods.**

The lead assessor should coordinate the preparation of methods for collecting and analysing relevant data for HCV and HCS forest identification (and peat verification, if data collected indicates potential presence of peat soils) with team members developing the sampling and methods design for desk-based information gathering activities and for field work (including tools, stakeholders to include, etc) according to their expertise. The assessment team must choose methods and sampling strategies, considering the following:

* Site characteristics: the final land cover map will give clear indications of the areas needed to be surveyed during the full assessment.
* Secondary information and scoping results must inform the decisions on what surveys (different taxa) are needed for environmental studies, **considering all indicators of HCV 1, 2 and 3 presence**, and also to assess presence of HCV 4. There is no specific prescription for determining sampling size and sampling intensity. Yet, for areas where HCVs may be present (scrubs, thicket, mixed garden/rubber), the assessor should allocate the additional Level of Effort necessary to collect data needed to come to conclusive findings.
* Efficient use of time and other resources: Field studies should be organised to maximise time and resources. This is also appreciated by affected communities and other stakeholders who can avoid multiple, often repetitive, consultations and visits.
* More than one field visit during the full assessment may be required and beneficial, for example in areas where consent to the assessment was obtained at a later stage.
* Planning for participatory mapping must include all the affected communities overlapped with the assessment area, while affected communities outside the assessment area must be included in the consultation activities.
* Sampling within affected communities must consider all sub-groups, including minority, vulnerable and marginalised groups. Note this may require sometimes support from interpreters but also special logistical considerations (adapting to availability of sub-groups, or considering cultural practices/preferences). If a National Interpretation is used as reference for the assessment, it may include specific sampling size requirements that must be met.
* Respect for agreed consultation mechanisms: Affected communities are organised and will have designated the appropriate people to engage with the assessment team; these representatives may support with organising meetings and inviting relevant people to attend.
* Inclusion of other relevant stakeholders through specific methods (interviews, focus group discussions, etc), providing them in advance with information relating to the upcoming assessment, the assessment team’s responsibilities, and the timing.

1. **Preparing the materials/equipment required to conduct data collection, analysis and consultation during the field visits.**

This includes preparing all adequate materials to explain the assessment to stakeholders (and affected communities, if applicable) and to support field activities, such as:

* 1. copies of the early preliminary participatory mapping conducted during the LT&US
  2. printed versions of the final land cover map to use in field surveys, participatory mapping and other methods used to gather information; the boundaries of the affected communities documented in the LT&U study should be also overlaid in the maps to help with participatory mapping.
  3. visual aids to explain in simple terms what the assessment is, and to engage affected communities (if applicable) in data collection.

Some equipment may be needed in the field depending on how the assessment is organised/the characteristics of the area (projectors, soil/peat sampler set/equipment, camera traps, drones, etc)

1. **Organising the logistics:**

All necessary logistical preparations (and budgetary implications) must be considered, including consideration of:

* national/regional/local health and safety/security risks while traveling to and in the area and making all the necessary preparations to avoid and/or mitigate such risks
* days or times when it would not be advisable to organise meetings e.g. religious days or times when everyone is at work.
* Time needed to communicate the assessment calendar to the Organisation, relevant experts, stakeholders and affected communities (if applicable)

### 1.3.2. What information is collected/produced

1. Timeline, activities and map of the scoping activities
2. Detailed documentation of scoping consultations with the sampled affected communities, including meeting notes, photos, lists of participants and documentation of the triangulation verifying that affected communities have given their consent to the HCV-HCSA assessment (study plots, data gathering, mapping, additional meetings, etc) going ahead.
3. Validated preliminary participatory mapping results (from LT&U Study)
4. Detailed documentation of consultations and meetings with other stakeholders.
5. Documentation of the land cover ground-truthing activities with ground-truthing coordinate points, and photos of the points for all compass direction, and the canopy - If a drone is used, then documentation taken by the drone. In all cases, **the final land cover classification must be completed to proceed with the full assessment.**
6. All full assessment methods, materials and plan (including calendar and lists of sites and individuals to be contacted)

# 1.4. Full Assessment

### 1.4.1 What assessor must do

The full assessment is comprised of three main activities:

* + - 1. Fieldwork
      2. Consultation of the preliminary findings
      3. Analysis and report writing.

### 1.4.1.1 Field work

The assessment team travels to the field site to collect primary data. It is also common for the Organisation staff and interpreter / local facilitator to support the assessment team during the full assessment, but if there are affected communities in the assessment area, participation of the Organisation’s staff must be conditional to consent from the affected communities.

The studies will vary depending on existing data and site-specific circumstances. Typical primary data collection falls into two parts: social fieldwork and environmental fieldwork.

#### 1.4.1.1.1. Social Fieldwork

Social fieldwork is required to take place in assessment areas where the Organisation[[10]](#footnote-11) has identified the presence of “affected communities”: indigenous and local communities and inhabitants[[11]](#footnote-12) with legal and customary ownership and/or usage rights over any of the land and resources that may be affected by the planned development.

Required field assessment activities are different if the affected communities are likely to be directly or indirectly affected by the planned development:

* Communities that are likely to be directly affected are required to be included in participatory mapping and through other consultation methods, including the final consultation.
* Communities that are likely to be affected indirectly (generally those located outside the borders of the assessment area, that could be affected, for example, by changes to ecosystem services provision for downstream water users due to impacts on water quality and quantity) are required to be included in the assessment process consultation stage (for example to suggest monitoring measures to ensure they are not negatively impacted).

**This subsection focuses exclusively on activities to be conducted with affected communities as defined above, and with consideration of how they are affected (directly or indirectly).**

The purpose of the social field studies is to work together with the affected communities in a participatory and informed manner, to discuss and document:

* Livelihood strategies and tenure, with detail regarding sub-groups within each affected community (defined by gender, age, ethnicity, origin, economic status and activities, organisations and power)
* Important sites and natural resource use critical to satisfy basic needs – HCV 4 and 5 (e.g. water, fishing, hunting, gathering non-timber forest products (NTFPs)) of each and all sub-groups; this includes discussing and identifying with indirectly affected communities what ecosystem services (HCV 4) resources (HCV 5) critical to satisfy their basic needs may be impacted by the development.
* Important cultural/historical sites and resources (e.g. places for ceremonies, totem species – HCV 6) of each and all sub-groups
* How the proposed project may impact livelihoods and resources use and access, and what related management and monitoring measures should be agreed to minimize such impacts on all sub-groups, including:
  + the identification of land for current and future livelihoods (land and resource needs) to be set apart from development and strict conservation
  + the design of management areas where certain practices will contribute to reducing impacts on social HCVs and will allow for affected communities to continued access to the resources.

