INCORPORATING CONSERVATION INTO COMMODITY SUPPLY CHAINS

JULY 2018 | FINAL

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HCSA Partnerships for Forests

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HCSA HIGH CARBON STOCK APPROACH

Partnerships for Forests

CONTENTS

BACKGROUND & OBJECTIVE

The High Carbon Stock Approach (HCSA) Protection Working Group (PWG) in 2017 decided to explore and develop guidance on the long-term protection of High Carbon Stock (HCS) forests and High Conservation Value (HCV) areas through three key workstreams, as follows:

1. Guidance on management and monitoring of HCV areas and HCS forests in existing concessions (especially in fragmented landscapes and on how to develop ICLUPs),
2. Financing protection of HCV areas and HCS forest, and
3. Novel approaches to forest protection in 'challenging' contexts.

For each workstream, the PWG chairs developed specific workplans and activities for completion. Under the auspices of HCSA PWG Workstream 2: "Finance", the HCSA (through Proforest, a PWG Co-Chair and Partnerships for Forest (UK) budget sub-grant holder) commissioned this outreach and research piece on financing model options for protecting HCV areas and HCS forests.

The objective of this research is to identify finance mechanism options and make recommendations to the HCSA/HCVRN on the issue and help refine the HCSA Forest Finance Mechanism Concept.

PREFACE

This document would not be possible were it not for generous support of the High Carbon Stock Approach and the Partnerships for Forests (UK), as well as the advice and support of the many individuals who volunteered their time. This document can be referred to as Roman Paul Czebiniak, Incorporating Conservation into Commodity Supply Chains, July 2018.

METHODOLOGY

Primary work for this scoping assessment was conducted between December 2017 and May 2018, with most research and outreach occurring between March and May 2018. Significant desktop research was conducted, with over 120 articles, reports, and related data sources examined. Over 20 interviews and meetings were held with individuals and organizations who shared their experiences and advice on these matters. An in-person meeting of HCSA members and conservation finance actors held in London in February 2018, organized by Proforest and Partnerships for Forests (UK), was also a valuable input into this work.

AUTHOR

Roman Paul Czebiniak is a principal with EcoNusantara, a private mission-driven advisory firm based in Jakarta, Indonesia; and Founder and CEO of The Forest Institute, a non-profit organization based in San Francisco, California. He has 20 years' experience in conservation, climate, and land use issues. He is an attorney at law and occasional skit artist. This document does not constitute legal advice, nor does it establish any attorney-client relationships.

EXECUTIVE SUMMARY

The High Carbon Stock Approach (HCSA) has received global recognition and praise for the progress it has made. However, High Carbon Stock (HCS) forests and High Conservation Value (HCV) areas inside and outside of member concessions remain under threat of deforestation even when covered by HCSA member companies or others with No Deforestation commitments. Moreover, as land use and landscape management plans are being developed, there remains little positive incentive for stakeholders to maximize areas for conservation.

As HCSA moves to the next phase of its work, "Achieving forest conservation with stakeholders," appropriate finance mechanisms must be identified and developed to provide simple direct incentives to conserve HCS forests and HCV areas.

This research piece identifies finance mechanism options for consideration by the High Carbon Stock Approach (HCSA) and High Conservation Value Resource Network (HCVRN) members and others that could potentially be created, modified, or expanded to increase the conservation of HCS forest and HCV areas. The finance mechanisms identified here include:

- Conservation Funds: Independent non-profit organizations encompassing a variety of structures and historically providing grants predominantly to NGOs (although increasingly using equity and loan instruments) for conservation benefits related to their mission
- Private Investment Funds: Private corporate organizations providing equity and debt impact investments (mostly loans) to companies engaged in sustainable activities that generate market-rate or near-market rate returns. Loans for sustainable agricultural and forestry production dominate, although there is at least one fund seeking to make some returns off the sale of voluntary carbon offset credits from forest carbon projects
- Fees, Charges & Taxes: Private or public financing from a wide range of activities (e.g. oil tax, tourist fees) put towards conservation
- Green Procurement Schemes (e.g. Certification): Financing generated through the added value provided by "sustainable" certification of a location, company, or product
- Trading Mechanisms: Allows a limited number of entities to trade a 'capped' amount of pollution allowances under an assigned cap.
- Mitigation Banks & Offsets: Financing generated from public and private sources to projects seeking to provide environmental benefits proportionate to an activity causing environmental damage
- Payments for Environmental Services (PES): Downstream actors compensate or reward upstream providers for conditionally agreed environmental services (e.g. forest conservation)
- Debt-for-Nature Swaps: Creditors accept lower renegotiated amounts in exchange for financing redirected towards conservation projects
- Hybrid Mechanisms & Blended Financing: New mechanisms are increasingly blurring the lines of traditional finance mechanisms and utilizing blended financial instruments that combine public and private finance (such as through loan guarantees, subjugated credit, insurance, etc.)

Gap Analysis & Assessment

A gap analysis and assessment of finance options reveals a number of outstanding gaps in the current conservation finance landscape relevant to the HCSA, HCVRN, and organizations commissioning assessments. Overarching gaps include the need for major new and additional conservation finance and increased public and private demand for conservation impacts and results. While the diversity of finance mechanisms has been expanding, significant gaps remain in the conservation finance mechanism domain. Specific gaps relevant to HCSA's consideration of finance mechanisms are identified, including:

- **Institutional Gap:** There remains no well-established financial mechanism focused on incorporating conservation investments in HCS forest and HCV areas into commodity supply chains. However, a number of existing mechanisms and potential partners for the HCSA are identified.

- **ICLUP Gap:** Landscape management plans, integrated conservation land use plans (ICLUPs), and jurisdictional green growth plans are being developed, but absent simple positive incentives for conservation, there remains little reason for stakeholders to maximize areas for protection.

- **Aggregating Bottom-up Approaches to Scale:** Gaps between and among private and public finance mechanisms at certain critical scales vital for HCS forest and HCV area conservation compound the lack of incentives for communities, smallholders, farmer associations, companies, and others to identify and conserve forests.

- **Results-based Conditionality with Activity and Durational Flexibility:** mechanisms that provide direct investments in exchange for evidence-based conservation results remain largely absent in the tropics, despite utilization elsewhere. Such approaches need not be overly prescriptive as to the piloting and application of different activities and tactics (e.g. in-kind services v cash payments, length of contract, etc.)

Case Studies in Gap Filling

Case studies of relevant 'gap filling' approaches that have been utilized by organizations commissioning HCS/HCV assessments and others to address deforestation are highlighted. Over 15 case studies illustrating schemes from around the world as well as projects at varying scales are assessed. The case studies provide myriad demonstrations of how investments in conservation have been and can be incorporated into the costs of production.

In most instances, the investments in conservation appear to have yielded significant benefits for the environment and the bottom-lines of investing companies, communities, and governments.

However, the case studies also revealed that in a significant portion of instances, conservation investments were made in response to or in anticipation of an imminent ecological and economic failure (rather than an earlier, more preventative, and likely more cost-effective measure). While companies have increasingly begun making 'net-positive' investments in conservation, it remains to be seen whether a more proactive approach that seeks to achieve collective results at scale will be initiated. Regardless, the examples illustrate how commodity-based companies can successfully incorporate conservation investments into their supply chains with favorable results.

Interviews and desktop research did not reveal an existing well-established finance mechanism suited to the current needs and objectives of the HCSA, particularly in relation to the HCSA Forest Finance Mechanism Concept

The research, however, did reveal that such a mechanism could be established quickly and efficiently if there was initial financing and support amongst a threshold of actors.

The project also identified some potential key partners moving forward, such as HCSA members, impact investment funds, IDH (Sustainable Trade Initiative), the Land Tenure Facility, etc. Several approaches are put forward for consideration as well as a recommendation for how HCS/HCV members could best incorporate conservation investments into commodity supply chains.

Incorporating Conservation into Commodity Supply Chains: A Proposal

The report concludes with a proposal on how to incorporate conservation into commodity supply chains. Because no existing well-established financial mechanism capable of meeting the current needs of HCSA members emerged from the interviews and research associated with this report, an alternative mechanism is proposed.

The report recommends the creation of the world's first global conservation asset: the forest conservation unit (FCU). One FCU would represent one hectare of High Carbon Stock forest and/or High Conservation Value area plus an additional community or social benefit.

FCUs would be independently verified and distributed by a new Forest Conservation Facility (FCF), which would focus on incentivizing the creation of FCUs and their financing. FCUs would be a "raw asset" or "raw conservation asset" representing the base HCS/HCV values, with buyers and sellers (and relevant intermediaries) potentially "refining" or adding to the unit value by incorporating additional carbon, biodiversity, and/or social or community benefits.

The Forest Conservation Facility (FCF) would provide performance-based incentives in exchange for the delivery of simple, transparent results.

FCU designation would be provided upon independent verification of performance across three stages: broad community consent to agreement (initial); ongoing performance through the conservation of HCS forest and HCV areas (ongoing); and delivery of social or community benefit (ongoing).

The FCF would differ from many traditional funds and grant-making institutions by requiring conditionality and revoking the FCU designation upon sufficient confirmation of non-compliance. While in some instances, ex ante conditional finance may be needed to help build trust and provide some initial technical capacity to communities, smallholder groups, and others, the vast majority of FCF financing would be directed towards payments for verified results.

The FCF could potentially delegate significant work to others by working with a professional fund manager to manage the financing (such as IFC, UNEP Trust Fund, etc.) and by providing financing to implementing partners, which could include HCSA member companies, NGOs, and technical support groups as well as communities, smallholder groups, farmer associations, and cooperatives. Financing thresholds would need to be established to streamline operations. This report recommends an FCF with the following characteristics during its piloting and initial implementation stage: 5000 hectares minimal area; $200,000-$2 million range for compensated agreements; prioritization of areas in and near HCSA member concessions; and a set percentage for social and community benefit.

The FCF would be open to the broadest possible donors and operate with a minimal level of financing reserve to provide an ongoing incentive for communities, companies, and others interested in protecting HCS forest and HCV areas. This level could come from a 'minimal contribution' from HCSA members or a subset of members (such as consumer companies and retailers).

The FCF could include a $40 per FCU contribution per year as a conservation investment related to a company's commodity purchases (as one potential indicative funding source).

For instance, a company that purchases 500,000 tonnes of palm oil, equivalent to 100,000 hectares would at a rate of $40 per hectare (i.e. US $32 conservation and social benefit & $8 FCF contracted independent verification and administration costs), acquire $4,000,000 per year in conservation assets (FCUs) as an investment related to its purchases and production. At the current price of $620 per tonne of crude palm oil (CPO), such a contribution would amount to less than 1.3% of total cost of CPO purchase (500,000 x US $620 = US $310 million).

Plantation companies could be both beneficiaries and contributors to the FCF, particularly those wishing to gain independent international acknowledgement for extensive conservation investments beyond an agreed threshold.

The FCF could provide brand recognition to HCSA members (and others) who meet an agreed threshold for contribution through various means including use of a logo on designated products.

CONCLUSIONS

HCS forests and HCV areas remain under threat of degradation inside and outside of concessions, even when covered by HCSA members or companies with 'No Deforestation' commitments. There are numerous finance mechanisms being implemented to promote the conservation of forests and high conservation areas, and significant innovation, in terms of hybrid mechanisms and blended financing instruments, is currently underway.

Nevertheless, there remain major gaps within and among these mechanisms, as well as in relation to the private sector's overall contribution to conservation investments. At present, there remains no well-established finance mechanism suited to the current needs and objectives of the HCSA.

This report proposes the HCSA harness its acclaimed methodology and build upon successful initiatives to date through the creation of an innovative new finance mechanism: the Forest Conservation Facility (FCF) and the world's first global conservation asset: the Forest Conservation Unit (FCU). Each FCU would represent a hectare of HCS forest or HCV area and a % social/community benefit. The unit would be independently verified by the FCF and would be generated and purchased by HCSA members and contributions from other interested parties.

The FCF would differ from traditional funds and grant-making institutions by requiring conditionality through the provision of performance-based incentives in exchange for delivery of simple transparent results; and revoking FCU designation upon sufficient confirmation of non-compliance.

The new mechanism would seek to inextricably link results-based conservation investments to traditional commodity supply chain investments, providing perhaps the single best opportunity for generating local and global economic benefits in a manner consistent with 'No Deforestation' commitments.

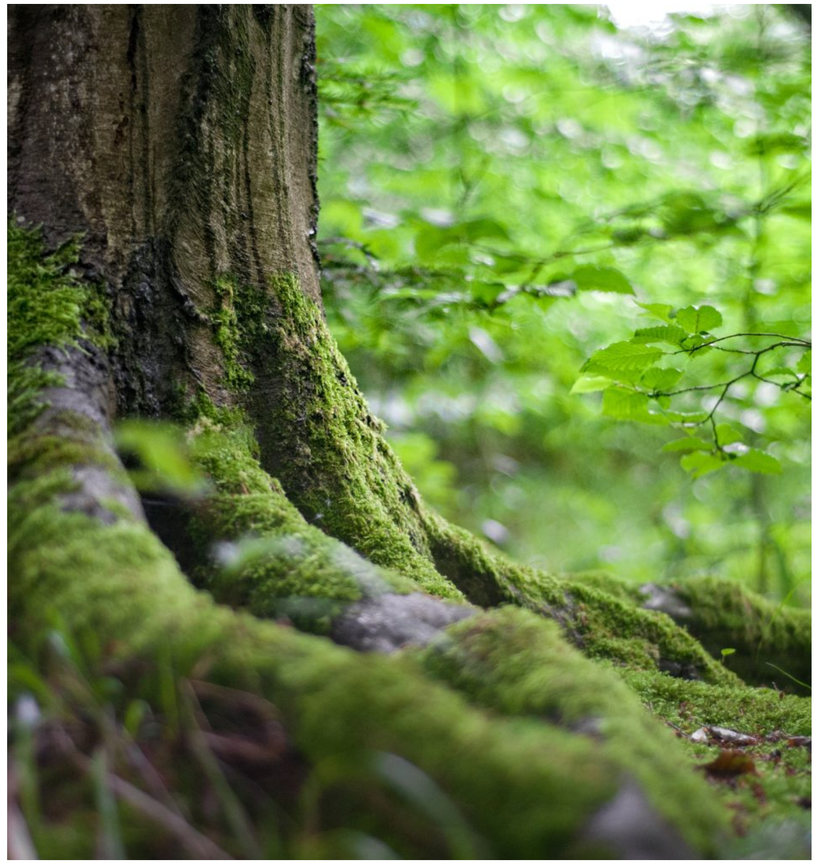
INTRODUCTION

The High Carbon Stock Approach (HCSA) has received global recognition and praise for its development of a methodology and vegetation stratification to identify potential HCS forest areas (Phase 1), as well as its work on forest patch analyses and the development of integrated land use management and conservation plans (Phase 2). As HCSA moves to the next phase of its work, "Achieving forest conservation with stakeholders" (Phase 3), HCSA members are working to identify and develop incentives for communities, smallholders, companies, and others to maintain and expand HCS forests and HCV areas, as well as appropriate finance mechanisms to disperse such incentives.

HCS FORESTS AND HCV AREAS REMAIN UNDER THREAT OF DEFORESTATION AND DEGRADATION INSIDE AND OUTSIDE OF CONCESSIONS EVEN WHEN COVERED BY HCSA MEMBER COMPANIES OR OTHER COMPANIES WITH NO DEFORESTATION COMMITMENTS.

Moreover, as land use and landscape management plans are being developed, there remains little positive incentive for stakeholders to maximize areas for conservation in the absence of finance mechanisms with dedicated resources and simple performance-based metrics that allow planners to better calculate the costs and benefits of conserving HCS forests and HCV areas. The systematic provision of conservation investments by HCSA members and others, particularly in and around areas of their supply chains, would precipitate better decision-making in land use planning and increase the chances that HCS forests and HCV areas will be conserved.

This research piece identifies finance mechanism options for consideration by the HCSA and High Conservation Value Resource Network (HCVRN) members and others that could potentially be created, modified, or expanded for the purpose of increasing the conservation of HCS forests and HCV areas. It begins by identifying the primary finance mechanism options, followed by a brief analysis and assessment focused primarily on identifying gaps in the current conservation landscape relevant to the HCSA, HCVRN, and others. Case studies of approaches that have been utilized by organizations commissioning HCS and HCV assessments and others to address issues of deforestation globally are highlighted. Several approaches are put forward for consideration as well as a recommendation for how the HCSA, HCVRN, and others could best incorporate conservation investments into commodity supply chains.



FINANCE MECHANISM OPTIONS

CONSERVATION FUNDS

Conservation funds and trusts are independent[1] organizations that encompass a wide array of structures and institutional operations in accordance with their mission (and donor requirements and requests). For purposes of this assessment, this category would include private foundations and public charitable (non-profit) organizations that engage in grant-making. These types of organizations have differing requirements and benefits,[2] but can generally be quickly established and evolve over time to incorporate different types of accounts and funds. Funds are overseen by an independent board and finances must be held separately from government and corporate budgets.

More established conservation funds and finance mechanisms typically develop to include a combination of revolving funds, sinking funds, and endowment funds. [3] Endowment funds, frequently labelled Conservation Trust Funds, are often set up to provide stable long-term funding for insufficiently financed protected areas and related programs (e.g. biodiversity conservation), most frequently in developing countries. The interest or investment income from an initial capital investment or donation provides perpetual funding through returns from the private markets. Only the interest is used to support the protected area or conservation program. For instance, an initial capital donation of US $20 million, if invested in markets providing an annual return of 5% per year, would provide $1 million per year in grants or funding most commonly to governments, non-profit organizations, or community-based organizations for conservation activities that maintain or enhance protected areas.

CONSERVATION TRUST FUNDS (OFTEN A COMBINATION OF THE FUNDS BELOW)

Endowment Funds:
Capital is invested and the interest it generates is used to finance activities and outcomes. Funding is perpetual and most applicable to projects with long-term sustainable finance needs. For instance, $20 million invested with an annual 5% return would provide $1 million per year (if all interest is spent annually).

Sinking Funds:
Principal and investment income are spent during a designated time (e.g. 5-15 years). For instance, a $20 million investment could provide $2 million per year for 10 years (or more, if front loaded). Funding is time limited but otherwise flexible. These funds are best suited to situations where there is an urgent need and absorptive capacity to utilize the funds within a short, finite period.

Revolving Funds:
A designated funding source such as a fee, tax, or levy from a given activity (e.g. development or extractive tax, tourist fee, etc.) is used and annually replenished (potentially in perpetuity). For instance, an activity generating $20 million in annual allocated fees could provide continuous financial support to designated projects.

While funds and foundations have traditionally focused on grant-making, they have in recent years increasingly begun to focus on mobilizing, blending, and dispersing financing through other financing options and instruments, including impact investing through loans, equity participation, etc. Further, while there are often limitations on fund disbursements requiring a designated percentage go to public-benefit organizations such as charities (and restricting the percentage that can go to private corporations), such institutions within certain boundaries are also generally allowed to handle mission-oriented revenues and to a more limited extent, unrelated business revenues.

