

Creating incentives for the protection of high-forest/ low-deforestation (HFLD) areas

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March 30, 2023

Brief history of HFLD: where did it come from?

Area (1992) 24.4, 367–379

The forest transition

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Research

Mapping the World's Intact Forest Landscapes by Remote Sensing

[Peter Potapov](#)¹, [Aleksey Yaroshenko](#)², [Svetlana Turubanova](#)², [Maxim Dubinin](#)³, [Lars Laestadius](#)⁴,
[Christoph Thies](#)⁵, [Dmitry Aksenov](#)⁶, [Aleksey Egorov](#)², [Yelena Yesipova](#)⁶, [Igor Glushkov](#)⁶,
[Mikhail Karpachevskiy](#)⁷, [Anna Kostikova](#)⁶, [Alexander Manisha](#)⁶, [Ekaterina Tsybikova](#)⁶, and
[Ilona Zhuravleva](#)²

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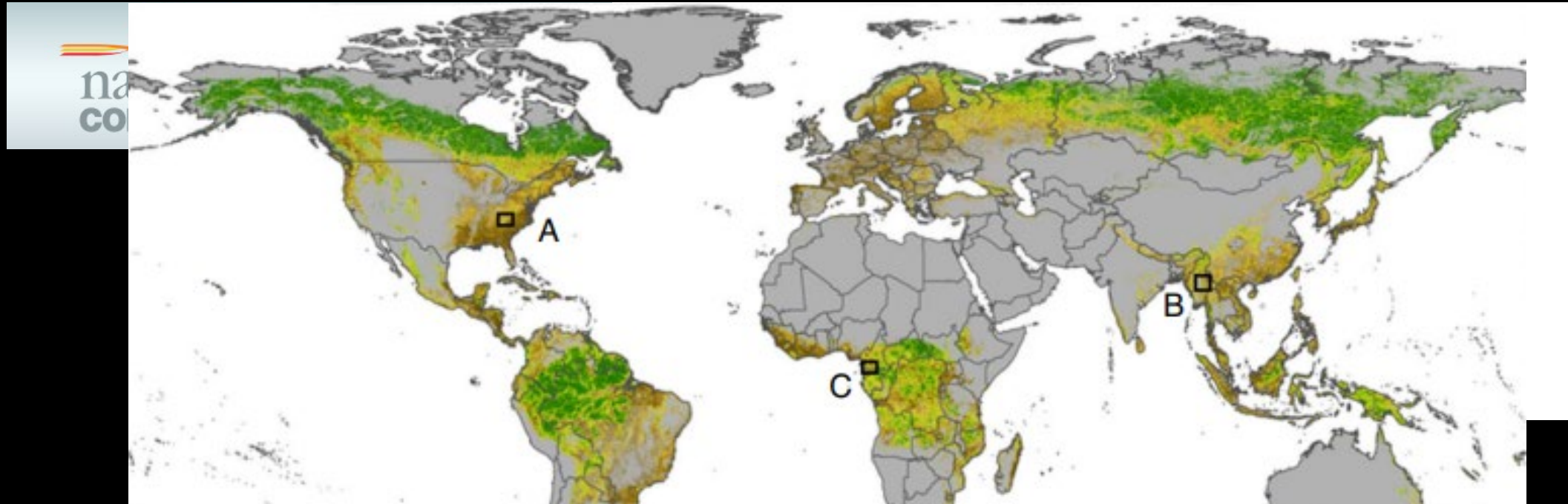
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No Forest Left Behind

Gustavo A. B. da Fonseca*, Carlos Manuel Rodriguez,
Guy Midgley, Jonah Busch, Lee Hannah, Russell A.
Mittermeier

Big steps forward in 2019



Securing the climate benefits of stable forests

Jason M. Funk, Naikoa Aguilar-Amuchastegui, William Baldwin-Cantello, Jonah Busch, Evgeny Chuvasov, Tom Evans, Bryna Griffin, Nancy Harris, Mariana Napolitano Ferreira, Karen Petersen, Oliver Phillips, Muri G. Soares & Richard J.A. van der Hoff

Krutu of Paramaribo Joint Declaration on HFLD Climate Finance Mobilization



We, Heads of Delegation and representatives of High Forest Cover and Low Deforestation (HFLD) developing countries met in the city of Paramaribo, Suriname, from 12 to 14 February 2019 on the occasion of the First HFLD Conference on Climate Finance Mobilization;

Reaffirming the recognition by the United Nations Forum on Forests (UNFF) at its 11th session in 2015 of the special needs and requirements of HFLD developing countries in mobilizing financing for sustainable forest management, including conservation;

Increasing sense of value and urgency







ScienceAdvances Current Issue First release papers Archive About

Degradation and forgone removals increase the carbon impact of intact forest loss by 626%

SEAN L. MAXWELL  , TC
 , REBECCA K. RUNTING

nature sustainability ARTICLES
<https://doi.org/10.1038/s41893-021-00803-6>

OPEN
Mapping the irrecoverable ecosystems

Monica L. Noon  , Allie Goldstein ¹, Juan Ca
Susan C. Cook-Patton ³, Seth A. Spawn-Lee ⁴,
David G. Hole ¹, Johan Rockström⁷ and Will R.

