



## ART’s Approach to High Forest, Low Deforestation (HFLD) Crediting

This primer explains how The REDD+ Environmental Excellence Standard (TREES, Version 2.0) addresses carbon crediting when it comes to High Forest, Low Deforestation (HFLD) <sup>1</sup> jurisdictions.

### Contents

Background.....	1
HFLD Jurisdictions and Indigenous Peoples .....	3
Frequently Asked Questions.....	4
Further Resources on the HFLD Crediting Approach .....	9
Technical Annex: How the TREES HFLD Crediting Level Works.....	10

### Background

It is widely recognized that forests are critical to meeting the Paris Agreement’s goal of limiting the planet’s warming to 1.5 degrees. Intact forests such as those in HFLD jurisdictions provide both climate mitigation and adaptation benefits, along with key ecosystem services that humans depend on. In the past decade, REDD+ financing has emerged as a prominent approach for incentivizing activities that reduce emissions from deforestation and forest degradation and increase removals from new forests. From a market financing perspective, companies and governments are searching for high-integrity credits and understand the importance of investing in jurisdictions and Indigenous Peoples and Local Communities (IPLCs) who are providing a hugely valuable global service through their intact but threatened forests.

REDD+ recognizes the critical role of protecting, maintaining, and restoring forests as a solution to combat climate change. However, REDD+ financing to date has been largely used to incentivize the reduction of deforestation in regions with historically high deforestation rates. HFLD jurisdictions have historically low deforestation rates, so they have not been prioritized for climate financing, *even though they also face consistent and mounting deforestation pressures.*

Similar to other places, forests in HFLD jurisdictions are also under threat, largely due to economic drivers. For example, as the price of gold rose dramatically from 2002 to 2012, forest loss in Suriname, an HFLD country,

---

<sup>1</sup> Environmental Defense Fund. (2023). What are HFLDs? And why are they important? [HFLD factsheet\\_final.pdf \(edf.org\)](#)



more than doubled due to the growth of extractive mining.<sup>2</sup> During the decade between 2010 and 2019, 21% of stable forests were converted to “at-risk” forests – these “at-risk” tropical forests face eight-fold higher deforestation rates than stable forests<sup>3</sup>. In fact, six countries *lost* HFLD status over the last decade (2010-2019)<sup>4</sup>, indicating that high forest cover, low deforestation landscapes cannot be expected to exist indefinitely without ongoing intervention. Furthermore, the drivers of deforestation can shift across geopolitical boundaries. International leakage of deforestation pressure can occur if only high-deforestation regions are working to lower their forest loss. Examples of this include the shifting of oil palm cultivation<sup>5,6,7</sup> and extractive gold mining<sup>8</sup> across the global tropics away from areas with deforestation controls to frontiers with fewer forest loss controls in place. Studies suggest that creating incentives, such as through carbon markets, to maintain carbon stocks in HFLD areas can be an effective solution to reduce the risk of leakage<sup>9</sup>. Unless standing forests are valued, under a business-as-usual scenario, many HFLD jurisdictions will see their deforestation rates increase sharply and are likely to lose their HFLD status. Critics of HFLD crediting say that past levels of deforestation are minimal, so deforestation can’t be predicted to increase in the future. ART’s perspective, based on published scientific research, is that sharp pivots in deforestation are probable *because they have happened in other places*, even though they have not yet borne out *in that particular jurisdiction*.

To generate financing through carbon markets, HFLD jurisdictions need alternative crediting pathways<sup>10</sup> that acknowledge this threat. The TREES HFLD methodology sets a reference level based on average emissions in the recent past, plus a percentage of the remaining forests’ carbon stock, which is used as a conservative proxy of forest loss if no conservation actions are undertaken. TREES only credits a fraction (less than 0.05%) of a jurisdiction’s carbon stock — meaning that credits are conservatively-issued and meet the additionality criterion for carbon market financing.

