Tropical Forest Finance Facility (TFFF)

Innovative large scale financial incentive to reward tropical forest countries who successfully keep their forests standing

Concept Note | 5 July 2024

MINISTÉRIO DO MEIO AMBIENTE E MUDANÇA DO CLIMA

MINISTÉRIO DA FAZENDA

The Ministry of Finance and the Ministry of the Environment and Climate Change of Brazil present this concept note as their state-of-the-art understanding of how an international blended-finance investment facility could be used to fully compensate forest countries for preserving their tropical forest coverage, in benefit of the entire global community. The idea was presented by the government of Brazil at COP 28 in Dubai, and we seek to keep advancing its design and implementation until COP 30 in Belém, Brazil.

This concept note benefited from extensive analytical support provided by Lion's Head Global Partners, the Wildlife Conservation Society and Rock Creek's Senior Managing Director, Kenneth Lay, as well as consultations with partner governments, experts, representatives of institutional investors, NGOs and philanthropies. The UK Government, in particular, provided key financial support. We would also like to thank the World Bank for helping convene stakeholders and for hosting these initial consultations.

I. Concept Summary

Case for the TFFF

Loss and degradation of forests – especially in the tropics – contribute to more annual CO2 emissions in the atmosphere than any human activity other than energy production and consumption. It also leads to the loss of multiple non-carbon benefits provided by forests, including commodity production, environment and climate regulations, biodiversity, livelihood of local communities and cultural services, ultimately resulting in significant negative impact on national and global economic and social well-being. Meanwhile, drivers of deforestation are complex and can change rapidly, with the circumstances of each jurisdiction dictating the appropriate mix of policies, tools and strategies needed to achieve positive results.[1]

In this context, a major incentive is needed to encourage governments of the countries in which tropical forests are located to continue protecting and conserving them at the right scale and speed, especially given significant opportunity and implementation costs. Most of the funding spent by governments and aid organizations to reduce deforestation and degradation is currently channelled through traditional input-focused approaches. This, however, is not enough, and given the inherent complexity of deforestation drivers does not always provide sufficient flexibility to direct funding where it is needed most. A transparent, result-based, large-scale financing mechanism is thus required to reward those who have taken concrete and successful steps to bring deforestation and degradation under control and to keep their forests standing, while also enabling governments to use the full set of their macro, fiscal and sector-specific tools and interventions to shape actions on the ground, promote local development, and address the needs of the local traditional communities who help maintain the forests.

Importantly, forests lend themselves well to result-based funding approaches because recent advances in satellite monitoring technology make results measurement relatively straightforward, transparent and consistent, compared to other sectors where there may be less agreement on outcomes and performance measures, and where assessing outcomes would require expensive on-the-ground surveys.

As such, TFFF is at heart an attempt to generate significant new finance to put in place long-term result-based incentives for Tropical Forest Nations (TFNs) to preserve, and if necessary, increase, the stock of standing tropical forests. By championing a global funding offer backed by real deposits rather than donor country commitments - TFFF de facto creates an asset out of the undervalued positive externalities of standing forests/forest stocks, which is expected to be large enough to compete with the existing political economy issues driving forest loss. By achieving these goals, it will increase the value of ecosystem services and consequently contribute to economic, social, environmental resilience, and climate change mitigation and adaptation. See Chapter VI: Logical Framework for the TFFF.

Raising the Bar for Innovation

TFFF contemplates the following unique innovative features to maximize finance for development:

1) <u>Rewarding measurable success in maintaining standing tropical forests:</u> The TFFF will make an annual payment to countries based on their eligible qualified standing natural forests measured in hectares adjusted for their forest loss in the preceding year. There

[1] Seymour and Harris, *Reducing tropical deforestation*, Science magazine, AUGUST 2019

are currently 79 countries within the boundaries of tropical broadleaf forest ecoregions as defined by the WWF. The proposed eligibility criteria:

a) exclude high-income countries based on the IBRD threshold (12 countries based on the 2023 data);
b) require the deforestation and degradation rate to be below a certain threshold [proposed as 0.5% per year] based on remaining forest in the previous year;
c) require deforestation and degradation in the year that the country becomes eligible to be below the rate of the previous year;
d) once participating in the program, deforestation should not increase by more than [proposed 0.1%] on a year-over-year basis, based on remaining forest in the previous year;
e) require adoption of a transparent, standardized and reliable method of measuring native forest cover, which could be its own country´s system or that of third parties;
f) require transparent and inclusive mechanism to receive and allocate resources including to those who effectively conserve forests (such as, for example, local communities, indigenous people and protected area managers).

Annual payments will be adjusted for any ongoing deforestation or degradation based on a ratio of 100:1 per hectare. This ratio acts as a 'deforestation penalty' whereby countries that lose forest cover, would lose 100 "shares" of the proceeds for each ha of forest loss. See Chapter III: Eligibility criteria and performance monitoring mechanism.

2) Creating a unified monitoring system for participating forest countries: Satellite observation of standing forests cover will be the primary mode for performance monitoring. The TFFF team will set minimum, globally standardized technical parameters for the national country forest cover monitoring system to be considered credible and transparent (ex.: resolution, treatment of clouds, frequency, means of publicizing the information), and will verify countries' compliance with such system for it to be eligible. In case the country decides to use a third-party system to provide the data, the team will carry out the due diligence/accreditation of that party. The satellite monitoring will be conducted annually and the data will be transparent, public, and available for independent verification. See Chapter III: Eligibility criteria and performance monitoring mechanism.

3) Raising funding for forests conservation and ecosystems services in a conceptually different way and at a large scale: The TFFF will make efficient use of public credit (sovereign investments) by mobilising 3-4x from private capital at a very efficient cost. The capital thus raised will be invested in a diverse higher yielding investment portfolio. The difference between the TFFF cost of borrowing and returns on the investment portfolio will be made available to TFNs as a result-based grant payment, linked to the countries success in decreasing their deforestation rates. The TFFF mechanisms will not rely traditional fully concessional/grant official development assistance (ODA). See Chapter IV: Financing Mechanism.

The initial proposal is to raise capital equivalent to USD 125 billion - that can generate the necessary cashflow to incentivize the necessary policy and regulatory reform and offset perverse fiscal incentives at the country and sector level. We note that countries will still be eligible to access additional incentives to fully utilize existing international support mechanisms including REDD+, multilateral support, and bilateral aid. See Chapter V: How will the TFFF address the underlying drivers of deforestation?

4) Supporting country systems to achieve results: The TFFF will make annual payments to the Ministries of Finance of the TNFs. It is proposed that a certain minimum percentage [to be agreed] should be allocated directly to those who effectively conserve forests, such as local communities and protected area managers [in addition to the baseline funding].

5) Governance: TFFF will have a clearly defined governance structure aiming to ensure transparency and accountability and to insulate the Facility from subjective political considerations. It will include a governing board and subcommittees, small executive secretariat headed by the CEO, and a few outsourced functions reporting to the board, including performance monitoring and treasury management. Legal status, board composition, location/placement of the TFFF and other relevant issues will be defined during the upcoming consultations and codified in the Governance agreement. See Chapter VII: Governance and Organizational Structure.