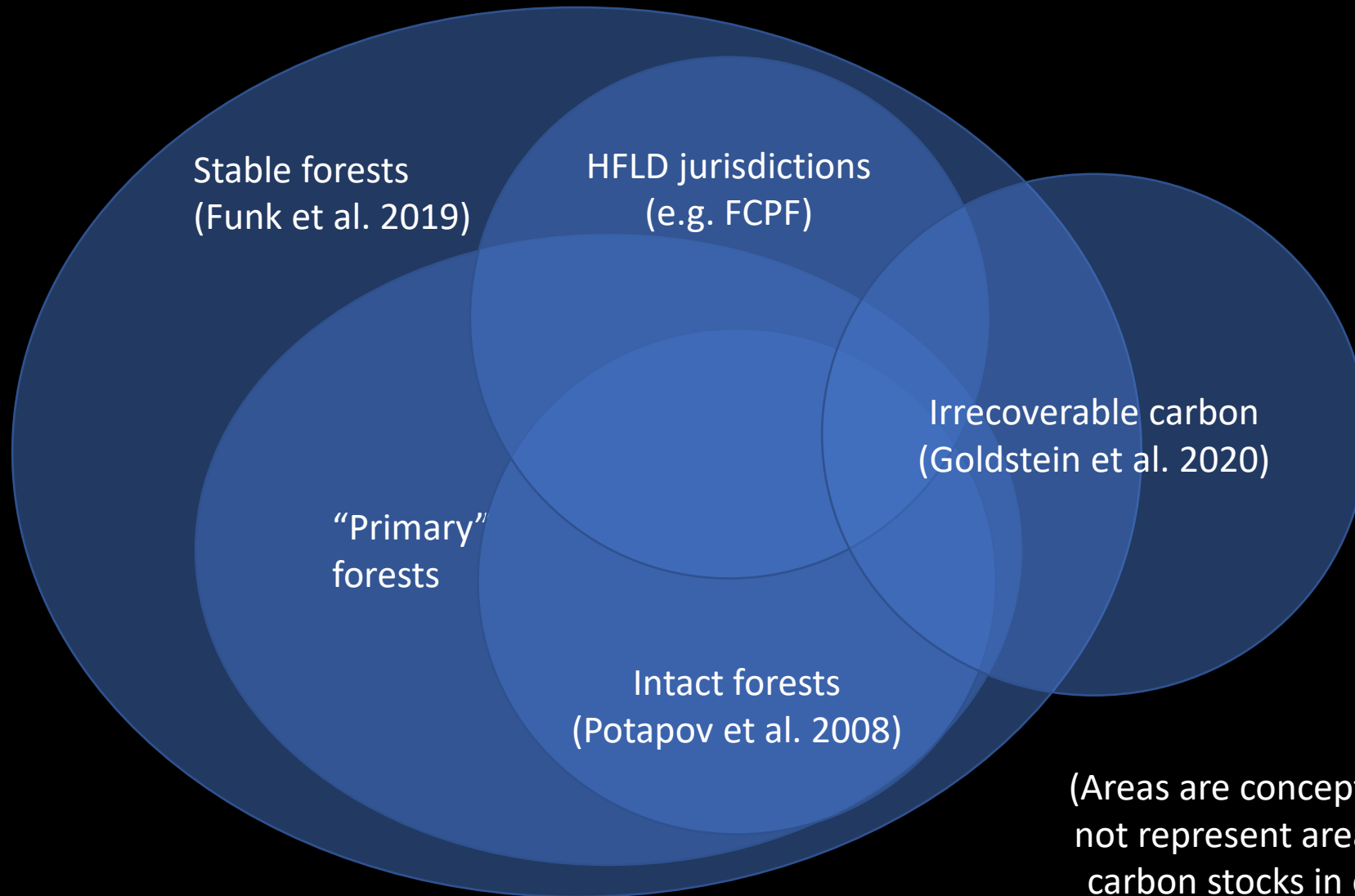
REPORT

Not Just Carbon

Capturing *All* the Benefits of Forests for Stabilizing the Climate from Local to Global Scales

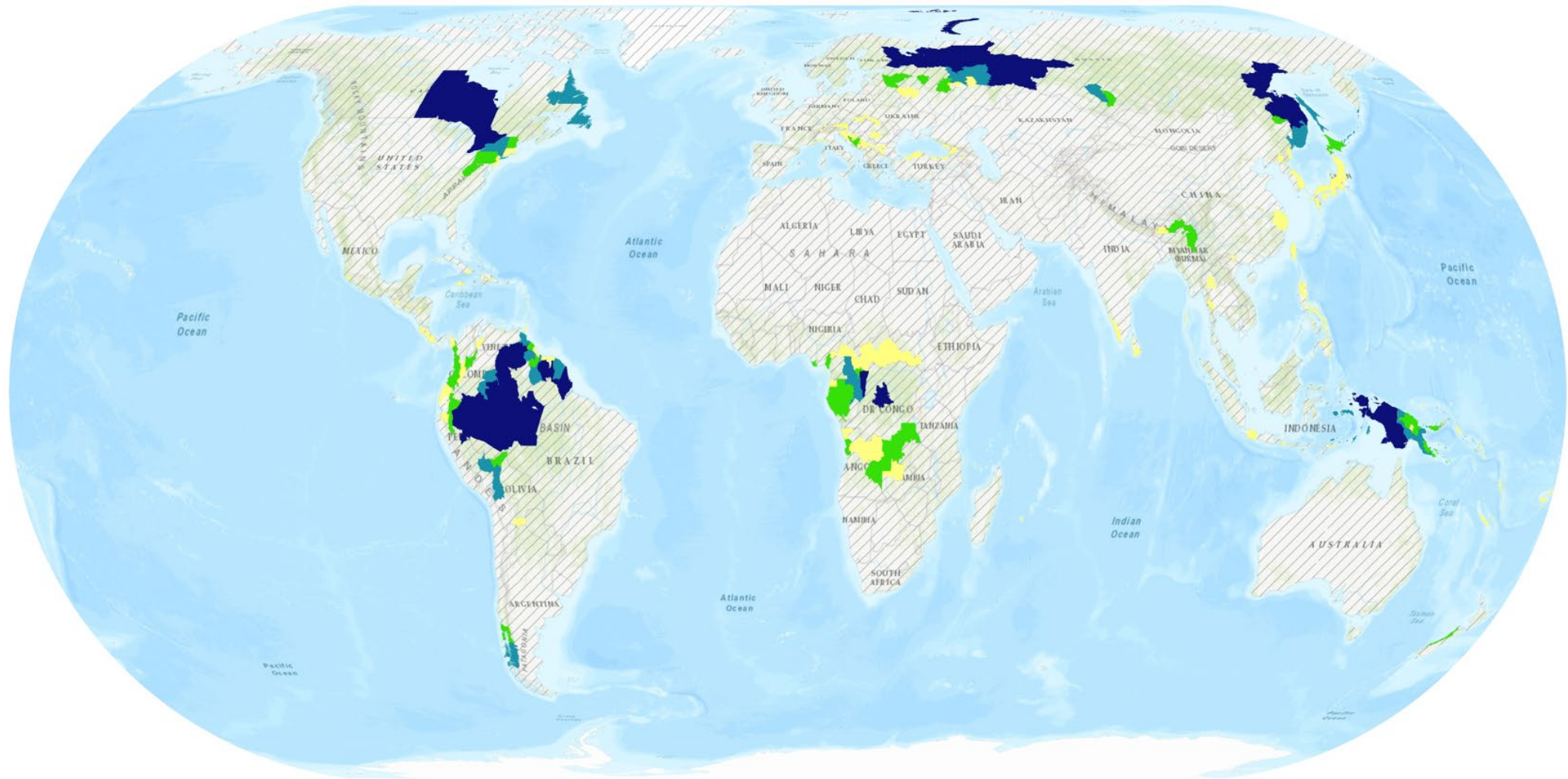
Frances Seymour, Michael Wolosin, and Erin Gray