When properly designed and implemented, funds can reduce transaction costs for financiers, donors, implementing institutions, and fund recipients;[4] while simultaneously providing significant non-financial benefits such as the facilitation and alignment of strategies, piloting of tactics, capacity building and institutional development assistance, facilitation of learning, monitoring and evaluation, outreach to stakeholders, etc. Historically, funds with the biggest impact on conservation have done so in part because they "became more than just financial mechanisms."[5]

THE GLOBAL ENVIRONMENT FACILITY (GEF) is an inter-governmental trust fund formally established from the 1992 Rio Summit to provide financing to "developing countries' efforts" to meet international environmental conventions and agreements. GEF is largely financed by voluntary contributions from member governments, who pledged approximately $1,1 billion per year during GEF's last four-year replenishment period. An Operational Focal Point (OFP), typically a government official, coordinates GEF-related projects and activities within a country and selects one of GEF's 18 Partner Agencies to serve as the primary partner for a given project. Partner Agencies include institutions such as the Asia Development Bank (ABD) and NGOs such as World Wildlife Fund (WWF) and Conservation International (CI). Financial support to implement activities is provided to government agencies, NGOs, private corporations, and others. GEF has faced some criticism for its perceived bureaucracy and inaccessibility, particularly from developing countries and local communities.[7]

THE GLOBAL FUND FOR AIDS, TUBERCULOSIS AND MALARIA & GAVI ALLIANCE

The Global Fund for AIDS, Tuberculosis and Malaria (aka "The Global Fund") was launched in 2002 and has annual revenues of roughly US $4 billion from public, private, and philanthropic sources which it disperses to implementing partners to improve health services particularly in developing countries related to its mission.[8] The Global Fund was established in part due to the view of experts who saw "existing aid programs as inadequate and incapable of scaling up quickly enough to meet pressing needs… [and therefore] sought to create a new mechanism that would be leaner, faster, and more 'business oriented'." [9] It is widely recognized as an innovative, efficient, results-driven operation, with just 200 staff and operating expenditures of $281 million. The Global Fund's board, Secretariat, and implementing partners reflect a close partnership with civil society organizations, businesses, and governments.

The Global Fund was meant to be additional to existing aid and global health efforts and institutions including the United Nations and World Health Organization, and not duplicate their activities. Interestingly, The Global Fund was established in the same city as the Global Alliance on Vaccines and Immunizations ("GAVI Alliance"), another global fund based on public-private partnerships focused on similar health issues, which was launched in 2000 with $750 million in seed funding from the Gates Foundation. At least one comparative analysis of the two funds has found vast differences between the two, with The Global Fund placing a much higher emphasis on innovation, results, and performance-based grantees relative to the GAVI Alliance.[10]

YAYASAN KEANEKARAGAMAN HAYATI INDONESIA (KEHATI): KEHATI, also known as the Indonesian Biodiversity Foundation, was established in 1994 as a non-profit foundation focused on supporting biodiversity conservation, sustainable agriculture, and environmental education.[11] A Memorandum of Understanding was signed by the Indonesian Government, the United States Government, and KEHATI prior to establishing an endowment fund of US $16.5 million for the period of 1995-2005, with $3.5 million for initial operations and overhead costs.[12] In 2016, KEHATI had annual revenues of US $5.65 million and total assets of $21.6 million (including the endowment investments).[13] The endowment fund is managed by a professional fund manager and invested in stocks and bonds through the capital markets, with annual returns going to KEHATI's grant programs.[14] Between 1995 to 2016, KEHATI provided nearly US $12 million in grants to over 1000 grantees (including community organizations, NGOs, universities, and other institutions) with funding from corporations, foundations, and foreign development agencies (including funding related to two debt-for-nature swaps from United States Agency for International Development, USAID).[15]

YAYASAN BERSAME LESTARIKAN NUSANTARA (YAYASAN BELANTARA): Yayasan Belantara, also known as the Belantara Foundation, is an independent Indonesian grant-making foundation formed in 2014 with the goal of delivering community and conservation results.[16] With an initial financial commitment of US $50 million over 5 years from Asia Pulp & Paper Group (APP), its primary donor, the foundation has advanced landscape conservation initiatives with an initial focus on the ten landscapes related to APP's supply chain.[17] To date, the foundation has provided grants to 33 institutions with a focus on multi-stakeholder landscape based approaches in Sumatra and Kalimantan.[18]

GLOBAL GREEN GRANTS FUND: The Global Green Grants Fund based in the United States and United Kingdom provides grants in the US $500-5000 range (with an average of $4800) to NGOs and local communities.[19] Since 1993, the Fund has provided more than $45 million in grants to 5,300 local projects in 163 countries.[20] Funding is not limited to direct conservation activities and has included projects such as an investigation into a Cameroon palm oil company (which led to the return of lands to local groups), campaigns against the International Finance Corporation/World Bank, efforts to compel cleanup of mercury spills, etc.[21] Fund expenses in 2016 were allocated as follows: 70% Grants, 19% Program Support, 11% Fundraising and Administration.[22]

PRIVATE INVESTMENT FUNDS

Impact investing, whereby dedicated private investment funds (or portfolios of private investment funds) seek to support more sustainable activities, is an area of finance that has grown significantly over the last decade. These funds provide impact investments through equity or debt instruments (such as loans) to corporations, projects and activities, that seek to generate both a positive financial return as well as an environmental or social 'return.' As with conservation funds, there are many different possibilities for structuring private investment 'funds' (in the broadest sense) with some holding a traditional dedicated management and advisory team, others combining non-profit and consultancy organizations with professional fund managers, and still others taking a 'partnership' structure with responsibilities divided amongst private, non-profit, and intergovernmental institutions. While private investors are beginning to increase their participation in such funds (and many developing new ways to 'blend' private, public, and philanthropic finance), Development Finance Institutions (DFIs): (e.g. World Bank's International Finance Corporation (IFC), European Investment Bank (EIB), and FMO (Netherlands) still account for "the large majority of conservation impact investment dollars".[23]

INVESTMENT INSTRUMENTS & TOOLS [24]

• **Loans:** Financing guaranteed against collateral (often property) and with interest rates reflecting the credit worthiness of the borrower and activity. Loans can be subsidized by governments, foundations, donors, etc. For instance, the Vietnamese government subsidized loans to help coffee growers replant degraded plantations.[25] However, sustainable agricultural loans face issues including competition with traditional agricultural loans, long payback periods, the need for technical assistance for new practices (which increases costs), and changes in habits and customs.[26]

• **Equity:** Financing provided in exchange for ownership shares in a business. Impact investors including foundations, donor governments, intergovernmental institutions, and others who have sough to stimulate environmental entrepreneurship through the provision of equity as well as 'first loss' equity (which allows other equity owners to collect first in the event of default).

• **Bonds:** While historically relevant for more established project investments, there has been a recent surge in green bonds and forest bonds for 'sustainable finance.' Earlier in 2018, Indonesia raised US $1.25 billion in green bonds to finance "climate friendly" investments in land use and energy, although there does not yet appear to be a publicly available pipeline of projects for this financing.[27]

• **De-Risking Instruments & Tools:** Credit and loan guarantees (which allow investors to make riskier investments), insurance (e.g. political, weather, etc.), capital stacking (e.g. agreeing to a junior rank allowing other investors to get paid first in chance of default), and off-take agreements (pre-determined contracts to purchase a set amount of future production at a set rate and date) are tools utilized by foundations, governments, and others to incentivize greater private investment in certain areas.[28] For instance, the Overseas Private Investment Corporation (OPIC) provided 'political risk insurance' for a project to Reduce Emissions from Deforestation and forest Degradation (REDD) in Cambodia due to political changes that were underway.[29]

Investment funds may also be established to invest in a 'sustainable' or environmentally beneficial activity (or set of activities) known to provide a decent return but undervalued in the current market (due to the inability of relevant actors to pay, the lower prioritization of the investment relative to others, etc.). For example, institutions have provided up front investments in industrial waste reduction and energy efficiency activities known to generate savings (i.e. returns) over a period of years, but which are under the control of an entity that either lacks sufficient capital for the investment or does not prioritize this investment relative to others. Private investors can provide a capital investment to a fund manager in exchange for market-rate (or below market-rate) returns while donating the residual capital gains over the market-rate return to an associated trust fund (to provide grants, etc.).

Impact investment funds are developed in a variety of ways. For instance, it appears one fund was created to show the viability of investment returns from carbon projects, but as the carbon offset market prices declined, it has diversified its focus to sustainable commodity returns. A second seems to have emerged from a vision to demonstrate a production-protection model, but has had some difficulties finding viable projects in which to invest. Another appears to have come together based largely on a single viable project, leading to a coalescing of partners and investors to support it.

Investment fund managers can spend significant time seeking sufficient finance by the 'close' of their fund (i.e. a deadline by which they must deliver a minimal threshold amount). That is often followed by a major search for viable investable projects in order to deliver expected returns. However, in many cases viable or pipeline projects are identified before the fund is even proposed.

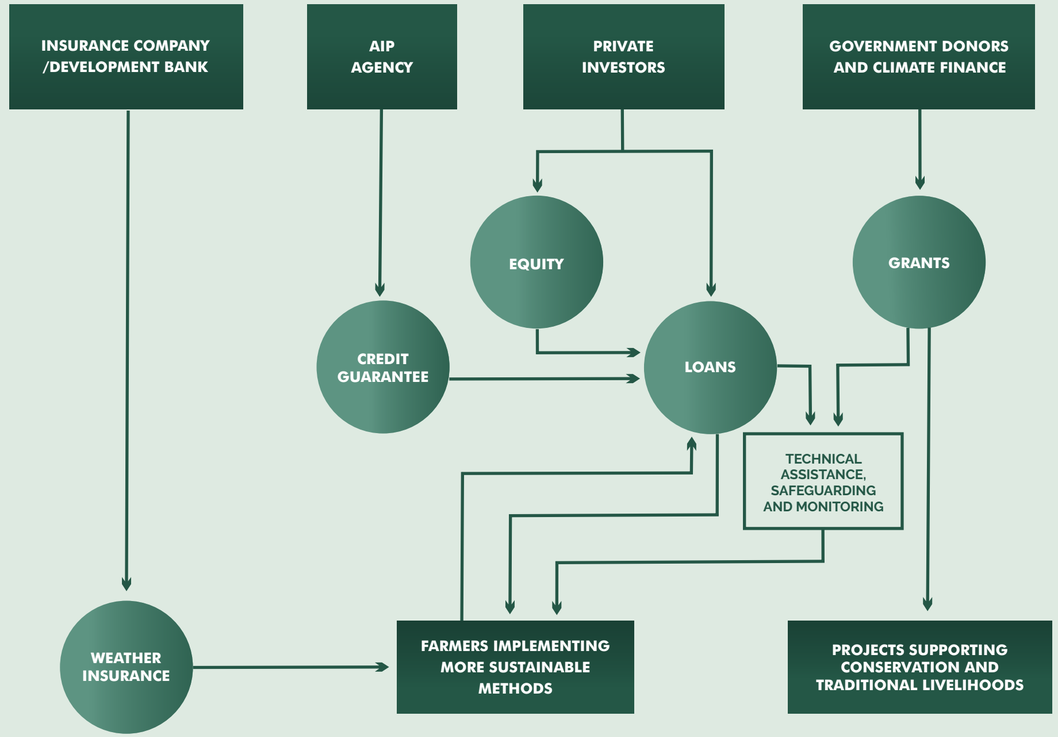
Luxembourg Structured Climate Funds

Source : European Impact Investing Luxembourg Initiative, Luxembourg Structured Climate Funds

Impact investment funds have been utilized to provide concessional loans to small farmers to increase the intensification of yields, and other practices to help conserve nearby forests. However, such approaches in the absence of either strong disincentives for increased degradation of HCS forests and HCV areas or strong incentives for forest protection could do little, or even be counter productive to conservation efforts. While some may point to the intensification of cattle yields in the Amazon frontier as a model to replicate, the comprehensive deforestation monitoring system in the Amazon combined with the demonstrated commitment of the large soya and cattle traders in Brazil to cancel the contracts of those engaged in deforestation appears to have been the primary driver of intensification, not vice versa.

Impact investors have begun (often with DFI or foundation support) to provide financing for the 'sustainable' production of commodities in landscapes commonly considered too risky for traditional investors. Indeed, absent this public support, many impact investments in this space would likely not have occurred.[31] Nevertheless, the benefits have been focused on the production side of the landscape which can provide more traditional returns, rather than on the protection side. The lack of significant and consistent demand for 'protection,' in part due to the more global failure to develop meaningful carbon taxes, markets, and other mechanisms (which may never develop), is omnipresent and has resulted in numerous carbon-related land-use projects (e.g. REDD+) and their developers searching for new ways to finance their projects. The supply of such projects greatly exceeds current demand from carbon markets, and it is unclear whether that will change anytime soon.[32]

One Model of an Impact Investment Fund with Blended Finance Elements [30]



Source: Arthur Girling and Simone Bauch, Incentives to save the forest: Financial instruments to drive sustainable land use, The Global Canopy Programme, 2017.]

ALTHELIA-MIROVA

Althelia Ecosphere is an investment fund manager recently acquired by Mirova. The Althelia Climate Fund is a public-private partnership that seeks to deliver triple bottom line impacts in terms of financial returns, environmental stewardship, and positive social development.[33] The Althelia Climate Fund's projects have included: the Tambopata-Bahuaja REDD+ and Agroforestry Project in Madre de Dios, Peru, a US $ 12 million, 7-year investment to help conserve 570,000 hectares; and the South Sumatra Merang Peatland Project, an EU €5.1 million over 4 years investment, with PT GAL (Global Alam Lestari) and Forest Carbon, to rehabilitate more than 22,000 hectares of peatland and generate over 30 million tons of carbon credits over its 25-year licensing period which is expected to generate partial returns for Althelia.[34] The Taita Hills Conservation and Sustainable Land Use Project in Kenya (adjacent to WildWork's Kasigau Corridor REDD project), a US $ 10 million, 8-year investment to help conserve 200,000 hectares of forest and grasslands, another of the fund's early investments, was converted into a loan and exited by the fund last year.

Investors included the European Investment Bank, the Church of Sweden, and the Finnish Fund for Industrial Cooperation.[35] The Fund also received a € 15 million investment from the Nature Conservation Notes issued in December 2014 by Credit Suisse.[36] The notes were originally part of Barclays MSCI Green Bond Index (a portfolio of 10– 20 green bonds), but once Althelia identified its revenue-generating projects, the bonds were liquidated, with the resultant funding reinvested into the Climate Fund.[37] Althelia received a US $138.8 million loan guarantee from the United States Agency for International Development (USAID) in May 2014 which guarantees 50% of Althelia loans to REDD+ project developers and helped catalyze additional private sector investments in the Althelia Climate Fund.[38]

Depending upon carbon markets to deliver a return for REDD + projects has proven challenging, as the markets currently provide an average price of $3/tCO2 ($4.20 for REDD), but with half of all projects unfunded due to the oversupply of carbon offset projects relative to demand.[39] Althelia and others have responded by increasingly diversifying their revenue sources, such as through projects that combine “sustainable commodity production” (e.g. profits from the sale of certified wood, coffee, cocoa) with the original 'environmental return' (e.g. sale of carbon credits).[40] A new book on forest finance published in 2018, determined with regard to impact investment firms: “There is an increasingly accepted model of 'Produce & Protect,' but there is still a challenge for money to flow to the protection side of the equation.” [41] There is growing demand for sustainable land use and conservation finance investments, but whether this innovative carbon collateralized model will be scalable and replicable in the future will fully depend on how carbon markets develop in the next 1-2 years.





ANDGREEN FUND

AndGreen is an Evergreen Revolving Fund that seeks to de-risk loans that may otherwise not be available for increased production of agricultural commodities to companies with No Deforestation commitments or those working in 'approved jurisdictions' with sustainability commitments in exchange for financial and environmental returns. The fund is looking to finance projects in the range of $10-15 million, with the fund's investment limited to 25-30% of the total loan, requiring the remainder be secured through co-financing with others. The fund finances private company activities that must deliver market rate or 'near' market rate returns. AndGreen seeks to create investment proposals consistent with its Production-Protection-Inclusion motto that deliver financial returns and environmental returns. An initial focus on Liberia sought to provide 1:5 ratio (production: protection), but that project has since been put on hold.

AndGreen received an initial capital commitment of US $125 million from the Norwegian International Climate and Forests Initiative (NICFI) ($100 million) and Unilever ($25 million). Its initial fund raising goal was $400 million by 2020, which has now shifted to 2022. Its long-term goal is to catalyze US $2 billion in commercial finance, conserve 5 million hectares of forest, and improve the livelihoods of 500,000 households.

AndGreen is an investment firm housed in a non-profit foundation ('Stichting' in Dutch), that heavily utilizes a 'fund adviser: Sail Ventures, a Netherlands based private investment firm. It initially had links to IDH (Sustainable Trade Initiative, a Dutch NGO).

Several major gaps have been raised in the context of such investments. First, there is a lack of viable ready-to-finance projects on the ground (often called "pipeline projects") to meet both the financial and environmental returns sought by investors. A 2016 analysis of 87 landscape initiatives by Enclude determined that "[t]here are not many investment opportunities that both adhere to the landscape approach and are commercially appealing to institutional investors … that investment opportunities do exist, though few have achieved sufficient scale to be interesting to institutional investors … more successful examples at scale are required … more players are needed."[49]

Second, private investors have identified the "lack of standardized impact metrics" and "the need for policies that put a price on a broader range of ecosystem services" as major barriers to increased investment in sustainable landscapes.[50] There remains a noticeable lack of financing or returns for the "protection" side of most protection-production investments, as the production side provides more traditional commercial returns while direct investments in conservation has been lacking.