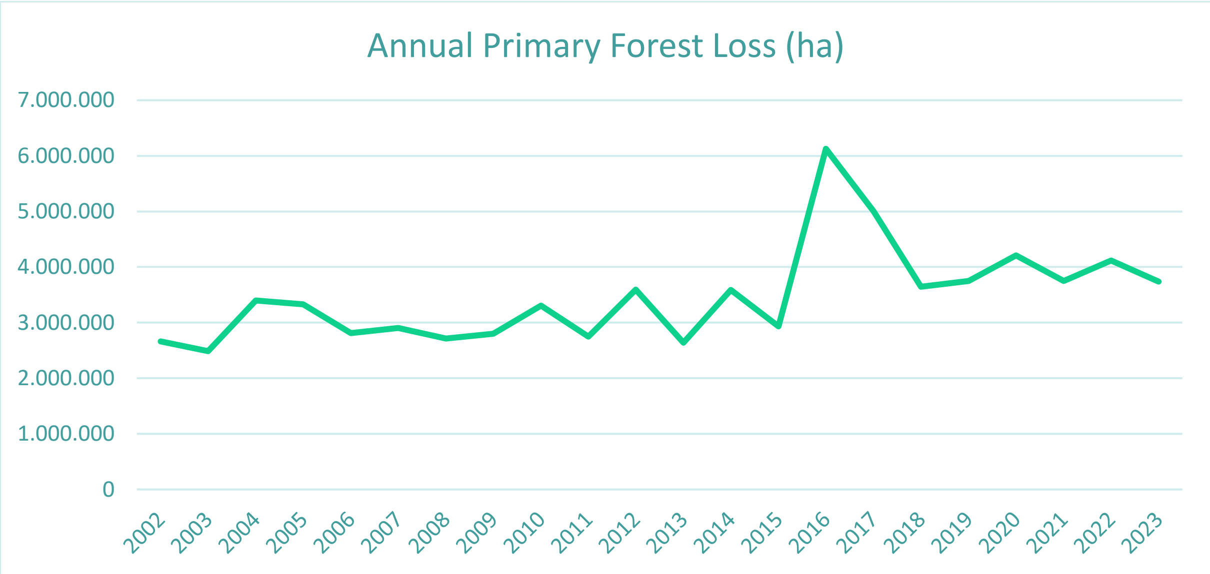
Checklist: What the TFFF does or does not do	
The TFFF will…	The TFFF does not…
√ Will create a new asset by giving a value to forest ecosystem services. √ Will help donors achieve global climate and development goals. √ Will link results-based performance in maintaining standing forests to award payments. √ Will assess performance using satellite data with a single global eligibility formula for all countries. √ Will complement other global forest initiatives including REDD+.	X Does not generate carbon or biodiversity credits but will help value ecosystem services. X Does not finance projects. X Does not determine how countries will use the funds awarded to them. X Does not replace other forest finance initiatives and mechanisms, including REDD+. X Does not compete with existing grant programmes.

II. TFFF Objectives and Approach

2.1. TFFF Objectives: Why?

The TFFF is anchored in a new multilateral investment fund whose returns, above its cost of funding, will reward TFNs for protecting their natural tropical forests. By valuing standing and restored tropical forests, the facility will help address a current market failure by giving a value to the ecosystem services that those forests provide. These include carbon sequestration, water management, biodiversity preservation, soil protection, nutrient cycling, continental and global climate regulation, and climate resilience. Correcting these market failures will reduce poverty and advance economic development, both in forest countries and globally. Loss and degradation of forests – especially in the tropics – contribute to more annual CO_2 emissions in the atmosphere than any human activity other than energy production and consumption. As the graphic below demonstrates over the past 20 years the rate of deforestation has been gradually increasing. Over this period, it is estimated that an area 2x the size of Germany has been deforested, totalling more than 71 million hectares. With an average carbon holding capacity of 200 tonnes per hectare this has resulted in the release of 14.2 gigatons of CO2 into atmosphere.

Figure 1: Annual Primary Forest Loss



Source: Global Forest Watch

As the graph above demonstrates, initiatives and programs have made progress, but they have not proven sufficient to reverse global trends in deforestation and degradation of forests. Current programmes are mostly focused on the flows, i.e. reforestation and are linked to carbon. While these are welcome, they are complex and depend on the effectiveness of global carbon markets that, to date, have lacked predictability. No incentives exist that simply reward countries for preserving the stock of standing forests.

2.2. TFFF Approach. How?

The TFFF will offer a substantial, long-term, predictable results-based reward for successfully tackling deforestation. It is additional to existing efforts and will be complementary to REDD+ and other initiatives. Funds will be disbursed annually to the finance ministries of TFNs. The TFFF comprises a core investment fund, whose objective is to generate a positive net investment return relative to its cost of capital. This new funding stream will be available to TFNs based on their standing forest evaluated on an annual basis.

Each tropical forest country which meets the performance criteria would be allocated its share in TFFF based on its proportion of the total forest area covered by TFFF. Periodic payments would be a fixed amount per hectare of standing forest, based on an annual assessment using nationally based monitoring systems that would adhere to a set of global harmonized criteria. To the extent that the standing forest has decreased from one year to the next, a TFN's share in TFFF, and thus its periodic payment and/or share of TFFF's retained earnings, would be reduced.

TFFF will repay TFFF Sponsors' capital over a 30–40-year period. Once sponsors capital is repaid, TFNs could choose to keep the TFFF operational providing continuing incentives, or they could elect to unwind the structure).

III. Eligibility Criteria and Performance Monitoring Mechanism

3.1. Eligibility Criteria

It is proposed that a TFN's participation in TFFF will be based on their respective areas of tropical broadleaf forests ecoregions as defined by WWF. The entire ecoregion would be considered, even if part of it is not within the tropics. A forest is made up of trees with at least 10% crown cover, and trees that are higher than 5 meters. The area with tree monocultures, or under afforestation would not be considered for the purpose of payments. TFFF periodic payments will accrue to countries based on their qualified standing forests. At present, there are 79 countries within the boundaries of tropical broadleaf forest ecoregions. The proposed eligibility criteria are as follows:

1) be a low- or mid--income country based on the IBRD threshold (67 countries);
2) require the deforestation rate to be below a certain threshold [proposed as 0.5% per year] based on the remaining forest in the previous year;
3) require deforestation in the year that the country becomes eligible to be below the rate of the previous year;
4) once participating in the program, deforestation should not increase by more than [proposed as 0.1%] on a year-over-year basis, based on remaining forest in the previous year;
5) require adoption of a transparent and reliable method of measuring native forest cover, which could be its own country´s system or that of third parties;
6) require transparent and inclusive mechanism to receive and allocate resources including to those who effectively conserve forests (such as, for example, local communities, indigenous people and protected area managers).

Annual payments will be adjusted for any ongoing deforestation or degradation based on a ratio of 100:1 per hectare. This ratio acts as a 'deforestation penalty' whereby countries that lose forest cover would lose the equivalent of payment for 100 hectares for each hectare of forest lost or degraded. The deforestation penalty acts as a clear incentive to tropical forest nations as it reduces the overall allocation to the country and promotes good quality forest as it also discounts degraded forests. Worth noting, a 100 to 1 penalty rule, associated with the $4 per hectare annual payment proposed here, will entail a forgone payout of $400 per hectare of deforested land each year. This number is a rough estimate, based on publicly available data, of the annual net profit of one hectare of soybean plantation in Brazil. Because soybean plantation is perhaps the main drive of deforestation in the country, the number offers a ballpark idea of the opportunity cost faced by individuals that chose not to deforest[2].

If country fails eligibility test within a particular period (i.e. by significantly increasing deforestation) but passes a following period – it will receive payment for periods in which is meets eligibility criteria. For purposes of TFFF payouts, degraded forests would include those that are affected by fires but that still meet the 10% forest crown cover threshold. While there are other forms of degradation, fires are the most systemic and widespread form of degradation that can be identified using GIS monitoring systems.

[2] Attention: these estimates have not been double-checked and they are used here merely as a mean to demonstrate that the $/hectare parameter chosen for the payout would offer enough incentives for containing marginal deforestation.

Next steps: proposed eligibility criteria will be confirmed during the upcoming consultations involving both Sovereign Sponsors and TFNs. Issues requiring further clarification could include tolerance level for the multi-year increase in deforestation; potential conditions for the permanent exclusion of a TFN from the TFFF; as well as the 0.5% "entry" threshold, or alternative mechanism, i.e. doubling in penalty [from 100 to 200] for deforestation above 0.5%.

3.2. Performance Monitoring Approach

Satellite observation will be the primary mode for performance monitoring. It is proposed that the TFFF will set minimum, globally standardized technical parameters for the national country forest cover monitoring system to be considered credible and transparent (ex.: resolution, treatment of clouds, frequency, means of publicizing the information), and would verify country's compliance with such system for it to be eligible. In case a country decides to use a third-party system to provide the data, the TFFF will carry out the due diligence/accreditation of that party. The annual satellite monitoring data used to prepare country performance reports will be public and independently verifiable. Results of the TFNs performance will be publicly disclosed through the Global Score Card. In the event of an identified discrepancy the TFFF governance structure will adjudicate acting through its monitoring authority.