Terminology and conceptual overlap



What's at stake?

HFLD Jurisdictions with Irrecoverable Carbon



Source: CI in-house analysis

Priority HFLD - Stock IC (Mt) < 50 50 - 200 200 - 500 500+

Are HFLD areas at risk now?

Yes.

Over the past two decades, **22%** of global forest emissions originated in primary tropical forests.

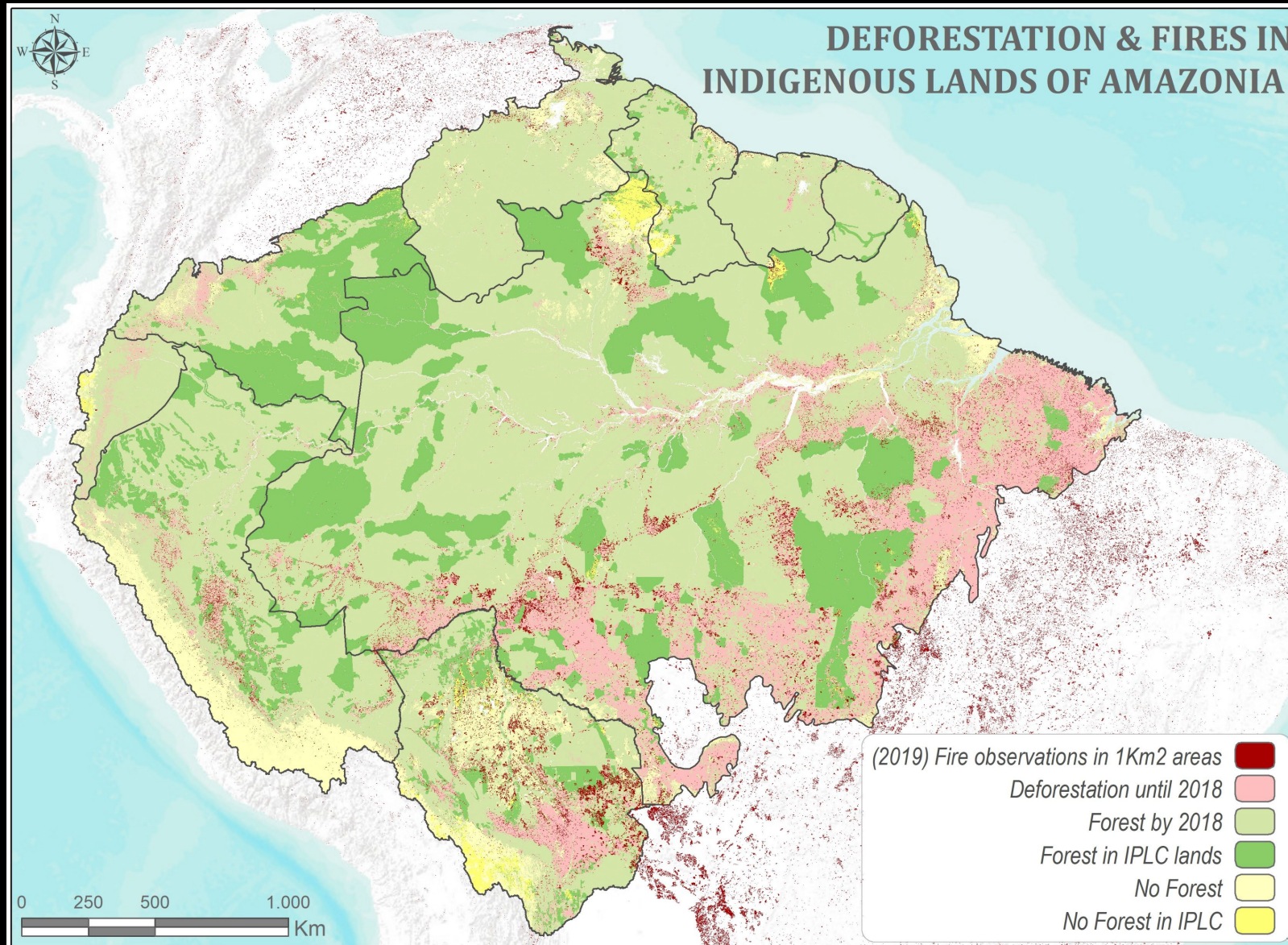
Overall, $\frac{1}{4}$ of forest emissions have come from mature/primary forest areas.

Table 1 | Forest-related GHG fluxes by climate domain and forest type

Climate domain	Forest type	Forest extent 2000 (Mha)	GtCO ₂ e yr ⁻¹ , 2001–2019					
			Gross emissions	Percentage of global total	Gross removals	Percentage of global total	Net GHG flux	Percentage of global total ^d
Tropical	Primary ^a	1,010	1.8	22	-1.9	12	-0.12	
	Old secondary (>20 yr)	880	1.9	23	-3.8	24	-1.9	
	Young secondary (≤20 yr)	47	0.76	9.5	-0.40	2.5	0.37	
	Plantations/tree crops ^c	47	0.89	11	-0.73	4.7	0.16	
	Mangroves	7.2	0.010	0.12	-0.16	1.0	-0.15	
Global	Primary	1,060	2.1	26	-2.0	13	0.13	
	Old secondary (>20 yr)	2,750	3.7	45	-11	72	-7.7	
	Young secondary (≤20 yr)	99	0.9	12	-0.54	3.5	0.39	
	Plantations/tree crops	113	1.4	17	-1.6	10	-0.23	
	Mangroves	8.7	0.012	0.14	-0.20	1.3	-0.19	
Total global		4,029	8.1 ± 2.5	100	-16 ± 49	100	-7.6 ± 49	100

Source: Harris et al. 2021. Global maps of 21st Century forest carbon fluxes. Nature Climate Change

Who is on the front lines?