Third, there is a need to move from impacting development finance institutions (DFI) to more traditional commercial and private investments which typically require minimal investments of $300-500 million per project.[51]

Further, a recent analysis of private conservation-focused impact investment funds between 2014-2018 found that the vast majority of investments by private fund managers was 'return-first' focused, with particular emphasis on sustainable agriculture and forestry operations (which are strong and growing markets).[52] Specifically, the study found that 75% of private fund manager commitments and 85% of corporate "conservation investments" were in fact investments in "sustainable food and fiber production."[53]

TROPICAL LANDSCAPES FINANCE FACILITY

The Tropical Landscapes Finance Facility (TLFF) is a partnership established in October 2016 between ADM Capital/ADM Capital Foundation, BNP Paribas (BNPP), UN Environment Programme (UNEP) and the World Agroforestry Centre (ICRAF) that seeks "to provide access to long-term finance at scale to commercial projects with clear environmental and social benefit."[42] A related private company, TLFF I PTE. LTD, is headquartered in Singapore.[43] TLFF's focus is on renewable energy and sustainable agriculture projects, and it serves as a financial lending platform managed by ADM Capital, with BNPP serving as a fund adviser and arranger to provide liquidity to projects.[44] UNEP and ICRAF will create and manage an affiliated grant fund (still in process) with the goal of providing US $10 million in grants over 5 years, and will also provide technical assistance as well as monitoring and evaluation support to projects.[45] TLFF's inaugural project was announced in February 2018. It will issue a sustainability note (aka bond) to finance its inaugural project: a US $95 million loan to PT Royal Lestari Utama (RLU), a joint venture between Michelin and PT Barito Pacific to support the development of sustainable natural rubber plantations of 88,000 hectares largely through increased productivity on degraded lands (with 70,000 hectares in Jambi and 18,000 in East Kalimantan). The area is expected to provide 10% of Michelin's natural rubber supply, and NGOs such as WWF have been involved.[46] The loan was announced while the project was still seeking financing to conserve a "9,700 hectare Wildlife Conservation Area" for the 150 remaining Sumatran Elephants.[47] Fortunately, subsequent interviews confirmed that the Partnerships for Forests (UK) will help finance the elephant conservation area.[48]

Direct private investments in habitat conservation have relied heavily on public and philanthropic investors seeking to be 'impact first' as opposed to 'return first,' and are much more willing to risk that the returns will not be realized for a long time (if at all).[60] This is also the case with the voluntary REDD market, whose largest players are DFIs and governments that often are willing to accept a return of 'carbon credits' as opposed to a financial return, functionally rendering a significant amount of such REDD 'investments' as grants.[61] There are some emerging exceptions to this, such as Althelia-Mirova, Permian Global, Wildlife Works, etc. who are in at least some instances seeking to create businesses or business projects around REDD+ carbon credit sales in anticipation of a future carbon market or other major demand driver.[62] However, a recent book on Forest Finance noted that interviews with large traditional investment firms revealed that such firms "are skeptical about the reliability of revenue streams generated from ecosystem services."[63] Further the increased momentum around jurisdictional approaches along with UNFCCC decisions on national (and interim subnational) accounting and results, may limit such projects unless new market demands are identified.[64]

Where financial returns are based on the increased productivity of agricultural or forest-based commodities, one can perhaps be forgiven for questioning the extent to which the 'environmental and social returns' will be equally valued. A historical analogy maybe the Clean Development Mechanism (CDM) carbon market under the Kyoto Protocol, which was established to deliver dual returns for emission reductions and sustainable development.[65] However, the well-recognized failure of CDM projects to deliver on the 'sustainable development return' (most notably through HFC-23 destruction facilities which delivered no sustainable development benefit but encompassed half of all credits issued through March 2008) relative to the primary return may prove prescient in this instance lest real value be placed on the conservation deliverable.[66]

COMMITMENTS TO NO DEFORESTATION HAVE INCREASED AMONGST INSTITUTIONAL FINANCE INVESTORS

The Natural Capital Declaration, signed by 41 financial institutions with more than US $6.4 trillion in total assets during the Rio+20 Summit in 2012, committed its signatories to integrating ecosystem service considerations into their lending requirements.[54] Along similar lines, The Equator Principles, adopted by more than 90 financial institutions across 37 countries in 2013, is a set of financial industry benchmarks for determining, assessing, and managing environmental and social risk in projects.[55] The principles were based in part on the International Finance Corporation performance standards, which are also applied by 32 credit agencies associated with the Organization for Economic Cooperation and Development (OECD), certain World Bank lending programs, and other select institutions.[56] Equator Principles Financial Institutions agreed to mandatory reporting and implementation requirements to provide minimum standards for due diligence and monitoring to support more sustainable and responsible decision-making as part of a broader risk management framework.[57] The benchmarks apply to four financial products across all the members global industry sectors: 1) Project Finance Advisory Services, 2) Project Finance, 3) Project-Related Corporate Loans, and 4) Bridge Loans.[58] Civil society pressure is likely to continue on such firms. For instance, the Carbon Disclosure Project (CDP) 2016 Global Forests Report covering 365 investors with US $22 trillion in assets asked companies to disclose information to CDP on how they are managing the deforestation risks associated with cattle, palm oil, soy, and timber.[59]

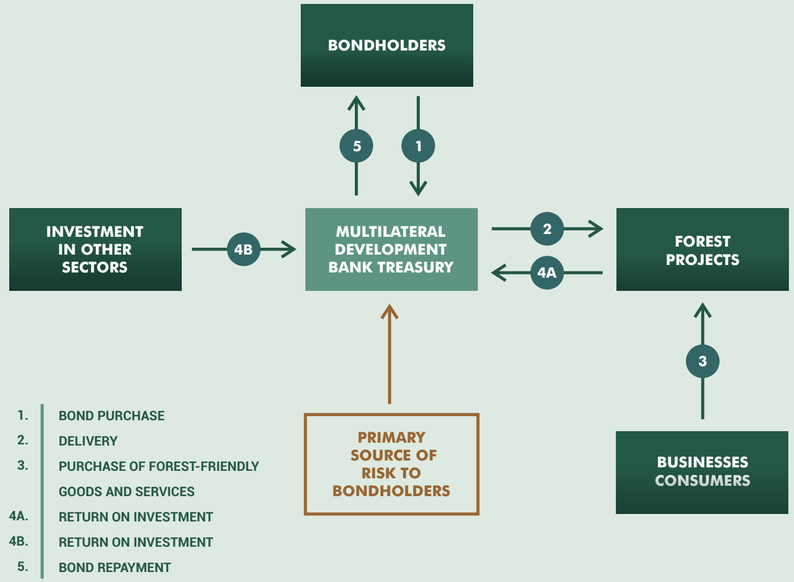
BONDS & CONSERVATION NOTES

Bonds and notes are securities that have interests rates which are paid annually until they are mature, with notes generally paying for 10 years or less and bonds paying over a longer period of time. There are at least six different types of forest bonds: 1. Government forest bond (tax-backed); 2. Government forest bond (revenue-backed); 3. Corporate forest bond; 4. Commitment-backed forest bond; 5. Forest-backed bond (equity-based); and 6. Forest-backed bond (debt-based).[67] Bonds and notes have been issued in relation to investments made by Althelia and the TFFI (see relevant sections). Two additional examples of such securities are outlined below.

• **The Nature Conservancy (TNC)** developed and issued Conservation Notes worth $25 million in 2012, in what may be the first investment-grade retail product focused on conservation.[68] The Notes were based on Hope Consulting research from 2010 indicating there maybe more than $100 billion of potential impact investment capital within individual households.[69] The Notes targeted high-net-worth individuals and most early investors were foundations.[70] TNC backed the notes with a below market return of 0-2% and investors were able to support TNC without directly donating capital to the organization.[71]

• **The International Finance Facility for Immunization (IFFIm)** was established in 2006 by GAVI, the Vaccine Alliance (formerly known as the Global Alliance for Vaccines and Immunization), a global public-private health partnership whose mission is to increase immunization access in developing countries. IFFIm sells vaccine bonds on global capital markets, secured against pledges from donor governments to maintain their long-term aid development levels (up to 20 years) which can also be used to buy back the bonds. IFFIm leveraged more than US $6 billion in donor pledges to raise more than US $5.7 billion during 2006-2016.[72] This financial commitment offered developing countries greater predictability to make longer term budget and planning decisions with regard to their immunization programs.[73] An independent evaluation found the IFFIm likely helped save more than 2.1 million lives.[74] Among other donors, GAVI received more than $1.5 billion from the Bill and Melinda Gates Foundation, which also helped establish the The Gavi Matching Fund (GMF), a public-private funding mechanism launched to incentivize private sector investments in immunization through direct corporate contributions, employee donations, and public visibility and participation.[75]

Structure of a Corporate Forest Bond



Source:
Cranford, M. Parker, C. & Trivedi, M. Understanding Forest Bonds, Global Canopy Programme, Oxford, UK, 2011 at 24, Figure 6

The research for this report revealed that there are some compliance measures and penalties (such as reversion to higher interest rates and faster repayment terms; or going into default) were loan recipients to fail to uphold their commitment to, for instance, not engage in deforestation and forest degradation activities (i.e. deliver the 'environmental return'). However, it remains to be seen the extent to which investors will risk failing to deliver returns (or even capital losses) to their creditors should the expected environmental returns not develop (e.g. should there be 'a little' or more deforestation or degradation).

In what maybe the largest recent and related investment, the TLFF RLU project was able to secure $95 million in investments to increase agricultural productivity for a rubber plantation in a Jambi landscape yet was unable to secure financing for a critical forested wildlife corridor for four of the remaining elephant families in that same landscape (such funding was ultimately secured thanks to the Partnerships for Forests(UK).

Investment firms interviewed largely welcomed the idea of an HCSA affiliated institution that would provide positive incentives for conservation in conjunction with working with communities and companies. The absence of direct incentives for HCS forests and HCV areas seems a very noticeable gap for this area, which the HCSA and others could potentially help fill through the provision of incentives and/or minimally accepted criteria or requirements that investments in 'sustainable' landscapes investments include incentives for the conservation of HCS forests and HCV areas.

FEES, CHARGES, AND TAXES

Fees, charges or taxes that are either directly related to an environmental benefit or harm (e.g. carbon tax; watershed subsidy fee) or indirectly related (e.g. airline fees used to finance forest protection) are instruments that have been used to finance public goods and services for many years. Traditionally, governments have raised funding for conservation through taxation or specified tax deductions, independent land trusts, and other institutions have shown how these instruments have many variations and applications. Bioprospecting fees paid by pharmaceutical companies for access and the rights to compounds from certain nature sites and nature reserve admission and use charges and tourist fees are just two examples. More recently, these instruments have increasingly been used by private sector businesses to finance sustainability programs and activities, including forest conservation. For instance, some water companies have incorporated into their budgets the costs of paying upstream actors to implement better conservation practices (therefore maintaining their quantity and supply of water). There can be significant overlap between this and the Payment for Environmental Services section below.

GREEN PROCUREMENT SCHEMES

Green procurement models generally seek to direct financing towards products and areas that have been independently certified against specific sustainability standards for production (e.g. Roundtable on Sustainable Palm Oil (RSPO); Forest Stewardship Council (FSC); etc.). For instance, RSPO provides certification to producers (producer/grower certification) and downstream companies (supply chain member certification); while the FSC provides certification to forest owners and managers (forest management certification) as well as to companies selling forest products (chain of custody certification).[76]

Advocates argue that sustainable certification allows consumers to purchase products aligned with their values, companies to meet their environmental commitments, and producers to maintain or expand their market share (and potentially gain premiums for their products). While critics contend that certification is a costly, inefficient, and indirect means of addressing issues such as deforestation and has ultimately been unsuccessful in conserving global forests.

In recent years there have been increased efforts to establish green procurement or certified regions, including specific government jurisdictions, providing efficiencies of scale and allowing all related commodities from the area to be certified. This is a positive development, along with the other landscape approaches, but one issue that remains is that communities, companies, and governments engaged in such processes are making decisions about forest areas largely in the absence of positive incentives to conserve them (which likely impacts both the initial designation of such areas as well as their ability to ultimately be protected). The designation of HCS/HCV areas in pending and proposed land use plans, green growth plans, ICLUPs, etc. is likely to be highly dependent upon whether there are incentives to maintain and enhance such conservation areas.

TRADING MECHANISMS

Trading mechanisms, often called cap and trade, are an approach that allows a certain number of entities (e.g. companies or governments) to trade pollution allowances under an assigned cap which limits the total number of allowances. Caps generally shrink over time to provide less overall pollution amongst the entities involved.

Trading schemes have shown some success in areas where there a finite number of polluters responsible for a disproportionate amount of pollution, such as the program to limit acid rain related pollutants from large industrial sources in the United States. However, they appear to be less relevant and successful in areas where pollution or impacts are dispersed amongst a broad universe of actors and areas.

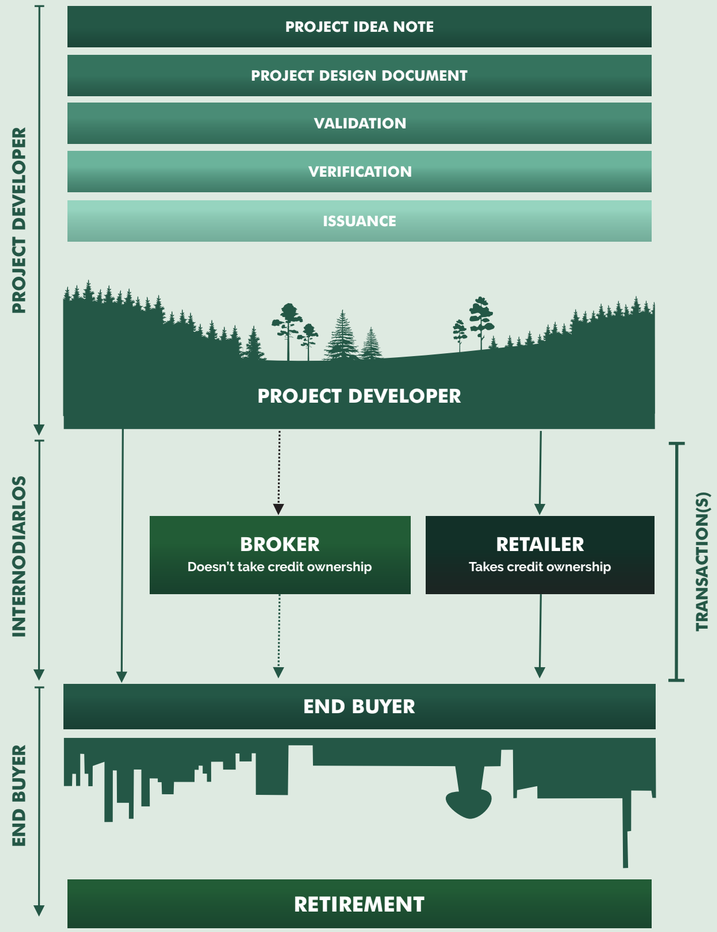
The approach seems most relevant to efforts to limit pollution within a known finite universe of actors as opposed to efforts to maximize environmental benefits in a broad universe of actors (such as in forested landscapes). The shrinking cap would also seem to pose a constraint to its applicability to HCS forests and HCV areas.

MITIGATION BANKS & OFFSETS

Mitigation banks, offsets, and related mechanisms derive from similar principles of proportionately compensating for environmental damage and have been used by governments, private sector companies, and others. One of the earliest examples of regulatory banking was the 1972 US Clean Air Act which required developers to protect or restore wetland areas as compensation for development impacting such areas. The requirements stimulated investment in private and non-governmental activities to purchase or lease high conservation value wetland areas (creating mitigation 'banks') which would be purchased by future development projects. Requisite compensation schemes can be set at any agreed rate (e.g. 1:1, 1:4, 1:0.25 etc.).

Biodiversity mitigation compensation and offset mechanisms provided at least $4.8 billion to environmental protection and rehabilitation activities in 2016, roughly double the transaction value of five years ago.[77] Most funding came from the private sector, largely the energy, transportation, and minerals and mining sectors.[78] Private investors reported that 87% of mitigation banking investments were on track to meet or exceed projected rates of return.[79]

The Offset Cycle: from Project Development to Retirement



Source: Forest Trends State of Voluntary Carbon Markets 2017 at 2, Figure

LESTARI CAPITAL

Lestari Capital, a private company registered in Singapore launched its Sustainable Commodities Compensation Mechanism (SCCM) in 2017[87] to serve as a platform to connect RSPO companies seeking to meet their liabilities with restoration and conservation projects that could meet those liabilities criteria. The partners have presented at two HCSA events in the last year and believe the company could have broader applications across sectors. The company has received financial support from the Partnerships for Forests (UK), and claims a portfolio supply of over 80 projects for which it is seeking funding, but as of April 2018 had yet to obtain a major corporate demand contract for its services.

As with mitigation schemes, offset mechanisms represent a potentially large source of finance for forest carbon projects. However, since the adoption of the Kyoto Protocol in 1997, the carbon markets have largely been inaccessible to tropical forest projects for methodological (e.g. permanence, leakage, additionality), national and local internalization of benefits (e.g. Australia and California prioritizing local projects), and other reasons. Recent efforts have been made to gain access to or create new markets (such as through the international aviation process in relation to climate), but the trends in the UNFCCC and other markets have not been favorable towards such projects over the last 20 years.

There are many forest carbon offset projects showing the potential for conservation, despite the difficulties faced by project developers selling their projects' carbon credits in an environment where existing carbon markets offer little to no price for such offsets.[80] Currently, in the voluntary carbon offset markets: supply greatly exceeds demand, and nearly half of all projects listed on the voluntary markets are not purchased due to oversupply.[81] The average trading price for carbon on the markets is $3/tCO2e, with REDD projects garnering a higher average of $4.20/tCO2e.[82]

The overall amount of carbon offsets bought and sold on the voluntary carbon markets dropped 24% from 2015 to 2016, in the wake of the UNFCCC Paris Agreement (a total of 63.4 MtCO2e compared to 84.1 MtCO2e traded in 2015, earning $191.30 million),[83] and the voluntary REDD market's largest players remain DFIs and governments willing to accept a return of 'carbon credits' as opposed to a financial return.

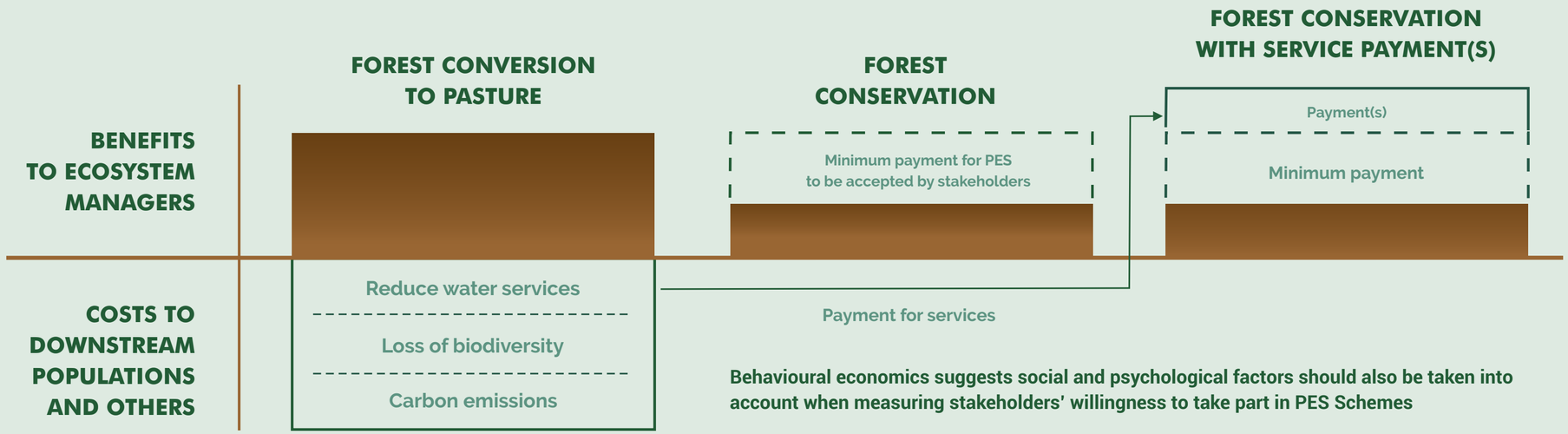
Since depending upon carbon offset markets to deliver a sufficient return for REDD + projects has proven challenging, project developers have been searching for new sources of financing with some successfully acquiring funding through the newer impact investments firms such as Althelia and Permian Global.[85] Given the UNFCCC decisions on national (and interim subnational) accounting and results, along with increasing momentum around jurisdictional approaches, it will be interesting to see what the future holds for such projects.[86] Nevertheless, the supply of such projects indicates that there are substantial opportunities to make advances in forest conservation if there were to be additional financing for such initiatives.