Next steps: comprehensive list of globally standardized technical performance monitoring parameters, due diligence approach for the accreditation of third parties, and content of the publicly disclosed global score card will be defined and agreed in consultation with technical experts, Sovereign Sponsors and TFNs.

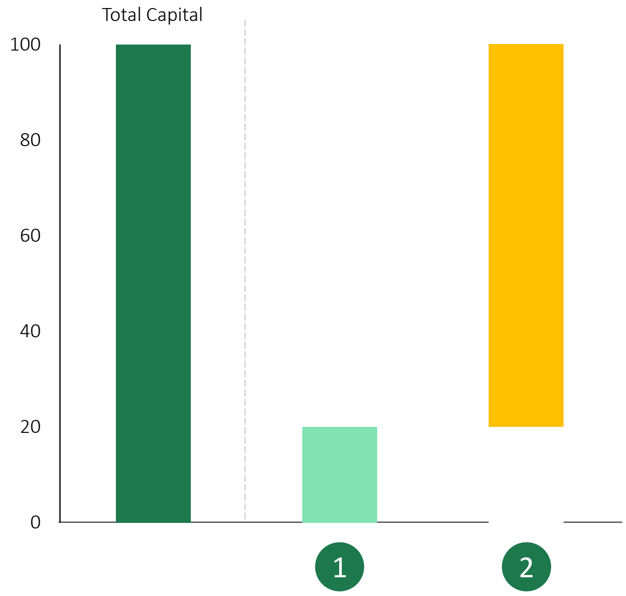
IV. TFFF Finances

4.1. Finance Structure

TFFF is being established by a core group of TFNs and high-income country partners as an innovative finance structure that combines sponsor capital with market borrowing. High income sovereign and other non-sovereign sponsors (e.g., philanthropies) (hereinafter "TFFF Sponsors"), would provide 20% or more of TFFF's funding as long-term loans, guarantees and/or outright grants, at a weighted average cost not to exceed sponsoring sovereign's long-term borrowing cost. TFFF Sponsors' funding would be repaid over a 30–40-year period. The remainder of TFFF's funding (80% or less) would be raised in the debt capital markets by issuing liquid, highly rated, long-term bonds for purchase by institutional and retail investors (hereinafter "Market Investors").

Figure 2: TFFF Finance Structure

TFFF Capital Stack (%)



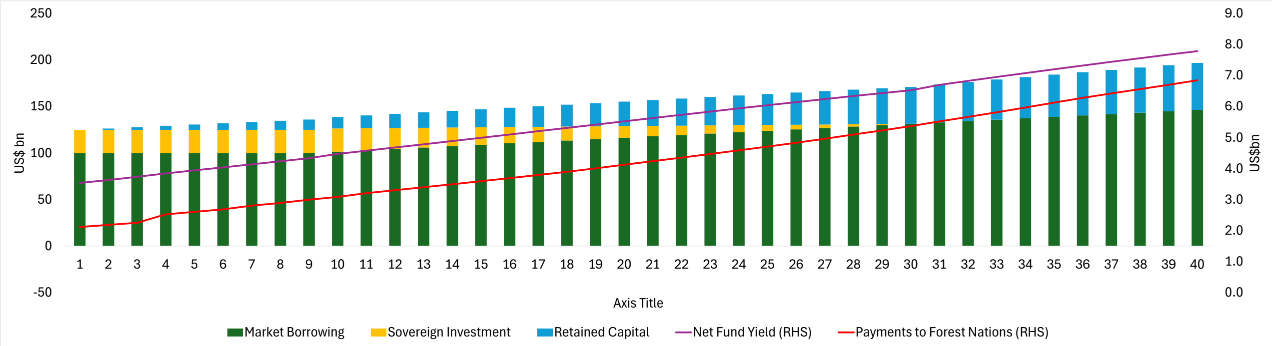
Description	Target Volume	Investors
2 **Vanilla Debt**	USD 100 bn / 80%	Institutional Investors, SWFs, Endowments
1 **Sovereign Investments / Guarantees**	USD 25 bn / 20%	Sovereign Investors, Foundations

Depending on TFNs and other stakeholders' preferences, TFFF could be dissolved upon repayment of TFFF Sponsors' funding. In the alternative, assuming it has retained surplus returns equal to 20% or more of its total capital, it could continue operations.

The difference between the weighted average cost of TFFF's funding and the return on its investment portfolio would fund periodic, grant payments to qualifying TFNs that successfully protect their forest resources. As an example, the current yield on a representative USD-denominated portfolio of bonds with an average rating of BB+ and a maturity of 10+ years is 7.5%.[3] If TFFF's average cost of capital were to be, e.g., 4.40%, the positive spread available for payment to forest countries would be 3.10%. A USD 125 billion fund would generate USD 3.9 billion per year, on average, that would be available to TFNs based on their successful performance in reducing deforestation or maintaining forest cover. With approximately 1 billion hectares of eligible forest, this would equate to a payment of $4 per hectare. Successful TFNs electing to forego periodic payments would see the long-term value of their interest in TFFF accumulate for a potentially greater total return to reward forest conservation.

[3] Yield of JP Morgan EMBI portfolio (07/01/2024)

Figure 3 – Projected Potential TFF Cashflows



As TFFF is an investment fund its returns cannot be guaranteed. There are two key drivers of fund economics. Firstly, the investment return. By buying long-dated assets TFFF will secure a predictable income flow but is subject to reinvestment risk and mark-to-market volatility on its asset portfolio. In the event that the market value drops below certain key thresholds it may be necessary to reduce the rate of payout to TFNs. However historical precedent shows that this would only occur in exceptional circumstances. In addition, if the forest nations cut their deforestation rates more quickly - then the TFNs will rightly be due a greater payout in terms of the absolute hectares. In this circumstance the TFFF will reduce the pace at which sponsor capital is repaid to ensure solvency is always maintained.

4.2. Fund Investment Strategy

It is proposed that the fund will be predominantly invested into a portfolio of fixed income bonds with a weighted average rating of "BB+/BB".

It is proposed that TFFF will adopt a prioritised investment strategy.

1. To the extent possible it will seek to invest in the climate and sustainability-related investments in developing countries (e.g., green or blue or sustainable bonds). This portion of the portfolio would aim to qualify under the NCQG criteria.[4]
2. Secondarily the fund will prioritise investments in developing country vanilla sovereign debt.
3. Finally, the fund will augment its portfolio with high-yield fixed-income instruments issued in developed economies.

TFFF would seek to invest in bonds issued in any currency that is represented within the IMF SDR basket (Euro, GBP, Swiss Franc, USD, Yen and Renminbi) and it would implement an asset-liability strategy to mitigate foreign-exchange risk. To the extent that TFFF liabilities are denominated in currencies other than US dollars it will hedge its asset portfolio accordingly (subject to securing the target minimum investment spread). As necessary, net portfolio income would then be hedged back to a base currency (USD). Once TFFF Sponsors' investments have been fully repaid, it can choose its preferred operating currency/mix of operating currencies.