Important steps to consider throughout the social field studies include:

1. Verifying and gathering evidence (triangulation) that there is FPIC to conduct the assessment and adequately informing all affected communities about the scope and implications of the HCV-HCSA assessment, including all paned activities field activities and consultations. Affected communities that were involved in the scoping would already have been informed and granted FPIC to the assessment, but in most assessments that is a minority compared to the total number of affected communities, so this must be a first step to implement.
2. If during fieldwork, the assessment team finds evidence that potentially affected communities have not been identified, adequately informed about the project, or asked to provide their documented consent to the full assessment the assessor must halt all assessment activities in the area corresponding to the potentially affected community and the area corresponding to that community will become part of the wider landscape and will be explicitly identified in maps as “not-assessed”.
3. Respecting mechanisms agreed for consultation and engagement.
4. Always respecting the decisions of the affected communities; this may include the decision, at any point in time, to withdraw their consent to the conduct of the assessment.
5. Using all resources collected during the previous stages to support the social studies: this includes the land cover map, but most importantly, the digitised preliminary participatory mapping results and information on community boundaries (extracted from the LT&U study), which should be used as the starting point for refining /expanding the participatory mapping exercise.
6. If during the full assessment the affected communities share pre-existing participatory mapping results and community planning information, this information must be used to adapt the scope of the field studies (what information needs to be collected), to recognise the pre-existing community identification processes and avoid duplicating efforts.
7. **Conducting participatory mapping with all affected communities with legal or customary rights overlapped with the assessment area.** Initial maps are created with the communities’ representatives using printed images of an adequate scale for their area, which include the landcover layer and the community boundaries layer (from LT&U study). The mapping work done manually by the communities representatives will then be transferred to a GIS format by the assessment team are will be presented back to the entire affected community for comment and corrections, providing a picture or the original sketch map to be compared with the digitised map. Participatory mapping must be GIS-based so that the maps can be overlaid with other assessment results. Participatory mapping is recommended for all affected community lands and not just those areas that overlap directly with the assessment area, as this will provide a more comprehensive picture of resource ownership and use, and thereby a better understanding of the impact of the development on the entire community (i.e., how dependent communities are on the assessment area.
8. Assessing future land and resource needs for securing livelihoods: participatory mapping is the process that must be used to document with the community current land and resource use (including swidden areas) and based on it, to discuss the quality, extent and location of lands which need to be allocated for future livelihoods and to map these whenever possible[[12]](#footnote-13).

To inform this discussion, the assessment team must share and discuss clear and adequately presented summaries of relevant information previously collected from secondary sources[[13]](#footnote-14) (or from primary sources contacted during the scoping) including (but not limited to) the following:

* + - information on food security and other basic needs (current and future) and their link to availability of land/resources;
    - information on population growth and trends (including migration) and how it will affect demand for resources;
    - information on regional development plans and policies and how they may impact (positively or negatively) the affected communities,
    - information on likely positive and negative economic impacts of the planned development such as employment and other opportunities that may affect the amount of land required for food security and basic needs, or impacts on water quality and availability, or substitution of food crops with market produce, etc.

Other methods such as focus groups, seasonal calendars and ranking exercises – can be used, particularly to gain understanding of different needs per sub-group.

1. During and right after finishing the field studies (social and environmental) the assessment team reviews the biological, ecological and social data (primary and secondary) to carry out the preliminary identification of HCVs and HCS Forest so these results can be discussed with other relevant stakeholders (in interviews, focus group discussions, etc.).

#### 1.4.1.1.2 Environmental Field Work

The field studies are conducted to help:

* Identify HCS forest.
* Identify rare, threatened or endangered species and ecosystems (HCV 1 and 3).
* Evaluate whether Intact Forest Landscapes or other large landscapes are present (HCV 2).
* Identify different ecosystem types and ecosystem services.
* Verify peat land.

#### 1.4.1.1.2.a HCS Stratification and Carbon Assessment

There are 3 options to identify HCS Forest (option 1 being the most accurate and option 3 being the least accurate):

* Option 1: Using a full-coverage airborne LiDAR data set, calibrated through LiDAR AGB calibration plots.
* Option 2: If the acquisition of full-coverage LiDAR data is not feasible, using a combination of LiDAR AGB calibration plots and LiDAR transects samples. Requirements for using LiDAR AGB calibration plots (applies only if the Option 1 and 2 are chosen) are outlined in HCSA Toolkit Module 4 Section C. Technical requirements for the Airborne LiDAR data are outlined in HCSA Toolkit Module 4 page 11.
* Option 3: Using Forest Inventory Plots. HCS Forest Inventory Plot (applies only if Option 3 are chosen)

To note that all the 3 options require the final land cover map produced from the interpretation of the satellite imageries. More detailed guidance on using field plots to estimate carbon stock (covering all the 3 options) can be found in the HCSA Toolkit Module 4 Section C, and depending on the option chosen, the assessor should follow the corresponding section of the guidance.

#### 1.4.1.1.2.b Identification of HCVs 1-4

Field Survey shall be conducted in:

1. Areas where there are strong indications of HCV presence i.e., certain land cover classes I.e., various forest types, wetlands, waterbodies, etc. The main objective of surveying these areas is to confirm the presence of HCVs, and following the precautionary approach, such areas are assumed to contain HCVs.
2. Areas where HCVs may be present i.e., in land cover classes scrubs, thicket, mixed garden/rubber, etc. The main objective of surveying these areas is to gather evidence whether HCVs presence can be ruled out or not. Precautionary approach must be applied where the collected data is not conclusive.
3. Areas where HCVs may not be present, i.e., in the land cover classes, plantation, agriculture, open land. The main objective of surveying these areas is to confirm whether HCVs are indeed absent or not.