Indigenous people are key defenders of forest carbon, and they face increasing challenges.

On protecting forests:
“It has not been easy; it has not been free. But it has become essential.”
- Juan Carlos Jintiach, COICA

IPLCs can benefit from additional support to protect forests.

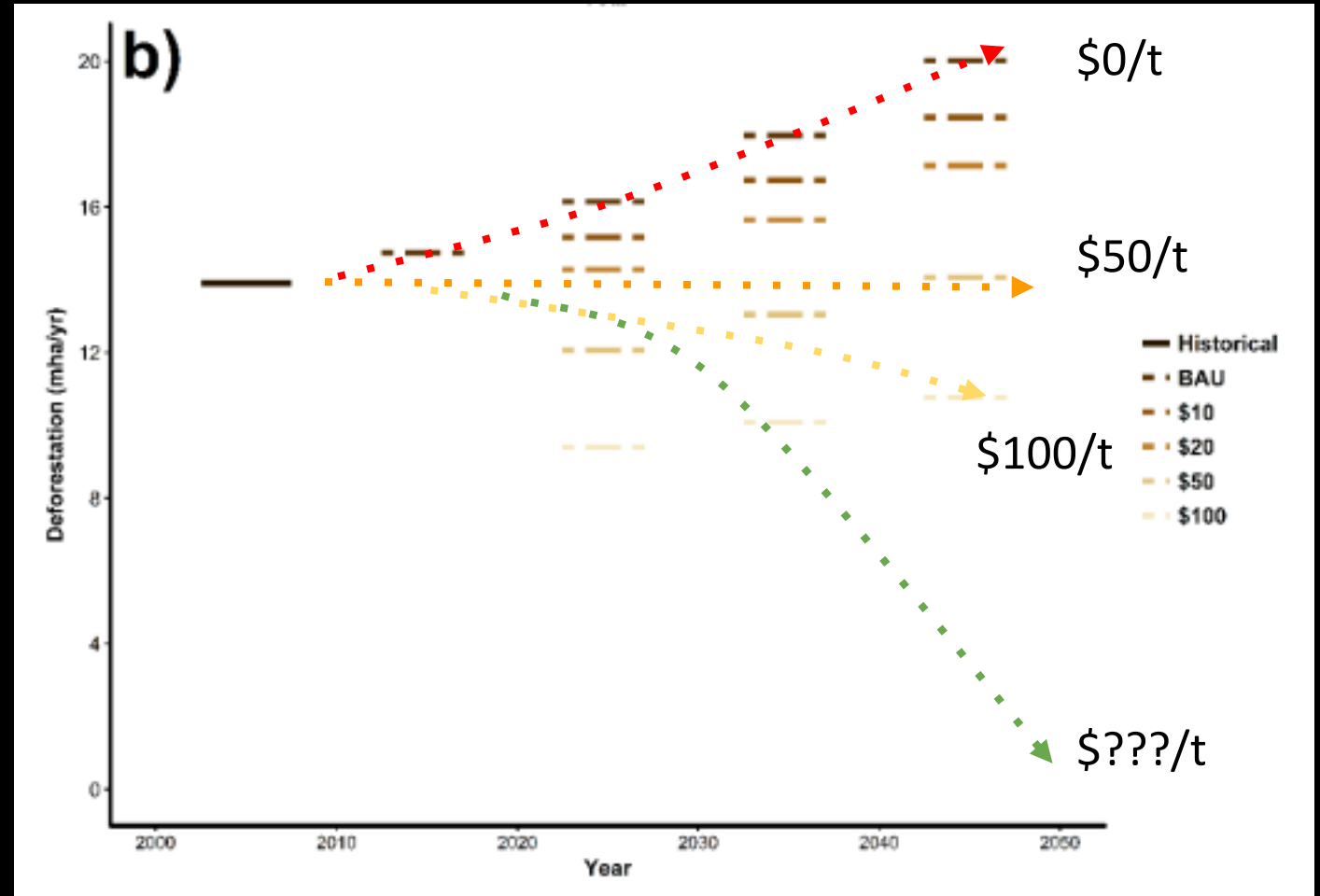
Source: CI in-house analysis

Are forests expected to change in the future?

Yes. The process of decarbonization of other sectors plus other factors are expected to increase pressures on forests.

Projections indicate that **deforestation rates will go up** in the absence of carbon incentives.

Therefore, the protection of existing forest stocks – even keeping them at static levels – will require **increasing incentives** if we are to counter-balance these increasing pressures.




Carbon prices must rise to $> \$50/t$ to maintain static levels of deforestation. Busch et al. 2019. Supplementary Fig. 6b

