

Governments of Guyana, Gabon and Suriname

Feedback on TREES V2

Introduction

For many years, the Governments of Gabon, Guyana and Suriname have called for international collaboration to enable ambitious action on maintaining the world's forests. All three countries have worked extensively on this matter, alongside other countries, including through the High Forest Low Deforestation (HFLD) Summit in February 2019 (held in Suriname) and during the UNFCCC COP in Paris in 2015.

As such, the three Governments very much welcome the potential emergence of a market-based mechanism to address all aspects of REDD+, namely: (a) Reducing emissions from deforestation; (b) Reducing emissions from forest degradation; (c) Conservation of forest carbon stocks; (d) Sustainable management of forests; (e) Enhancement of forest carbon stocks.

In particular, we welcome the emergence of the ART-TREES Version 2.0 HFLD and removals modules. As the HFLD score within the module highlights, Guyana, Gabon and Suriname have the highest HFLD scores in the world. Towards that end, we remain open to considering further engagement with ART-TREES, and hope that our feedback can lead to a solution that underpins the following two objectives:

1. Ensures environmental integrity through the creation of incentives for all the REDD+ activities,
2. Starts to create a market for forest-based carbon credits which achieves a fair balance between the legitimate needs of both buyers and sellers.

At this point, our shared view is that the proposed ART-TREES HFLD module does not yet meet either of these objectives, and we summarize our analysis in this note to the ART Secretariat for further consideration.

However, we also believe that the two objectives are achievable providing there is collaboration with HFLD Participants and/or jurisdictions in the finalization of the design of the module(s). All three countries are willing to take part in such a collaboration in the coming weeks, and we propose a potential solution which could be the basis for further work.

In this document:

- **Section One** sets out our analysis of the HFLD module and our identification of many positive elements. It also sets out why we believe that as it stands, the HFLD module rewards increases in deforestation for reference periods, and actively disincentivizes (i) reducing deforestation and (ii) maintaining constant rates of extremely low deforestation. We were surprised to reach these conclusions and welcome feedback on our calculations. Furthermore, we invite the ART Secretariat to share information about what datasets were used to validate the module's methodology – perhaps it is not intended for countries with very high HFLD scores such as ours and if that is the case, we would appreciate learning more about what the target national or sub-national levels are.
- **Section Two** sets out an alternative proposal which could meet the objectives above, and in particular enable the integration of methodologies which target those elements of REDD+ which involve reducing relatively high levels of deforestation with those that prevent it from taking off in the first place.

- **Annex 1** shares country specific feedback and examples.

We will welcome feedback from the ART-Secretariat on the contents of these Sections, as well as further dialogue to determine whether the HFLD module can align with the two objectives set out above.

Unfortunately, ART-TREES Version 2.0 does not yet recognize the value of forests remaining forests and thus excludes the REDD+ activity 'Conservation of forest carbon stocks'. We believe that this is an important element for the ART Secretariat to consider in future iterations of the Standard. Thoughts on how forests remaining forests could be recognized are shared in Annex 1.

Section 1: Specific Feedback

The inclusion of an HFLD aspect under TREES v.2 is a significant move forward in providing a valuable opportunity for HFLD countries to have access to a market-based payment system for forest carbon services which the forest provides.

It is recognized that the emphasis has been on maintaining low deforestation rates for HFLD countries. As mentioned previously, there is also an interest in exploring/expressing an intention, even at this stage inclusion of conservation aspects, which may add a more holistic treatment of forest carbon services at HFLD level.