An effective and equitable global system for reducing tropical deforestation should incentivize all relevant jurisdictions and actors, including both historical emitters and historical protectors of carbon stocks, if the world

---

<sup>2</sup> Dezécache, C. et al. (2017). Gold-rush in a forested El Dorado: deforestation leakages and the need for regional cooperation. *Environmental Research Letters*, 12(3), 034013. <https://doi.org/10.1088/1748-9326/aa6082>

<sup>3</sup> Simon, S. et al. (2019). Options for Conserving Stable Forests. World Bank Group.

<https://documents1.worldbank.org/curated/en/541251635971110855/pdf/Options-for-Conserving-Stable-Forests.pdf>

<sup>4</sup> *Ibid*, using an updated 10-year average global deforestation rate with the approach to classify HFLD that is presented in da Fonseca, GAB. et al. (2007). No Forest Left Behind. *PLoS Biol*, 5(8), e216. <https://doi.org/10.1371/journal.pbio.0050216>. Note that this approach is different from how ART defines HFLD.

<sup>5</sup> Heilmayr, R. et al. (2020). Deforestation spillovers from oil palm sustainability certification. *Environmental Research Letters*, 15(7), 075002. <https://iopscience.iop.org/article/10.1088/1748-9326/ab7f0c>

<sup>6</sup> Vijay, V. et al. (2018). Deforestation risks posed by oil palm expansion in the Peruvian Amazon. *Environmental Research Letters*, 13(11), 114010. <https://doi.org/10.1088/1748-9326/aae540>

<sup>7</sup> Qaim, M. et al. (2020). Environmental, economic, and social consequences of the oil palm boom. *Annual Review of Resource Economics*, 12, 321–44. <https://doi.org/10.1146/annurev-resource-110119-024922>

<sup>8</sup> Dezécache, C. et al. (2017). Gold-rush in a forested El Dorado: deforestation leakages and the need for regional cooperation. *Environmental Research Letters*, 12(3), 034013. <https://doi.org/10.1088/1748-9326/aa6082>

<sup>9</sup> Busch, J. et al. (2009). Comparing climate and cost impacts of reference levels for reducing emissions from deforestation. *Environmental Research Letters*, 4, 044006. <https://doi.org/10.1088/1748-9326/4/4/044006>

<sup>10</sup> Schweikart, M. et al. (2022). Adaptive approaches to REDD+ are needed for countries with high forest cover and low deforestation rates. *Environmental Research Letters*, 17(11). <https://doi.org/10.1088/1748-9326/ac9827>



is to eliminate forest loss in areas where it is already occurring and continue to actively protect areas of high forest cover. Public policies can influence the maintenance or loss of HFLD status. Thus, jurisdictional REDD+, which offers a financial incentive for regions to develop with forest-positive policies, can be a crucial tool.

The ART initiative encompasses REDD+, not just REDD. That “plus” is meant to include the conservation and enhancement of forest carbon stocks, along with the sustainable management of forests, which is what the alternative HFLD crediting methodology encourages. The HFLD approach in TREES recognizes that even forests that have been historically protected face threats and that these threats are expected to increase as neighboring regions start reducing their own deforestation, shifting the demand for forest resources.

TREES offers qualifying HFLD jurisdictions a conservative approach to participate in global voluntary and compliance carbon markets, and thus to receive payments for their REDD+ activities that help to maintain their high crucial levels of forest cover and low deforestation rates. TREES HFLD credits are fully fungible with other high-integrity carbon credits that are independently verified and issued by a credible standard.<sup>11, 12, 13</sup>

## HFLD Jurisdictions and Indigenous Peoples

A crediting approach for HFLD jurisdictions is also essential to reward the historical and ongoing performance of Indigenous Peoples in protecting forests. Indigenous territories in the Amazon Basin, the Mesoamerican region, the Democratic Republic of Congo, and Indonesia are estimated to contain 20 percent of the world’s aboveground terrestrial carbon stocks<sup>14</sup>, and at least 36 percent of the world’s intact forests are within Indigenous Peoples lands<sup>15</sup>. Further, Indigenous territories and lands managed by Indigenous Peoples are shown to experience a lower rate of forest loss compared to other areas, suggesting the effectiveness of active protection by Indigenous communities<sup>16</sup>.