Rapid Biodiversity Assessment (RBA) can be used in both flora and fauna survey. An example of guidance on conducting RBA in Oil Palm Landscape can be found on [Handbook for conserving HCV species and habitats within oil palm landscapes (2018)](https://www.hcvnetwork.org/library/handbook-for-conserving-hcv-species-and-habitats-within-oil-palm-landscapes-2018)

#### Flora and vegetation survey (terrestrial)

Vegetation survey can be conducted in parallel with forest inventory plot and fauna survey – depending on the logistics. Vegetation inventory must be produced at the end of the survey activities.

Secondary data on species potentially present in the assessment area can be extracted from field guides, IUCN Red List, ESIA, and recent findings from scientific journals.

#### Fauna survey (terrestrial)

Depending on the characteristics of the assessment area and its wider landscape, it is likely that specific surveys will be conducted for different taxa (e.g., birds, non-flying mammals and bats, herpetofauna), and for some, surveys can be conducted in different seasons for data comparison.

Secondary data such as from field guides, IUCN Red List, ESIA, recent findings from scientific journals, could assist the identification and verification on HCV species within the assessment area.

It is recommended the assessment team consults the community groups with knowledge of the area and species likely to be present by using pictorial guides and the final land cover map. The local guide or community representatives can go with the assessment team to point out the location of the species and its habitat.

#### Aquatic survey (recommended)

Knowledge of HCV in aquatic ecosystem, in freshwater and marine systems, is much less developed. An aquatic ecological survey may be needed to perform fish and benthic macroinvertebrates survey, including habitat assessment in the aquatic ecosystem. RTE species data for some aquatic species can be extracted from IUCN Red List and national protected species data.

#### Peat verification (when applicable)

Based on credible secondary information collected in previous stages (either a peat study conducted by the Organisation or publicly available information on peat soils), the assessor will have determined whether peat verification is needed in the assessment area.

In such cases, the assessor should verify the results of the soil/peat study (if available), and/or peat data from best publicly available secondary data/information (if no soil/peat study is available).

Verification should be conducted in sample locations both on organic soil and mineral soil (identified in the soil/peat study, and/or indicated in the referred secondary data), i.e. using soil/peat sampler set/equipment.

Sample locations (GPS coordinates), photos of the soil profile taken should be documented (as this will serve as evidence for justification in the reporting).

### 1.4.2. What information is collected/produced

During and right after finishing the field studies (social and environmental) the assessment team reviews the biological, ecological and social data (primary and secondary) to carry out the preliminary identification of HCVs and HCS Forest so these results can be discussed with other relevant stakeholders (in interviews, focus group discussions, etc.).

#### 1.4.2.1 Social and environmental field studies results

* Location of affected communities and their resource use area (either formally titled or customary)
* Sites providing ecosystem services (HCV 4) of critical importance to the affected communities
* Sites and resources of critical importance to satisfy basic needs (HCV 5) including:
  + Water sources used for household purposes and fishing.
  + Hunting territories
  + Sites of important NTFP collection (for diverse purposes including food, construction, medicinal, etc)
  + Sites of importance to provide fodder/grazing area to livestock or fuel sources.
* Historic, cultural or sacred sites (e.g. graves, ruins of former communities or settlements, ceremonial sites, sacred groves, waterfalls) or resources important for cultural/ceremonial practices (HCV 6)
* Current (active) farm areas and swidden areas.
* Land needs for future food security/livelihoods/basic needs.
* Vegetation inventory
* Presence/absence of different faunal species
* Final maps identifying all areas described above as applicable. Maps may also identify community lands for future use and community lands that must be excluded from HCS forest classification and/or project development.

### 1.4.3. Preliminary management and monitoring recommendations

The assessment team must produce a set of management recommendations aimed at maintaining/enhancing the social and environmental values identified during the assessment, along with monitoring recommendations so the Organisation can develop the organisation's management and monitoring plan based on those recommendations.

Discussions with all stakeholders, affected communities (if applicable) and the Organisation’s staff are crucial to propose sensible management and monitoring recommendations, and these discussions may take place throughout the entire assessment, but it is required that some management and monitoring recommendations have been drafted before the final consultation.

The first and most critical management recommendation concerns the designation of the HCV Management area, that is, the area inside the management unit where standard operation procedures and best practices must be implemented in order to protect/actively maintain the HCVs identified, and the areas where these were found (HCV areas). Management areas may often be larger than the HCV area where a value occurs. For example, the management area for an endangered species could include nesting and feeding areas and a buffer around them to protect them.

To provide sound management recommendations, the assessor must:

* understand the conditions necessary to maintain social and environmental values over time.
* provide recommendations specific to the values identified in the AOI, although the assessor is not expected to present detailed management objectives and targets as would be elaborated in a full HCV management plan.
* consider the risk and threats to the values (current and likely to be caused by the planned development)
* link the management recommendation to maps showing the location of values and delineated management areas,

Monitoring recommendations follow on from the overall management goals. If the aim of management is to maintain values over time, then the goal of monitoring is to track and measure whether the management goals are being met, but also whether planned management activities are being implemented, and with what results.

### 1.4.4. Final consultation of the preliminary findings

Though consultation, in some form, has taken place throughout the assessment (e.g. consultation during participatory mapping, consultation with experts to discuss results of field studies), the final stakeholder consultation is an opportunity to discuss the overall assessment results and management recommendations and to seek consensus on the values that have been identified and on the locations of the conservation areas.

To prepare for the final consultation the assessment team must:

* document the explanations and justification (backed by evidence from the field studies) on why each HCV (1-6) is present, potentially present or absent,
* prepare draft maps of HCV areas (where the values are found),
* prepare draft maps with the proposed HCV management areas (areas needed to protect or enhance the identified values) and related management recommendations. This includes providing information on potential impacts of the planned development on HCVs and HCS forest, identifying possible approaches for avoiding, mitigating or compensating for negative impacts of operations and gathering different perspectives and recommendations on threats and management options.

These draft assessment results must be shared with stakeholders in consultations events that may be organised in varying formats including village meetings, large presentations to government and NGOs, individual meetings with experts or NGO leaders, etc.

Formats/processes used to consult with affected communities and relevant stakeholders must be adequate to obtain their free and informed views and recommendations.