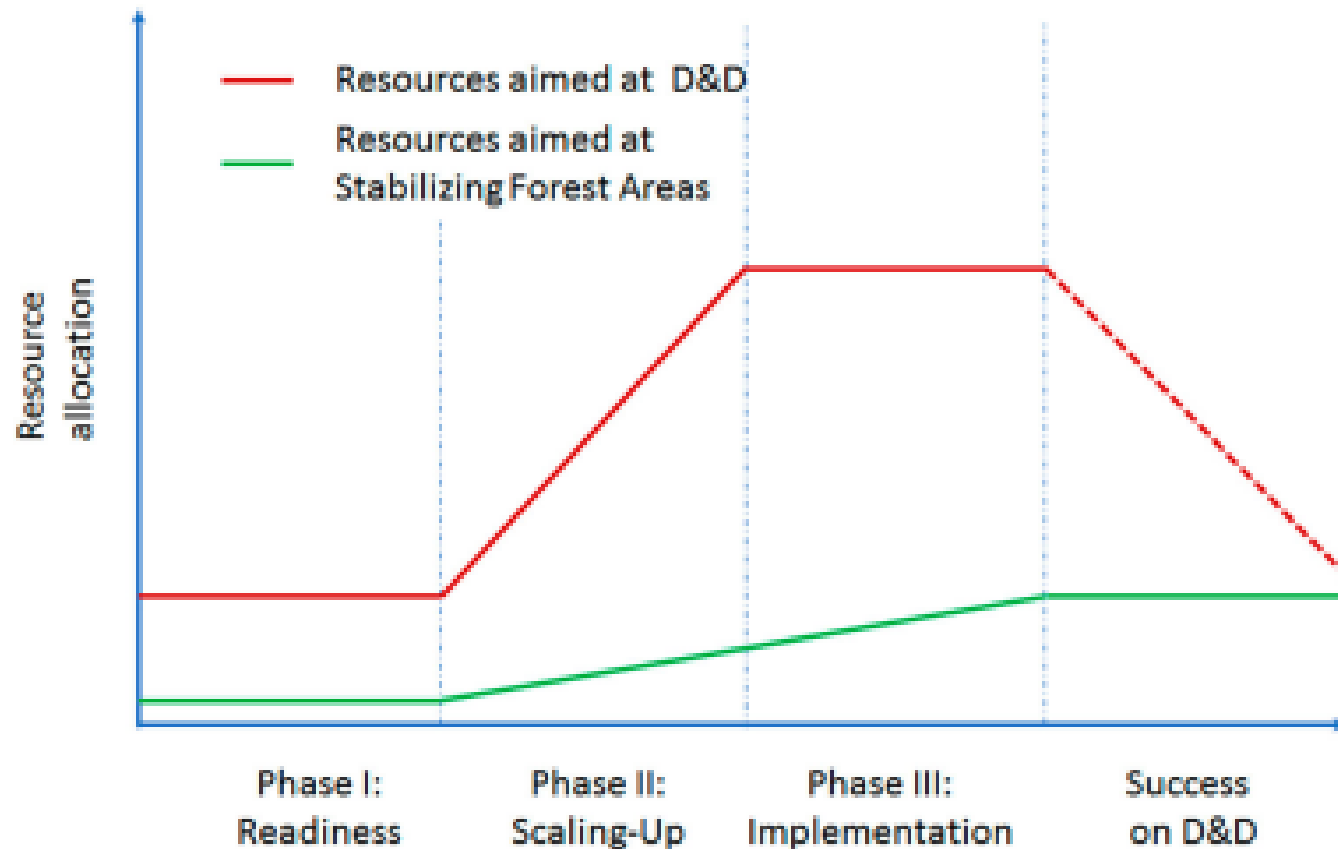
Have existing mechanisms served these forests?

Do HFLD credits have a role to play here?

Policy Attributes	International climate agreements	National climate policies	Donor-supported land management planning	Voluntary activities among non-state actors
1) Anticipate risks	Missing. Current policies are framed by historical emissions, with little incentive for forward-looking, holistic approaches.	Mixed. Some countries actively anticipate drivers and enforce protected areas, but these actions are insufficient or contentious in many places.	Missing. Donor-supported activities have been almost entirely in the context of emission reductions and have not recognized the climate value of stable forests.	Mixed. Some projects and activities have tackled underlying drivers (such as commodity supply chains) and recognized the value of existing stable forests, but these efforts have had little impact at the global scale so far.
2) Incorporate broader value	Good. The climate value of stable forests is emphasized in the UN Framework Convention on Climate Change and the Paris Agreement, and this value is linked to non-climate benefits.	Mixed. In some cases, stable forests are implicitly part of national climate policies, but they typically lack detail, coherence with other issues, and administrative support.	Good. Climate-related support has often been directed at holistic planning as part of 'readiness,' with non-climate benefits specifically targeted, and environmental and social safeguards enforced.	Missing. With a few notable exceptions, projects and activities have typically been designed to secure climate benefits alone, and they are not often integrated into a holistic land management strategy.
3) Allocate resources	Mixed. The Paris Agreement and the Warsaw Framework on REDD+ develop mechanisms that could direct resources toward the protection of stable forests, but these mechanisms are either incomplete or have focused on emission reductions.	Mixed. National policies have created and enforced protected areas, but such areas are often under-resourced, and PADDD activities are sometimes the result of inadequate resourcing in the face of development pressures.	Mixed. Donors have channelled significant resources into readiness and forest protection, but the overall scale of finance is still inadequate at a global level, and resources have tended to be directed at historical threats, rather than stable forests.	Missing. Voluntary activities have been funded at levels far below what would be required to adequately secure current areas of stable forests.
4) Sustain efforts	Mixed. The nature of commitments under the Paris Agreement prohibits backsliding on activities, but this has not yet been tested.	Mixed. Most countries engage in some sort of long-term land-use planning, but climate benefits have rarely been a priority in such efforts, and stable forests are often seen as untapped areas for future exploitation. The result is that enforcement can be inconsistent, or protection efforts can be removed (PADDD).	Mixed. While most donors require long-term planning as a condition of eligibility, these plans are not typically required to explicitly address current areas of stable forests.	Missing. Voluntary activities have proven to be ephemeral, with many projects or initiatives becoming abandoned when financial resources cannot be sustained.
5) Monitor outcomes	Missing. These agreements do not require ongoing monitoring of stable forests and they include the option to exclude such forests from monitoring activities.	Mixed. Many countries are equipped to comprehensively monitor forests, but unmanaged areas receive little attention, and monitoring is not always linked to enforcement.	Good. Donors generally require, and have supported, efforts to improve monitoring capacity, aimed at directing resources and enforcement.	Mixed. Most voluntary market activities require a significant monitoring effort, over long-time periods. However, this is typically limited to the project area or the specific commodity, resulting in piecemeal coverage and enforcement.