The following points are specifically noted:

Positives

1. Very robust standard that is comprehensive in its capture of environmental, economic and social aspects of REDD+,
2. Allowing for Reference Period of 15 years with 7 data points,
3. Allows for crediting of period 2016 to 2020,
4. Use of HFLD Score as an eligibility criteria that assesses forest cover and loss,
5. Comprehensive coverage of both deforestation and forest degradation,
6. Continued inclusion of ICAO as a partner

Performance of HFLD Module against Environmental Integrity and Fairness Objectives

Annex One details country-level analysis of the HFLD module, but broadly similar conclusions were reached when looking at Guyana, Gabon and Suriname in terms of (i) environmental integrity and (ii) fairness:

Environmental Integrity:

- Sustained increases in deforestation in reference period create a higher crediting level than efforts to flatten the deforestation curve or reduce it,
- Decreases in deforestation actually lead to a negative crediting level,
- For countries with high HFLD scores, there are incentives to prioritize sub-jurisdiction projects (whose HFLD scores are lower than the national score).

Therefore, there are significant perverse incentive risks.

Fairness

Using reasonable pricing assumptions, the crediting level creates income streams that are far lower than those of alternative land use options. They are also lower than the potential income from subnational or project-based initiatives.

This creates significant risks for both:

- buyers (the risk that they will be perceived as exploitative through under-paying for nature-based solutions to receive market reward/recognition for voluntary climate action), and
- sellers (whose citizens may query why transactions are taking place with little or no economic value to the jurisdiction which is providing the nature-based solutions).

The anticipated income is also below the costs of MRV systems and other capabilities needed to operationalize the HFLD modules. Given that all three countries have invested considerably in the assets needed to build those systems/capabilities, it would be perverse if ART-TREES was to catalyse the stranding of those assets by reducing (and possibly destroying) their economic value.

Annex One sets out the analysis behind the above.

Areas for Improvement

1. There should be more consideration of countries which have very high forest cover and low deforestation rates by more integral inclusion of forest size/cover/carbon stocks within consideration of reference and crediting levels.
2. Model needs to address significant variation in crediting levels with marginal increases in emissions levels. Guyana's emissions have ranged within small margins and reflecting an accompanying deforestation level range of 0.048% and 0.079% annually. Gabon's emissions have been historically low, its historical deforestation emissions have ranged within the margins of 0.06% and 0.08% annually. These narrow ranges should see a stable crediting level of emissions.

Although in the immediate term a trend can be used by HFLD countries (which allows a true representation of likely emissions from forests under increasing pressures), it is expected that the curve will be leveled out and in the longer term even HFLD countries will be using an average (or a trend that is so marginal that it is almost level). In countries with very low rates of deforestation, an average poorly represents likely annual emissions in the absence of REDD+. At very low levels of emissions, exogenous factors will lead to marginal upward and downward movement in emissions with little opportunity for REDD+ strategy to have an impact. In these low emission situations, there is a high probability that the country will either be rewarded for emissions below the average that are effective "hot air", or punished for emissions above the average that in any given year do not actually represent a REDD+ failure by the country.

Instead, we would recommend a different approach to setting a crediting level for countries that have annual deforestation rates of $<[0.15]\%/yr$. In this circumstance we respectfully suggest that crediting level be viewed as an envelope or range rather than a single value. The envelope would be defined by all emission values in the five reference years. Thus,

emissions above the average but within the envelope would not be viewed as a reversal, but crediting for emission reductions within the envelope would be fractional with full crediting only occurring when emissions are fully below the entirety of the envelope.

3. For reversals, mitigating factor #2 is unjustly penalizing countries with very low deforestation rates, countries that, in reality, are least likely to cause reversal harm. For countries with 2 or 3% deforestation rate, clearly a 15% variation is highly significant and indicates volatility that will be a reversals risk. But for a country like Guyana where the rate is approximately 0.05% per year, 15% represents the difference between 0.043 and 0.058 %/yr which would be less than 25 square kilometers of forest loss between the highest and lowest rates. This level of difference can be down to random variables that cannot be controlled by the Government yet in no way indicate that Guyana is a country that is at high risk of reversals. We argue that Guyana, Gabon and Suriname should have access to all three mitigation factors indicating our low reversal risk instead of being penalized as we currently are for already having low rates of deforestation.