To ensure that consultations are productive and that stakeholders are well informed, at a minimum, the assessment team must prepare the following for consultation sessions:

* Overview of proposed development project
* Key steps of assessment process
* Main findings
* Description and justification of HCVs and HCS forest identified.
* Maps of areas identified as community lands (current and future, if available)
* Maps of conservation areas (e.g. HCV, HCS forest, peatland)
* Identified threats to social and environmental values.
* Management and monitoring recommendations
* Limitations, concerns or issues (with assessment process, findings, MU areas excised from the assessment area and why, etc.)
* Any overlapping conservation areas (for social and/or environmental conservation objectives) and how to harmonize their management. For example, implications for community use or access if HCV 4, 5 or 6 areas are designated for HCV 1-3 conservation.

Assessors are responsible for documenting and addressing (where relevant and possible) stakeholder concerns.

### 1.4.5 Analysis and reporting

Analysis of the information collected or produced during the HCV-HCSA assessment and reporting must follow the key principles described above: meeting minimum preconditions, FPIC, consideration of risk to HCVs, precautionary approach, wider landscape consideration, proportionality and practicality of HCV management and monitoring recommendations, significance, criticality, and independence from land planning decisions.

Analysis of the data collected and secondary data sources will be qualitative and quantitative.

#### Qualitative Analysis

The collection and interpretation of data translates them into evidence that supports the identification and designation of HCVs.

The data collected must be analysed and a proper description should be provided.

Assessor must reach conclusions drawing on existing information (including large-scale maps of HCVs and HCS forest) and data collected, such as hydrological functions for HCV4, distribution ranges of RTE species for HCV 1, connectivity to forested landscapes for HCV 2, rarity assessment for HCV 3.

#### Quantitative Analysis

Quantitative analysis may be made and provided in addition to the qualitative analysis. For the analysis of the collected biodiversity data, Assessor may consider following the recommendations as provided in HCSA Toolkit Module 4 Appendix 2: Additional biodiversity analysis tools.

# PART 2: Reporting requirements

This section explains what information and evidence from the assessment is necessary for the report and how it must be presented.

HCVN receives any HCV-HCSA assessment reports provided they meet the requirements at the time it was conducted.

For older reports (submitted more than 2 years after final consultation) it is required to include a recommendation to validate outcomes and recommendations with affected communities (if any) before implementation.

Revisions to published reports are not allowed as reports reflect the conditions at the time of assessment.

## Sworn declaration

HCVN will only evaluate reports where the lead assessor provides a sworn declaration that during the assessment conflict of interest (COI) was avoided or managed, preconditions were verified, and the team composition followed requirements at the time of the assessment.

This declaration is made when uploading the report and will be shared with the public through the HCVN website. The declaration form content at the time of publication of this manual can be found in Annex 1, but in any case, and also in the event of updates, the assessor must complete the online form.

HCVN will document feedback from the public on the conduct of assessments, and when evidence is provided, false declarations will be documented and disclosed along with other report documentation (for example, a published report). False declarations lead to cancellation of the ALS licence.

The topics covered in the sworn declaration are:

1. **COI in conducting this assessment**, and how it was managed (if applicable)
2. **Team composition**: meeting the requirements at the time of the assessment.

Preconditions

1. Verification of **client’s rights/permission to assess the AA(s)** in their entirety. The report does not include any area where the client has no rights/permission.
2. Verification that **no land clearing** took place in the AA since the client became responsible for the area, including during the assessment. If land clearing occurred, this is documented in the report, which includes recommendation for the client to disclose the land clearing as applicable (i.e. to the relevant certification scheme, authority, buyers, etc)
3. Where there are affected communities, these have given **FPIC** and participated in the assessment. The report does not include any area owned/used by affected communities that did not consent/participate in the assessment. This applies also to affected communities with ongoing conflict, which must be excluded unless all parties in the conflict agree the assessment may proceed.

## 

## Reporting scope

You might be able to combine results from more than one assessment area in one report. See the Procedure for HCV and HCV-HCSA standard and multiple management unit assessments reporting.

## Transparency

Satisfactory report packages (the full report document and all its annexes and supplementary materials) are published on the HCVN website.

Assessors may include a statement in the report requesting some contents (in the report or some annexes/supplementary materials) are redacted (obscured/removed) before publication. Sections or annexes proposed to be redacted must be clearly indicated (highlighted), so HCVN can do the redactions.

Redactions will likely follow requests by the Organisation or some stakeholder(s) involved in the assessment process. The only contents allowed to be redacted are those that cannot be disclosed due to legal reasons, risk to the sources or risk to HCVs. Information already available in the public domain will not be redacted.

## List of required supplementary materials

These materials are submitted along with the assessment report:

• Input satellite imagery used for classification, lidar or aerial photographs (Minimum 300 dpi, with sufficient resolution to re-do analysis) for the AOI

- Shapefiles of the sample/survey locations for the environmental/biodiversity field work for the assessment area and/or AOI

- Shapefiles of the sample/survey locations for the social field work for the assessment area and/or AOI

• Shapefiles of HCV areas the assessment area and/or AOI

• Shapefiles of HCV management areas for the assessment area

• Shapefiles of community land use and land tenure for the assessment area

- Shapefiles of preliminary land cover classification with the training samples for the AOI

• Shapefile of final land cover classification with the ground-truthing points for the assessment area and/or AOI

• Complete forest inventory plot data: Raw and processed data for each plot and summary data at plot level.

• Complete species list with wood density assumptions (if relevant)

• Shapefiles of HCSA forest inventory plot locations

• Shapefiles for each step of the HCSA Decision Tree

• Shapefiles of HCS forest patches. Each patch must be numbered.

## Key Issues in reporting

Reports that do not comply with any of the requirements for Key Issue sections will be marked "unsatisfactory."

Reports can be revised twice to correct any outstanding major requirements for key issue sections (affecting designation or delineation of areas for HCVs, HCS Forest and peat) while additional unlimited revisions are allowed for minor requirements.

Below are listed all the Key Issue sections

### Description of the AOI

The assessor shall describe the assessment area (AA) and clearly state if the MU and the AA are the same.