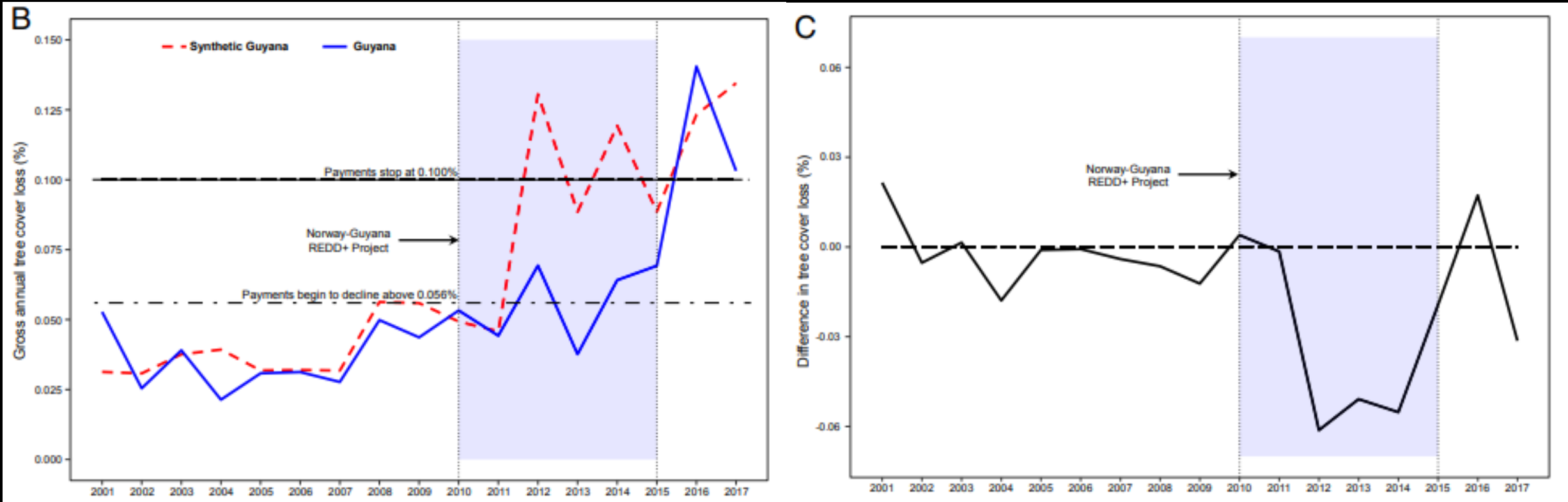
Securing the climate benefits of stable forests

Jason M. Funk^a, Naikoa Aguilar-Amuchastegui^b, William Baldwin-Cantello^c, Jonah Busch^d, Evgeny Chuvsov^e, Tom Evans^f, Bryna Griffin^g, Nancy Harris^h, Mariana Napolitano Ferreiraⁱ, Karen Petersen^b, Oliver Phillips^j, Muri G. Soares^k and Richard J.A. van der Hoff ^{lm}



Can incentives reduce risks, even in historically low-risk areas?

Yes. Limited examples demonstrate a measurable effect of policies to protect forests.



Policy interventions in Guyana had a measurable effect in keeping deforestation low. Roopsind et al. 2019.

Current pathways to generate HFLD credits

1. Forest Carbon Partnership Facility (FCPF)

country level, HFLD designation applies to all credits

2. ART/TREES standard (version 2) HFLD module

countries and subnational jurisdictions, HFLD designation applies to some credits, other credits can be generated as “normal” emissions reductions or removals



ART
Architecture for
REDD+ Transactions

THE REDD+ ENVIRONMENTAL EXCELLENCE STANDARD (TREES), VERSION 2.0

AUGUST 2021

5.2 CALCULATING A TREES CREDITING LEVEL FOR HFLD PARTICIPANTS (OPTIONAL APPROACH)

5.2.1 High Forest, Low Deforestation Eligibility

5.2.2 HFLD Crediting Approach

Previous finance architecture for REDD+ results

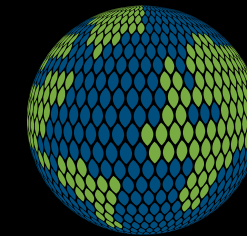
Finance source	Type of results-based finance	Examples	Status of funding flows
Donor funded	Non-market payments	Green Climate Fund REDD+ RBP Pilot Programme	Fund fully committed
		Bilateral agreements, e.g. Central Africa Forest Initiative, Joint Crediting Mechanism (JCM)	Ongoing
		REDD Early Movers	Fund fully committed
	Pilot programs	FCPF Carbon Fund	Fund fully committed
		BioCarbon Fund	Fund fully committed
Private sector	Voluntary carbon market	Companies buying carbon credits	~2B USD in 2021, projected ~1T USD in 2037
	Compliance markets	Colombia carbon tax	Ongoing
Donor or private sector	International market mechanism	CORSIA	Participation voluntary 2021-2026
		Paris Agreement Article 6 mechanisms	Some rules still being finalized

Any new approaches to incentivize intact forest conservation must:

- (1) modify one of these mechanisms;
- (2) influence one of the non-REDD+ mechanisms (FIP, GEF, other ODA, etc);
- or
- (3) create a totally new mechanism