Section 2: Proposal for Consideration

Two proposals are put forward to address the issues outlined in Section 1. A mechanism under ART for HFLD countries should recognize the asset base of HFLD through its forest carbon stock in tandem with historic emissions. To only use historic emissions to determine crediting levels for HFLD countries, excludes the important consideration of the asset itself.

The first proposal outlines the use of the Combined Reference Level Approach as submitted in Guyana's FREL.

The second proposal below, takes both HFLD priorities into consideration in a manner that encourages longer term commitment, more stable annual crediting levels, whilst creating additionality within reasonable limits. This creates a development space from a position of historic emissions level, within limits.

This proposal on "*Adjusted historical emissions level based on HFLD Score*", reflects these priorities:

Part 1

Crediting Level **for gross emissions** Determined by:

(HFLD Score X 0.1% of carbon stock)

plus

Historical emissions level up to 15 years

Crediting Level for gross removals Determined by:

Historical removals level up to 15 years

minus

(HFLD Score X 0.1% of carbon stock)

Part 2

Payment Level for Assessment Year (for gross emissions) Determined by:

Verified Emissions level

Subtract from

Crediting Level

Payment Level for Assessment Year (for gross removals) Determined by:

Crediting Level

Subtract from

Verified Emissions level

Part 3

To ensure additionality,

Reduced if:

Actual Gross Emissions exceeding 25% from historical level	Actual Gross Emissions exceeding 35% from historical level	Actual Gross Emissions exceeding 45% from historical level	Actual Gross Emissions exceeding 55% from historical level	Actual Gross Emissions exceeding 65% and greater from historical level	...	Actual Gross Emissions doubling historical level
Reduced by 10% on crediting level	Reduced by 15% on crediting level	Reduced by 20% on crediting level	Reduced by 25% on crediting level	Reduced by 30% on crediting level	...	No payments

For gross removals, the same would be applied as the table above, except that the reduction the crediting level would be measured as an increase.

For each crediting period, the Crediting Level will be the same for every year of the 5 years within the crediting period and only adjusted by the above table and reversal buffers and uncertainty.

The use of the 0.1% of forest carbon stock proposed, encourages longer term commitment of forest carbon maintenance, is conservative and speaks to the plus element REDD+.

Annex 1

Country Specific Feedback: Guyana

HFLD Model Outcomes for Example Scenarios in Guyana

The HFLD model, when applied for Guyana shows higher crediting levels for where the immediate past years reflected higher emissions totals (Scenario 1: Reference Period 2005 to 2015), and lower crediting levels for those immediate past years that have lower emissions (Scenario 2: Reference Period 2005 to 2019). For years where there is a stable/flat emissions level, the crediting levels yields no likely benefits in payments (Scenario 3). Even though there is some room to reduce emissions for HFLD countries, this is limited and short term. Guyana's average annual emissions level is 13,000,000 tCo2.

With a reference period of 2005 to 2015, the crediting level for year 2020 is 23,750,317.7 tCo2.

Scenario 1: Reference Period 2005 to 2015

Year	Crediting Level (tCo2)
2016	19,585,357
2017	20,626,597.1
2018	21,667,837.3
2019	22,709,077.5
2020	23,750,317.7

With a reference period of 2005 to 2019, the crediting level for year 2020 is 15,412,678.2tCo2.

Scenario 2: Reference Period 2005 to 2019

Year	Crediting Level (tCo2)
2020	15,412,678.2
2021	15,854,881.7
2022	16,297,085.2
2023	16,739,288.7
2024	17,181,492.2

Scenario 3: Reference Period 2005 to 2019 with hypothetical stable emissions level for 2015-2019 (12,279,152 tCo2)

Year	Crediting Level (tCo2)
2020	12,620,468.3
2021	12,705,797.4
2022	12,791,126.4
2023	12,876,455.5
2024	12,961,784.5