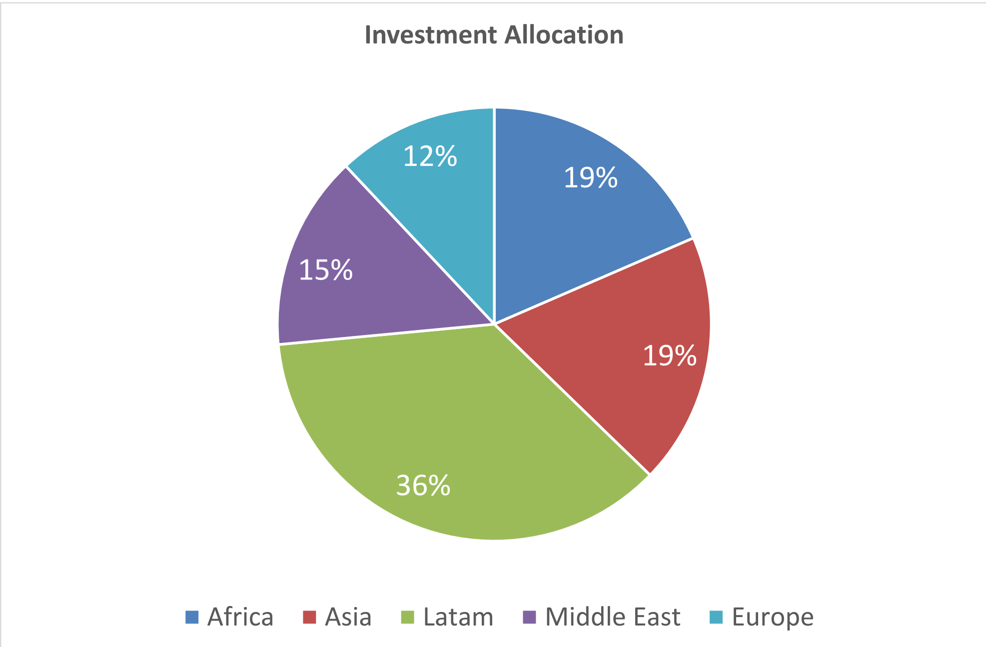
Given the relative scarcity of green/blue/sustainable bonds issued by developing economies and even vanilla debt issued by developing economies, initially the portfolio will contain proportion of developed economy assets. However, the fund will progressively transition out of that portfolio

[4] Subject to confirmation once the NCQG methodology and criteria are determined. In 2023 JP Morgan launched an indicative benchmark via the JP Morgan ESG EMBI Global Diversified Index, which complements the longstanding JP Morgan EMBI Index.

and into eligible developing country securities, with the objective of progressing the allocation both to those economies and more specifically to green, blue and sustainable investments in those economies.

For modelling purposes, we have used a portfolio that uses the JP Morgan EMBI as the reference excluding countries that are either in selective default or restructuring. This portfolio has a weighted average rating of BB+ and a current yield of 3.10% over the US Treasury benchmark.

Figure 4



Subject to further discussion with the OECD Development Assistance Committee, it is possible that, in addition to investments the developing country climate bonds counting towards the NCQGs, all investments by the TFFF in developing economies would qualify for sovereign sponsors' ODA attribution in proportion to their respective shares of the sovereign financing component of TFFF's overall structure.[5] Note that these attributions to TFFF's sovereign sponsors would decline as their loans are repaid, with a corresponding increase in attribution to participating forest nations.

To the extent that TFNs choose to accept lower periodic payments the fund will retain a higher proportion of its surplus returns. This would enable TFFF to make more rapid repayment of TFFFs Sponsors' investments and to initiate a more broadly diversified/non-fixed income investment strategy, further augmenting its capital base, while continuing to maintain TFFF's bond market borrowing at less than 80% of its total funding. While there is of course a trade-off for participating TFNs between maximising the annual payment from the fund and maximising a long-term return, foregoing periodic payments would progressively increase their respective shares of the TFFF portfolio and the total long-term return for their successful deforestation efforts. It would also

[5] A sovereign donor could count as ODA contributions to the fund if the activities follow the ODA definition, namely that they have the economic development and welfare of developing countries as their main objective and meet certain financing parameters (element of concessionally). Once the TFFF characteristics are confirmed – it would be possible to assess whether private capital mobilized into the fund could also count as ODA contribution.

enhance the potential for TFFF to become a perpetual vehicle, with the associated long-term benefits for TFNs transitioning to economies not dependent on deforestation.

A TFN's share of the equity in the fund is represented by its total area of qualifying standing forest. In this regard a nation that deforests at a lower rate than its peers or indeed sees its forest cover increase will see its share of periodic cashflow from TFFF increase as well as its stake upon dissolution of the TFFF portfolio.

4.3. Fund Mobilisation

Overview. To underpin a portfolio that can generate surplus returns adequate to support meaningful incentives for TFNs, TFFF's weighted average cost of total capital will have to be at or below that of highly rated sovereign or supranational borrowers in the debt capital markets. To achieve this the proposed TFFF capital structure assumes it can obtain triple-A credit ratings for approximately 80% of the debt it issues, with the remainder sourced from TFFF Sponsors willing to make long-term loans, guarantees, and/or outright grants, on terms subordinate to those of the triple-A debt investors and at a cost equal to or below that of triple-A debt. Maximum amount of payouts to qualifying TFN participants would be limited to the annual and/or accumulated return on the TFFF portfolio in excess of that required to meet all of its obligations to TFFF Sponsors and Market Investors. In this respect, qualifying TFN participants would have the equivalent of a *de facto* equity interest in TFFF, on which they would earn the equivalent of a dividend subject to their performance in conservation and enhancement of their tropical forest resources.

Given the global impact of reduced deforestation the TFFF will seek to attract investment capital from the full spectrum of sovereign sponsors and market investors. This would include more traditional as well as non-traditional sponsor nations and philanthropies providing the catalytic sponsor capital, to institutional investors including pension funds and insurance companies as well as Sovereign Wealth Funds for the market borrowing tranches. As discussed above, attribution for the impact of mobilising the market borrowing would be shared by the providers of the sponsor capital tranche.

The following describes these arrangements in more detail.

4.3.1 Sovereign, Philanthropic and Other Sponsorship: Sponsor Capital

As discussed above in order to secure the Fund's target ratings it will be necessary to secure a financing provided by developed-country sovereigns as well as philanthropies and other willing sponsors (TFFF Sponsors) in the form of long-term loans at or below sovereigns' respective interest rates, and/or as guarantees or outright grants, collectively referred to as sponsor tranche of capital, at a minimum 20% of the capital base. For a USDeq 125 billion fund this represents USDeq 25 billion (leverage of 1:4). In case of sovereign sponsors, provided the cost and repayment term constraints can be met, the other characteristics of these investments can be adapted to the particulars of each sponsor's fiscal- and budget-management conventions. Recent examples relevant to TFFF include certain sovereigns' "loan contributions" to the Clean Technology Fund (CTF), comprised of long-dated term deposits at concessional interest rates. In the U.S. context, participation by a tax-qualified philanthropy would be treated as a program-related investment and require a lower-than-market return. As noted above, the financing provided on such terms by sovereign, philanthropic and other sponsors would be subordinate to that of financiers holding the double- or triple-A-rated bonds TFFF issues in debt capital markets.

The base assumption is that non-grant sovereign capital contributed to the Sponsor capital tranche would be structured as a coupon paying investment. The coupon will be set to reflect the prevailing long-term (20-year) sovereign bond yield of the currency in which the capital is contributed. The TFFF would reserve the right to skip a coupon payment in the event that the fund breached its 80% leverage limit. It is expected that the Fund will run an investment surplus from the start due to the fact that TFNs forfeit a share of their revenues whilst net-deforestation is still occurring. This capital will accrue to the benefit of the sponsor nations and will be used to return their capital over a 30-year period starting in year 10 on the basis of 1/30th per annum as long as at all times the leverage ratio remains below 80%. If the leverage ratio falls below 75% due to reduced outflows as a result of deforestation, the fund will repay sponsors investments on an accelerated basis. If the fund has positive cashflow due to outperforming its investment objectives, this capital will be retained within the fund, allowing the fund to build its asset base. This is necessary to ensure that the fund can meet its target payment obligations to TFNs adjusting upwards annually to take into account inflation.

As an alternative to investing in the sponsor notes of the TFFF, sponsors may choose to purchase a zero coupon note, that would simply repay its principal on a *pari passu* basis with all other sponsor capital, or indeed make a grant. To the extent that sponsors are willing to accept a lower return for their contributed capital, it will reduce the blended capital cost of the facility allowing for a reduction in risk to all sponsor capital providers and increasing the probability that the TFFF can increase its overall impact.