The HFLD approach in TREES permits national governments to aggregate recognized Indigenous territories as part of a subnational accounting area which creates an opportunity for partnerships between jurisdictions and Indigenous Peoples enabling access to carbon markets that might not otherwise exist. The Tropical Forest Credit Integrity guide recommends that companies purchase HFLD credits as a means to avoid forest conversion in

---

<sup>11</sup> Paltseva, J. et al. (2023). Justification for HFLD Crediting: How jurisdictional HFLD credits meet integrity and additionality thresholds for fungibility. [HFLD-crediting-additionality-EDF-white-paper.pdf](#)

<sup>12</sup> ICAO. (2023). CORSIA Eligible Emissions Units. [CORSIA Eligible Emissions Units\\_March2023.pdf \(icao.int\)](#)

<sup>13</sup> Coordinator of the Indigenous Organizations of the Amazon Basin (COICA), Conservation International, Environmental Defense Fund, The Amazon Environmental Research Institute (IPAM), The Nature Conservancy, Wildlife Conservation Society, World Resources Institute, WWF. (2023). Tropical Forest Credit Integrity Guide for Companies: Differentiating Tropical Forest Carbon Credit by Impact, Quality, and Scale. [TFCIGuide.org](#)

<sup>14</sup> Environmental Defense Fund and Woods Hole Research Center. (2015). Tropical Forest Carbon in Indigenous Territories. <https://www.edf.org/sites/default/files/tropical-forest-carbon-in-indigenous-territories-a-global-analysis.pdf>

<sup>15</sup> Fa, J. et al. (2020). Importance of Indigenous Peoples lands for the conservation of Intact Forest Landscapes. *Frontiers in Ecology and the Environment*, 18(3), 135-140. <https://doi.org/10.1002/fee.2148>

<sup>16</sup> Blackman, A. & Veit, P. (2018). Titled Amazon Indigenous Communities Cut Forest Carbon Emissions. *Ecological Economics*, 153, 56-67. <https://doi.org/10.1016/j.ecolecon.2018.06.016>



these territories and to support IPLC led initiatives to manage forest resources and conserve forests<sup>17</sup>. Furthermore, revenue from the sale of carbon credits and other non-monetary benefits resulting from the participation of HFLD jurisdictions in the carbon market provides investments in Indigenous communities. Alternatively, IPLCs could receive TREES Credits in return for their activities supporting the jurisdictional ambition, and they could then monetize the credits in the manner they wish.

## Frequently Asked Questions

### 1. What does HFLD stand for and why is it important to recognize HFLD jurisdictions?

HFLD is the acronym for “High Forest, Low Deforestation” and refers to jurisdictions that still have very high levels of forest cover and also experience low rates of annual deforestation. There is no single global threshold for what is considered a sufficiently “high forest” cover, or a sufficiently “low deforestation” rate. TREES identifies HFLD jurisdictions as those that exceed the HFLD Score, which is determined based on a calculation using forest cover and deforestation rate.

It is important to recognize the contribution of HFLD jurisdictions to climate change mitigation because forests are critical to meeting the Paris Agreement goal of limiting the planet’s warming to 1.5 degrees. These large forest areas contribute to both climate mitigation and adaptation benefits by storing carbon, regulating local and regional climate, supplying critical moisture to agricultural lands, and resisting wildfire. Also, providing incentives to HFLD jurisdictions to maintain low rates of forest loss lowers the risk of cross-boundary shifting of deforestation emissions (i.e., leakage).

All countries, including HFLD jurisdictions, need an ongoing incentive to continue to address the drivers of deforestation and lower emissions associated with forest loss and degradation. HFLD crediting offers a market solution for climate action.

### 2. Can any jurisdiction qualify as HFLD?

No. The TREES HFLD approach was developed to incentivize jurisdictions to achieve and maintain high-forest and low-deforestation (HFLD) status. TREES includes an HFLD Score threshold that jurisdictions must meet to qualify as HFLD and be permitted to use the optional HFLD Crediting Level. The HFLD Score is based on the percentage of forest cover and the rate of deforestation in the accounting area. Jurisdictions calculate their HFLD Score for each year of the 5-year historical reference period, and if the HFLD Score is 0.5 or higher in each year of the reference period, then the jurisdiction qualifies as HFLD for the entire subsequent crediting period. The HFLD Score calculation is validated by the independent third-party auditors as part of the validation and verification process.