PAYMENTS FOR ENVIRONMENTAL SERVICES (PES)

Payments for Environmental Services operate under the principle of 'beneficiary pays' (as opposed to 'polluter pays') for benefits that are otherwise external to the conventional costs of businesses and supply chains.[88] Such schemes are generally viewed as efforts to internalise externalities by having downstream beneficiaries of services compensate upstream service providers for results,[89] although some have argued that PES can be viewed as either a compensation or reward for maintaining or improving environmental services.[90] There are myriad structures and forms for PES schemes and payments and contributions can be mandatory or voluntary, come from private or public sources, be area-based or product-based, etc.[91] The costs for PES can vary significantly within a given system, even within a single watershed.[92]

Basic contractual agreement is sufficient for defining the services and conditionality (i.e. the contract provides the conditionality sufficient for describing the services), noting that any price the two parties jointly and freely negotiate can be 'the right price.'"[93] PES schemes can utilize very simple and direct metrics for performance, with significantly lower transaction and implementation costs than projects dependent upon more sophisticated and costly accounting and monitoring schemes.[94] The negotiated agreements must clearly specify the amount and form of compensation as well as the services being provided; how implementation will be monitored, sanctions for non-compliance, and the administration of the scheme. Clear, enforceable rules and transaction mechanisms for the contracts are essential.[95]

Payment for Ecosystem Services Logic

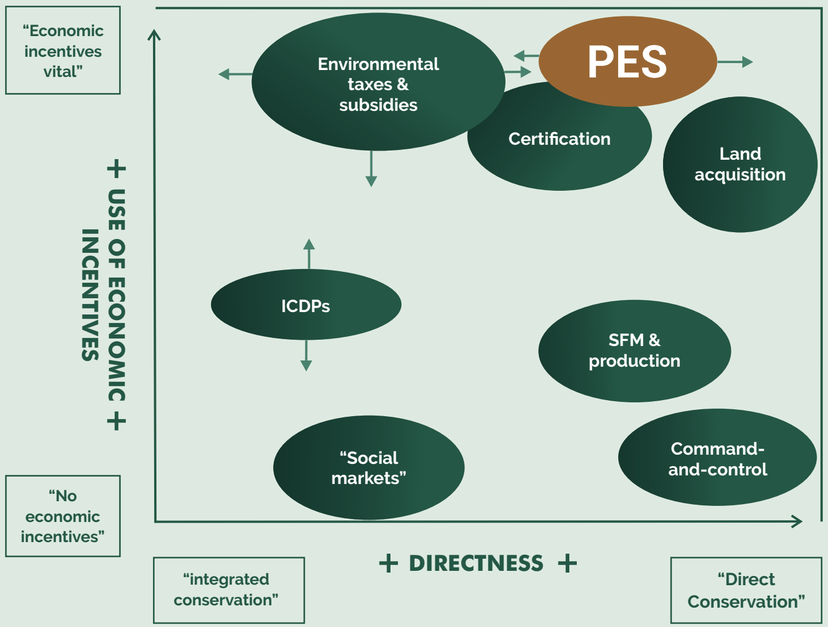


Source: Maya Innovating Conservation Finance in West Africa and the Mediterranean, Dec. 2017 at 23, Figure 7: The Logic of payment for ecosystem services (modified from Engel et al 2008).

A survey of 36 PES projects found that "in most cases non-financial benefits in the short-term lead to longer-term financial benefits for landholders, most often as yield increases, future harvest revenue, and access to markets for products."[96] The same study found that many projects were not quantifying the full range of environmental services and benefits they were providing, but that full compensation for the many benefits was not necessary to safeguard those environmental services.[97]

At the same time, while PES schemes have won laudits from some conservation experts and academics, they have at times faced opposition from donor governments, NGOs, and consultants who perhaps viewed them as replacing the value they provided for integrated landscape management, conservation projects, and the like.[98] A number of relevant examples are included in the Case Studies in Gap Filling section below.

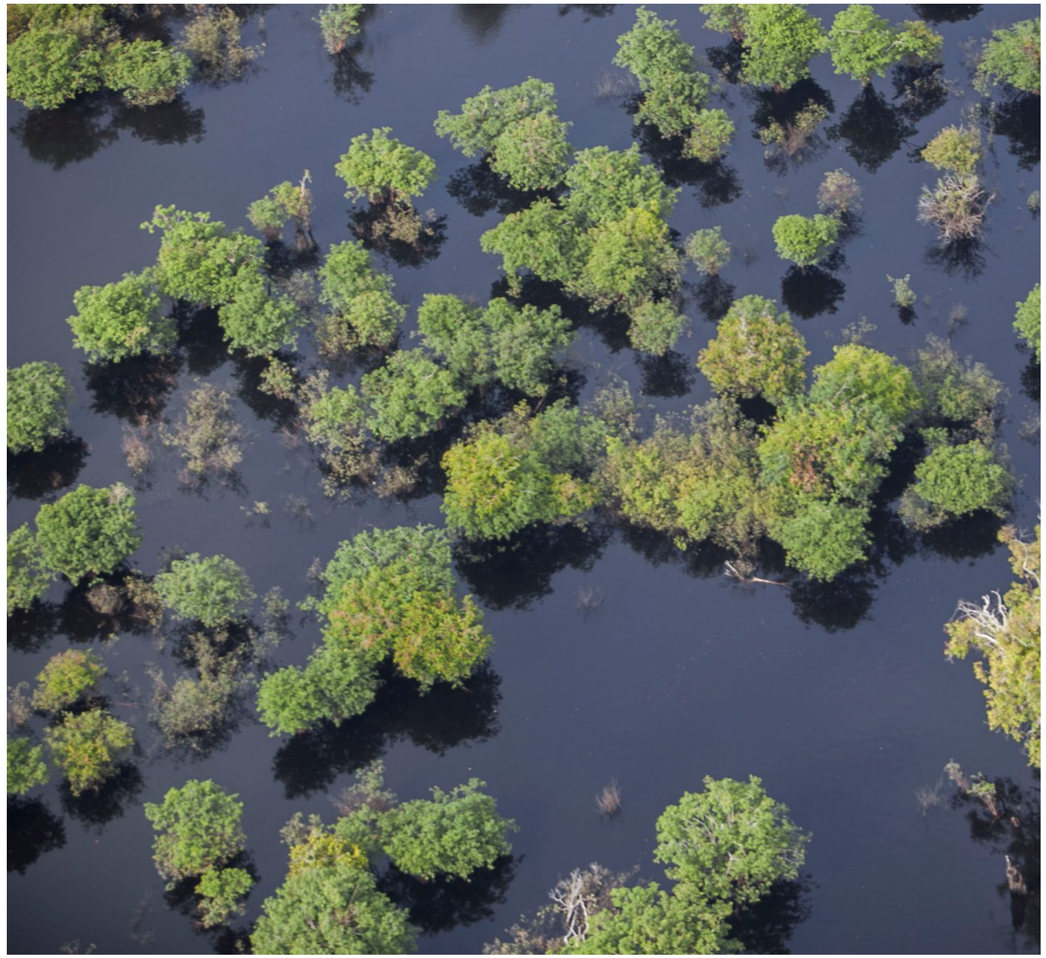
Comparison of PES to Other Conservation Approaches



Source: Sven Wunder, CIFOR Occasional Paper No. 42, Payments for environmental services: Some nuts and bolts, Center for International Forestry Research, 2005, at 6, Figure 1

DEBT-FOR-NATURE SWAPS

Starting in the 1980s foreign banks and creditors who held the debts of developing countries began to pilot renegotiated terms that allowed payments for debts to instead be directed towards the establishment of protected areas and conservation programs. NGOs such as World Wide Fund for Nature (WWF) and Conservation International (CI) often helped broker agreements for renegotiated debts accepted by creditors (because it provided some compensation in an atmosphere of potential default) and debtors (because of the more favorable terms and local benefits). This instrument has been used less frequently over time in part due to governments and international finance institutions adjusting their standard lending policies. Whether there are opportunities for such instruments to potentially be applied in the private sector context (where private loans at high risk of default are exchanged for a smaller return and conservation benefits) remains an open question, but there has been little to no evidence of such use to date.



HYBRID MECHANISMS & BLENDED FINANCING

The above categories describe some traditional finance mechanisms and instruments but over the last few years there has been an increased comingling of both in an effort to have a more ampliative effect. Donor agencies such as UKDFID and USAID, and foundations such as the Gates Foundation and Packard Foundation, have increasingly engaged in impact investments including debt and equity financing in addition to their more traditional grant portfolios. AndGreen is effectively an investment firm housed in a non-profit foundation; TLFF is a 'partnership model' that includes both lending and grant portfolios, and some organizations operate as 'groups' with for-profit and non-profit branches to maximize the benefits of both.

Therefore, the aforementioned mechanisms and instruments should be seen as guideposts for the types of mechanisms and instruments that can be created, with the understanding that this is an area of rapid innovation and new mechanisms that do not strictly meet the above categories will undoubtedly be created in the coming years.

GAP ANALYSIS & ASSESSMENT

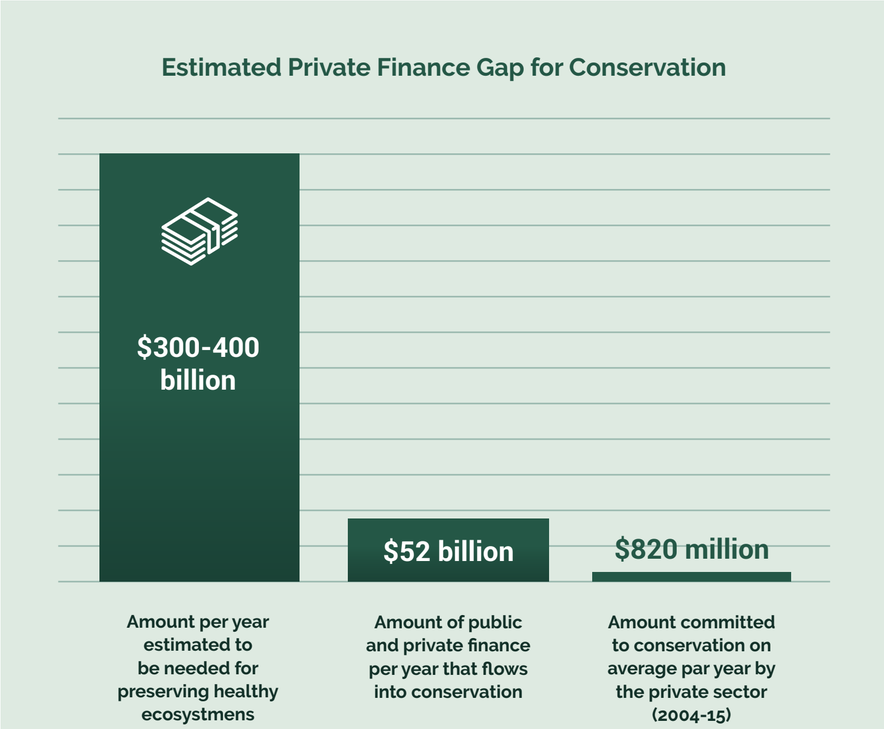
The finance mechanisms outlined above all have strengths and weaknesses. Because "finance mechanisms and sources are not mutually exclusive and can work in concert to leverage their advantages while mitigating the risks due to their shortcomings,"[99] they could potentially be utilized and help play a role in advancing the conservation of HCS forests and HCV areas.

At the same time, the need for major new and additional conservation finance and increased public and private demand for forest conservation results was a paramount, recurring theme throughout the research conducted for this report in both the literature and interviews.

WHILE THE DIVERSITY OF FINANCE MECHANISMS HAS BEEN EXPANDING, SIGNIFICANT GAPS IN CONSERVATION FINANCE AND FINANCE MECHANISMS REMAIN. CURRENTLY, THERE IS NO SINGLE, WELL-ESTABLISHED FINANCE MECHANISM CAPABLE OF PROVIDING SIMPLE PERFORMANCE-BASED INCENTIVES FOR CONSERVATION IN A MANNER OR SCALE CORRESPONDING TO THE NEEDS OF THE HCSA AND ITS MEMBERS.

While existing mechanisms could promote individual projects which protect HCS forests and HCV areas, there is no single mechanism or obvious configuration of existing mechanisms capable of providing a systemic approach to addressing and reversing the impacts of commodity production on HCS forests and HCV areas in the tropics. Further, as elaborated below, there remain important gaps within and among existing mechanisms that should be strongly examined by HCSA members and others in their consideration of options for finance mechanisms.

As local communities, smallholders and conservation organizations have been seeking funding to help them maintain forests and improve livelihoods, the impact investment funds outlined here generally required minimal investment opportunities of no less than $5-15 million in order to maintain returns and avoid the high transaction costs associated with smaller and aggregated projects, with larger commercial firms requiring even larger investments starting at $300-500 million per project.[100] This gap between the minimal scale projects for commercial finance and ability to scale projects among parties on the ground (and likely the absorptive capacity of local stakeholders as well) begat another gap, namely the provision of loans dominated such investments, while the primary conservation finance need seems to be for the provision of conditioned capital.



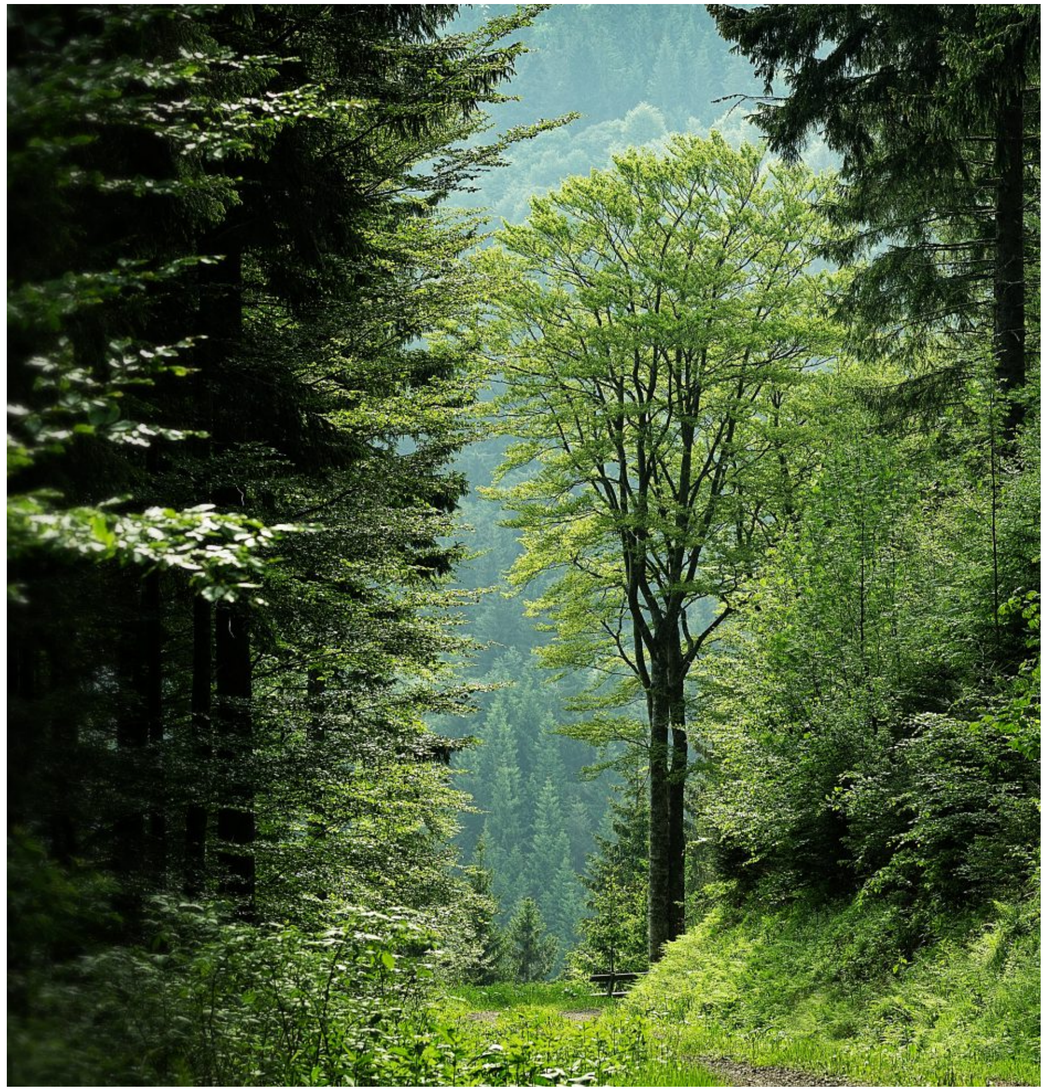
Source: Conservation Investment Blueprints: An Investment Guide, Coalition for Private Investment in Conservation and PWC, at 10, Figure 1: The private financing gap for conservation.

MOST IF NOT ALL IMPACT INVESTMENT FUNDS WITH A SUSTAINABILITY EMPHASIS FOCUS PREDOMINANTLY ON PROVIDING AND DERIVING VALUE FROM THE TRADITIONAL 'PRODUCTION' SIDE OF THE EQUATION AS OPPOSED TO THE 'PROTECTION' SIDE.101

TLFF RLU project is indicative, with the “climate smart, wildlife friendly” project securing $95 million to increase agricultural productivity in a landscape in the absence of financing for the conservation of a critical forested corridor for the remaining 150 Sumatran elephant (four families) in the landscape (at least until a late fortunate entry by the Partnerships for Forests (UK).

Expanding private investments in 'sustainable' agriculture may do little to slow deforestation if they grow rather than displace total agricultural investments; and could, by increasing the productivity and profits from hectares of land in production, inadvertently increase local incentives to convert nearby forests. Finance mechanisms dependent on the returns produced from the increased yields maybe unlikely to forego the returns (and risk their creditor's capital investments) in order to enforce compliance with the more ancillary environmental benefit of forest protection.

