



# The High Carbon Stock Approach

**A practical, scientifically robust and cost effective methodology to identify areas of natural forest for conservation**

## About the High Carbon Stock (HCS) Approach

Tropical natural forests hold large stores of carbon and biodiversity, and are critical for millions of indigenous and local peoples who depend on their forest for their livelihoods. However, this carbon is released and biodiversity is lost when these forests are cleared – otherwise known as deforestation.

The High Carbon Stock (HCS) Approach is a methodology that distinguishes forest areas for protection from degraded lands with low carbon and biodiversity values that may be developed. The methodology was developed with the aim to ensure a practical, transparent, robust, and scientifically credible approach that is widely accepted to implement commitments to halt deforestation in the tropics while ensuring the rights and livelihoods of local peoples' are respected.

Identification of HCS forests can also help governments fulfil commitments to reduce greenhouse gas emissions from deforestation because it allows the mapping of forest areas that should be conserved (and thus GHG emissions prevented).

## About the Methodology

Agricultural or plantation development has a lower environmental impact when it takes place in areas with low carbon and biodiversity. Broadly, the HCS Approach stratifies the vegetation on an area of land into different classes using analyses of satellite images and field plot measurements. Each vegetation class is validated through calibrating it with carbon stock estimates in the above-ground tree biomass and field checks. The diagram on the next page shows the four HCS forest classes and the two degraded land classes; the threshold for potential HCS forests lies between the Young Regenerating Forest (YRF) and Scrub (S) classes. After stratification, the HCS forest patches are further analysed via a Decision Tree, applying conservative size thresholds – i.e. precautionary principle - to identify viable forest areas for potential protection and development.

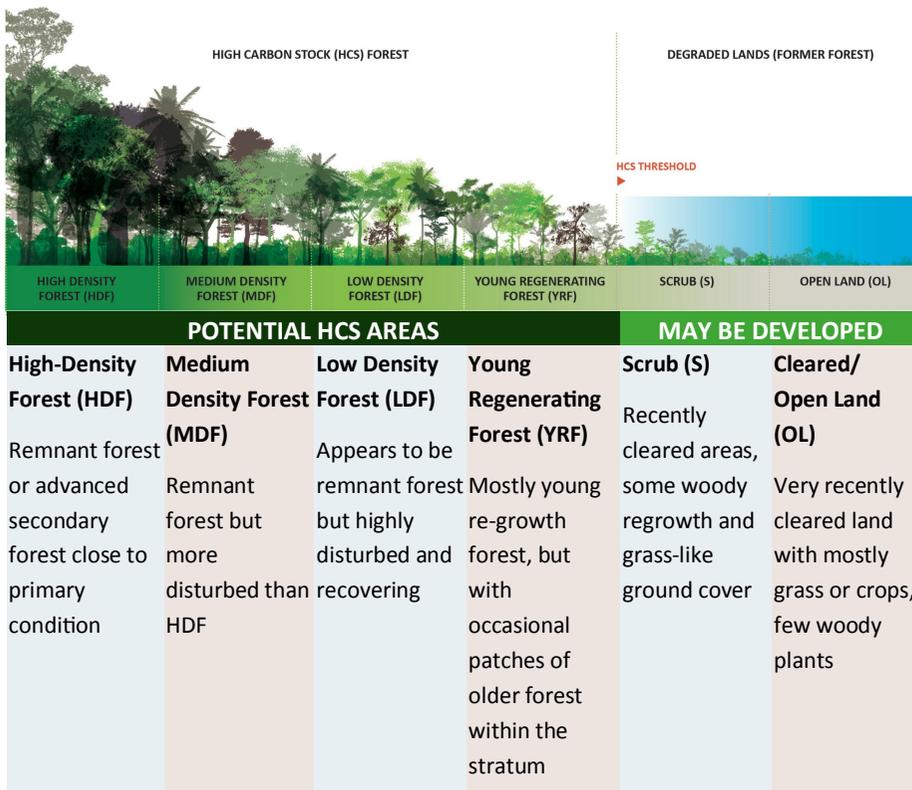
The methodology also respects local community rights through its integration with enhanced Free Prior and Informed Consent (FPIC) procedures, and respecting community land use and livelihoods. It encourages community-land use planning and management, and applies conservation planning tools to the identified HCS forest areas, and combines with mapped community land use, HCV, peatland and riparian areas to micro-delineate areas for conservation, restoration, community land use, and/or areas potentially available for plantation development.