---

<sup>17</sup> Coordinator of the Indigenous Organizations of the Amazon Basin (COICA), Conservation International, Environmental Defense Fund, The Amazon Environmental Research Institute (IPAM), The Nature Conservancy, Wildlife Conservation Society, World Resources Institute, WWF. (2023). Tropical Forest Credit Integrity Guide for Companies: Differentiating Tropical Forest Carbon Credit by Impact, Quality, and Scale. [TFCIGuide.org](https://www.tfciguide.org)



The flexibility of this composite threshold approach versus using a single fixed definition of HFLD allows a Participant with greater forest coverage but a slightly higher deforestation rate (indicating a higher threat) to still qualify as HFLD. Similarly, a Participant that has experienced deforestation and therefore has had forest cover loss but has managed to successfully reduce the deforestation rate to a low level could also qualify as HFLD.

**3. What happens if the HFLD Score is greater than 0.5 in four years of the reference period, but less than 0.5 in one of the years of the reference period?**

This jurisdiction would not qualify for HFLD status. In order to use the optional HFLD crediting approach, a jurisdiction must have an HFLD Score that is 0.5 or higher in every year of the five-year reference period.

**4. What happens if the HFLD Score changes over time during the crediting period?**

To qualify as HFLD, the HFLD Score must be greater than 0.5 for each year of the five-year historical reference period (i.e., the period directly prior to the TREES crediting period). Participants that qualify as HFLD can maintain that status for a full five-year crediting period even if their forest cover and deforestation rate change during the crediting period. However, they must then reassess the HFLD Score when they begin a new crediting period. It is possible for a jurisdiction to gain or lose HFLD status between crediting periods based on its performance.

**5. How will stakeholders know which TREES Credits are generated using the HFLD crediting approach?**

TREES Credits that are issued using the HFLD crediting approach are labeled in the ART Registry as such for full transparency.

**6. Are HFLD credits additional? Do HFLD jurisdictions get credits for doing nothing?**

HFLD credits under TREES 2.0 constitute additional climate action. Like all other ART Participants, TREES requires action from HFLD jurisdictions. All HFLD jurisdictions must have a jurisdictional REDD+ implementation strategy that establishes the new or revised actions they are taking to mitigate the drivers of deforestation and degradation in the crediting period. These actions contribute to low deforestation rates in their jurisdictions, and without financial incentives, it is unlikely that forests in HFLD areas will remain effectively protected. Moreover, providing incentives to jurisdictions with intact forests to protect the at-risk forests lowers the risk of deforestation shifting to these countries as nearby jurisdictions with high deforestation begin reducing their forest-related emissions.

**7. Are HFLD credits fungible with credits from other sectors or other TREES crediting approaches?**

In light of the growing threats to all tropical forests, a conservative approach to HFLD crediting yields credits that are fungible with those generated by other sectors and other crediting approaches in TREES. Such an approach must:

- operate on a jurisdictional scale.
- require new or revised activities to mitigate the drivers of deforestation.
- include reporting of annual emissions from deforestation and degradation and include appropriate safeguards against rising annual emissions.



- apply an adjustment factor that serves as a conservative proxy for how much forest would be expected to be lost without REDD+ actions.
- ensure the adjustment factor is objective and verifiable.
- account for leakage, uncertainty and reversals.
- avoid double-counting.
- adhere to the same rigorous environmental and social safeguards requirements as non-HFLD crediting approaches.

The incremental value of emission reductions captured by the TREES HFLD methodology represents an additional mitigation outcome in the same sense that a traditional emission reduction methodology does – forests would have likely been lost in the absence of ongoing intervention.