Legal contracts and designations have to date proven ineffective in conserving many forested landscapes, as have efforts focused on more sustainable productivity with forest protection as a byproduct. Unquestionably, more efforts must be made to get investment firms, banks, and other financial institutions to adopt and implement the HCS Approach and genuinely bind productivity investments to conservation financing and outcomes. Such firms could ultimately be important partners in increasing the value and permanence of sustainable landscapes.



THERE REMAINS NO GLOBAL FOREST CONSERVATION MECHANISM EXCLUSIVELY FOCUSED ON PROVIDING DIRECT COMPENSATION FOR EVIDENCE-BASED RESULTS, LET ALONE IN THE CONTEXT OF THE HCSA AND HCVRN.

The larger conservation fund mechanisms that currently exist appear to lack sufficient funding and a conditionality in their operations emphasizing metric-driven impacts and results. The payment for environmental service and mitigation mechanisms appear to have promise and the literature review and interviews revealed interest in such approaches. Such approaches have yet to be formally proliferated at scale in tropical countries or placed into the context of supply chains.

The gaps in finance options present an opportunity to innovate new approaches and mechanisms that would incorporate conservation investments into the commodities and related investments driving major deforestation.

THE GOOD NEWS IS THAT SUCH MECHANISMS COULD BE CREATED QUICKLY AND EFFICIENTLY. INDEED, IN A FEW CONTEXTS THEY ALREADY HAVE BEEN.

FOREST CONSERVATION COMPENSATION IN SOUTHEAST ASIA

In the wake of the 2015 fires in Indonesia which made global headlines and cost an estimated $16 billion (roughly 2% of GDP)[102], a number of plantation companies put in place fire prevention projects that provided compensation to communities to better conserve their forests (or, from an alternative viewpoint, not cause fires). Incentives were provided through cash payments and in kind contributions including services, goods, direct payments, educational trainings, technical assistance, capacity building, etc.

Such activities (often under rubrics such as “Fire Free Alliance” or “Fire Free Villages” etc.) frequently involve community agroforestry and alternative livelihoods projects to improve food security and the marketability of local commodities to provide better incomes (e.g. through more diverse vegetable, fruit and livestock farming; and technical assistance, loans and finance to increase yields), strengthening local firefighter councils (through improved offices, vehicles, capacity, trainings, technologies, etc.), greater patrolling and monitoring, canal blocking, etc.[103]

THE PONGO ALLIANCE

A unique collaboration among four growers (Sime Darby, Musim Mas, PT ANJ Agri, and United Plantation), a trader (Wilmar), seven NGOs and others to help protect nearly 10,000 remaining orangutans living non-RSPO-certified concessions in Borneo. The partners have committed to collectively advance a landscape approach in the area to create “safe corridors” that will allow orangutans to safely migrate through the various concessions into and out of the protected area “without the risk of being killed or stranded.” How can such initiatives be expanded and promoted?

A key finding from these activities has been that in many cases, ‘fire free’ communities have willingly accepted financing to conserve forests at less than the opportunity cost of converting the forests into plantations. Recent academic research, including a 2017 randomized trial involving 120 villages in Uganda, has provided additional confirmation that simple direct compensation mechanisms that provide payments for forest conservation can be highly successfully.[104] The Uganda research showed that every $200 spent on forest conservation yielded $500 in global carbon benefit (based on a net global environmental cost of $40 per MT of CO2).[105]

Given increased global market demands for sustainably produced commodities, and widespread adoption of no deforestation commitments, there should be ways to integrate investments in forest conservation into commodity investments and production, as a shared responsibility amongst members throughout the supply chain.

The activities provide some valuable lessons and inputs for the HCSA and HCVRN but also raise questions: Can such activities be expanded through a more dedicated mechanism supported by actors throughout the supply chain? Could such a mechanism change the nature of commodities and investment, by directly tying commodity production in forested landscapes to investments in forest conservation? And could initial contributions and commitments to such a mechanism yield the expectation (or requirement) that others to do the same?

CASE STUDIES IN GAP FILLING

In recent years more companies have begun adopting what some have called “net-positive” objectives and implementing related activities to improve their brand image and better “secure a sustainable supply of raw materials.”[106] For example, Unilever’s target is to be “net carbon positive” by 2030,[107] and Kingfisher, Europe’s largest home improvement store, has a target to source 100 percent sustainable timber products by 2020 and reforest more land than is deforested in its supply chain.[108]

Below are some relevant case studies that could help inform the development of mechanisms and activities:

AB InBev

AB InBev: The world’s largest brewer, Anheuser-Busch InBev (AB InBev), recently completed its target of engaging in watershed protection measures, in partnership with local stakeholders, at 100% of its facilities in Argentina, Bolivia, Brazil, China, Mexico, Peru, Zambia, and the United States.[109] The initiatives were conducted to improve the security, quantity, and quality of watersheds for the company’s operations and surrounding communities.[110] AB InBev provided financial and technical resources for a variety of initiatives (conservation, reforestation, habitat restoration, green infrastructure, etc.) in conjunction with relevant local stakeholders including local water users, authorities, and NGOs including the World Wide Fund for Nature (WWF) and The Nature Conservancy (TNC).[111] These efforts were started with a single project in Jaguariúna Brazil in 2014, where the company invited local farmers and landowners within the water basin to partner with them on a watershed protection effort.[112] Five farmers covering a third of the designated pilot area joined the effort and were provided financial incentives for implementing conservation and sustainable management practices to protect the local forests and prevent erosion and sedimentation.[113]

UNILEVER & TEA

Unilever & Tea: In 2000, Unilever noticed that its tea plantations near the Mau Forest in Kenya were being impacted by reductions in the rainfall and water availability in the landscape, which seemed to be caused by ongoing land clearing and logging in the forest.[114] The company engaged the locals who were engaged in these practices that were impacting the forests and ecosystem services and provided them incentives to reforest the areas with indigenous seedlings.[115] Since 2001, 850,000 trees have been planted to secure the quantity and quality of water in the area.[116]

VOLKSWAGEN IN MEXICO

Volkswagen in Mexico: Volkswagen's factory in Mexico's Puebla Tlaxcala Valley, foresaw diminished water supplies as the demand for water from the nearby city of Puebla increased. The company therefore initiated a groundwater replenishment project that compensated local landowners to reforest the upstream mountainous areas to improve the functioning of the ecosystems in upstream mountain areas in order to better recharge and maintain the supply of groundwater.[117]

ASIA PULP & PAPER GROUP

Asia Pulp & Paper Group (APP): APP has spent nearly US $200 million over 3 years to implement its Zero Deforestation policy.[118] Resources have gone to the training of more than 2,900 fire fighters, fire suppression helicopters, surveillance drones, and satellite monitoring (via Global Forest Watch).[119] In addition, APP's community engagement programs have provided trainings, fire equipment, and other benefits to more than 2,600 people across 220 villages.[120]

APRIL

APRIL: APRIL has instituted a No Burn Village Reward program since 2014 that provides financing for community infrastructure projects to participating villages in exchange for their agreement not to burn land.[121] The project initially included 27 priority villages (identified based on a fire risk assessment process), another 9 villages joined in 2017, covered a total of 622,112 hectares in Riau Province, Indonesia.[122] An additional 50 villages with lower fire risk assessment profiles, have been engaged in an education-based Fire Aware Communities programs.[123] An analysis by the organization Carbon Conservation found a 42.6% reduction in burnt areas from 2016 to 2017 (from 390.6 to 159.3 hectares), and a reduction of 97% since 2014 (when 618 out of 352,146 hectares burnt).[124] The review found that the majority of burnt areas came from two fires largely outside the control of the program's villages, and that the fires demonstrably within the village's control amounted to just 5 hectares.[125]

GOLDEN AGRI RESOURCES (GAR)

Golden Agri Resources (GAR) has over 500,000 hectares of palm oil plantations and 72,000 hectares of conservation forest.[126] The company has made community conservation partnerships agreements with 10 villages to conserve more than 7000 hectares of forest.[127] The company's Fire Free Villages programs provides IDR 100 million per village as a reward for its conservation efforts as well as an additional IDR 500,000 for increased food security.[128]

INCORPORATING CONSERVATION INTO COMMODITY SUPPLY CHAINS

SIME DARBY

Sime Darby: Sime Darby contributed US $6.25 million over 10 years to restore 5,400 hectares of logged-over forest with indigenous tree species in a forest carbon sequestration project initiated with Face the Future, a Netherlands-based organization. WWF Malaysia raised an additional US $2.375 million to restore an adjacent 2,400 hectares of degraded orangutan habitat, towards the collective goal of 25,000.[129]

COCOA IN GHANA & COTE D'IVOIRE

Cocoa in Ghana & Cote d'Ivoire: A report by Mighty Earth in 2017 showed how chocolate from Ghana and the Ivory Coast, once considered perhaps the best in the world, has shown appreciable reductions in quality in part due to deforestation.[130] Cocoa production that was driving deforestation was sold to traders including Cargill and Barry Callebaut, who then sold it to Nestlé, Mars, Hershey, and Mondelez (who owns Cadbury).[131] Mars has stated that it will make "financial commitments for forest protection and restoration in Ghana and Cote d'Ivoire"; and Hershey has committed $500 million by 2030 to improve cocoa sustainability in the two countries in addition to purchase 100% certified cocoa by 2020.[132] Mondelez agreed earlier in 2018 to contribute US $5 million over 5 years to Ghana and UNDP's Reducing Emissions from Deforestation and forest Degradation (REDD+) Partnership Program to help conserve the country's forests.[133] Cote d'Ivoire has drafted a plan to require each trader to take responsibility for reforesting an area of degraded forests in conjunction with local farmers, while the Ghanian government is also developing proposals to protect the country's high carbon stock forests.[134] Olam has launched a Cocoa initiative with the Rainforest Alliance called "Livelihoods & Landscapes in Western Ghana," supported by the Partnerships for Forests (UK), which will provide financing for forest conservation, restoration, and participatory mapping.[135]

MALUA BIO BANK

The Malua Forest Reserve (MFR) in the Malaysian state of Sabah in Borneo encompasses 340 km2 (34,000 ha or 80,000 acres) of lowland rainforest. The Malua BioBank, established in 2008, is a public-private venture between the Malua BioBank Company (created by the Eco Products Fund (EPF), a private U.S. equity fund jointly managed by New Forests and Equator LLC) and the Sabah State Government, with key participation by Sabah Foundation (a state organisation), and local and international experts and NGOs. The private-public partnership was created with civil society and non-governmental organization support.[136] The Malua BioBank committed US $10 million to the project and the Sabah Forestry Department (SFD) and others were contracted to implement the Malua Conservation Management Plan, which was developed with guidance from biodiversity experts and support from local non-governmental organisations (NGOs).

The BioBank sold Biodiversity Conservation Certificates (BCCs), with each certificate representing a 100 square meter protected or rehabilitated area of the Malua Forest Reserve.[137] The certificates were based on the Sabah Government's contractual commitment to implement the Conservation Management Plan, which was monitored by the Malua Trust, and overseen by a Steering Committee and Advisory Committee composed of government, private investors, scientists, and local and international NGOs.[138] The Steering decided what management practices the BCC sales would finance (activities included establishing forest checking stations, monitoring teams, aerial surveys, vehicles, and telecommunication services),[139] with a portion of the sales going to a perpetual endowment fund to ensure long term sustainable financing, and remaining profits going to the BioBank and Sabah Government.[140]

The project engaged the local palm oil companies to improve the plantation's boundaries through the recruitment and training of palm oil workers as honorary wildlife wardens. In the short term, the project delivered conservation results by halting or dramatically reducing illegal logging and illegal hunting. However, the BioBank as a novel project had significant capital and transaction costs and lacked established independent methodologies, modern technologies, and risk pooling/aggregation with other actors. Ultimately despite it's success in conserving forests, the efforts failed largely due to its inability to secure sufficient resources through the voluntary offset markets which it had targeted as a primary revenue stream.[141] Nevertheless, the project led the Sabah government to consider developing a 'no net loss' policy for forests and in 2013, the government changed the land use zoning of the Malua Forest Reserve from commercial forestry to fully protected.[142]

MURRAY-DARLING BASIN, NEW SOUTH WALES, AUSTRALIA

Murray-Darling Basin, New South Wales, Australia: land clearing from agricultural development caused the salinisation of soils and water, resulting in a large scale decline in agricultural productivity.[143] Natural vegetation clearing resulted in less water transferring to the atmosphere, causing water tables to rise and deposit mineral salts in the surface waters and soils.[144] Salinity affected 40% of private land owners and threatened to impact up to 80% of irrigated land in the watershed.[145] As a result, the state forestry agency struck an agreement with an association of 600 farmers (Macquarie River Food and Fibre or MRFF) to initiate a pilot project that provided financing to farmers for reforestation efforts in order to reduce salinity in the region.[146] The farmers purchase "salinity credits" at a rate of US$ 45/ha/year from the government, which is then redirected to compensate upstream landowners and farmers for forest restoration efforts.[147]

SMALLHOLDERS AND MEXICO'S PES SCHEME

Smallholders and Mexico's Payment for Environmental Services (PES) Scheme: Smallholders can present a particular challenge with regard to negotiating payment schemes, with higher transaction and monitoring costs than those applicable to larger landowners and properties.[148] Nevertheless, this problem has been overcome in many instances, for instance, by working with groups of landholders (such as associations or cooperatives) and negotiating with appointed representatives.[149] Such groups can facilitate the more efficient direct contracting or can serve as intermediaries who then subcontract with individual group members.[150] For instance, in Mexico's payment scheme, the authority that represents the ejidos (communal land owners) applies to the government for payments based on the group's forest cover, and subsequently redistributes the payments within the ejido based on internal agreements related to land distribution.[151]

SMALL FARMERS IN COLOMBIA'S CAUCA RIVER BASIN

Small Farmers in Colombia's Cauca River Basin: The Cauca river basin in Colombia supplies water to 5 million people, but rapid urban, industrial, and agricultural development in the 1980s resulted in increased droughts during the summertime and increased floods during the rainy season.[152] Colombia's laws requiring that water first be allocated to residential users had a severe impact on local farmers.[153] Small farmers in the river basin found that the government and other existing institutions were not sufficiently addressing their interests and needs for increased protection of watershed services.[154] To facilitate investment in watershed management, the farmers created 12 water user associations, which were funded by voluntary member fees based on water consumption. These fees went into a fund which was used to finance watershed restoration activities upstream to improve the quantity and quality of streamflow.[155] Financing was provided based on contracts with upstream forest landowners and was also used for direct land purchases in environmentally sensitive areas near water supplies.[156]

SEIMA, CAMBODIA

Seima, Cambodia: Launched in 2002, the Seima Biodiversity Conservation Area project in Cambodia compensates local community members for protecting birds' nests to help conserve endangered species. A non-profit organization, the Wildlife Conservation Society (WCS) acts as the coordinating agency and contracts with local individuals to compensate them for their labor and outcomes (i.e. the number of nests protected).[157] The program was initiated with just four villages but within six years had expanded to 21 villages and protected more than 1,500 nests.[158]

CHESAPEAKE BAY, USA

Chesapeake Bay, USA: The Chesapeake Bay Watershed Initiative in the United States helps agricultural producers to reduce sediments and nutrients (e.g. nitrogen and phosphorus) which had significantly deteriorated the ecological resilience of the bar. Agriculture covers roughly 25% of the Chesapeake Bay watershed area.[159]

HYDROPOWER COMPANIES & FONAFIFO IN COSTA RICA

Since 1998, the La Esperanza hydropower company in Costa Rica has provided compensation (US $10 per hectare per year) to the Asociación Conservacionista Monteverde (Monteverde Conservation League), an NGO, in exchange for conserving forests in the watershed's upper catchments (due to the important hydrological services they provide).[160] Costa Rica's National Forest Office and Fund for Forest Financing, (FONAFIFO) also obtained agreements with hydro-electric power companies and major water consumers to provide compensation for forest conservation in upstream watersheds.[161] Private companies pay FONAFIFO on a per hectare basis, and FONAFIFO in turn provides compensation to local forest owners and NGOs for forest conservation results.[162] Per hectare payments vary in amount but are generally within a 500% range (e.g. from US $10-$47 per hectare per year in 2004), with agreement periods often in the 5-10 year range.[163]