In this section, the assessor must provide the following information:

1. Whether there are any (directly or indirectly) affected communities relevant to the assessment area and (if applicable) including the names of all affected communities and a map with their location (boundaries and centre point).
2. The option(s) used to define the AOI for the assessment. A brief justification on the decision to use a particular option and why other options are not relevant as a comparison would be sufficient. As an example of using (sub-)watershed, the assessor must explain why the (sub-)watershed option is the most viable to be used, compared to other options such as using a 3 km buffer or using a radius of 5 km. In this example, the assessor explains the watersheds surrounding the concession by showing a map of the watershed overlaid with the assessment area. If the assessor decides to use sub-watersheds, the assessor must explain which watershed that the sub-watersheds are part of.
3. Provide a map of the assessment area showing the defined AOI, overlaid with the final cover layer (following the final land cover classification section)
4. Provide a map of the assessment area showing the defined AOI and the satellite image over the area by the time of the assessment.
5. Provide a map of the assessment area showing the defined AOI and the satellite image over the area by the time when the company acquired the license/permit.
6. If the report is intended to meet certain certification or standard requirements, provide a map of the assessment area showing the defined AOI and the satellite image over the area by the time of the no-deforestation/damage to HCVs cut-off dates relevant to the certification scheme (only if applicable).

### Image analysis and land cover classification

**Preliminary land cover classification**

The report section must provide the description and explanation for all the following:

**Image Acquisition**

The section must provide description presenting that following image requirements are met:

* Images must be no older than 12 months since the commencement of HCV-HCSA assessment process.
* Have a minimum 10 meter of resolution.
* Have less than 5% of cloud cover within the AoI

If the assessor could not fulfil the requirements above, the assessor must provide justification on the alternative used to acquire an acceptable image.

Assessor must provide information about the image(s) acquired specifically on the dates of when images are acquired, sources, and image bands used, including details on the sensor and platform used. Depending on source of image; the assessor must state the tile of image including the exact date of the images are acquired.

If using Google Earth engine to produce a combination of images within the acceptable time span to produce a high-quality image with minimal land cover, in this case, the assessor must provide explanation on the process of acquiring the image by sharing the code used during the acquisition as an annex (linked to the report section)

**Image Pre-processing**

Assessor must provide description and/or explanation of pre-processing steps.

If there are images that have already been pre-processed, the source and how the assessor acquired those pre-processed images shall be explained in the report.

**Image processing**

**Object-based Land Cover Classification**

The assessor shall explain the object-based classification undertaken to produce the preliminary land cover classification. This includes:

* details on segmentation, classification algorithms (un-/supervised classification) and calibration (incorporation of ancillary information).
* software used to conduct segmentation and classification.
* and definition of classes used in classification.

In the report section, the assessor shall provide an explanation on how the assessor moves from segmentation to classification. The assessor shall also provide an illustration of how each class is represented by particular area in satellite image.

The assessor could snippet the satellite image and provide explanation of why the assessor considers the particular area is considered as specific class of land cover. In addition to that, the utilization of other images to complement the land cover classification process shall also be justified and the assessor shall explain how the additional images would enhance the quality of the preliminary land cover classification.

The assessor shall present the map of preliminary land cover classification including the accuracy assessment of minimum 70% overall accuracy.

**Accuracy assessment of the preliminary land cover classification**

The assessor must provide the explanation of the accuracy assessment process for the preliminary land cover classification. This includes the method of generating sample points for accuracy assessment and the justification of the number of samples used.

The assessor must provide a map showing the sample points used during the accuracy assessment process for preliminary land cover classification. The assessor must present the confusion matrix in a table setting and provide explanation regarding the numbers represented in the confusion matrix table. If the first accuracy assessment shows under 70% of overall accuracy, the assessor should also provide explanation on the process to achieve the minimum 70% (e.g., increasing sample points, reclassification, etc.).

**Final Land Cover Classification**

In this section, the following are required:

1. Explanation illustrating how the assessor gathered the field data (including how many samples of ground-truthing was used, how the ground-truthing data was gathered, etc.). Furthermore, the assessor must provide explanation on how the ground-truthing data was used in order to make the final land cover map from the preliminary land cover map.
2. A map showing the sample (of ground-truthing points).
3. Description and result of the accuracy assessment conducted with at least 80% of overall accuracy, using the confusion matrix in a table setting, covering all the land cover classes used in the final land cover map, and provide explanation regarding the numbers represented in the confusion matrix table. The photos/images taken during the ground-truthing activities linked to their respective locations must be provided in the Annex and other supplementary materials.
4. Description of the land cover classes used in the final land cover map including the descriptions of qualitative factors (see Advice Note 1), including the description of the relation and comparison between HCS forest classes and land cover system used. The relation and comparison description must be presented following the table as shown below.

|  |  |  |
| --- | --- | --- |
| Land Cover Class | Description of the Land Cover Class | Comparison to HCS Classes |
| Name and Indicative photos characterising the Land cover class, referring to data from sample plots in Section 8.2.2. | The description of the Land Cover Class | A specific HCS class equivalent to the Land Cover Class |

**Additional provisions**

If some land cover classes used in the final land cover map were not ground-truthed, then the following applies:

* A justification must be provided (i.e., the land cover class only occurs in the wider landscape, or local/indigenous communities do not give consent to access, or access is physically difficult or dangerous) explaining why ground-truthing was not possible. See also HCSA Advice note 4.
* The preliminary land cover classification is used in the final landcover classification, and this must be noted in the final land cover classification section.

Where clearance of potential HCS forest or HCV area during the assessment was detected in the assessment area(s), the assessor must clearly state that land clearing has been detected, identifies the landcover types that have been cleared, and maps (delineate and label) the areas where this happened within the assessment area(s) as part of the land cover classification (see Advice Note 6).

## Identification of HCVs

Identification of HCVs refers to the determination of whether any HCVs are present, potentially present or absent.

**All key issue sections concerning identification of HCVs must describe the methods used (literature review, fieldwork results, consultation), provide link to the evidence supporting the delineation and show resulting HCV areas clearly on maps** (if/when applicable)**.**

The HCV area shall also be calculated and the size area written in the report must match that according to the spatial analysis.

In the sections below, the following are required:

### HCV 1: Concentrations of biodiversity

* A clear decision on presence, potential presence or absence of all HCV 1 attributes (see CG/NI on the qualification of HCV1), supported by evidence (i.e. literature review, fieldwork results, consultation).
* If a value is deemed potentially present, evidence is weak or results are uncertain there is:
  + a description on how the precautionary approach has been used, or
  + a detailed outline of what needs to be done to identify the HCV for certain (this may be better presented in the management and monitoring section)
* HCV 1 Map for the entire AOI (assessment area(s) and wider landscape), showing where the HCV extends into the wider landscape. Draft maps must be clearly labelled.