#### **8. Have HFLD credits been reviewed and approved as fungible by any organization outside of ART?**

The HFLD methodology in TREES, along with all TREES crediting approaches, is approved to generate Eligible Emission Units to be used for compliance under the U.N.'s International Civil Aviation Organization's (ICAO) Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA)<sup>18</sup> for both the pilot phase and the first compliance phase. In fact, ART is one of only two programs approved for the first compliance phase and all TREES Credits are eligible. The rules that ICAO sets for evaluating Emissions Unit Criteria are widely regarded as markers of high integrity. ICAO's approval of the ART TREES HFLD methodology for the pilot and compliance phases of CORSIA indicates an independent proof-point of the fungibility of TREES HFLD credits with other credit types.

Please consider reviewing these additional resources that determine the fungibility of conservative HFLD crediting: [Tropical Forest Credit Integrity Guide](#), written by Coordinator of the Indigenous Organizations of the Amazon Basin (COICA), Conservation International, Environmental Defense Fund, The Amazon Environmental Research Institute (IPAM), The Nature Conservancy, Wildlife Conservation Society, World Resources Institute, and WWF; and [HFLD Additionality Brief](#), written by authors from EDF, CI, WCS and WRI.

#### **9. Why does ART feel the crediting approach is conservative?**

ART credits HFLD jurisdictions proportional to a conservative assumption that less than 0.05% of their forest would be under threat in the absence of any REDD+ actions. The percentage is less than 0.05% because it is multiplied by the HFLD Score, which will always be less than one. The fraction of a jurisdiction's standing forest carbon stock that is used to calculate the HFLD Crediting Level represents a conservative<sup>19</sup> proxy of the probability of loss that these forests face in the absence of REDD+ activities. This approach to crediting HFLD jurisdictions is consistent with the World Bank's Forest Carbon Partnership Facility (FCPF) program, though ART's factor (<0.05%) is more conservative.

The HFLD crediting approach is conservative because it:

- is consistent across all Participants, meaning each Participant cannot suggest an estimation of emission reductions based on its own assumptions which could be challenging to independently verify.

---

<sup>18</sup> ICAO. (2023). CORSIA Eligible Emissions Units. [CORSIA Eligible Emissions Units\\_March2023.pdf \(icao.int\)](#)

<sup>19</sup> Teo, H. et al. (2024). Charting the future of high forest low deforestation jurisdictions. PNAS, 121(37). <https://doi.org/10.1073/pnas.2306496121>



- is based on data that can be verified (emission reductions, forest cover, deforestation rate and carbon stock), not counterfactual guesses of what might transpire.
- uses an average carbon stock, hence it does not allow “cherry picking” of high carbon intensity areas.
- remains constant for the entire crediting period. Assumptions of exponential or dramatically increasing emissions each year are not permitted.
- creates an incentive for jurisdictions to improve their HFLD Score by reducing their deforestation rates and increasing their forest cover.

Like all TREES Credits, HFLD jurisdictions are required to apply deductions to what is eligible for crediting to account for leakage, uncertainty, and to the buffer pool to manage the risk of reversals. In addition, HFLD Participants are required to take an extra deduction if their annual emissions rise more than 15% above their 5-year historical emissions average. These deductions all reinforce the integrity of what is issued as a conservative volume of credits.

#### **10. What if a jurisdiction faces forest loss threats higher than 0.05%? Why does TREES not permit jurisdiction-specific multipliers?**

In order to have a transparent, standardized approach that yields consistent results, it is important that each country uses the same formula. Otherwise, there is a unique methodology for each country based on their derived country specific factors. These factors are often challenging to define and validate as has been shown by project level REDD+ crediting approaches. Therefore, ART feels it is most appropriate and conservative to base crediting on a globally conservative proxy of forest loss faced by countries with historically low deforestation rates, even if some countries likely have a higher threat in reality.

#### **11. Can subnational jurisdictions be HFLD when the whole country is not HFLD?**

Yes, an eligible<sup>20</sup> subnational accounting area can be registered and use the HFLD Crediting Level if it meets all the requirements to calculate an HFLD Score and if its HFLD Score is 0.5 or greater in every year of the five-year reference period. The rest of the country outside of the subnational area, or the country as a whole, does not need to be HFLD eligible for a subnational jurisdiction to be deemed HFLD eligible. This may especially be the case when it comes to recognized Indigenous territories, which can be considered eligible areas to participate in TREES if they are registered as subnational accounting areas by a national government.