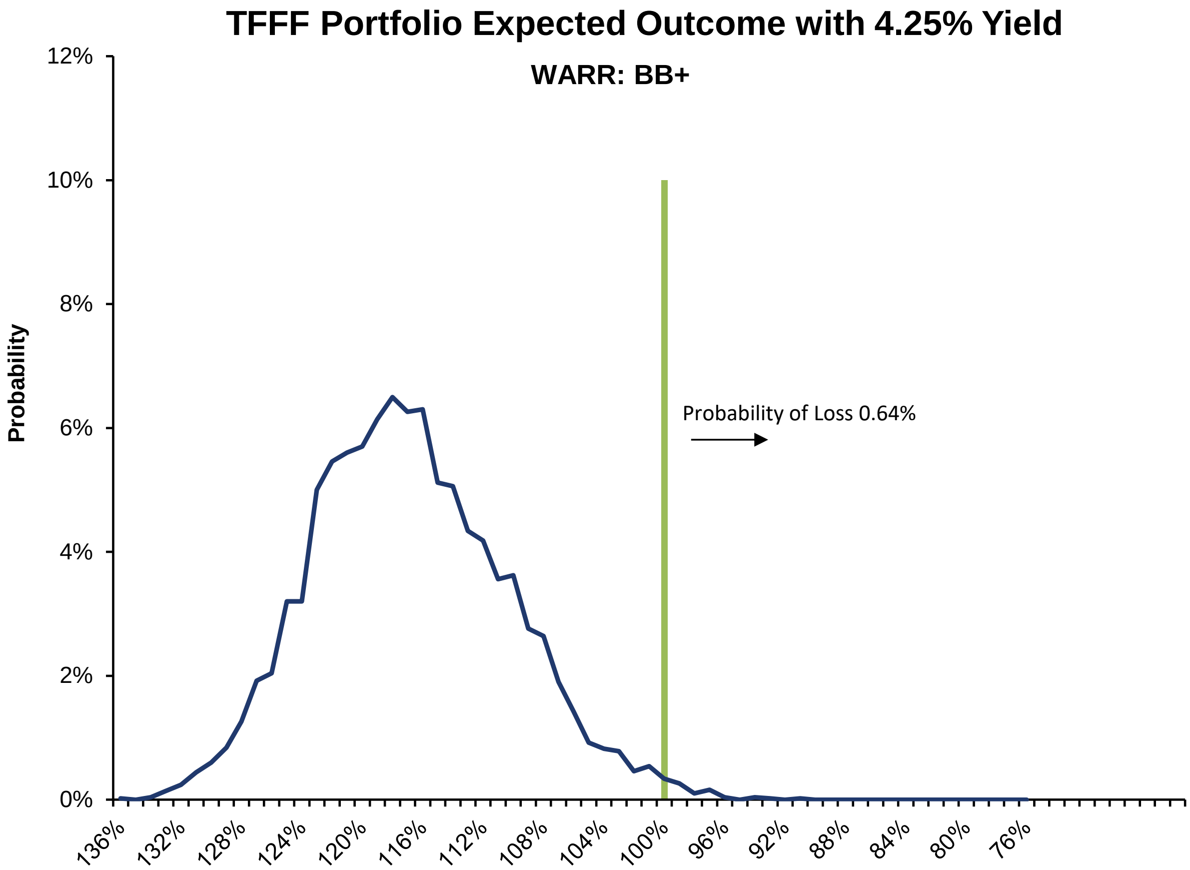
The model assumes that all sponsor funds are received at the beginning of the life of the facility, however it maybe that certain sponsors wish to make contributions over a few years. This would be acceptable if the commitment to fund was made via a legally binding pledge. If the target of USDeg 25 billion of committed sponsor capital is not achieved upfront, the TFFF would proportionally reduce the payment value per hectare in the early years and seek to continue fundraising until the funding target is achieved.

It would also be possible for a sponsor to support the TFFF via the provision of a guarantee. The guarantee would rank *pari passu* with the paid-in sponsor capital but would be funded with additional market borrowing. The attractiveness of using a guarantee-structure would depend on whether a sponsor required the payment of a guarantee-fee as this would increase the overall blended cost of the sponsor capital tranche.

We use a monte carlo simulation to evaluate the risk of loss for the sponsor capital. As the graph below illustrates based on a representative portfolio the probability that the fund is unable to pay all of its investors principal <u>and</u> interest is 0.64% assuming a 60% recovery rate.

The probability that the fund cannot return at a minimum its sponsor capital (excluding interest) is 0%.

Figure 5 – TFFF Monte Carlo Analysis



4.3.2 Market Borrowing

The Market Borrowing tranche would represent the bulk of the capital base of the TFFF (between 75-80%). This would comprise rated notes issued with a 10–30-year maturity, to match the long-duration of the TFFF's target asset portfolio. The TFFF will seek to secure either a double A or a triple A rating for its market borrowing so as to minimise the funding cost of this tranche. Given the scale of the TFFF's anticipated borrowing (USDeq 100 billion) it would access a broad spectrum of the capital markets. Debt will be hedged back to enable TFFF to match its liabilities with its asset base. EUR investments, for example, will be matched with EUR debt.

The target investors for the TFFF debt will be traditional institutional investors such as pension funds and insurance companies, fixed income asset managers and sovereign wealth funds. To the extent that the bonds match green investments such as the portfolio of developing country climate linked assets that qualify under the NCQG's, TFFF will itself issue Green Bonds to its investor base.

Investors in TFFF bonds will not be able to count an investment as an offset for any carbon linked scheme, but the TFFF would report on its impact and as a participant in the TFFF capital stack, Market borrowing investors would be able to attribute the impact of their investments in terms of carbon captured or avoided production of CO2 as well as Biodiversity protected. It is anticipated that the climate impact of an investment into TFFF's bonds will be approximately 30x that of a standard green bond linked to renewable energy production.

4.4. Payments to Forest Nations

Once the capital has been raised and invested the positive yield of the TFFF can be determined. TFFF will set an initial payment per hectare rate, calculated to ensure that the fund is sustainable over the long term and operating within its agreed stress limits is able to maintain its objective of being a permanent capital vehicle for TFNs. Periodic payments adjustments could be considered by the governing body to account for inflations.

Payments to qualifying TFNs would be made periodically from surplus income after all debt service payments. In the event that repayment of a tranche of sponsor junior capital would result in TFFF being unable to meet its target payment obligations to TFNs - the TFFF would skip its sponsor capital repayment. Repayment would restart as soon as there are sufficient funds in the TFFF.

In the event of a permanent depletion in the asset value of the TFFF, TFFF would reduce current and future payments per hectare so as to restore the TFFF to financial sustainability. This could result in a period of lapsed payments to qualifying TFNs. If TFFF were to no longer be rated investment grade, it would seek to commence an orderly liquidation.

In the event that the capital base of the TFFF has outperformed TFFF could increase periodic payments to qualifying TFNs.

TFNs would also accrue the value of the equity inside the TFFF. In its simplest format each country would have an ownership equivalent to its standing forest as a percentage of the global standing forest. However, as the ownership right pertains to the right to receive a future cashflow from the TFFF which is based on both standing forest (forest stock) and their deforestation rate, in the event that a country wished to leave the TFFF its share of the TFFF equity base would be set to reflect its area of standing forest at the time of departure adjusted to take into account its prior year's deforestation rate.

4.5. Use of National Systems

TFFF payments to qualifying TFNs will be disbursed to their respective national treasuries. *Ex ante* assessment of TFNs' public financial management systems and investment programs will be conducted to ensure presence of transparent and inclusive mechanisms to receive and allocate resources including to those who effectively conserve forests (such as, for example, local communities, indigenous people and protected area managers). TFFF will reserve right to conduct periodic verification of such systems. To maintain balance between simplicity and accountability – the internal allocation mechanisms would be governed by four core principles that recipient governments would agree to ex ante as a condition of joining the Facility:

- Sovereign decision-making: each recipient government will be free to make its own decision on internal allocation of resources received from the Facility, rather than the Facility dictating a universal rule.
- Transparency: Each recipient government will develop and publicly disseminate its [high-level] national revenue distribution plan in advance of receiving funding from the Facility – describing how the money will be allocated at the [program/agency/jurisdiction] level. These plans would be updated on a [annual/periodic] basis.
- Revenue-Sharing: As part of its national revenue distribution plan, recipient countries will commit to ensuring that some portion of the revenue would flow through to forest stewards (i.e. the actors on the ground ensuring forests remain intact – which includes local

governments, corporations, individual landowners, Indigenous communities, etc.) either directly, or through some kind of localized funding mechanism.
- Accountability: The TFFF will publicly disclose all payments to recipient countries and recipient countries will publicly disclose information on pre-agreed criteria.