## The HCS Approach Toolkit

The HCS Approach Toolkit was designed to provide complete technical guidance for the practical implementation of the HCS Approach. It takes practitioners through the steps in identifying HCS forest, from initial stratification of the vegetation using satellite images and field plots to making the final conservation and land use map.

The Toolkit is available on the HCS Approach website: [www.highcarbonstock.org](http://www.highcarbonstock.org).

### Identifying HCS forest: Vegetation Stratification



## Implementing No Deforestation commitments with the HCS Approach

Increasingly, companies are adopting policies to eliminate deforestation from the production of their raw materials. Several approaches that help define what areas are able to be converted to plantations or industrial agriculture have been developed, including Free Prior and Informed Consent (FPIC), GHG emissions assessments, and High Conservation Values (HCV) assessments. While these are valuable, they were not designed to fully address deforestation. In addition, measures to protect forests under current RSPO standards for palm oil are not sufficient, nor is there a practical approach for other commodity plantations such as pulp and paper, soy and rubber. There is thus a clear need for a practical, scientifically robust and cost-effective methodology that can distinguish viable forest areas from degraded areas that have lower carbon and biodiversity values.

The HCS Approach is a breakthrough for plantation companies and manufacturers who are committed to breaking the link between deforestation and land development in their operations and supply chains. The approach represents the first practical methodology that has been tested and developed in active concessions in Asia and Africa with input from a variety of stakeholders. It is a relatively simple tool that plantation companies can use for new developments while ensuring that forests are protected from conversion.

### Key stakeholders and governance

The HCS Approach was initially developed by Golden Agri-Resources (GAR) in collaboration with Greenpeace and TFT in 2011-2012. Following the Nestlé and GAR commitment to protecting HCS forests, many other plantation, trader and consumer companies have committed to the HCS Approach, with the majority of these focusing on palm oil.

With the rapid expansion of the implementation of the HCS Approach, key stakeholders have established an HCS Approach Steering Group that will provide oversight and governance of the HCS Approach to ensure its scientifically grounded development and application in the field. The Steering Group will consider and incorporate the interests of the broader users and interested parties by using a 'Consultative Forum', including: RSPO, FSC, HCVRN, financial institutions, other pulp and paper and palm oil plantation companies, national and local government bodies, as well as other organisations and sectors making commitments to halt deforestation or expecting to in the near future, CGF members and the TFA, and international and national REDD initiatives.

The following organisations are members of the High Carbon stock Approach Steering Group:

#### Commodity Companies

Agropalma, Asia Pulp & Paper, Golden Agri-Resources, Golden Veroleum Liberia, Wilmar, Musim Mas, NBPOL, Cargill

#### Consumer goods manufacturers

BASF, Procter & Gamble, Unilever

#### Non-governmental organisations

Greenpeace, Union of Concerned Scientists, Rainforest Action Network, Forest Peoples Programme, WWF, National Wildlife Federation, Forest Heroes

#### Technical Support Organisations

TFT, Daemeter, Proforest, Rainforest Alliance

## Q & A

### What is the scope of the HCS Approach?

The HCS Approach was designed for assessing vegetation on mineral soils in the humid tropics. It has been trialled in many provinces in the Indonesia, Liberia, PNG and Nigeria, and is currently being implemented over more than 10 million ha of concessions. Even though the methodology was developed in a palm oil plantation context, it is not specific to any commodity but rather to any tropical moist forest conversion setting. It is currently being used for palm oil, pulp and paper and rubber plantations and is being considered for soya in Brazil.