#### **12. Can HFLD jurisdictions also be credited for removals?**

In addition to the regular TREES Crediting Level and the HFLD Crediting Level, TREES also offers a third optional approach for crediting removals from forest restoration and the establishment of new forests<sup>21</sup>. Only Participants who have reduced their deforestation and degradation emissions below their TREES Crediting Level are eligible to use this approach for crediting removals. For eligible HFLD jurisdictions, this means that the removals methodology is allowed to be used if emissions fall below the 5-year historical average of emissions, which is the same at the TREES Crediting Level (not the HFLD Crediting Level). These three approaches combine to provide a pathway for Participants to be continually incentivized to improve their performance over time.

---

<sup>20</sup> Eligible entities are listed in TREES Section 3

<sup>21</sup> Further details are listed TREES Section 5.3

### **13. What if emissions increase in the HFLD jurisdiction during the crediting period?**

In order to generate TREES HFLD Credits, HFLD jurisdictions must have annual emissions that are lower than the HFLD Crediting Level (CL). Because the HFLD CL reflects both historic emissions and a conservative proxy of the risk to standing forest carbon stock, it is possible that HFLD Credits may be generated even if annual emissions exceed the five-year historical average. If this were to occur, deductions to the allowable volume of TREES HFLD Credits would be taken each year based on the amount the emissions rose for that year. The deductions range from 15% to 100% of the TREES Credits<sup>22</sup>.

HFLD jurisdictions already have very low levels of emissions from deforestation and forest degradation. This means that their emissions are not able to increase much before deductions are required. A rise in emissions would signal to the jurisdiction that new or revised actions are required to address the clear risk of forest loss.

If annual emissions exceed the HFLD Crediting Level at any time after TREES credits have been issued to the Participant, then a reversal has occurred. The reversal is compensated by the ART Secretariat retiring buffer pool credits corresponding to the amount of the reversal. The Participant must then increase its buffer pool contribution by 5% for the next five years and would need to replenish the buffer pool for any credits used for the reversal in excess of what the Participant has itself contributed. (See TREES Section 7 for more information).

### **14. How are HFLD credits different than biodiversity credits or payments for intact forests?**

HFLD credits are verified carbon emission reductions. The unit is tonnes of CO<sub>2</sub>e. Unlike payments for intact forests, HFLD credits are only being issued for the emission reductions that result from REDD+ actions in HFLD jurisdictions and not for the carbon stock of the entire forest. Furthermore, even though HFLD territories are expected to have high biodiversity values, HFLD credits are not a measure of biodiversity or of biodiversity conservation achievements. For that reason, certifications that capture the value-add of biodiversity could be used on top of HFLD credits, as they account for a metric other than carbon.

### **15. Why would a buyer want to buy HFLD credits?**

Companies may wish to purchase carbon credits, including HFLD credits, for a variety of reasons. These could include offsetting or supporting the numerous social and biodiversity related co-benefits HFLD REDD+ programs offer. Companies may choose to make various claims consistent with demand-side initiatives such as the VCMI, which offers guidance on what claims corporate buyers may choose to make when it comes to purchasing carbon credits. Note that VCMI points to CORSIA-eligible units as the type of credits that are appropriate to purchase for corporate climate claims, and TREES HFLD credits are CORSIA-eligible. Buyers may also wish to plug the climate-finance gap and to provide results-based payments, both of which are also accomplished by the emission reduction value captured by HFLD credits. Airlines participating in CORSIA could purchase HFLD credits to comply with ICAO's global market-based mechanism to achieve carbon-neutral growth in international aviation.