### HCV 2: Large landscapes

* A clear decision on presence, potential presence or absence of all HCV 2 attributes (see CG/NI on the qualification of HCV2), supported by evidence (i.e. literature review, fieldwork results, consultation)
* If a value is deemed potentially present, evidence is weak or results are uncertain there is:
  + a description on how the precautionary approach has been used, or
  + a detailed outline of what needs to be done to identify the HCV for certain (this may be better presented in the management and monitoring section)
* HCV 2 Map for the entire AOI (assessment area(s) and wider landscape) showing where the HCV extends into the wider landscape or where the AOI may provide buffering or connectivity for HCVs present in the region. Draft maps must be clearly labelled.

### HCV 3: Rare ecosystems

* A clear decision on presence, potential presence or absence of all HCV 3 attributes (see CG/NI on the qualification of HCV3), supported by evidence (i.e. literature review, fieldwork results, consultation)
* If a value is deemed potentially present, evidence is weak or results are uncertain there is:
  + a description on how the precautionary approach has been used, or
  + a detailed outline of what needs to be done to identify the HCV for certain (this may be better presented in the management and monitoring section)
* HCV 3 Map for the entire AOI (assessment area(s) and wider landscape), showing where the HCV extends into the wider landscape. Draft maps must be clearly labelled.

### HCV 4: Ecosystem services in critical situations

* A clear decision on presence, potential presence or absence of all HCV 4 attributes (see CG/NI on the qualification of HCV4), supported by evidence (i.e. literature review, fieldwork results including participatory mapping, consultation)
* If a value is deemed potentially present, evidence is weak or results are uncertain there is:
  + a description on how the precautionary approach has been used, or
  + a detailed outline of what needs to be done to identify the HCV for certain (this may be better presented in the management and monitoring section)
* HCV 4 Map for the entire AOI (assessment area(s) and wider landscape), where the HCV extends into the wider landscape. Draft maps must be clearly labelled.

### Peat

Provide the background information whether there is a soil study available or not.

Where soil studies are available, the assessor shall present the soil map and highlighting the various soil type/association categorising them into Organic soil/histosols (including Peat), and Mineral soil. This section must include description of each soil type. Any discrepancy regarding the extent of organic soil (including peat) between the soil study and information from publicly available secondary data sources must be explained and justified with evidence collected by the assessor.

Where soil or peat studies are not available, the assessor must use the best publicly available secondary data/information, present the soil and/or peat map referencing to the secondary data source. A recommendation for the Organisation to conduct soil study must be given.

In absence of soil/peat study and secondary data sources, the assessor must ensure that data is available prior to the submission of the assessment report for evaluation by HCVN, i.e., by conveying to the Organisation to complete soil study, or the assessment team conduct soil/peat survey provided that there are sufficient capacity and expertise.

## HCS forest

There are 3 options to identify HCS Forest (as explained in Part 1 of this document). For option 1 and 2, more details can be found in the HCSA Toolkit Module 4 Section C. In particular, the technical requirements for the Airborne LiDAR data are outlined in HCSA Toolkit Module 4 page 11.

If Option 3 is chosen (Using Forest Inventory Plots), then this section must contain the following information:

1. Methodology, especially sampling plan, including

* A step-by-step calculation of the target number of plots, based on the final land cover map.
* Separate sampling estimates for each stratum, based on the final land cover map.
* A reasonable justification if the assessor combines AGB measurement of the LDF/MDF/HDF strata into a single forest stratum
* If applicable: Clear and reasonable justification (why some plots cannot be located within the assessment area(s) and AOI) to include plots located outside the AOI in the analysis

1. Statistical Analysis of the collected field data, including

* Tables with basal area, canopy cover, ground cover, stems/ha, % pioneer stems, etc. in an annex
* At a minimum, there must be statistical difference shown between the higher quality forest (HDF/MDF/LDF), YRF and Scrub strata. Evidence and justification should show that YRF forest and above (HDF/MDF/LDF) have been correctly identified for conservation, even if the plot data does not provide statistically significant distinctions between those forest classes.
* Other provisions for some circumstances outlined by HCSA Advice note 3 must be followed.
* Justification to be provided if the minimum number of plots (according to the HCS plot calculation. See HCS Toolkit Module 4 and Advice Note 2) was not reached, or if significant difference among forest classes was not proved. 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
* Proof of a significant difference (using ANOVA and then the Scheffé test) among at least the following three HCS land cover classes: at least one higher quality forest class (i.e. with HDF, MDF, LDF combined, or all left separate), YRF, and Scrub, or else providing adequate justification for why this could not be achieved.
* For agroforestry land cover (often also labelled as jungle/mixed rubber), or other land cover with introduced tree species. The report section must ensure that the basal area percentages of introduced are calculated and explained for the applicable plots (See Advice Note 3): Forest inventory plots with introduced comprising 50% or more of the basal area have been categorized as ‘Other’ or ‘SH’ under the non-HCS land cover categories. Forest inventory plots with less than 50% of the basal area comprised by introduced species have been categorized as YRF

1. Results, including

* Table with HCS forest inventory results, displaying the Above Ground Carbon stock estimates for each HCS vegetation stratum.
* Area calculation for each vegetation stratification of YRF, Scrub, HDF/MDF/LDF (or combined), and non-HCS areas
* HCS Forest/vegetation stratification Map and the discussion explaining the map and findings.
* Description of stratum (technical description and photographs) used in the map.