Enhanced finance architecture for REDD+ results

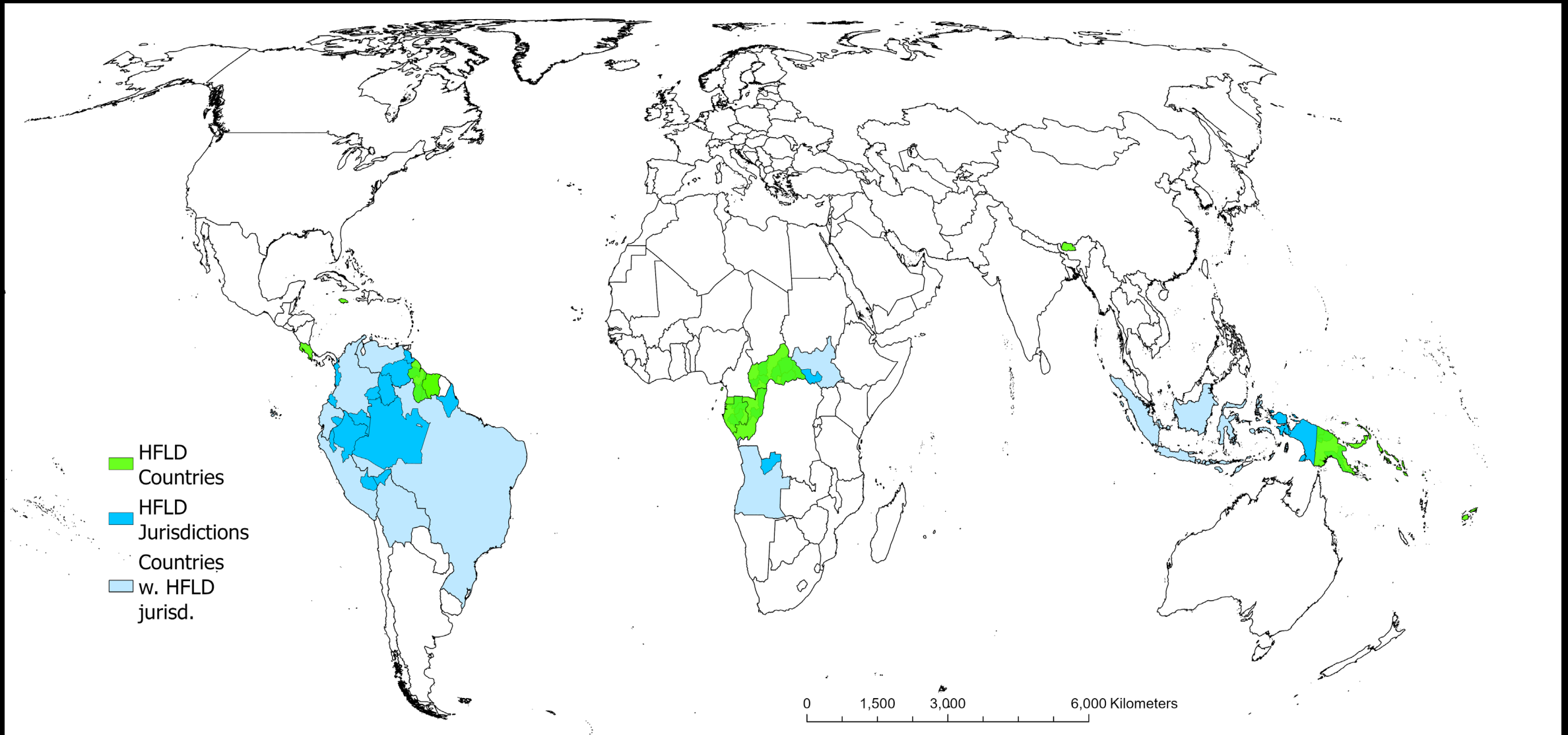
Finance source	Type of results-based finance	Examples	Status of funding flows
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ART
Architecture for
REDD+ Transactions

HFLD crediting level under the ART TREES standard finalized in August 2021

Potential locations for HFLD carbon finance



Source: Internal WCS analysis. Not for reproduction or circulation

Have HFLD areas been static over time?

There are currently 20 countries that can potentially earn HFLD credits.* Others may qualify in the future as they manage to curb their deforestation rates.

Region	HFLD countries identified in 2007 [†]	HFLD countries identified in 2021 [‡]
Latin America and Caribbean	Belize	Costa Rica
	Colombia	Dominica
	French Guiana	Grenada
	Guyana	Guyana
	Panama	Jamaica
	Peru	Suriname
	Suriname	
Africa	Democratic Republic of Congo	Congo
	Gabon	Gabon
	Zambia	Equatorial Guinea
	Bhutan	Bhutan
		Cook Islands
Asia and the Pacific		Fiji
		Marshall Islands
		Micronesia
		Niue
		Palau
		Papua New Guinea
		Seychelles
		Solomon Islands
		St Vincent & the Grenadines

HFLD geographies and indicative annual crediting levels

Nations

	Country	HFLD score 5 yr average	Total est TREES Credits (after deductions) (tCO ₂ e/yr)
Larger territories	Papua New Guinea	0.68	6,152,543
	Gabon	0.83	4,533,648
	Congo	0.58	3,085,219
	Guyana	0.81	3,568,359
	Suriname	0.86	2,897,822
	Equatorial Guinea	0.54	305,518
	Solomon Islands	0.84	308,361
	Bhutan	0.71	229,325
	Costa Rica	0.59	260,364
	Fiji	0.62	56,109
	Jamaica	0.54	38,411
Smaller territories	9 other territories, credits not estimated		

Subnational jurisdictions (can receive credits only until 2030)

Country	Jurisdictions outside HFLD countries	Total TREES Credits (after deductions) (tCO ₂ e/yr)
Brazil	2 (Amazonas, Amapa)	23,231,279
Peru	3 (Loreto, Madre de Dios, Amazonas)	7,182,192
Indonesia	2 (Papua, Papua Barat)	5,054,209
Venezuela	3 (Amazonas, Bolivar, Delta Amacuro)	5,162,365
Cent African Rep	7 (Haute-Kotto, Mbomou, Haut-Mbomou, etc*)	1,766,944
Colombia	5 (Amazonas, Guaina, Vaupes, Choco, Narino)	4,126,183
South Sudan	1 (West Equatoria)	293,900
Angola	1 (Lunda Norte)	289,859
Bolivia	1 (Pando)	775,480
Ecuador	1 (Pastaza)	423,756
Total	26 jurisdictions across 10 countries)	48,306,167
	<i>of which, for Amazonas State, Brazil, alone</i>	21,830,231

Total potential annual crediting (national + subnational) = up to c. 69 million tCO₂/year @ c\$10/tCO₂ = c \$690 million/year.

All crediting estimates here assume no increase or decrease in emissions compared to baseline. Defor set to 0 where cover is increasing.