Country Specific Feedback: Gabon

A) HFLD Model outcomes for Gabon

The application of the HFLD Crediting level regression tool to set a crediting level for Gabon did not demonstrate any advantage to Gabon compared to the standard ART-TREES crediting level, and Gabon was not able to demonstrate eligibility for RBPs under the TREES 2.0 standard under any simulation (Figure 1). Gabon's proof of having already reduced emissions prior to the first results year works against the country when the crediting level is set using a linear regression with a recent historical reference period. Although Gabon's total annual emissions are demonstrably low (e.g. compared to removals), the HFLD Crediting Level regression tool would only work to the country's advantage had it maintained higher historical emissions prior to the first results year and lower or decreasing emissions from the first results year.

Simulation 1: Crediting level for HFLD countries established with 15 years' historical data (2001-2016)

Given the historically high gross emissions for Gabon in the early 2000's, the regression line is very steep downwards, indicating that Gabon would fail to meet the threshold for results in 2017-2018 by 6-9 million tCO₂eq/year.

Year	Crediting level	Actual Results	Difference
2017	20,431,725	26,390,631	-5,958,906
2018	19,310,180	28,132,379	-8,822,199
2019	18,188,635		
2020	17,067,089		
2021	15,945,544		

Simulation 2: Crediting level for HFLD countries established with 7 years' historical data (2010-2016)

This is the most optimal scenario for Gabon, given emissions are at their lowest from 2010 onwards, and the regression line actually increases slightly through the crediting level. However, emissions in 2017-2018 still exceed this threshold by 3-4 million tCO₂eq/year.

Year	Crediting level	Actual Results	Difference
2017	23,288,369	26,390,631	-3,102,262
2018	23,433,280	28,132,379	-4,699,099
2019	23,578,192		
2020	23,723,103		
2021	23,868,014		

Simulation 3: ART-TREES normal crediting level established with 5 years' historical data (2012-2016)

This scenario does not result in much difference compared to Simulation 2; the crediting level is equivalent to the 5-year average for 2012-2016, meaning Gabon is not eligible: emissions in 2017-2018 exceed this threshold by between 3-5 million tCO₂eq.

Year	Crediting level	Actual Results	Difference
2017	23,120,778	26,390,631.4	-3,269,853
2018	23,120,778	28,132,379.2	-5,011,601
2019	23,120,778		
2020	23,120,778		
2021	23,120,778		