### HCVs 5 and 6 and other community areas necessary for future livelihoods and food security

* Designation and delineation of HCVs 5 and 6. This includes describing the methods used (literature review, fieldwork results, consultation), providing link to the evidence supporting the delineation and showing resulting HCV areas clearly and accurately on maps (if/when applicable).
* A clear decision on presence, potential presence or absence of all HCV 5 & HCV 6 attributes, supported by evidence (i.e. literature review, fieldwork results including participatory mapping, consultation)
* If a value is deemed potentially present, evidence is weak or results are uncertain, there is:
* a description on how the precautionary approach has been used, or
* a detailed outline of what needs to be done to identify the HCV for certain (this may be better presented in the management and monitoring section)
* HCV 5 and HCV 6 map(s) for the entire AOI (assessment area(s) and wider landscape), where the HCV extends into the wider landscape. Draft maps must be clearly labelled.
* Discussion, supported by references (if applicable) of the affected communities’ current livelihood activities and land utilisation and how may be affected by future changes in population and potential changes in livelihood choices and patterns (including the proposed development). This includes overview and link to evidence of discussions with communities about future land-use and other resource needs.
* Description of community land use and estimates of future land needs.
* Summary table of interviews and discussions with other stakeholders detailing who was consulted, his/her organisation, type of interaction (e.g. group meeting or workshop, individual interview, email, letters, phone calls), concerns or topics raised.
* Link to detailed records of interviews and discussions (in annex).
* Overview of the status of FPIC in the AA by the end of the assessment
* Geo-referenced maps produced from participatory mapping of current land use in the assessment area.
* The indicative minimum amount of land (number of hectares) necessary to be allocated for future food security, based on population size (0.5 ha of farmland per person, if no other data supports the calculation) if no other calculation was produced.
* Brief analysis of the feasibility of allocating the minimum amount of land: where the minimum land may be (tentatively) allocated (e.g. in the AOI, adjacent with or overlapping with the AOI, and/or outside of the AOI)
* If possible/available maps of lands for future livelihood security, labelled "draft”

### Patch analysis decision tree

Note that the scope of the Patch Analysis in HCV-HCSA assessment ends at Step 13, and the final ground checking (step 14) is not necessarily within the scope of the HCV-HCSA assessment.

This section must include the respective content of each step:

**Step 1**:

* Description and map overlaying HCS forest classes with other layers, including: Local people’s land tenure (including boundaries) and land use (including current and (if available) future land/resource use) – at least an indicative area. This must all be excluded from HCS forest classification. Location of HCV areas and HCV management areas, Peat soil areas, and legally protected and required conservation areas (e.g. protected areas, protected peatland, slopes, riparian zones) – if not already included in maps listed above.

**Step 2**:

* Description and map showing all the physically connected HCS Forest patches are merged. This includes patches that extend beyond the boundary of the assessment area.

**Step 3**:

* Description and map showing the estimation of core areas and patch prioritisation.
* The complete boundary and area of the patch has been used in the analysis, irrespective of whether the patch extends outside the boundary of the management unit(s): A 100m negative buffer is applied to the boundary of the whole potential HCS patch to represent the "forest edge" area (See Advice Note 3)
* Core area > 100 ha = High Priority Patch (HPP). All HPPs are marked for proposed conservation.
* Core area 10 - 100 ha = Medium Priority Patch (MPP)
* Core area < 10 ha = Low Priority Patch (LPP)
* The map(s) must clearly show negative/internal 100 m buffer layer (to illustrate the core size for each patch), and use contrast colour/pattern to distinguish HPP, MPP, and LPP.

**Step 4:**

* Description and map showing (if any) MPP and LPP providing connectivity between High Priority Patches.
* All MPPs and LPPs providing connectivity between HPPs are earmarked as indicative conserve. Note that Connectivity is defined as two patches whose edges are within 200 m of each other, measured from actual edge to edge (connectivity does not consider patch core size, position or configuration).
* If the assessor uses GIS ‘aggregate’ tools to assist in identifying connectivity, then this must be explained here.

**Step 5**:

* Description and map showing (if any) MPP and LPP connected to High Priority Patches, and (if any) connected MPP and LPP.
* MPP and LPP connected to HPP or any large (>100 ha core) HCS forest or HCV forest areas, peatlands, or riparian areas are marked for proposed conservation.
* MPP and LPP identified as connected (but not connected to HPPs) are provisionally marked ‘give and take conservation’.
* The map(s) must clearly show the 200 m distance, and use contrast colour/pattern to distinguish HPP, MPP, or LPP.
* MPP not connected to HPP – to be reviewed in step 7.
* LPPs that do not have immediate connectivity to HPPs, or to HCV, riparian areas are shortlisted for proposed development and reviewed in Step 13 (Integration and Conservation Planning).

**Step 6:**

* Description and map showing(if any) MPP and LPP that have not been earmarked as proposed conservation.
* The map(s) must clearly show separation between the MPP and LPP (that are subjected to this step)
* MPPs that have not yet been designated for conservation are to be reviewed in step 7.
* Remaining LPPs in Medium Forest Cover Landscapes are not analysed further nor shortlisted for conservation; they are classed as indicative ‘give and take develop’ and held for consideration during the final boundary adjustment, ‘give and take’ process, and land use planning phase.
* LPPs in Low Forest Cover Landscape are reviewed in step 9.

**Step 7**:

* Description and map showing the risk assessment of the MPPs resulted from step 6 (if any) following the HCSA Toolkit Module 5
* MPPs outside the high-risk zones are identified as lower-risk and are marked as ‘indicative conserve’
* MPPs located inside the risk zones are identified as higher-risk and are reviewed in step 8, step 9 and step 13.
* The map(s) must show the buffer distance and/or other factors used for the risk assessment and use contrast colour/pattern to distinguish lower risk MPP and higher risk MPP.

**Step 8**:

* Description and map showing High-Risk MPP for the presence of LDF, MDF, and HDF.
* Higher-risk MPPs containing more than 10 ha of continuous core area of LDF, MDF or HDF (not YRF) are marked for potential conservation with mitigation measures to address the threats to these forests.
* The map(s) must clearly show the HDF/MDF/LDF in contrast to YRF in the High-risk MPP

**Step 9 and Step 10:**

* Explanation if the assessment’s biodiversity field work/survey has covered the High-risk MPP (subjected to this step, with no more than 10 ha of continuous HDF/MDF/LDF). If the MPPs, haven’t been surveyed, then provide the description of the pre-RBA check and map of the RBA conducted (according to the HCSA TK Module 5).
* In an integrated HCV/HCS Assessment report (including ALS and quality assurance) was used for the assessment, and field surveys for biodiversity values have already been carried out in these MPPs (particularly for representative areas and aggregations/ concentrations of local species and their habitat), then an RBA is not required. In such cases, the target MPPs can be evaluated using existing information for these biodiversity values and either moved to ‘indicative conserve’ or ‘indicative give and take develop’.

**Step 11:**

* Description of the step 11 and map(s) showing that all HCVs 1, 2, 3, and 4 Areas, peatland areas, riparian zones, and any other protection or conservation areas with all HPPs, MPPs and LPPs that have either been identified as ‘indicative conserve’.