### How does the HCS Approach apply to extended supply chains, i.e. beyond the plantations?

Most of the 'No Deforestation' commitments by companies apply to their whole supply chain and thus all the products they trade. Thus the implementation extends beyond the plantations that the company owns directly. The HCS Approach Toolkit and the growing number of experts who are providing technical support for the implementation of the methodology will provide the guidance to any plantation manager. There will be transparency and quality assurance requirements for any use of the methodology, and it will be up to the consumer and trading companies to ensure that suppliers in their supply chain are meeting the requirements to ensure the goal of halting deforestation is being achieved.

### How can we be sure that all the companies implementing HCS are doing it properly?

The HCS Approach toolkit provides the technical guidance on how the methodology should be implemented and it is expected that companies will follow this. The HCS Approach Steering Group is developing a set of quality assurance requirements that will ensure the methodology is consistently followed. This will include transparency of reports and maps, independent expert reviews and 3rd party verification.

### What science input has there been to the HCS methodology?

Both phase one and phase two of the methodology have undergone an expert and science review to ensure the methodology has a strong basis and rationale in science. In the development of the methodology every endeavour was made to address the feedback and recommendations made by the reviewers. Furthermore, as the HCS Approach is an 'adaptive approach' that seeks continuous improvement, further trials are ongoing and expert research and advice is being sought to ensure a robust implementation of the HCS Approach in different forest regions. The recommendations coming from the Sustainable Palm Oil Manifesto group (SPOM) HCS study will also be considered by the HCS Approach Steering Group. Lastly, the HCS Approach Steering Group has established a Science Advisory Committee with a group of leading scientists to provide ongoing advice on the methodology, including its applicability at a landscape scale.

### What are the key differences between the HCS Approach and the SPOM HCS Study?

The SPOM (The Sustainable Palm Oil Manifesto) was founded by a group of companies, some of whom do not yet have policy commitments to No Deforestation. They have initiated an HCS study to come up with an alternative methodology, with different definitions and thresholds to the HCS Approach. The key different aspects that the SPOM study is focusing on are: emissions reductions scenarios from palm oil development, considering below ground carbon, and they take into consideration a range of different thresholds in relation to socio-economic factors (such as community and government priorities).

The HCS Approach stratifies vegetation in order to identify potential HCS forest areas. It does not calculate carbon stocks nor can it be used as a carbon or emissions accounting tool. It is a land-use planning tool to identify natural forests for protection and degraded lands for potential development. It combines biodiversity and carbon conservation with respect for communities' customary rights and livelihoods.

There are moves and collaboration underway to bring the HCS Approach and the HCS study recommendations together to form one approach. It should be noted that the

HCS study is for a finite period. Whereas the HCS Approach Steering Group is multi-stakeholder, provides ongoing governance, and covers any commodity or sector that is associated with tropical forest conversion.

### How are HCS forest areas being protected?

In order for HCS forest to be effectively protected, it requires the FPIC of local customary land owners. New mechanisms, including changes to laws and regulations to facilitate their protection, may also be required. There will also need to be innovative new forms of incentives and benefits for local communities who agree to protect HCS forests to compensate foregone uses, such as, clear legal rights and direct monetary compensation payments. This is a key research and innovation area for the methodology being led by companies implementing the approach and the HCS Approach Steering Group.

## Membership

The HCS Approach Steering Group invites interested parties to participate in this multi-stakeholder initiative. Organisations who may be eligible to join include:

- NGOs with a focus on implementation of the HCS Approach
- Plantation companies committed to and implementing the HCS Approach in their operations or supply chains
- Commodity users committed to and implementing the HCS approach for commodities at risk of driving deforestation in their supply chains
- Technical support organisations with expertise in HCS Approach implementation

For information on how to become a member, please contact us.

## Contact us

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