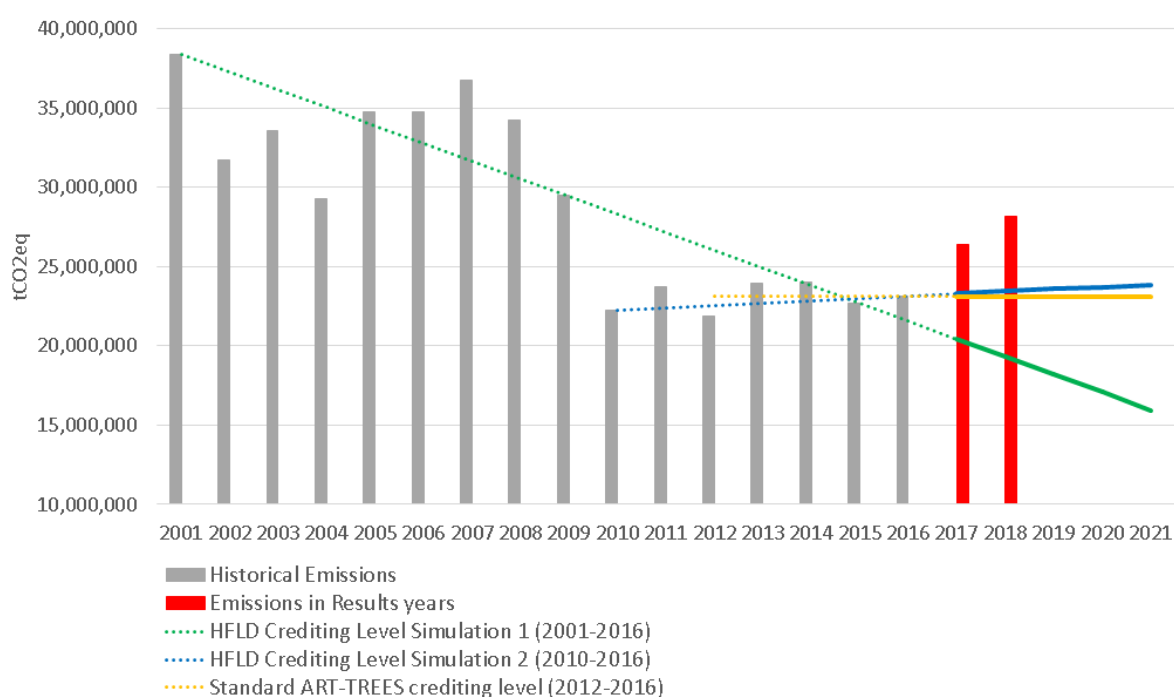


Figure 1- Gabon's historical emissions 2001-2016 (grey bars), used to calculate three different crediting levels under ART-TREES for results years 2017 and 2018 (red bars). HFLD crediting level simulation 1 (green line); HFLD crediting level simulation 2 (blue line), crediting level simulation 3 (yellow line).

B) HFLD Score calculated for Gabon

Deforestation rate (average 2002-2016) = 0.07%

Forest cover = 88%

HFLD Score = $FSCt + DRS \ t = 0.0038 + 0.0043 = 0.81\%$

C) Further ideas for Consideration

1. Net approach for emissions and removals

Currently the draft TREES v.2 states that Participants “must have successfully reduced emissions from deforestation and degradation below the TREES Crediting Level (at the time of the most recently verified TREES Monitoring Report)” in order to be eligible for removals.

As this is particularly difficult for HFLD countries, it is suggested that HFLD Participants should be eligible for crediting from removals if they can demonstrate overall net removals.

0.1% of carbon stocks over the historical reference period are 15,882,245 tCO₂eq. When applying the suggested approach in Section 2, the table below shows potential results for Gabon based on gross emissions and removals respectively.

Accounting	Avg historic level (2002-2016)(tCO ₂ eq)	Crediting level (tCO ₂ eq)	2017 performance (tCO ₂ eq)	Results against Crediting Level (tCO ₂ eq)	
Gross Emissions	28,406,043	41,111,839	26,390,631	14,721,207	Reduced Emissions
Gross removals	143,536,404	130,830,608	139,881,968	9,051,360	Increased removals

2. Rewarding removals for forests remaining forests

Sinks provided by ‘forests remaining forests’ in REDD+ are not currently valued in climate finance frameworks, but they are significant in scale, are expected to continue functioning decades into the future if undisturbed, and face increasing threats. A mechanism is needed that explicitly gives a value to actions that maintain these sinks. Unfortunately, the TREES draft v.2 continues this trend and only allows for the inclusion of non-forest land converted to forest-land.

We propose to use the ecological concept of ‘dense’ or ‘old-growth’ forest, which is widely accepted in the scientific community, as an accurate and conservative manner to include removals from forests-remaining forests in TREES v.2 while maintaining environmental integrity. Furthermore, most Participants have robust national data on these forests and several regional datasets and high-level peer reviewed publications exist on these forests and their removal rates with known uncertainties. This data is readily available in the scientific literature and as part of big forest research initiatives such as [GEM](#), [Afritrion](#), [RAINFOR](#) and others. Participants may need to accurately map the areas of forests with a legal and active protection/conservation status as well as indigenous and community territories.