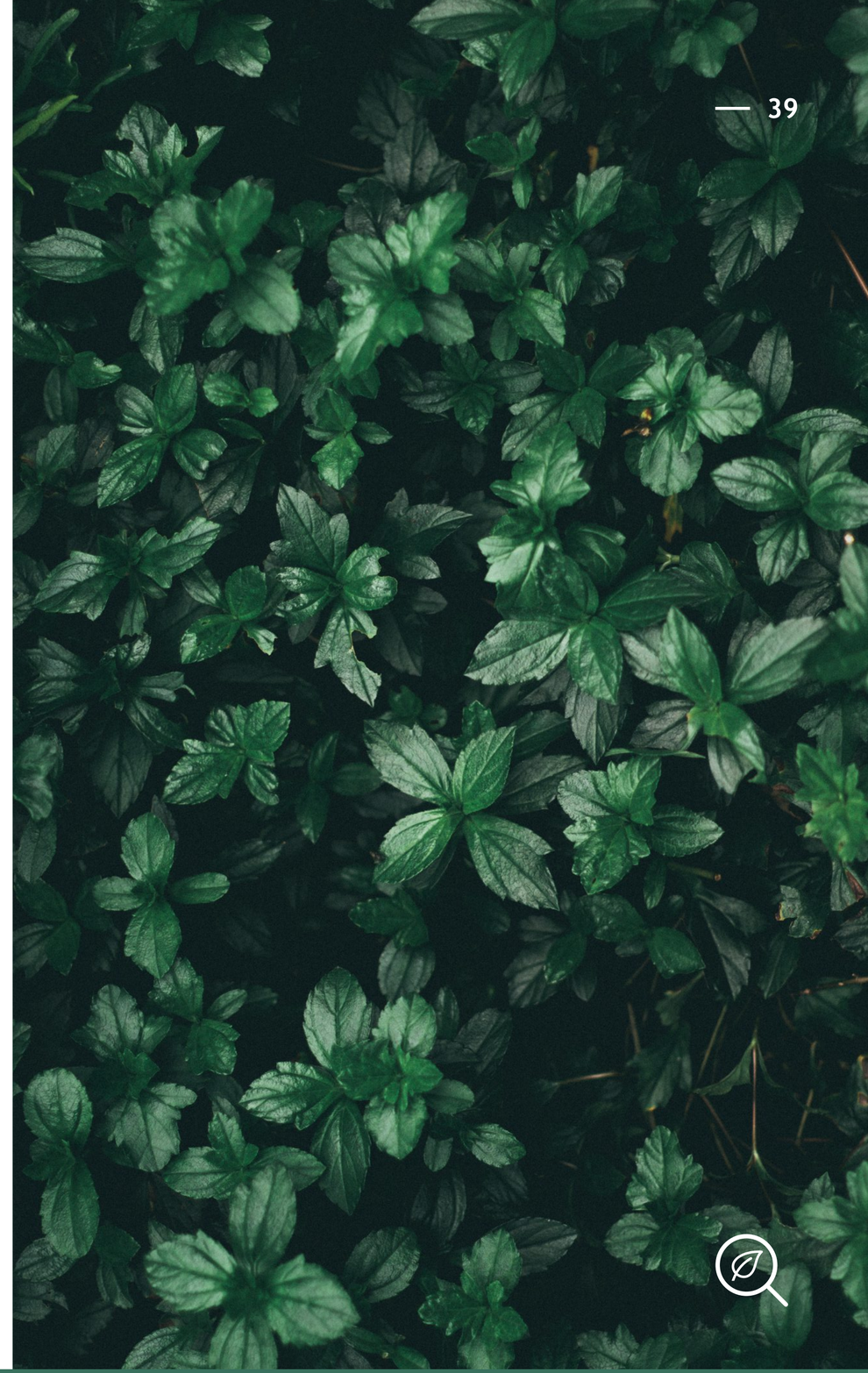
FONAFIFO compensates private landowners who agree to protect, sustainably manage or reforest their land.[164] Part of FONIFIFO's financial support comes from a 5% national sales tax on fossil fuels, and part from private company contributions. FONAFIFO also acts as an intermediary between hydropower companies and upstream forest owners. For instance, Energía Global (now Enel Latin America), a private hydropower company, wanted to help conserve its upper watershed to reduce sedimentation and increase streamflow throughout the year, which was being disturbed by increased land clearance by local farmers. Through FONAFIFO, Energía Global compensates upstream landowners to improve the conservation and reforestation of their lands. Landowners who recently engaged in deforestation or plan to convert their natural forest to plantations are not eligible for compensation. Energía Global pays US $18 per hectare to FONAFIFO, which adds an additional US $30 per hectare, in order to provide US $48/hectare/year in compensation to landowners who signed contracts with Energía Global, in exchange for more sustainable management of the land and for the foregone opportunity costs from other activities such as cattle ranching. A local NGO, FUNDECOR (Fundación para el Desarrollo de la Cordillera Volcánica Central), is responsible for helping to administer the scheme, oversee the implementation of the conservation activities, and carry out technical studies.[165] Interestingly, while cash payments were a primary form of contribution,[166] some landowners did not favor participating in the payment scheme if it only provided cash payments on a per hectare basis.[167] Conditions to address land titles and improve roads were therefore included in order for an agreement to be reached.[168] The PES system compensates farmers not to deforest even though deforestation on some of lands is illegal, acknowledging the realities of governance and enforcement in the region.[169] Despite the profitability of cattle ranching in the area, the initial offering of compensation for hectares of forest conserved was met with a demand that exceeding the initial available funding by a factor of three.[170] The program has been tremendously successful: Costa Rica had 75% forest cover in 1940, which dropped to a low of 21% in 1987, but has now increased to more than 50% due to its forest compensation scheme (with half of all forests now classified as protected).[171]

NEW YORK CITY (NYC)

New York City (NYC) Watershed: Over 90% of the drinking water supply for New York City's 9 million residents comes from the Catskill and Delaware watersheds which encompass a largely forested area of 4000 km^2 with a population of 77,000.[172] In 1992, the City of New York City decided to invest in protecting these watersheds rather than a water filtration system which would have cost US $6-8 billion to build and US $300 million to operate annually.[173] NYC invested roughly $1.5 billion over 10 years (financed by a 9% tax increase on water bills), and established a $60 million conservation trust fund to compensate farmers and foresters for adopting more sustainable management practices. The initiative included the removal of environmentally sensitive lands from agricultural production through 10 to 15 year contracts, and the purchasing the development rights to certain lands (at market rate) near rivers, wetlands, and reservoirs.[174] Additional incentives were developed and utilized, such as expedited permitting for best practice low impact logging companies, and tax deductions for forest landowners with 10 year sustainable management plans.[175]

NESTLE WATERS IN FRANCE (VITTEL)

Nestlé Waters in France (Vittel): Nestlé's subsidiary Vittel is the world's largest bottler of natural mineral water.[176] Most of its water sources in France are in watersheds with significant agricultural presence whose runoff (including nutrients, sediments, pesticides, etc.) risks contaminating the aquifers the company's business depended upon.[177] Vittel spends an average of US $24.5 million annually compensating farmers in the watershed at $230 per hectare per year to implement sustainable land use practices (based on contracts of up to 30 years).[178] In addition, Vittel purchased 1500 ha of farmland in particularly water sensitive areas for $9 million (more than market price), but granted some restricted legal use rights back to the farmers to profit from the land in a more sustainable manner.[179]



CHINA

Degradation And Erosion Prompted China's Grain-for-Green Program

China in 1999 initiated the Grain-for-Green Program, the world's largest environmental payment scheme, turning 28 million hectares of largely degraded agricultural lands into forest (albeit primarily monoculture plantations) while addressing rural poverty and reducing pervasive erosion.[180] The program provides grains to rural farmers in exchange for their not clearing sloped lands for agriculture, thereby reducing erosion and sedimentation in nearby streams and rivers and improving the quantity and quality of water.[181] While some have estimated the cost of the entire program at $95 billion,[182] it is broadly acknowledged to have provided over $40 billion in direct payments and other benefits to 32 million households, impacting more than 124 million people.[183]

Image Source: Timberland

USA

1930s Dust Storms in the United States Prompted Conservation Payments

In the Midwest United States during the 1930s, the large scale over-development of unsustainable agricultural production and cultivation practices led to the “dust bowl era” (or “dirty thirties”), whereby soil and wind erosion coupled with drought caused massive dust storms that devastated livelihoods, farming, and the economy.[184] As a consequence, the United States government established the Soil Conservation Service (SCS), later re-named the National Resources Conservation Service (NRCS), which implemented a new Agricultural Conservation Program (ACP) in 1937 which compensated farmers for conservation projects.[185] A broader initiative, the Conservation Reserve Program (CRP), was adopted in 1985 as part of the Food Security Act, providing annual cost sharing and rent payments (as part of 10-15 year contracts) to farmers who agree to remove environmentally sensitive areas from agricultural production and/or plant indigenous vegetation.[186] The CRP has become the world's longest running PES program and is considered one of the most successful private conservation programs in US history by providing $1.8 billion a year in compensation through 766,000 contracts to landowners and farmers to rent 10-14 million hectares of environmentally-sensitive land.[186]

Image Source: Dust Storm Approaches Stratford, Texas, USA, 1935 NOAA MCT, Getty Images

Image Source: The Black Sunday Storm Approaching Rolla, Kansas, USA

EUROPE

European countries also provide direct area-based payments to farmers to institute conservation practices and protect environmentally important areas in lieu of agricultural development.[188] Data from 2015 and 2016 indicated that nearly twice the amount of land (8 million hectares, roughly 10%) was held by farmers as an ecological focus area (EFA), than legally required (5%).[189] For instance, Switzerland launched its ecological compensation programs in 1993, and Ecological Compensation Areas (ECAs) have grown from 70,500 to 126,500 hectares since then, and now cover approximately 12% of the country's total agricultural lands.[190]

INDIA

India recently adopted and began to implementing a new ecological fiscal transfer (EFT) system whereby $6.9–$12 billion of the central government's annual tax revenue payments to India's 29 states will be conditioned on the conservation of their forests and forest cover (in addition to other indices such as poverty reduction) based on a 2013 baseline.[191] The program was adopted in 2014 and implementation is underway, with the Government estimating that payments will amount to roughly $174– $303 per hectare of forest per year.[192] Experts are optimistic that the approach will significantly help India in meeting its climate targets and could be transformative and replicated elsewhere for purposes of forest protection.[193]

OBSERVATIONS & OUTSTANDING GAPS

Deforestation is increasingly negatively impacting the productivity and profits of companies and local economies, who are increasingly finding ways to incorporate investments in conservation into their costs of production. The aforementioned case studies show how numerous compensation schemes have been successfully developed and deployed in such instances. At the same time, whereas the profits of ongoing deforestation remain largely 'localized' (in terms of specific company and local economies), the negative impacts remain far ranging and global (in terms of carbon, biodiversity, hydrology, etc). The question remains whether finance mechanisms and incentives can more fully incorporate conservation investments into commodity production in a manner that provides both local and global benefits.

Many of the case studies above reflect performance-based conservation schemes, and the research for this piece revealed a strong preference for such results-based systems. Upfront start-up and ongoing operating costs are an acknowledged reality for any finance mechanism, PES schemes (and hybrid schemes incorporating PES elements can have a much stronger focus on metrics and results for conservation than other mechanisms. Nevertheless, these efforts have not been replicated at scale globally, nor in many tropical forest regions and serious outstanding gaps remain, including:

OVERARCHING GAPS RELEVANT TO CONSERVATION BENEFITS AND NEEDS

Research from WWF, McKinsey and others have identified $200-$300 billion as the global annual need for conservation finance, while current global funding for conservation is estimated at $50 billion annually (primarily from government, multilateral, and philanthropic sources).[194] Dedicating just 1% of annual global private sector investments would provide $200-$300 billion annually.[195] There remains no simple positive incentive mechanism for communities and companies to conserve forests in and around concessions, despite many years' worth of activities and discussion around the risks and impacts of deforestation.

While covering less than 7% of the earth's land surface, tropical rainforests account for 40% of the earth's oxygen.[196] Studies have shown how forests can double precipitation in some areas[197] with one study finding the Amazon forest is accountable for 50% of the region's rainfall (due to evaporation and transpiration).[198] Deforestation reduces rainfall both locally and as far as thousands of kilometers away.[199] Other research has shown that since 2000,[200] rainfall has declined across 69% of forests and 80% of grasslands in the Amazon since 2000, and with ongoing deforestation, scientists have predicted the tropics could see a 12 percent and 21 percent decline in wet and dry season precipitation by 2050.[201]

Tropical forests account for up to 24-30% of global climate mitigation potential, based on the most recent scientific studies, due to their contribution to both carbon emissions and sequestration.[202] These same forests also house more than 50% of terrestrial biodiversity of species.[203] IPCC has estimated forest carbon fluxes to be near 11%, and most attention and funding has gone to projecting and quantifying reductions in deforestation emissions in relation to that figure.[204] A simple metric-based mechanism to incentivize the conservation of high carbon stock forests has yet to be developed but could provide the greatest opportunity to address the 24-30%.

SPECIFIC GAPS RELEVANT TO COMMODITIES & CONSERVATION FINANCE MECHANISMS

Institutional Gap: There remains no well-established finance mechanism focused on incorporating conservation investments in HCS forests and HCV areas into commodity supply chains. There are existing facilities and funds focused on delivering financial returns through increasing sustainable production (e.g. TLFF, AndGreen, etc.); and a new institution focused on clarifying rights and tenure of indigenous peoples and local communities (the Land Tenure Facility); but there is no equivalent facility focused on conservation. Further, impact investment firms require large projects that can yield market or near-market rate financial returns (with some impact firms in the $5-15 million range but most traditional firms requiring $200 million+), while most donor conservation finance requires minimal conditionality, and most small grant facilities offering $500-50,000 per project (Global Green Grants[205] & GEF Small Grants Programme[206]). A facility that provided payment-for-performance investments in the 'missing middle' could partner with other institutions and help catalyze additional landscape investments.

ICLUP Gap: Landscape management plans, integrated conservation land use plans (ICLUPs), and jurisdictional green growth plans are being developed but there remains little positive incentive for stakeholders to maximize areas for conservation. A finance mechanism with dedicated resources and a clear metric by which planners could prognosticate the economic benefits of conserving HCS forests and HCV areas could drastically improve the development and effective implementation of the conservation elements of land use plans (potentially through “contingent ICDPs” or “PES-ICDP hybrids”).[207] By providing an alternative economic option, such finance would precipitate better decision-making in land use planning.

Aggregating Bottom-up Approaches to Scale: a finance mechanism could be designed to support community and corporate projects from the bottom up compared to top-down mechanisms (including certain REDD+ and forest carbon initiatives) that have struggled to have funds reach the ground. Communities organizations, farmer associations and collaborative landscape partnerships that identify forests for conservation could potentially establish community conservation trusts or similar sustainable development institutions to receive and disseminate dedicated funding for conservation.[208] In time such community-based trusts could proliferate, with the high transaction costs of having each engage in fund management buttressing the argument for a single more efficient pooled fund.

Results-based Conditionality with Activity and Durational Flexibility: mechanisms providing direct investments in conservation conditioned upon performance remain largely absent at sufficient scale in the tropics, despite being applied in other regions. The use of pre-determined simple metrics tied to evidence-based results need not be overly prescriptive as to the piloting and application of different activities and tactics (e.g. in kind services v cash payments). Flexibility on contract duration could better relate to the different concessions and leases and quicker, simpler, short term contracts could prove a more attractive proposition when negotiating with communities, smallholders, and others. Finance mechanisms that maintain strict conditionality while providing flexibility on such terms could make significant conservation gains on the ground relative to the extensive contract periods generally required of many carbon-offset projects (to claim sufficient emission reductions and greater permanence). For instance, California's Protocol for US based Forest offsets have a 25 year crediting period that must be tied to a minimal 100 year commitment period,[209] while Costa Rica's FONAFICO PES system is largely based upon 5 year contracts.[210]

THE URGENT NEED FOR INNOVATION IN CONSERVATION FINANCING

CLIPS FROM THE LITERATURE REVIEW

- "Today we urgently need new and innovative ideas, tools and ways of working to finance the protection" of natural resources."[211]
- "[W]e need to test and refine more innovative approaches… and the courage to employ direct, conditional payments."[212]
- "[A]dequately rigorous control mechanisms to incentivize a wholesale change in practice upstream are currently lacking."[213]
- "The conclusion is that a gap in financing mechanisms exists."[214]
- "There is a significant unmet demand for the funding of conservation programs to preserve ecosystems at a global scale. Conservation finance, in particular from for-profit investors, has to date been small-scale and so possesses large unrealized potential."[215]
- "Develop simple, investable and scalable cash flow mechanisms that have measurable conservation impact. In order to appeal to a broad range of investors, conservation finance mechanisms need to be simple and modular, ideally structured as simple combinations of investments in underlying assets and revenue-generating mechanisms."[216]
- "[N]ew financing strategies for protected area systems are critical to reduce existing funding gaps and improve management."[217]
- "There is a need to increasingly focus REDD+ finance on on-the-ground testing and implementation, even at smaller scales."[218]
- "[T]he most obvious recommendation – to choose payment structures that least displace intrinsic motivation for conservation… [and] testing at least the differences in impact resulting from cash versus in-kind incentives, and individual versus community level payments."[219]

HOW MANY RESOURCES HAVE COMPANIES DEVOTED TO SHOWING THEY ARE NOT PART OF THE PROBLEM, RATHER THAN TRYING TO SOLVE IT?

"We are at a point right now when the cost of not acting is starting to become higher than the cost of acting. Conflict prevention and wars take up 9% of the global GDP. Loss of biodiversity costs 3% of the global GDP. Climate change and all its indirect effects are 5% of GDP.

IT IS CHEAPER TO ATTACK THE ISSUES AND INVEST IN SOLVING THEM THAN TO DEAL WITH THE COSTS."

Paul Polman, CEO, Unilever.[220]

SHARED RESPONSIBILITY

CLIPS FROM THE LITERATURE REVIEW

- "[O]pportunity costs [should be] borne by multiple stakeholders along the value-added chain."[221]
- "The best result for all concerned (in sum rather than individually) is one which allows for appropriate degrees of risk and cost sharing."[222]
- "The CCC payments should be seen as a strategic insurance premium or marginal subsidy designed to raise the threshold of local net conservation benefits."[223]
- "A significant share of the world's resources is in the hands of private businesses. Those same businesses are also major contributors to biodiversity loss. As such, businesses have considerable capacity either to deliver improved outcomes or to forestall change."[224]
- "Most ZDC adopters formulated strong ZDCs, but failed to specify concrete implementation mechanisms or adequately account for externality problems."[225]

BUILDING ON HCSA PROGRESS & PROMISING CONSERVATION INITIATIVES

The companies who have driven a significant degree of forest loss still control or otherwise have influence over a significant share of the world's forests and ecosystems and, as a result, will have "considerable capacity either to deliver improved outcomes or to forestall change."[226] Since 2000, an estimated 60% of palm oil exports (approximately 16 million tonnes) have come from deforested areas in Indonesia and Malaysia.[227]

COMPANIES WITH NO DEFORESTATION COMMITMENTS NOW COVER 74% OF PALM OIL REFINING CAPACITY IN INDONESIA AND MALAYSIA.[228]

At the same time: "palm oil is not going away because there is no good substitute. Rather, palm oil —and other commodities— need to reflect proper pricing by incorporating the price of externalities into products."[229]

All businesses, profits, and life is dependent upon ecological services and stakeholders should seek ways to collaboratively create "shared value" in terms of brand value, productivity, environmental services, and social conflict insurance, by "holistically reconceiving products and markets" and "redefining productivity in the value chain."[230] Some authors have argued that multi-stakeholder efforts to create shared value will drive the next wave of innovation and productivity growth" and provide supportive businesses "a competitive edge."[231]

Many of the case studies above were initiated only after a direct ecological impact on economic production had been identified (increasing the overall costs of the programs). While deforestation has begun to directly impact supply chains in a number of areas, perhaps the overall desire for more sustainably produced commodities can stimulate action at an earlier preventative phase, reducing the overall costs of such interventions. One is left to wonder what the cost of preventative action would have been relative to the ex post costs incurred after ecosystems had been deteriorated to the point of having negative impacts on revenues and economies.

There has been an increasing trend of palm oil companies engaging in more collaborations; such as the PONGO Alliance[232] initiative to save 10,000 orangutans (Sime Darby, Wilmar, Musim Mas, and others); Wilmar-GAR-Musim Mas work on human rights; the Cargill-Musim Mas Production-Protection smallholder project in Riau; the Palm Oil Innovation Group (POIG); etc.