This system would have the advantages of being able to provide predictable revenue stream for national government agencies and would also build a political constituency in support of reducing deforestation. In addition, this system would also create citizen-led accountability in each country, such that it would be up to civil society in each country to hold their own governments accountable for the flow of funds based on public disclosures, rather than the Facility being responsible for challenging recipient governments.

Next steps: scope of the ex-ante assessment of country systems, approach to the revenue sharing, and content of the required public disclosure will be agreed as part of the consultations involving sovereign sponsors, TFNs and technical experts.

V. How will TFFF address the underlying drivers of deforestation?

The TFFF's direct objective is to provide a clear and transparent result-based payment structure that rewards countries for successful conservation of natural forests within their jurisdictions.

5.1. Create a sufficient incentive to shift political economy towards forests

Countries that are home to tropical forests face trade-offs when protecting and restoring their forests because cleared forest land can be "repurposed" for agriculture, mining or other uses that produce an income.[6] Much of the over-exploitation of forests is either illegal or the result of perverse incentives, such as fiscal incentives, subsidies and other policies that do not take into account the full natural wealth of forests and their ecosystem services - which often benefit people outside national boundaries or even globally and are thus considered global public goods - such as the climate stability services that tropical forests provide to the world by storing immense quantities of CO_2. All of this is fuelled by weak governance, whereas often only few individuals benefit from the destruction or degradation of forests at the direct cost to those who rely on the natural forest (both people and the forest fauna) as well as society at large.

Experience shows that economic incentives for forest conservation and forest restoration can be successful in reverting forest loss. Successful payment for ecosystem services (PES) systems and ecological fiscal transfers show that stakeholders (including small and large landholders and local governments) react to incentives if they are perceived as sufficient when compared to business-as-usual land use practices.[7] Examples from Brazil and elsewhere also demonstrate that public opinion can drive politics on forests. Both elements together could trigger the policy changes that are necessary to tackle illegality, reduce rent-seeking, improve governance and shift incentives towards forest protection. Moreover, law enforcement activities can be efficient in the short-term to reduce deforestation, however, once positive results achieved, they need to be accompanied

[6] Seymour and Busch, *Why Forests? Why Now?*

[7] A number of cases pointing to this conclusion was analysed in the Payment for Ecosystem Services paper prepared by for the G20 Environment and Climate Sustainability Working Group deliberations by eth Brazilian G20 presidency.

by long-term positive incentives to be sustainable, as local stakeholders' support to forest conservation is critical and it requires these actors to perceive conservation as their self-interest. *This cascade from incentives and public pressure to changing policy is expected to catalyse a shift in economic development pathways away from deforestation-intensive practices.*

Box 1: Why Pay for Results?[8] The Development Case
Centre for Global Development has carried out research and developed policy advice on results-based approaches in a range of sectors. An extension of these ideas, Cash-on-Delivery (COD) aid, aims to change existing behaviour and uphold certain behaviour patterns not just among recipients, but also among funders. COD aid provides funding for the achievement of results aimed at addressing constraints to development at the national level. COD aid differs from other programs in that it eschews the imposition of pre-conditions and does not require agreements between funders and recipients on strategies to achieve results. The only "preconditions" relevant to COD aid are a good measure of progress and a credible way to verify it. One of the key features of COD aid is that the funder embraces a hands-off approach, emphasizing country ownership and the power of incentives to drive outcomes, rather than financing projects that provide guidance or technical assistance. Under the COD aid model, at no point does the funder specify or monitor inputs. Similarly, the funder does not impose conditions or restrictions on the use of funds (rewards payments). It provides recipient countries with full authority and flexibility to undertake interventions or address policy issues that will lead to the desired results, even if such interventions and policies are outside the domain of the relevant sector ministry or subnational government entity. It does this by recognizing and further encouraging the recipient country's inherent ownership and responsibility over strategies and implementation, and then paying for measured and verified results.

One of the key powers of TFFF is the ability to inform and influence TFNs' decision making both through its allocation from the facility, but also through what the Forest Nation may forego because of its continued deforestation. This is not only a very visible metric for Governments, but also informs the citizens of a country about the capital they have lost – linking foregone national income to deforestation that is less often perceived as valuable natural capital. Importantly the TFFF will not impact existing international mechanisms including REDD+, bilateral aid and zero-net deforestation commodity commitments. These mechanisms – which currently only provide a fraction of the global environmental value provided by TFNs to the rest of the world - will continue and will play an important role of providing the upfront investments required to achieve results unlocking access to the TFFF.

The TFFF as a global offer backed by real deposits rather than donor country promises, creates an asset of the undervalued positive externalities of standing forests/forest stocks, which is expected to be large enough to compete with the existing political economy issues driving forest loss. Its simple mechanism, understandable measurements, and clear communication of results—both positive (rewards earned) and negative (foregone income)—will also help domestic constituencies including NGOs, Indigenous Peoples, and forest-dependent communities to drive action to deliver a just transition through nature conservation.

Thus, the performance-based payments are expected to create direct and sufficient incentive to: a) motivate Ministries of Finance to objectively look at tropical forests as an asset and seek to preserve them utilizing domestic and international instruments, policy and fiscal solutions

[8] de Nevers, Lay, Wolosin, and Bliss-Guest, *Creating a Multilateral Wealth Fund for a Global Public Good: A Proposal for a Tropical Forest Finance Facility, CGD 2018.*

available for better land use management, b) change the perception of public, private, and CSO actors on the income and wealth value of deforestation versus conservation, c) move the needle on building 'political will' at the highest levels of government, driving inter-ministerial cooperation and country ownership of forest conservation objectives, and d) encourage tropical countries to explore innovative financing for land use management.

5.2. Open new opportunities to advise on fiscal and governance aspects of forest conservation

By interacting with the Ministry of Finance, the TFFF could drive collaboration on forest governance, tenure and law enforcement, but also on fiscal issues, taxes, fees and subsidies that today impact negatively on forests. Fiscal policy reforms have the potential to reduce deforestation through lasting structural changes in countries with low levels of economic development, weak institutional arrangement, and agricultural sector focus. The large-scale facility is expected to be sufficient incentive to tackle policy and governance policy reforms including on illegal trade and organized crime.

For example, since the introduction of ecological fiscal transfers (EFTs) for forests in 2014, net loss of very dense or moderately dense forest cover in India is reported to have decreased by 51%. Finance ministries could boost the use of fiscal tools and instruments such as Intergovernmental Fiscal Transfers (IFTs), taxes, and budget allocations to include the elements of forest and biodiversity conservation to generate TFFF payments. This new source of incentive would also boost interest by political leaders to explore and utilize a broad range of domestic and international tools for conservation and for stronger resource governance. Finance ministries can further incentivize other line ministries to collaborate for strengthening tenure security, inclusion and recognition of indigenous peoples, and advancing the environmental rule of law. TFFF reward and communication aims to boost the political dynamics and will use these tools and mechanisms for better land use practices and policies.

5.3. Make communicating the deforestation rate a major global event

In Brazil, the annual communications of deforestation rates are important news events, which are widely broadcasted, reported on and discussed in public media and in politics. In fact, it was public pressure that was responsible for giving the Brazilian Government the comfort that policy changes and other measures to curb deforestation will be backed by the population at large. This example supports the theory that an annual communication of deforestation rates needs to be made a public global event. It can ensure inclusion and participation of CSOs, public, and media to create necessary public pressure for the tropical forest countries as well as TFFF itself. Linking national deforestation rates directly to the awarding (or failure to earn) significant funds would increase the power and relevance of such regular communication of those deforestation rates. Transparent and accountable ways to measure and communicate this data will be key to build trust in the facility and within the tropical forest countries, making the TFFF's annual scorecard communications an opportunity for public motivation.

The global events would also potentially offer a platform for participating countries to share their good practices and discuss technical challenges, encouraging regional and international partnership. It would create a window for the tropical forest countries to seek technical assistance from development banks, to leverage private finance, and ultimately, to improve their performance in sustainable management of forests.