**Step 12:**

* This step is recommended only. If conducted by the assessor, the map should show the surrounding wider landscape (5 km from the boundary of the assessment area) and consider additional areas that may function as wildlife corridors to be earmarked as indicative conserve.

**Step 13:**

* Description and rationale for the Give and Take process (if applicable/conducted) It should be emphasised that while the full ‘give and take’ process is preferable because it increases viability and optimisation, it is not a mandatory requirement). If Give and Take is conducted, description and justification following the requirements and principles for Give and Take outlined in HCSA Toolkit Module 5 (step 13) must be provided.
* A DRAFT version of the step 13 map , showing the proposed conservation areas, proposed development areas, (already) developed area, and community land use areas within the assessment area.
* MU boundaries (according to the permit/license) must be delineated on the map. Areas within the MU, but excluded from the assessment area due to extraordinary circumstances (such as consent to conduct the assessment was not granted) are part of the Wider Landscape (of the assessment area), and must be marked as “Not-assessed.”

This section must also include:

* **Discussion and comments on the HCSA Decision Tree outcome**
* **Description of limitations and extraordinary circumstances (if any)**
* **Recommendations to follow up with Step 14, noting that the final step is required to produce the proposed ICLUP map. The proposed ICLUP is required to be vetted by an independent conservation science expert as well as through the HCS Approach Steering Group quality assurance procedure (see Module 7) to ensure that the steps outlined in this phase of the HCS Approach methodology are properly followed.**
* **Explanation if any step in the HCSA Decision Tree that was skipped (due to being not applicable)**

The scope of HCV-HCSA assessment ends at Step 13, the responsibility of ground checking step 14 is not within the scope of the HCV-HCSA assessment.

Completion of the proposed Integrated Conservation and Land Use Plan (ICLUP) is beyond the scope of this manual and not the role of the assessment team.

### Stakeholder consultation

* + How was the information shared and consulted upon?
  + How were stakeholder concerns addressed?

### Management and monitoring recommendations

* Description of current and potential threats to all values identified (e.g. HCS forest patches, HCVs, local peoples’ future lands and peatlands)
* Map(s) of HCV management areas and HCS forest patches
* Description of how management areas were designed to address threats and maintain values
* For every value identified: threats, management areas and prescriptions, monitoring recommendations
* Advice to follow up on any pending consultation (if applicable)
* Summary areas (in hectares) to be published on the HCVN website
* Total Conservation Area (Total HCVMA + HCS forest + peat + local people’s land in AA without overlaps)
* Total HCV area (Total HCV area in AA without overlaps)
* Total HCVMA area (Total HCV area in AA without overlaps)

The reasons for having a distinction between the HCV areas and the HCV management areas must be clearly explained by the assessor.

## Annex 1 - Sworn Declaration

* + - 1. Do you have a COI in conducting this assessment?
         1. No
         2. Yes
  + explain how you managed the COI.

1. Have you verified that your client had rights/permission to assess the AA(s) in their entirety?
   * + - 1. Yes
         2. No
   * confirm you have excluded from the report all areas where your client did not document rights.
2. Have you verified all affected communities have given FPIC and participated in the assessment?
   * + - 1. There are no affected communities.
         2. Yes
         3. No
   * Confirm the areas of all affected communities that did not give FPIC / participated in the assessment have been excluded from the report
3. Have you verified there were no ongoing land/resource conflicts involving any of the affected communities?
   * + - 1. There were no ongoing conflicts involving affected communities.
         2. Yes
         3. No
   * Confirm you have excluded from the report all areas of affected communities with ongoing conflict where all parties involved did not give FPIC / participated in the assessment.
4. Have you verified no land clearing took place in the assessment area since the date your client became responsible for the area?
   * + - 1. D.1 Yes
         2. D.2. No
   * Confirm the report includes information on all land clearing happening since the date of acquisition and a recommendation for the client to disclose the land clearing as applicable (I.e., to the relevant certification scheme, authority, buyers, etc.)
5. Has the team composition followed the requirements at the time of the assessment?
   * + - 1. Yes
         2. No

1. See Precautionary Approach, FSC P&C Glossary V 5.0 [↑](#footnote-ref-2)
2. See Common Guidance 2017, pg. 21 [↑](#footnote-ref-3)
3. HCV-HCSA assessments are **one of several studies conducted at the “Stage 2. Assessment” in the implementation of the HCSA Social requirements**. [↑](#footnote-ref-4)
4. Since November 2017 all HCSA assessments are required to be conducted as HCV-HCSA assessments. Exceptions to this are found on the HCSA website. HCV- only assessments follow the HCV assessment manual. [↑](#footnote-ref-5)
5. See Annex 1 for terms of reference for HCV-HCSA assessment teams. [↑](#footnote-ref-6)
6. This section follows content in HCSA Guidance for the Implementation of Social Requirements. and in Common Guidance for the Identification of HCVs [↑](#footnote-ref-7)
7. As detailed in Common Guidance for the Identification of HCVs. Part Two. [↑](#footnote-ref-8)
8. FSC-STD-01-001 V5-2 [↑](#footnote-ref-9)
9. Requirements of certification schemes may also lead to assessments being conducted in areas with outstanding natural land cover located within larger and already partially developed management units. [↑](#footnote-ref-10)
10. The Organisation is responsible for identifying which groups are “affected communities,” and whether they are designated as being directly or indirectly affected. See https://highcarbonstock.org/sr-faqs/ [↑](#footnote-ref-11)
11. This may include tenants, sharecroppers, farm workers and other companies with leases on the land, or those with legal or informal permits to access and use lands and natural resources. [↑](#footnote-ref-12)
12. According to the HCSA Toolkit, while the actual amount of land necessary for food security shall be determined on a case by case basis through collaborative land use planning processes including participatory mapping, a minimum of 0.5 ha of farmland per person in a family unit shall be allocated for this purpose. This figure (0.5ha/person) is indicative and the actual amount of land needed for future livelihood needs is likely to exceed that. [↑](#footnote-ref-13)
13. The LT&U study will provide good information on community boundaries and customary use, while SEIA, SIA or EIA will provide good information about likely changes over time that may affect local livelihoods, including population growth, migration, government policies and programmes, and the expected likely impact of the planned development. [↑](#footnote-ref-14)