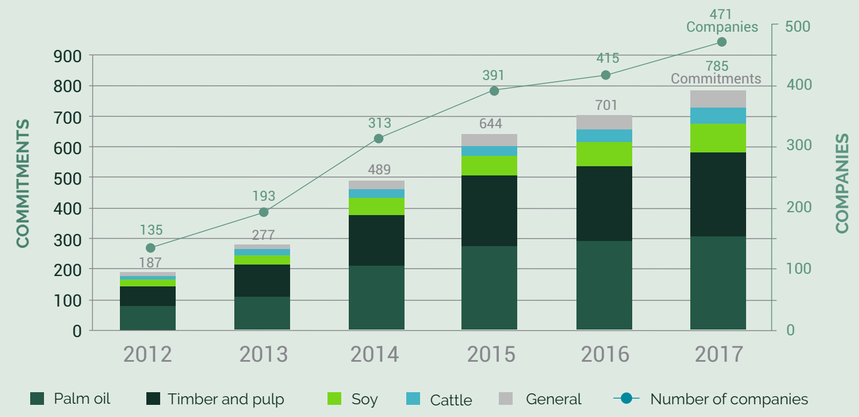
A DEDICATED FOREST FINANCE MECHANISM COULD NOT ONLY SERVE AS AN EXTENSION OF THOSE COLLABORATIONS, BUT PERHAPS CONSTITUTE THE ULTIMATE PARTNERSHIP FOR SUSTAINABLE SUPPLY CHAINS.

The reduced biodiversity and ecosystem services from global forest loss has been estimated to cost the global economy US $2 trillion per year.[233] The decline in these ecosystem services is creating risks to businesses' continued profitability and social license to operate.[234] While there have been a number of projects and initiatives to conserve forests, "these actions are not sufficiently widespread,"[236] particularly in tropical forest countries. The OECD notes that the best policies and mechanisms to address this issue would be those capable of creating "incentives for behavioral change" and mobilizing finance, specifically noting economic instruments such as PES as opposed to regulations.[236]

THE NEED FOR FOREST CONSERVATION FINANCE

Over the last five years, significant finance has been dedicated by companies to certification, traceability and other efforts to show that they are not associated with deforestation. Far less finance has gone into efforts to directly address deforestation by compensating evidence-based forest conservation results. The inability to successfully reduce deforestation does not appear to lie in the absence of slightly improved funding for more "sustainable agriculture," rather the near complete lack of direct conditional funding for forest conservation.

Increased Commitments to No Deforestation Within Commodity Sectors



Source: Progress on the New York Declaration on Forests: Finance for Forests - Goals 8 and 9 Assessment Report, Climate Focus, 2017, at

HCS forests and HCV areas are under threat of deforestation and degradation inside and outside of concessions even when covered by HCSA member companies or other companies with No Deforestation commitments. Incentives are needed for communities and companies to maintain and expand HCS forests and HCV areas, and such efforts could serve as "effective insurance against future degradation."[237]

INVESTMENTS IN CONSERVATION BY SUPPLY CHAIN COMPANIES ENGAGED IN COMMODITY PRODUCTION IN TROPICAL FOREST REGIONS APPEARS TO BE A PREREQUISITE FOR BOTH THE SUSTAINABLE PRODUCTION OF SAID COMMODITIES AND THE GLOBAL EFFORT TO AVERT CATASTROPHIC CLIMATE CHANGE.

Providing incentives for the conservation of HCS forests and HCV areas is a shared responsibility. The benefits and costs of conservation should be incorporated into the costs of 'sustainable commodities' and shared throughout the supply chain.

Most landscapes with HCS forests and HCV areas contain numerous competing interests in land, from differing companies, communities, etc. Despite corporate commitments and NGO campaigns, there is a still a market for commodities from deforested HCS forests and HCV areas, and stakeholders can often obtain economic value from converting forests into plantations or other destructive activities such as illegal logging. There is currently no counteracting positive market value for such areas to be conserved.

IF THESE 'STRANDED ASSETS' ARE IN FACT UNDERVALUED GLOBAL ASSETS, HOW CAN THEY BE RECOGNIZED AND INCENTIVIZED?

OPTIONS FOR SHARED VALUE

The proposal in the below section further refines the HCSA Forest Finance Mechanism Concept but should the HCSA Membership decide not to advance such an approach, there are a number of alternative options it could pursue. Specifically, membership in the HCSA could be conditioned upon additional financial contributions towards conservation and independently verified conservation results that meet a pre-determined threshold. The process for agreeing to additional membership requirements could also potentially require additional commitments on the part of its non-governmental organizations and technical support groups.

Under such an approach, member companies could make a contribution to, for instance, an expanded HCSA Quality Assurance Unit (or MRV Unit) which would then contract out the work to independent assessors. Such a process would increase transparency and separation between the companies and the assessors adding significant credibility to the process. Member companies could utilize the finance mechanisms and institutions of their choice (including their own or others) in providing incentives for forest conservation in and around their supply chains.

For instance, companies could establish or expand foundations such as Belantara Foundation, which was started with an initial commitment of US $50 million over 5 years from Asia Pulp & Paper Group (APP), to advance landscape conservation initiatives with an initial focus on the landscapes related to APP's supply chain. An HCSA Quality Assurance (MRV) unit would then ensure such contributions and their impacts are independently verified.

One alternative to the above scheme would be an agreement within or among HCSA members for consumer companies to provide a set premium for commodities provided by plantation companies whose full operations have been independently verified as consistent with the HCS Approach. While a more indirect incentive for conservation, it would promote the broader sharing of the costs of conservation throughout the supply chain. Consideration would need to be given to the potential outcomes. For instance, the HCSA would need to decide how to deal with the potential of companies segregating their supplies and creating subsidiaries that meet the criteria. It is also not clear how this approach would capture activities by smallholders and local communities.

INCORPORATING CONSERVATION INTO COMMODITY SUPPLY CHAINS: A PROPOSAL

RECOMMENDATIONS ON THE HCSA FOREST FINANCE MECHANISM CONCEPT

NEW UNIT, NEW FACILTY, NEW CONTRIBUTION	=	SIMPLE, TRANSPARENT, RESULTS FOR SUPPLY CHAINS & CONSERVATION

THE WORLD'S FIRST GLOBAL CONSERVATION ASSET:

THE FOREST CONSERVATION UNIT (FCU)

HCS forests and HCV areas are assets that are presently highly undervalued in the global markets. The approach proposed here would seek to tap into broad markets and stimulate new demand for these assets. Much of the difficult work has already been done by the HCS Approach in developing a methodology to identify and define these assets.

The creation of a global unit representing these assets is the logical next step for this work. Such a unit would better allow companies interested in investing in sustainable supply chains – as well as outside parties interested in investing in evidence-based conservation results – to support the efforts of those (both inside and outside of the HCSA and HCVRN) willing to create and conserve these assets.

The Forest Conservation Unit (FCU) would represent one hectare of HCS forest and/or HCV area and a social and/or community benefit. A new Forest Conservation Facility (FCF) would be a results driven mechanism focused on racking up hectares of forests under conservation agreements in and around the supply chains of HCSA members to demonstrate real measurable progress on the ground (for conservation and social/community benefit). By connecting companies and others to conservation investments in or around relevant HCSA supply chains, the FCF contributors could show how they are moving from being associated with the problem of deforestation to being part of the solution of systematic evidence based tropical forest conservation.

FCUs would be base units independently verified to constitute 1 hectare of HCS forest and/or HCV area and a social/community benefit. Additional claims above and beyond the “raw value” of the FCU (e.g. other carbon, biodiversity or other benefits) would be the responsibility of the buyers, sellers, and third parties. Over time the HCSA and/or HCVRN could potentially develop and classify different units for areas inside concessions (FCU-I), and outside in the nearby landscape (FCU-L), as well as different conservation values (e.g. HCV 5,6), that could appeal to different funders.

To the extent that the purchase of FCU Units is an investment in securing the landscapes and areas which benefit and source a particular supply chain, the costs of conservation should likewise be shared by members of the supply chain. The facility could have the impact of building a broader business best practice and expectation that every metric tonne (or unit) of palm oil or other commodity utilized should be accompanied with an equivalent unit of conservation.

This innovation would catalyze a paradigm shift whereby direct investment in conservation becomes the norm for sustainable and responsible supply chains. Conservation and commodities would become one, changing the course of industrialized production and perhaps giving the global citizenry the best chance to protect the beauty and diversity left on this planet.

FOREST CONSERVATION UNITS (FCUs)

- Independently verified areas of HCS forests and HCV areas: 1 FCU = 1 hectare HCS forest and/or HCV area and a percent (%) of the investment towards a social and/or community benefit.
- Accounting ties each unit to a specific location to promote transparency, avoid duplication of efforts, and enable FCU buyers to conduct additional MRV as desired
- Members and partners must maintain HCS forests and HCV areas consistent with negotiated agreements. Loss of HCS forests and HCV areas would lead to the loss of FCU designation and related brand promotion (e.g. use of logo)
- Payment for results, low accounting and transaction costs; attractive to buyers interested in investing in and maintaining tangible evidence-based conservation results
- Potential Apps & Add-ons: FCUs would be a “raw conservation asset” which sellers, purchasers and intermediaries could 'refine' with additional carbon, biodiversity, and social assessments and benefits
- Investment-Insurance-Donation-Mitigation-Offset? FCUs would only be verified by the FCF as providing the value ascribed to them: a hectare of HCS forest or HCV area and a % for social or community benefit. FCUs could be utilized and valued by different parties and different contexts.

SIMPLE TRANSPARENT RESULTS

- **Pay for Performance**: fund payments would be in exchange for independently verified results for conservation and social/community benefit. In certain instances, initial ex ante payments could be made to facilitate transactions and build necessary trust (like rent downpayments).
- **Simple Tangible Metric**: each FCU represents a concrete independently verified result (for conservation and social/community benefit).
- **Verification of Results**: independent third party verification would be conducted at three stages: i) initial broad community consent ii) ongoing HCS forests and HCV areas conserved and iii) social/community benefit provided
- **Transparency & Accountability**: each unit is assigned to GPS coordinates, transparently accounted for, and included in a publicly available registry.

WHY A FOREST CONSERVATION FACILITY [238]

- Success stories of sustainably produced commodities (including palm oil) in tropical countries boosts many, particularly when supported by broad and credible multi-stakeholder groups
- Shared responsibility through agreed conservation contributions can end trade wars
- Risk pooling and aggregation can reduce individual risk and overall costs of implementation
- Multi-stakeholder forums and mechanisms supported by campaigning NGOs also reduces risks
- Conflict Reduction: similar forest conservation efforts have been shown to reduce conflicts and promote peace.[239] As plantations become more efficient (through operations and automation) and require fewer workers it will be important to support community development projects to maintain or improve social stability
- Interviews with project developers and others reviewed a preference for a single finance mechanism rather than multiple. The HCSA has the necessary buy-in to create such transformative change (again)

HOW THE FUND IS FINANCED

- Supply Chain Payments for FCUs: can go through the fund for distribution, or if intended for a specific recipient through a special 'pass through' vehicle (accompanied with an independent verification fee). By contracting with communities and others for conservation, companies would better secure areas in their supply chain from competing companies and others seeking to convert those forests.
- Other Donors & Contributors: general payments would be directed to available FCUs with the potential for segregated accounts to accommodate donor preferences for certain projects and implementation partners (e.g. NGOs, community orgs, corps, etc.)[240] Additional resources would be sought to provide a sufficient reserve to incentivize new and additional conservation efforts.
- $40 per FCU contribution per year for the conservation and social/community benefit ($32 per hectare) & FCF independent verification and administration costs ($8). Alternatively, contributions could be structured to entail a more substantial initial capital investment followed by lower annual maintenance fees.

Initial major donors and seed funders often have some influence on the design of the facility and where it will be based. Significant early funding would be expected to come from HCSA member contributions, as a new major action to end deforestation in their supply chains. Major donor government agencies, foundations, companies, and high net worth individuals could also support the creation of such a facility. Plantation companies could potentially be both beneficiaries of and contributors to the facility based on their capacity and commitments.

Contributions could be voluntary or mandatory, and conditioned upon membership in the HCSA/HCVRN (and possibly other membership organizations). Any number of metrics could be used to determine an appropriate contribution level, including hectares of land impacted, total annual commodity purchases, or annual profits. A mechanism that can accept a combination of mandatory and voluntary contributions would likely have the greatest flexibility, growth potential, and ability to incentivize conservation on the ground.

Most FCF contributions would be expected to be in exchange for forest conservation units (FCUs). An indicative proposed contribution could be $40 per FCU, with $32 allocated for the delivery of forest conservation and social/community benefit and $8 allocated for the FCF's operational costs and the provision of independent verifiers who would confirm initial community consent to the contract, ongoing verification of HCS forests and HCV areas, and delivery of the social/community benefit.

POTENTIAL CORPORATE CONTRIBUTIONS:

A hypothetical company that purchases 500,000 tonnes of palm oil per year, would essentially be sourcing from the equivalent of 100,000 hectares per year (assuming yields of 5 tonnes of crude palm oil per hectare). Assuming a rate of $40 to conserve one hectare, a contribution for these hectares would be $4,000,000 per year, providing a conservation investment for the hectares impacted by production. Assuming the current price of $620 per tonne of CPO, such a contribution would amount to less than 1.3% of the total cost of CPO purchase (500,000 x 620 = US $310 million).

In the long term, the FCF would need to ensure a balance between the revenues and FCU generation, which will undoubtedly vary over time. Setting thresholds at the correct levels and remaining adaptive to landscape and industry changes seems key. For instance, some impact investment firms have struggled to find viable projects at their minimal funding levels (i.e. $5-15 million per project), while the Costa Rica and Mexico Payment for Ecosystem Services systems experienced drastic over demand from eager landowners which far exceeded their initial capital allotment and expectations. A diversity of funding sources that would allow the FCF to maintain an appropriate balance to stimulate and meet new demands to create FCUs would be ideal.

WHO GETS FUNDING

The FCF would disperse financing to approved Implementation Partners that meet certain basic predetermined criteria. Implementation partners are anticipated to include, but not be limited to HCSA Member companies, NGOs, and technical support organizations; as well as community-based organizations, farmer associations and cooperatives, and other institutions and funds established for such purposes with HCSA consent. Potentially the FCF could be opened to many other implementation partners outside the HCSA after results from the piloting period.

Such initiatives often require the building of an "initial trust" or "social capital" which can be precipitated through intermediaries who can serve as "honest brokers".[241] Trusted intermediaries are often "essential catalysts in setting up and running payment schemes," improving the process of negotiation, helping define contractual terms, filling institutional gaps, and facilitate financial transactions.[242] These actors can "be vital and result in lower transaction costs and increased trust and transparency."[243]

WHAT GETS FUNDED

During the piloting phase, incentives for conservation could vary from direct payment for conservation or, more likely, provision of services, technical assistance, employment, and goods requested by communities.[244] Approaches could be done in isolation or in relation to broader landscape or jurisdictional approaches so long as they meet the minimal scale requirements. Clear conditionality and additionality would be required in all instances, i.e. the exchange of incentives for the maintenance of HCS forests and HCV areas on land.[245] Funding should be directed towards new and additional conservation activities rather than those long required by law (while preserving incentives for companies and others to push for ever more progressive conservation policies and regulations). A key early task done in connection with the pilots would be for the HCSA to establish clear criteria for what on the ground activities could be supported to achieve long-term conservation.

A diversity of approaches should be tested in the piloting phase, including, but not limited to simple payment for performance schemes, in kind services and goods (such as improved educational and health care facilities), alternative livelihood projects, participatory mapping and the clarification of land tenure, monitoring and patrolling, etc. Financing could in some instances promote community-based forest management, a bottom-up approach that is "often more successful than protected areas in curbing deforestation," "has demonstrated an ability to deliver benefits and improve the welfare of poor communities while conserving forests," and has proven to be "highly adaptable" to different capacities and situations.[246] The results of the piloting phase could help refine best practices and would be expected to pioneer some novel approaches to conservation.

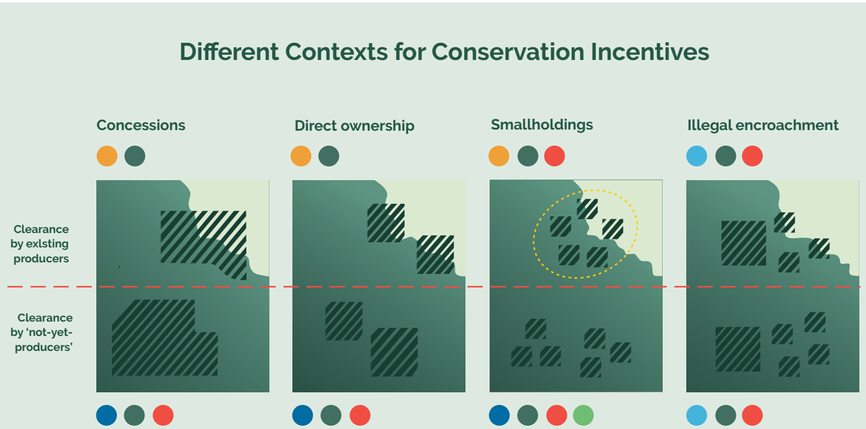
Partnerships with other funders could result in larger agreed packages that incorporate financial or other support to cover actions to clarify land tenure rights (see e.g. Land Tenure Facility), loans for increased agricultural productivity (see e.g. impact investment firms), etc. Working and coordinating with multiple stakeholders will help reduce the risks that other actors will create changes in the landscape that are outside of the control of a company, and also address changes in natural conditions.[247] Additional more detailed information and ideas on activities and partners can be found in the HCSA Modules on Social Requirements and Issues Under Development.

POTENTIAL INDICATIVE THRESHOLDS

Thresholds for pilots and future funding should be established to minimize operation and transaction costs and better steer and compare the activities of implementation partners. Initial guidelines could be:

- 5000 hectares minimal area / 5000 FCU (multiple projects and areas can be aggregated by implementing partners);
- $200,000 - 2 million per agreement per year (at $40/per its $200,000 for 5000 hectares)
- Only areas in or near concessions of HCSA members (within 25 km of nearest concession);
- Designated percentage provided as a community/social benefit

Startup and Operating Costs: There would be initial capital costs in starting the FCF and the piloting phase would help more accurately determine the costs of operation, along with verification (& MRV). The FCF would be focused on delivering results for conservation and social/community benefit, but certain minimal operational and administrative capacities and staff would need to be maintained, which would be expected to provide greater impacts and costs savings (through the collective effort as compared to aggregated individual efforts). Administrative costs are estimated for Conservation Trust Funds (15-20%) and the World Land Trust (20%), the latter of which was identified as a "flow through mechanism" at an HCSA affiliated Finance Workshop held in London in February 2018.