Crediting for removals for forests remaining forests would be given for removals achieved during the crediting period, applied to all forest types nationally that have been assigned a legal and active protection/conservation status of one kind or another (e.g. under the REDD+ activity ‘Conservation of existing stocks’) which is being effectively implemented and could also include indigenous and community territories. A conservative per hectare annual removal factor based on national data

and/or regional data on “dense / old-growth” forests would be applied to these forests for each year that they remain effectively protected. This provides an elegant and solid accounting solution with known uncertainties, respects the principle of conservativeness, evidences action by the Participant, and removes the need for additionality (e.g. no need for additional removals against a historic baseline).

Applying this example to Gabon, a conservative removals factor for old growth forests of 3,49 tCO₂eq/ha/year (aboveground and belowground) is applied to Gabon’s protected areas (including National Parks, Integral Nature Reserves, Presidential Reserves, Faunal Reserves, Hunting Domains, Managed Faunal Exploitation Areas, Arboretums, Cultural/historic areas)^[1]. This results in a mean of 11.6 million tCO₂eq per year. If a 35% deduction would be applied as a ‘buffer’ and \$5 tCO₂eq per year, this would result in approximately \$37.8 million per year in Results-Based Payments for removals in protected areas for Gabon.

	Units	AGB+BGB	AGB only
Forest cover Protected Areas (2018)	Ha	3,336,167	3,336,167
Removals	tCO ₂ eq	11,632,603	9,419,112
35% deduction	tCO ₂ eq	7,561,192	6,122,423
@5USD/t	USD	37,805,959	30,612,113

^[1] This calculation currently excludes set-aside conservation areas in logging and agricultural concessions.

Country Specific Feedback: Suriname

The application of the HFLD Crediting level regression tool does not seem to have advantages for Suriname looking at the difference of the crediting levels and actual emissions demonstrated in the three simulations below.

Simulation 1: Crediting level for reference period 2000-2014

Within the period 2000-2014 there is an increase in deforestation emissions. However, the difference between the crediting levels and actual emissions doesn't show to meet the threshold for the period 2015-2017.

Year	Crediting level (t CO2)	Actual emissions (t CO2)	Difference
2015	6,777,216.21	7,609,527.68	-832,311.47
2016	7,155,620.86	9,176,366.74	-2,020,745.88
2017	7,534,025.51	8,596,501.43	-1,062,475.92
2018	7,912,430.16	7,106,345.98	806,084.18
2019	8,290,834.81	8,255,061.68	35,773.13

Simulation 2: Crediting level for reference period 2000-2017

In the beginning of the period 2000-2017 there was an increase in the deforestation rate until 2014, whereafter it decreased. The emissions in 2019 does not meet the threshold by 200,000 tCO₂eq/year.

Year	Crediting level (t CO2)	Actual emissions (t CO2)	Difference
2018	7,702,589.86	7,106,345.98	596,243.88
2019	8,066,005.91	8,255,061.68	-189,055.77
2020	8,429,421.97		
2021	8,792,838.03		
2022	9,156,254.08		

Simulation 3: Crediting level for reference period 2014-2017

Within this period there is more or less a stable trend. The emissions in 2018-2019 still exceeds the threshold by 200,000 to 1 million tCO₂eq/year.

Year	Crediting level (t CO2)	Actual emissions (t CO2)	Difference
2018	6,819,772.99	7,106,345.98	-286,572.99
2019	6,300,372.18	8,255,061.68	-1,954,689.50
2020	5,780,971.37		
2021	5,261,570.56		
2022	4,742,169.75		

From the preliminary calculations of results as presented in the tables above, it is evident in the case of Suriname that results are only marginally positive or negative with the crediting period of 2015-2022. These results indicate that, in the case of Suriname, with stable and reduced emissions rates

during the reference period, the results of the model indicate minimum benefits for Suriname under the current formulation of the HFLD module. Any marginally positive results could be further reduced to the negative with inclusions for provisions for buffers and uncertainty.

The reports of the three simulations can be viewed on the following link:

<https://drive.google.com/drive/folders/1MuwFFekpS-gkydfnoNTG1ThjeQsRuqDG?usp=sharing>