---

<sup>22</sup> The calculation is listed in TREES Section 5.2.2 in Table 1





## Further Resources on the HFLD Crediting Approach

- [Tropical Forest Credit Integrity Guide \(TFCI\)](#) (Annex discusses the fungibility of ART TREES HFLD Credits)
- [Environmental Defense Fund's HFLD Portal](#) (briefs, blogs and more)
- [The Case for Preservation in HFLD Jurisdictions](#)
- [Yale Forest Forum](#) (Seminar Series – March 30<sup>th</sup> presentation on HFLD Jurisdictions)
- [ART Board of Directors - 2022 statement](#)
- [Forests for Life Partnership](#) (Statement on Credibility of HFLD Credits)
- [Wildlife Conservation Society](#) (Statement on Importance of HFLD Countries)



## Technical Annex: How the TREES HFLD Crediting Level Works

TREES offers two crediting approaches for quantifying emission reductions. One approach uses the TREES Crediting Level, which is based on the average of emissions from deforestation and forest degradation during a historical period. The other approach uses an HFLD Crediting Level, which is also based on the average of emissions during a historical period, along with an adjustment component that represents a conservative proxy of at-risk forest carbon stock.

Any jurisdiction<sup>23</sup> is eligible to use the TREES Crediting Level. Only jurisdictions that meet certain qualifying criteria can opt to use the alternative HFLD Crediting Level.

Both approaches can be combined with a third, optional approach for crediting removals. All three crediting avenues provide pathways for Participants to be incentivized to improve their performance over time. Full details can be found in Section 5 of TREES 2.0.

### 1. Establishment of eligibility

Jurisdictions must first determine if they meet the TREES HFLD threshold by calculating their TREES HFLD score. Taking into consideration the unique qualities of HFLD jurisdictions, the HFLD Score is the sum of the Participant’s Forest Cover Score and the Participant’s Deforestation Rate Score<sup>24</sup>. **To be eligible to calculate the HFLD Score, Participants must have an accounting area with greater than 50% forest cover and an annual deforestation rate that is less than 0.5% during each year of the reference period.**

The Forest Cover Score is determined by the following equation from page 35 of TREES 2.0:

#### Equation 3: Forest Cover Score

$$FCS_t = (FC_t - 50) / 100$$

#### WHERE:

$FCS_t$	Forest Cover Score in year $t$
$FC_t$	Forest Cover in year $t$

<sup>23</sup> Eligible entities under ART are listed in TREES Section 3.1. They are referred to as Participants.

<sup>24</sup> See TREES Section 5.2.1 for details on equations.

The Deforestation Rate Score is determined by the following equation from page 35 of TREES 2.0:

**Equation 4: Deforestation Rate Score**

$$DRS_t = 0.5 - DR_t$$

**WHERE:**

<b>DRS<sub>t</sub></b>	Deforestation Rate Score in year <b>t</b>
<b>DR<sub>t</sub></b>	Deforestation rate in year <b>t</b> <sup>12</sup>

The HFLD Score is a sum of these two values, as listed on page 34 of TREES 2.0:

**Equation 2: HFLD Score**

$$HFLD\ Score_t = FCS_t + DRS_t$$

**WHERE:**

<b>HFLD Score<sub>t</sub></b>	HFLD Score in year <b>t</b>
<b>FCS<sub>t</sub></b>	Forest Cover Score in year <b>t</b> (Equation 3)
<b>DRS<sub>t</sub></b>	Deforestation Rate Score in year <b>t</b> (Equation 4)

Here is an example of an HFLD Score calculation:

*Consider a country with the following data, for year t:*

*Annual deforestation rate: 0.08%*

*Forest cover: 79%*

*Since the deforestation rate is less than 0.5% and the forest cover is above 50% this country is eligible to calculate an HFLD score for year t as follows:*

- 1.  $DRS_t = (0.5 - 0.08) = 0.42$*
- 2.  $FCS_t = (79 - 50)/100 = 0.29$*
- 3.  $HFLD\ Score_t = 0.42 + 0.29 = 0.71$*

*A Participant must meet the HFLD threshold for each year of the reference period.*

Participants whose HFLD Score is 0.5 or higher for each year of the reference period meet the HFLD Score threshold and are considered HFLD Participants under ART. Only these Participants may use the optional HFLD crediting approach. The HFLD Score is then also used as a factor in calculating the HFLD Crediting Level.

The following table shows examples of the HFLD Scores that six sample jurisdictions would calculate *for a single year* according to their characteristics.