5.4. Complement ongoing initiatives, including REDD+

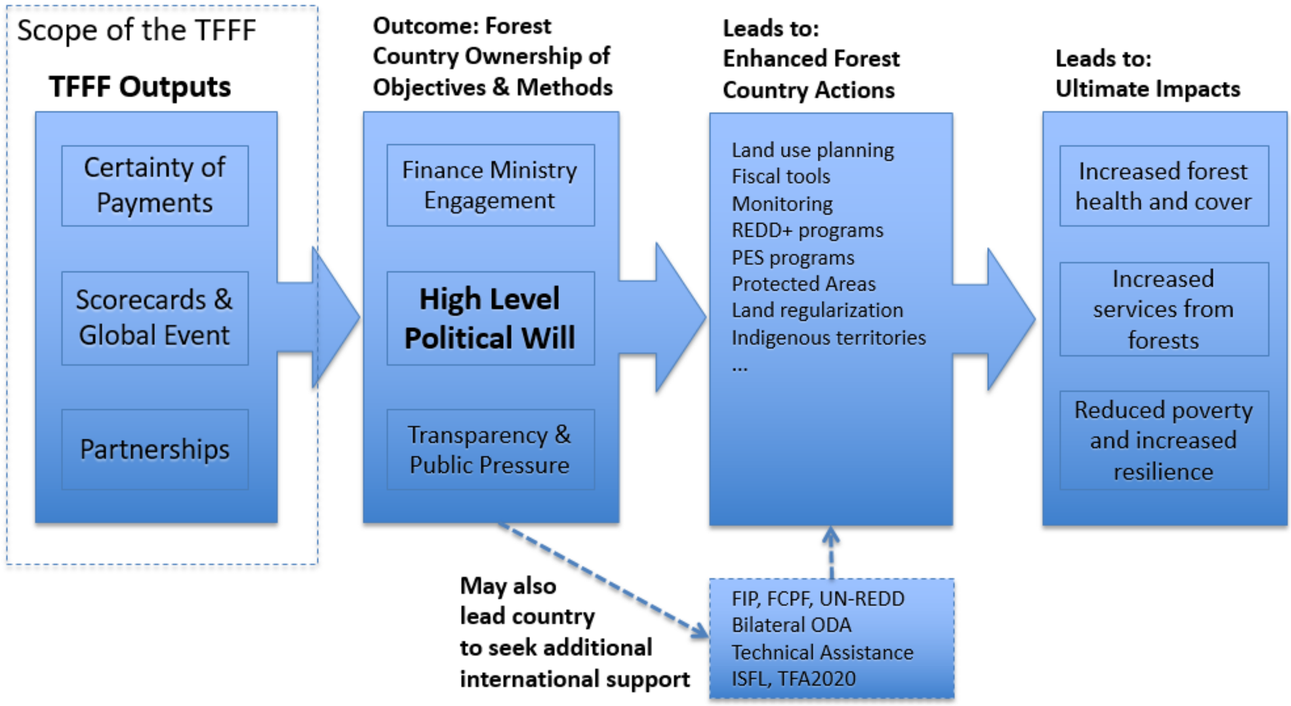
TFNs are setting aggressive targets in their NDCs to reduce and reverse forest loss and have started to translate this into national planning documents. REDD+ was set up in the context of international climate and carbon to support forest countries in meeting their forest sector emission reduction goals. Parties to the UNFCCC agreed in Cancun (COP16, 2010) to a three-phased approach to REDD+, progressing from readiness, through implementation to results-based finance. Unlike current REDD+ programs, TFFF would not undertake capacity building or other project-based activities. It would only reward successful outcomes. Countries that rise to the challenge of TFFF will be motivated to seek out REDD+ resources to achieve their goals and meet their REDD+ objectives—allowing TFFF to "supercharge" REDD+. The TFFF is also complementary to Phase III REDD+, which is focused on rewarding success of specific interventions, while the large scale TFFF results-based payments would be additional to and would de-risk existing REDD+ and carbon finance mechanisms. One way to think about it is that while REDD+ funds "flows", TFFF will fund forests "stocks", thus establishing a virtuous cycle.

Complementarity between the TFFF and Phase III REDD+ would be supported by:
Tapping into new funding sources and providing certainty: Commitments to results-based payments for REDD+ have largely come from grant ODA resources to date and have been insufficient in size and predictability to incentivise transformational change, in addition, as noted above, TEDD+ primarily focuses on flows. Large-scale private finance through market mechanisms also remains not fully realized – and generally requires transfers of carbon ownership that may not be possible or preferable by all TFNs. The TFFF, which focuses on stocks, would become even more critical when countries would achieve their zero deforestation goals, would create new results-based flows for forests from non-grant and non-carbon market finance.

Knowledge/experience sharing: Results-based REDD+ resources has started to disburse. As TFFF resources will become available, experiences from REDD+ on benefit sharing mechanisms could be used by governments when receiving TFFF payments.

Scope: Results-based REDD+ payments, especially those linked to carbon markets, will at best only generate sufficient finance to compensate for the climate protection services provided by forests through carbon sequestration and storage. The TFFF payments will complement REDD+ by also valuing public goods that contribute to domestic development (such as local to regional climate regulation and water provisioning) and non-climate global public goods (such as biodiversity), resulting in a more optimum level of forest protection.

Complementary Beneficiaries: REDD+ includes explicit mechanisms to drive benefits to local communities, while the TFFF allows countries and MoF to allocate benefits to broader national development objectives.



VI. Logical Framework for the TFFF

The purpose of this section is to provide insight into the role and drivers of different types of international forest finance to conserve forests, which typically seek to increase the amount of forest ecosystem services provided to people. The role a particular mechanism plays depends on whether the forest ecosystem services of interest 1) primarily benefit the host country or the international community, and 2) are represented in formal economies or are primarily externalities that are difficult to "internalize" and thus subject to significant market failures.

Those occupying forest land or with direct access to that land are the most likely to derive benefit from forests' provisioning of goods—food, fuel, water, including water for agriculture, or timber. The value of forest services (as opposed to goods) may travel farther afield, for example pollination services improving yields of nearby farmers, or climate protection services that benefit everyone on earth. The extent to which ecosystem services are valued in formal economies determines how much intervention may be needed to incentivize rational land use decisions. Goods-provisioning services of a forest are more easily monetized and will more directly impact land use decision-making than regulating services like soil protection or water cycling. Notably, a much greater proportion of the total value of a diverse natural tropical forest is from externalities than that of a monoculture plantation, which generates significant income but does little to maintain biodiversity or ecosystem function and resilience.

The market failures leading to undervaluation of forest services, and the role of different types of forest finance in reducing these failures, can be mapped onto these two dimensions (Figure 1).

Figure 6: Mapping Ecosystem Services and International Forest Finance Modalities

		1) Target beneficiaries: The value of increased forest ecosystem service is enjoyed primarily...	
		within the forest country	outside the forest country
2) Representation in formal economies: Ecosystem service value is...	more marketable (products)	Quadrant 1 *Commodity production for domestic use* Supported by: ODA for forestry, natural resource management, promoting livelihoods	Quadrant 2 *Commodity production for trade* Influenced by: Voluntary and legal criteria for international trade and investment of forest and forest land products certification
	more externality (services)	Quadrant 3 *Local env regulation and cultural services* Supported by: ODA for biodiversity conservation, water services, indigenous rights and justice, local PES schemes, support for transparency and knowledge such as WAVES	Quadrant 4 *Global climate regulation and biodiversity* Support for forests' global public goods including REDD+, FCPF, FIP, UN-REDD, GEF, bilateral deals (NICFI, others)

Quadrant 1 represents the marketable products that forest ecosystem services provide, such as timber and land for agriculture, which can easily be converted into revenue by individuals living on or with access to the land. Market failures such as corruption or insufficient infrastructure and access to credit may lead to land use decisions that under-deliver in Quadrant 1, while subsidies, corruption, or other perverse incentives may lead to excess forest clearing to generate marketable goods at the expense of non-market services. Support for forestry and forest management as an economic development tool (e.g., Quadrant 1) was the traditional mode of forest-related official development assistance (ODA) through the 1980s or 1990s and remains a priority for some international donors. ODA programs in this quadrant have typically required significant safeguards to avoid exploitation of forest resources to generate marketable products while reducing their less-monetizable values.