Source: Proforest, Delivering company commitments to zero deforestation commodity supply chains, Oct 2017, at 6

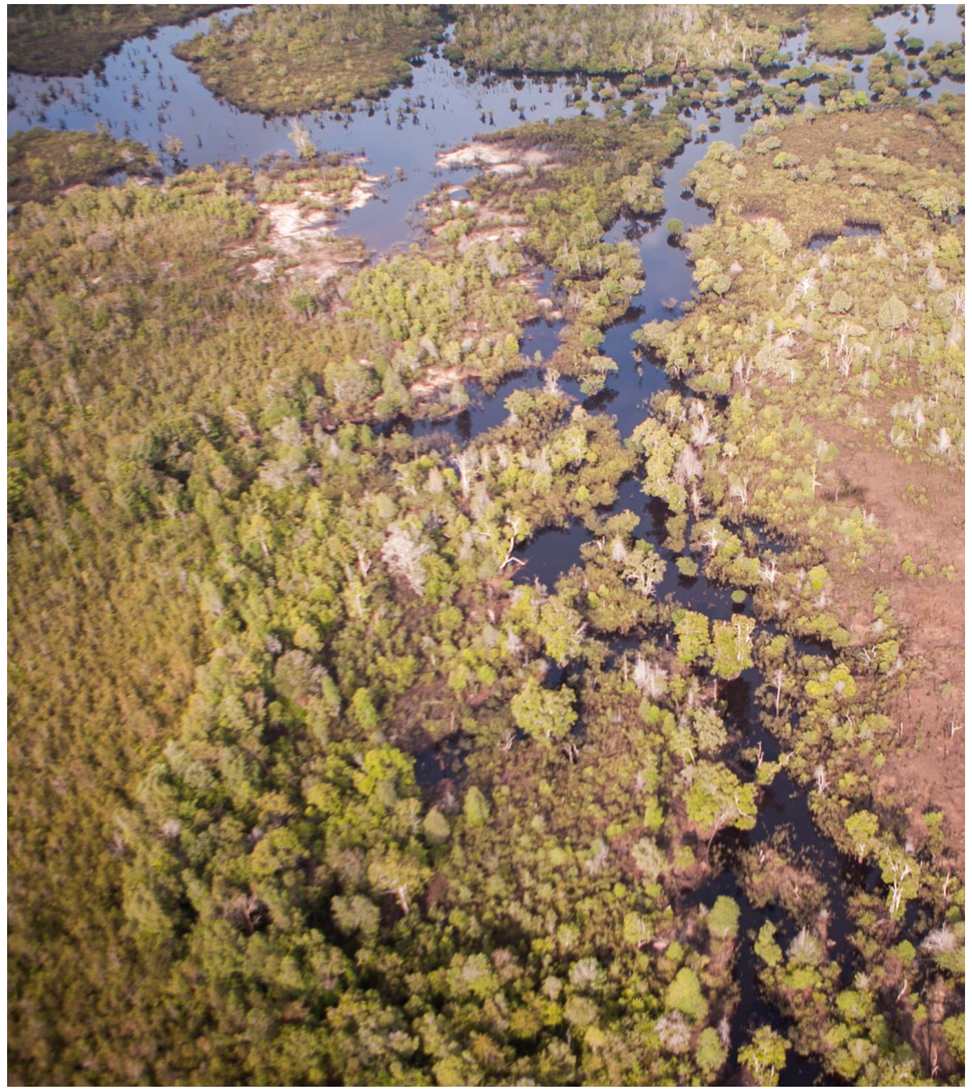
VERIFICATION: Conservation compensation approaches have been successfully utilized in areas with unclear tenure and land rights, an issue that affects many tropical forest regions.[248] New robust mechanisms have recently been developed to independently verify broad agreement within and among communities and are being piloted by the AndGreen Fund and other mechanisms, in response to criticisms that broad community consent is often absent in agreements made through village chiefs and other designated leaders.[249] For instance, the European Union's Forest Law Enforcement, Governance and Trade's (FLEGT) Social Responsibility Agreements (SRAs), require logging companies reach agreement with all communities within 5 km of their logging concession.[250]

HOW CONSUMER COMPANIES BENEFIT

- Conservation investments better secure supply chains from deforestation and social conflict and improve relationships with plantation companies, smallholders and communities.
- Logo for companies and/or products actively contributing to forest conservation (provided threshold contributions are met) visibly show a commitment to solutions. Stronger relationships with retailers result.
- Stories from the field. Products with FCF Logo could potentially use an agreed metric of 'contributed to conservation of 'X' hectares or trees.'
- Clear accounting of areas provide costs savings relative to individual efforts despite administration costs (since payments in the absence of an aggregated accounting mechanism would likely be highly duplicative given multiple actors in the same landscapes)

HOW PRODUCER COMPANIES BENEFIT

- Forest conservation costs are incorporated into the costs of business and shared by the supply chain for new and additional conservation investments
- Provides opportunities to contribute and gain greater public acceptance and recognition
- New conservation asset and results-based facility attracts additional resources for forests
- Helps ensure supply chains remain consistent with their no deforestation commitments
- Improves relations with smallholders, local communities, and NGOs
- Mitigates the risks that other parties in the landscape will further degrade conservation areas



HOW SMALLHOLDERS, FARMER GROUPS, LOCAL COMMUNITIES, & INDIGENOUS PEOPLES BENEFIT

- New option for livelihoods with potential revenue stream that could help clarify tenure and secure rights
- Increased opportunity to gain visibility in and engage global markets
- Provides acknowledgement for those who have historically valued and conserved forests (rather than merely incentivizing those engaged in forest conversion to do less harm)

POTENTIAL PARTNERSHIPS & COLLABORATIONS

- HCSA Members including companies, NGOs, and technical support organizations.
- Communities, farmer associations, and local governments interested in conserving their forests
- IDH: working on landscape and jurisdictional approaches with an emphasis on the production side. Strong desire for matching funds creates potential opportunities to amplify FCF's impacts.
- Investment Funds such as Althelia, AndGreen, TLFF, and others: potentially contributors to and beneficiaries of a new fund. HCSA could seek to condition investments in landscapes to include compensation for conservation in exchange for FCUs and sustainable branding.
- Land Tenure Facility: in landscapes where a major barrier to conservation is lack of clear tenure
- Can align with key emerging government finance mechanisms, such as Indonesia's Ecological Fiscal Transfer scheme (see Government Regulation 46/2017 & Finance Minister Regulation 230/PMK.07/2017). National laws may also restrict FCU tradeability and other elements

WHO MANAGES THE FUNDING

While a Facility Secretariat would decide how funds are dispersed, a designated professional fund manager could be hired to hold and account for the funding. Possible institutions who could serve as fund managers include the International Finance Corporation (IFC), United Nations Development Programme (UNDP), Asian Development Bank (ADB), or private investment firms, etc. Brazil National Fund on Climate Change's (FNMC) fiduciary manager is the Brazil National Bank for Social and Economic Development (BNDES). The FNMC provides grants and loans to recipients, with grants managed by Brazil's Ministry of Environment and loans managed by BNDES. Ecuador's Yasuni ITT Fund uses the UNDP's Multi-Partner Trust Fund as an administrative agent to receive, administers, and disburse contributions to implementing entities as directed by the Steering Committee.[251]

FCF PHASES

1. **Phase I: Proof of Concept at Scale in Key Areas**[252]
   a. Implementation & Piloting: provide proof of concept by initiating partnerships and collaborations at meaningful scale in key regions that demonstrate how companies can incorporate conservation into commodity supply chains.[253]
   b. Pass Through Funding Piloted for Select Corporate Contributions (minus % for FCF/V)
   c. Piloted areas: conservation contracts, agreement for services, verification of broad community acceptance of agreement, activities funded, accounting and financial reporting, baseline determination, area scale, partnership making, clarifying conditionality around payment for performance, FCU creation, etc.[254]
   d. Alignment with national and local government policies and goals including ecological fiscal transfer mechanisms

2. **Phase II: Full Implementation in Select Regions**
   a. Focus on and near HCSA member concessions and medium to high risk locations.
   b. Pass through funding portal utilized for select corporate contributions
   c. Additional resources and partnerships mobilized for FCUs

3. **Phase III: Global Implementation.** Products without the HCSA Logo and which do not contribute to the sustainability of life on earth via conservation are shunned by consumers, investors, companies, and governments. HCSA adopted by Consumer Goods Forum or its successor.

PRIORITIES & ACTIVITIES

1. **Resource Mobilization, Relationship Building & Storytelling**
   a. Identify and seek additional sources of funding for HCS Forests and HCV areas.
   b. Building better relationships among disparate and diverse actors in supply chains to help strengthen the collective commitment to a sustainable and equitable future
   c. Tell stories to the public that demonstrate how commodities and conservation are linked

2. **Cost Savings, Risk Aggregation & Partnership Mobilization**
   a. Companies can better secure their own supply chains while pooling risks
   b. Transparent Results: duplicative efforts avoided, partnerships lower overall costs
   c. Learning by Doing: culture of continuous improvement and knowledge sharing

3. **Quality Assurance: Independent Accounting & Verification of FCUs**
   a. Independent verification of HCS forests and HCV areas is provided (1 FCU = 1 hectare HCS forest and/or HCV area and a % for social/community benefit
      i. Independent verification of broad community agreement (initial)
   b. Accounting: each unit tied to a specific location provides transparency and allows purchasers to conduct supplemental monitoring at their own initiative

PRACTICALITIES AROUND GOVERNANCE & INSTITUTIONS

There are several attractive and expeditious options the HCSA and HCVRN could pursue in moving forward with developing a finance mechanism. Below, some consideration and suggestions are made with a primary focus on the creation of institutions and organizations that would be open to the broadest number of funding sources.

The current legal status of HCS Approach Ltd. as a private company in Singapore could potentially work for facilitating transactions between HCSA company members such as an investment or contribution from a consumer or trading company in exchange for conservation results from a plantation company. Affiliated or alternative companies to HCS Ltd. could also be quickly established for such purposes, and in certain jurisdictions, there are specific corporate organizations (e.g. S Corps in the US) that can be created for the specific purpose of facilitating transactions amongst companies with minimal tax burdens.

At the same time, the HCS Ltd. for profit incorporation status is not particularly attractive to major individual donors, foundations, and development agencies with mandates (or major benefits) associated with giving to non-profit organizations, foundations, or other public benefit corporations. Should the HCSA/HCVRN wish to tap into and maximize its receipt of funding from major donor and foundation sources, it should establish a legal non-profit organization or foundation in a desired jurisdiction.

Two preliminary organizational structures could be utilized for these purposes: i) a non-profit charitable organization with a subsidiary for-profit corporation or ii) a "group" of entities including a non-profit charitable organization and a for-profit corporation. The diversity or select funding sources as well as the diversity or select fundable activities will determine the optimal entity to be created. Variables could include: company-company; company -nonprofit; nonprofit-nonprofit; nonprofit-company; donor-company, donor-nonprofit; etc. Once a jurisdiction for incorporation is selected, professional law firms and attorneys specializing in the establishment of for and non-profit corporations should be consulted to more fully evaluate options, opportunities, and tradeoffs.

Within nonprofits there are different types of organizations, such as public charities, private foundations, etc. which have different tax benefits and restrictions (e.g. charities in the USA provide tax exemption for 30-50% of donations but face greater restrictions on what they can finance relative to foundations). Additional configurations are also possible to maximize flexibility and provide some additional distance between finance and operations. For instance, the Sierra Club is a foundation affiliated with a charity and The Gates Foundation is a Trust affiliated with a foundation, etc.

Non-profit organizations, including charities are generally allowed to engage in business activities related to their mission, and to a lesser extent unrelated business income tax activities (UBIT). However, if these activities are or become substantial the best practice would appear to be either separate entities (e.g. non-profit charity and a for profit private corporation) or to create within the nonprofit a subsidiary legal for profit corporate entity.[255] Such a company would allow the charity to engage in more substantial revenue generating activities while protecting it (and relevant entities) from unnecessary legal liabilities.[256] Potentially such an entity could be an S corporation, or "pass through" LLC corporation,[257] allowing funding to go through with more limited tax implications for those who engage.[258] Other novel approaches that have been utilized (mostly in education) are loan forgiveness programs, whereby loans are forgiven annually upon the demonstration of activities meeting pre-determined criteria.

"Groups" of organizations have also become increasingly common and potentially allow the group to benefit from maximum charitable deductions and benefits while also engaging in for-profit enterprises. For instance, a group can include for profit companies and non-profit organizations. Under such a circumstance, one entity (potentially HCS Approach Ltd.) could potentially focus on methodological development, monitoring, and verification, with another entity focused on raising and dispersing funds for FCUs.

SUMMARY OF NEXT INSTITUTIONAL STEPS

Whether establishing a group of organizations (including a nonprofit and for profit), a non-profit organization with a for-profit subsidiary, or some other entity, there are options available for the HCSA to quickly create a properly independent legal organization to operate the FCF.

With regard to governance, nonprofit organizations are legally required to have an independent and impartial board.[259] Board members should have diverse expertise relevant to the mission of the organization, ideally including representatives from the private sector, non-governmental organizations, governments, and local community representatives.[260] The organization should also have a Secretariat with sufficient staff to establish and operationalize the organization and its governance, begin mobilizing resources, and dispersing finance.

Generally, operations can begin once the initial paperwork is filed and a minimal number of board and professional staff that meet the legal requirements has been identified. Legal formation often takes no more than a few months.

CONCLUSIONS

HCS forests and HCV areas remain under threat of degradation inside and outside of concessions, even when covered by HCSA members or companies with 'No Deforestation' commitments. There are numerous finance mechanisms being implemented to promote the conservation of forests and high conservation areas, and significant innovation, in terms of hybrid mechanisms and blended financing instruments, is currently underway.

Nevertheless, there remain major gaps within and among these mechanisms, as well as in relation to the private sector's overall contribution to conservation investments. At present, there remains no well-established finance mechanism suited to the current needs and objectives of the HCSA.

This report proposes the HCSA harness its acclaimed methodology and build upon successful initiatives to date through the creation of an innovative new finance mechanism: the Forest Conservation Facility (FCF) and the world's first global conservation asset: the Forest Conservation Unit (FCU). Each FCU would represent a hectare of HCS forest or HCV area and a % social/community benefit. The unit would be independently verified by the FCF and would be generated and purchased by HCSA members and contributions from other interested parties.

The FCF would differ from traditional funds and grant-making institutions by requiring conditionality through the provision of performance-based incentives in exchange for delivery of simple transparent results; and revoking FCU designation upon sufficient confirmation of non-compliance.

[1] Independence from the government is an important characteristic of such funds. See e.g. UNDP Environmental Trust Funds, at http://www.undp.org/content/sdfinance/en/home/solutions/environmental-trust-funds.html
[2] See e.g. Choosing a Public Charity Private Foundation for Your Non-Profit, LegalZoom at https://www.legalzoom.com/knowledge/nonprofit/topic/choosing-a-public-charity-or-private-foundation-for-your-nonprofit ("Donors who give to a private foundation can only deduct up to 30% of their adjusted gross income, whereas for a public charity, they can deduct up to 50%.").
[3] Sustainable Financing of Protected Areas: Conservation Trust Funds and Projects Comparative Advantages, Conservation Finance Alliance (CFA), October 2014 (such funds are not limited to those three categorize, and can be associated with debt-for-nature swaps and other financial instruments).
[4] UNDP Environmental Trust Funds, at http://www.undp.org/content/sdfinance/en/home/solutions/environmental-trust-funds.html (noting that when compared to government official development aid and large NGOs, conservation funds can be lightweight and flexible institutions, reacting flexibly to new challenges and investing in innovation, as well as catalysts for bringing in new, additional, and blended financial sources to stimulate investments that would not otherwise occur.)
[5] Ricardo Bayon, et al., Environmental Funds: Lessons Learned and Future Prospects, Global Environment Facility (1998).
[6] See e.g. Record Funding for the Global Environment, GEF, 16 Apr 2014, at https://www.thegef.org/news/record-funding-global-environment
[7] See e.g. The Global Environment Facility and its Local Benefits Study, A critique, Forest Peoples Programme, 2008; Thomas Griffiths, Help or Hindrance, The Global Environment Facility, Biodiversity Conservation, and Indigenous Peoples, March 2004; and ODI, The Global Environment Facility: What's in it for developing countries? at https://www.odi.org/sites/odi.org.uk/files/odi-assets/publications-opinion-files/6786.pdf
[8] See Financials - The Global Fund to Fight AIDS, Tuberculosis and Malaria, 20 June 2017, at https://www.theglobalfund.org/en/financials/ (Of the $4 billion, The Global Fund received roughly $1.5 from the United States and $1 from Norway and Sweden. The Global Fund has been acknowledged as being highly efficient, with a staff of roughly 200 and operating expenditures of US $281 million in 2016, roughly 15% of revenues and slightly more than 2% of the total grants under management.)
[9] Celina Schocken, Overview of the Global Fund to Fight AIDS, Tuberculosis and Malaria, at https://www.cgdev.org/page/overview-global-fund-fight-aids-tuberculosis-and-malaria
[10] See Agbakwuru Chinedu, A Comparison of The Global Fund and The GAVI Alliance with Emphasis on Health System Strengthening, May 2009
[11] History of KEHATI at https://www.kehati.or.id/tentang-kami/; and KEHATI: prospective donors, 9 September 2016, at https://www.kehati.or.id/kemitraan/calon-donor/
[12] KEHATI: Endowment Fund at https://www.kehati.or.id/pengelolaan-dana-abadi/
[13] KEHATI Annual Report 2016 (Total Annual Revenue from 2016: 78,841,874,734 and Total Assets of 302,581,753,081)
[14] History of KEHATI at https://www.kehati.or.id/tentang-kami/
[15] KEHATI: Prospective Donor 9 September 2016, at https://www.kehati.or.id/kemitraan/calon-mitra/; and KEHATI: prospective donors, 9 September 2016, at https://www.kehati.or.id/kemitraan/calon-donor/
[16] Belantara: About Us, at http://belantara.or.id/about-us
[17] Belantara: Ongoing Initiatives, at http://belantara.or.id/document/resource/on-going-initiatives-resource.pdf
[18] Belantara: About Us, at http://belantara.or.id/about-us
[19] See The Global Green Grants Fund: Annual Report 2017; Global Green Grants Fund: Grants and Program Internship at https://www.greengrants.org/careers/grantsprograminternship/; Global Green Grants Fund at https://www.fundsforngos.org/foundation-funds-for-ngos/global-greengrants-fund/; Funds for NGOS: Small Grants: Global GreenGrants Fund, at https://www.fundsforngos.org/foundation-funds-for-ngos/small-grants-global-greengrants-fund/
[20] See The Global Green Grants Fund: Annual Report 2017; Global Green Grants Fund: Grants and Program Internship at https://www.greengrants.org/careers/grantsprograminternship/; Global Green Grants Fund at https://www.fundsforngos.org/foundation-funds-for-ngos/global-greengrants-fund/; Funds for NGOS: Small Grants: Global GreenGrants Fund, at https://www.fundsforngos.org/foundation-funds-for-ngos/small-grants-global-greengrants-fund/
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What we are doing
to the forests of the world
is but a mirror reflection
of what we are doing
to ourselves and
to one another.

Mahatma Gandhi

We must learn
to live together
as brothers or perish
together as fools.

Martin Luther King, Jr.

Only if we understand,
will we care.
Only if we care,
will we help.
Only if we help shall
all be saved.

Jane Goodall

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