Jurisdiction	Forest cover (must be >50%)	Forest Cover Score	Deforestation rate (must be <0.5%)	Deforestation Rate Score	HFLD Score (must be ≥0.5)
A	60%	0.1	0.1%	0.4	<b>0.5</b>
B	70%	0.2	0.3%	0.2	<b>0.4</b>
C	75%	0.25	0.3%	0.2	<b>0.45</b>
D	80%	0.3	0.49%	0.01	<b>0.31</b>
E	80%	0.3	0.25%	0.25	<b>0.55</b>
F	55%	0.05	0.05%	0.45	<b>0.5</b>

In the previous example, all six jurisdictions have more than 50% forest cover and less than 0.5% deforestation rate, so they are all eligible to calculate an HFLD Score. However, when calculating their composite HFLD Score as a sum of the Forest Cover Score and Deforestation Rate Score, only jurisdictions A, E, and F have an HFLD Score that is 0.5 or higher. Thus, they are the only jurisdictions in the list that are eligible to use the HFLD approach. A Participant must meet the HFLD threshold for each year of the 5-year reference period, so an HFLD Score would have to be calculated five times to demonstrate eligibility. The average HFLD Score over the five years of the reference period will then be used as a factor to calculate the HFLD Crediting Level as described in the next step.

HFLD eligibility must be demonstrated at the beginning of each crediting period. Once calculated, the HFLD Score remains applicable for all five years of the crediting period.

## 2. Determination of crediting level

A five-year historical average of deforestation and degradation emissions is established from the reference period directly prior to the crediting period<sup>25</sup>. To obtain the HFLD Crediting Level (HFLDCL), this five-year

<sup>25</sup> See TREES Section 5.1 for more details on setting the CL



average (CL) is added to a figure that is composed of two numbers: the average HFLD Score and 0.05% of carbon stock of trees in standing forests. The following formula is used:

$$\text{HFLDCL}_n = \text{CL}_n + (\text{HFLD Score}_{\text{avg}} * \text{Carbon Stock})$$

Where:

**HFLDCL<sub>n</sub>** is the HFLD Crediting Level for crediting period *n*; tCO<sub>2</sub>e/yr

**CL<sub>n</sub>** is the average emissions during the five-year historical reference period. This is the regular TREES Crediting Level for crediting period *n*; tCO<sub>2</sub>e/yr

**HFLD Score<sub>avg</sub>** is the average of the HFLD Score in each year of the reference period; no units

**Carbon Stock** is 0.05% of Standing Forest Carbon Stock<sup>26</sup> within the jurisdiction; tCO<sub>2</sub>e/yr

This crediting level calculation takes into consideration the unique characteristics of HFLD jurisdictions. Furthermore, a new HFLDCL is calculated after each 5-year crediting period. Hence, a jurisdiction that increases its HFLD Score by reducing its deforestation rate and/or increasing its forest cover will have a higher HFLD Score value to adjust its crediting level in the subsequent crediting period. This incentivizes HFLD jurisdictions to continue to improve performance and recognizes that threats and pressures will continue to increase over time.

### 3. Calculation of credits and deductions

Participants report annual emissions from deforestation and forest degradation during the 5-year crediting period (per the monitoring and reporting requirements in TREES). If annual emissions are below the HFLD Crediting Level, then the difference between the HFLD Crediting Level and the reported annual emissions value are the eligible emission reductions (ERs) for that period<sup>27</sup>. Leakage, buffer pool, and uncertainty deductions are taken as applicable, and, following successful validation and verification and ART Board approval, the net quantity is issued into the Participant’s account as serialized TREES Credits.

If reported annual emissions are above the 5-year historical emissions average by greater than 15% but are not greater than the HFLD Crediting Level, then an HFLD rising emissions deduction is taken from the final ERs according to TREES Section 5.2.2. This deduction can be up to 100% of the credits if the annual emissions rise significantly.

### 4. Issuance of credits

TREES Credits issued to Participants using the HFLD crediting approach represent emission reductions and will be designated with an “HFLD” label in the ART Registry.

<sup>26</sup> Above-ground and below-ground tree biomass only

<sup>27</sup> If a HFLD jurisdiction wishes to do so, it may also calculate the associated foregone removals as laid out on page 37 of TREES 2.0.