PROJECT PRESERVATION

Understanding the role of credits from High Forest Low Deforestation (HFLD)
jurisdictions in climate mitigation portfolios

Authored by:



TFCI
TROPICAL FOREST CREDIT
INTEGRITY GUIDE



Tropical Forest Credit Integrity Guide for Companies Version 2

Differentiating Tropical Forest Carbon Credits
by Impact, Quality, and Scale

Revised February 2023 to include
Implementation Guidance

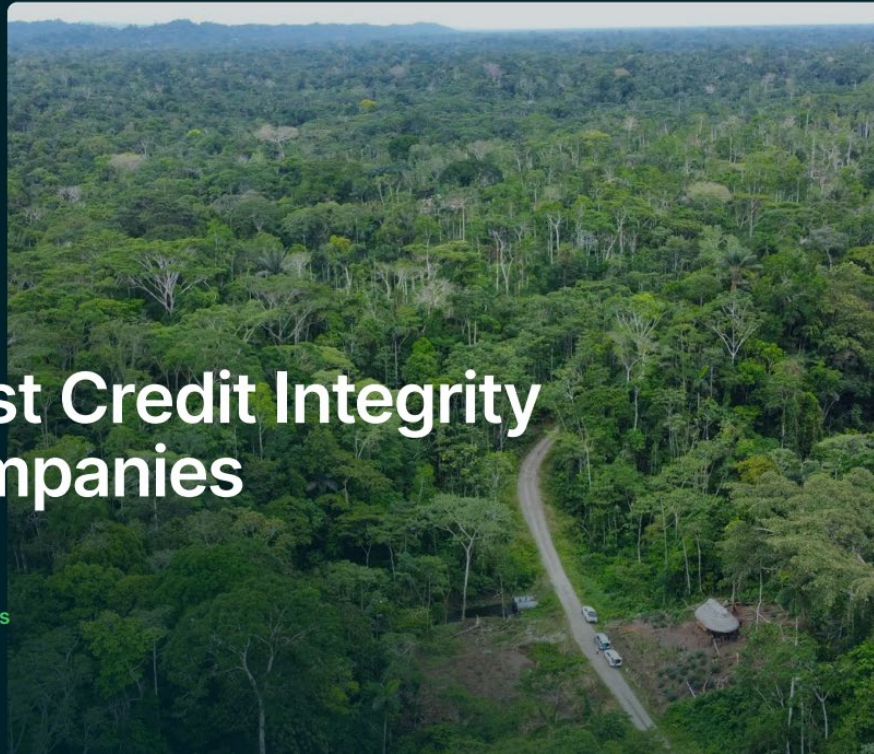
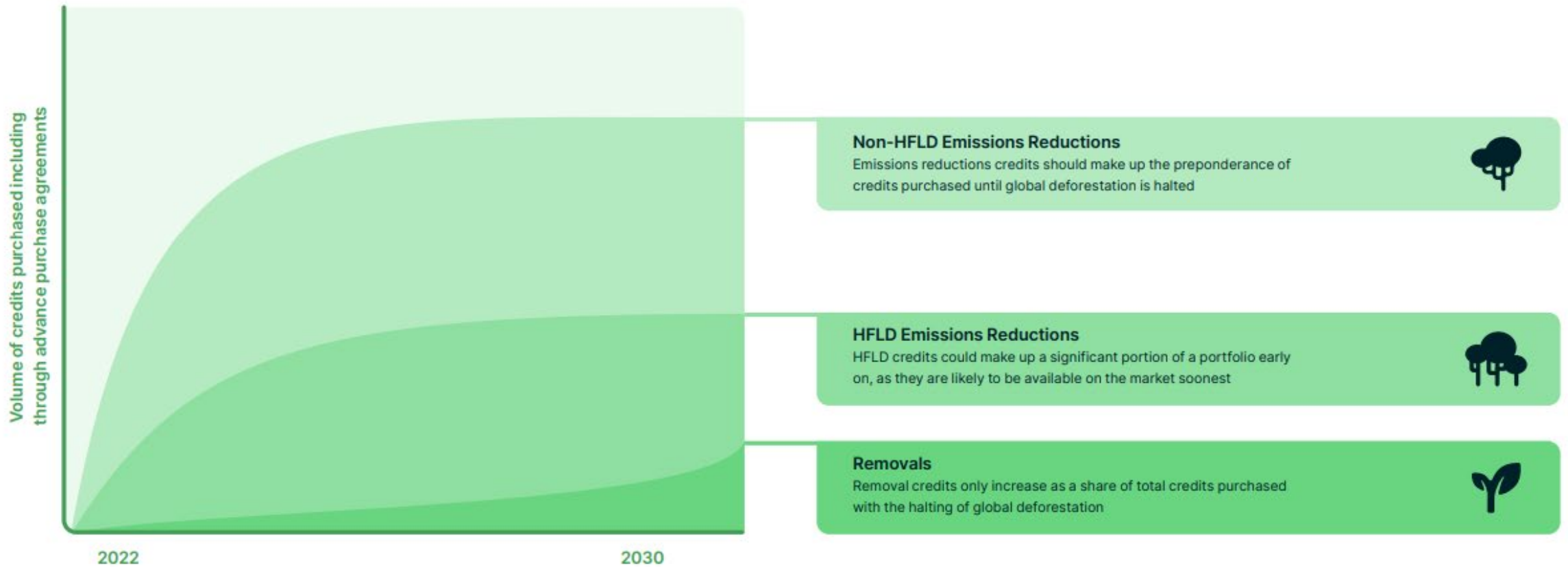


Figure 2: Example portfolio of tropical forest carbon credits—progression over time



Hess to buy \$750 million in carbon credits from Guyana

December 3, 2022



[Click to copy](#)

GEORGETOWN, Guyana (AP) — U.S.-owned Hess Corporation, a consortium partner in Guyana's offshore oil sector, has agreed to buy \$750 million worth of carbon credits from the South American nation in the next decade as it works to ensure Guyana's almost intact Amazonian rainforests remain standing for decades to come, officials said Saturday.

RELATED TOPICS



Scientific recognition



Policy awareness



Crediting mechanisms



Carbon market activity/acceptance



The HFLD issue
has evolved over
time

Where is it
headed next?

Potential future evolutionary directions

- HFLD credits used as compensation for international leakage from emission reduction activities elsewhere
- Tool for directing resources to “good actors” on forest protection
- Developing targeted means of supporting IPLC areas
- Targeting support for areas of high biodiversity or combining with biodiversity incentives/credits

Questions?

Thanks!

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