Quadrant 2 depicts the economic value of forest goods that flow beyond the borders of the forest country through economic transactions of international trade and investment. For example, a consumer in China may benefit from the trade of soybeans produced in Brazil on former forest land through lower food prices. A substantial amount of effort has gone into "greening" international trade and investment flows related to forests and the marketable commodities that forests and forest land generate (e.g., timber, pulp, soy, palm oil) over the past decade. Such efforts seek to leverage the scale of these flows by focusing on the values of international consumers, consumer governments, and corporate traders to steer production in ways that protect rather than undermine forest externalities. However, analyses have long shown that the amount of "green" trade and investment in sustainable commodities is dwarfed by the scale "grey" finance for the land sector that influences forests and is not clearly aligned with forest protection goals.[9] And while voluntary corporate zero-deforestation commitments continue to spread in forest-risk industries, their implementation lags and the proportion of companies with such commitments remains too low.[10] In addition, the expected price premium from certified sustainable commodities has not yet fully materialised, reducing incentives for producer countries to engage in this type of transaction.

Much of the value of forest ecosystems is difficult to monetize and would thus fall into Quadrants 3 and 4. In these quadrants, the difficulty of "internalizing" externalities is the primary market failure. Services like soil protection, water purification and flow regulation, local to regional temperature and rainfall regulation, and pollination benefit the people living near or downstream from forests, most likely within the forest country itself (Quadrant 3). Over the past three or four decades, the centre of gravity for forest-related ODA has shifted from Quadrant 2 to Quadrant 3, which represents a shift from focusing on maximizing economic output (largely by boosting exports) to generating some direct economic benefits while maintaining and enhancing the functioning and resilience of forests and thus their ability to provide a broader range of ecosystem services over the long term.[11] These include programs to promote forest conservation and biodiversity, to protect watersheds, and to advance the rights of indigenous and local

[9] Climate Focus. 2017. Progress on the New York Declaration on Forests: Finance for Forests - Goals 8 and 9 Assessment Report.

[10] Thomson, E. and Franklin, H., 2024, A decade of deforestation data, Global Canopy, Oxford, UK.

[11] See, e.g., Michael Wolosin 2012. US Forest-Climate Assistance: An Asessment. Washington, DC. Resources for the Future. Available at: http://www.rff.org/research/publications/us-forest-climate-assistance-assessment; and Collaborative Partnership for Forests, 2012. 2012 Study on Forest Financing. Available at: http://www.un.org/esa/forests/pdf/AGF_Study_July_2012.pdf

communities. While the economic benefits of Quadrant 3 ODA are less direct – mediated through ecosystem services that don't directly generate income – they are no less real. Significant effort is being invested in estimating the economic benefits of forests and other natural ecosystems and ensuring that these values are appropriately mainstreamed into development planning and national economic accounts.[12] Efforts such as these will enable forest country governments to more effectively manage Quadrant 3 ecosystem service values to maximize development. [13]

The climate regulation and biodiversity services from tropical forests benefit everyone in the world, with most of the benefit accruing outside the forest country (Quadrant 4). Even in a world without development assistance, rational self-interest should drive distant countries to support forest protection in tropical countries to maximize their forests' provisioning of these global public goods. The REDD+ track of negotiations under the United Nations Framework Convention on Climate Change (UNFCCC) has been working for more than a decade to build a global system to generate international finance for the climate regulation services that developing country forests provide. The scale of REDD+ support to date has been vastly insufficient compared to the need. Only 3% of international climate finance supports forests, even though forests have the potential to provide up to 30% of the mitigation needed to meet global climate objectives.[14]

Examining the Landscape of International Financing

The landscape of international financing to support non-carbon global ecosystem service benefits of forests is fragmented. There is some support for international forest knowledge and data public goods such as the Global Forest Resources Assessments of the FAO, and additional value provided through international cooperation and coordination of ODA resources flowing through the GEF and UNEP. Existing project-based and capacity-building finance streams are insufficient, and there is no major performance-based finance supporting the non-carbon global public goods from forests, although finance negotiations under the Convention on Biological Diversity may lead to a boost. Therefore, the TFFF is being proposed in the context of an international forest financing landscape that is fragmented and insufficient, alongside domestic flows that ignore externalities:

- Foreign assistance to promote the development benefits of forests is limited;
- Compensation for forests' global public goods is limited in scope to primarily carbon, with biodiversity finance possible but not guaranteed;
- Even for carbon services, forests are globally underfunded through REDD+ compared to the value of those services;
- Progress in "greening" the trade and investment in forest-risk commodities is slow;
- Domestic subsidies and international investments in "grey" agricultural practices far outweigh "green" investments that help maintain forests.

Proposed Role of the TFFF: A Tropical Forest Public Goods Facility

The TFFF is being proposed as a facility to support the full range of less-marketable tropical forest ecosystem services, to incentivize tropical forest protection and expansion for two objectives:

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12 See, e.g., Wealth Accounting and the Valuation of Ecosystem Services partnership https://www.wavespartnership.org

13 See the 2024 G20 ECSWG PES paper for examples of efforts tropical forest countries have put into creating local-level PES schemes, particularly for watershed protection.

14 Barbara Buchner, Baysa Naran, Rajashree Padmanabhi, Sean Stout, Costanza Strinati, Dharshan Wignarajah, Gaoyi Miao, Jake Connolly, and Nikita Marini. Global Landscape of Climate Finance 2023. Climate Policy Institute. Available at https://www.climatepolicyinitiative.org/publication/global-landscape-of-climate-finance-2023/ .

1. Forest country economic development through greater provisioning of local and regional (domestic) ecosystem services (Quadrant 3); and
2. Greater provisioning of tropical forests' global public goods (Quadrant 4), including:
    - Non-carbon global public goods services, including biodiversity, water and nutrient cycling, and non-carbon climate services; and
    - Climate protection services through carbon storage and sequestration.

This approach invites participation from the broadest range of potential investors, increasing the ability of the TFFF to generate investments at the target scale. Sovereign investors will be more able to generate the political will and legal authority to participate in the TFFF when they can point to the above objectives. Investors will also have broad flexibility in how they account for their TFFF investments in the context of international forest finance: as ODA, as climate finance, and/or as support for non-climate "global public goods."

A broad approach also supports the full participation of middle-income countries, which are home to some of the largest and most threatened tropical forests in the world. Upper-middle income/IBRD countries such as Brazil, Colombia, Peru, Mexico, Malaysia and Gabon are home to more than 40% of the world's tropical forests and about 45% of tropical tree cover loss.[15]

A strategic focus by the TFFF on correcting the market failures leading to underinvestment in tropical forests' public goods also supports an emphasis on natural forests over plantation forests. Excluding plantation forests from the TFFF – or at a minimum, industrial-scale plantations – is becoming technically feasible, would be attractive to many potential donors, and would avoid the perverse incentive that would result from reducing the cost of converting natural forests to plantations.[16]

VII. Governance and Organizational Structure

7.1. Governance Principles

TFFF is a long-term, result-based/pay-for-performance financing mechanism. As such, the following key principles should guide its governance structure:

1) *Payments for outcomes*: The TFFF would make direct payments to the national level, based on national natural forest cover for countries which have met the eligibility criteria. The use of funds will not be defined, but TFNs would commit to transparency in reporting results according to the pre-agreed criteria.
2) *Hands-off approach for funders, and recipient discretion*: TFNs would have full ownership and responsibility for achieving the result of reduced deforestation.

[15] Estimates from Hansen *et al* (2013) based on 2000 tree cover and 2000-2014 tree cover loss at 20% cover threshold, and World Bank country groups. Hansen, M. C., P. V. Potapov, R. Moore, et al. 2013. "High-Resolution Global Maps of 21st-Century Forest Cover Change." Science 342 (15 November): 850–53. World Bank Country and Lending Groups. datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups

[16] A plantation exclusion would reduce the ability of the TFFF to incentivize reforestation, much of which is likely to be in the form of plantation timber or tree crops. Technical solutions may be possible, for example by including plantations below a threshold size or by including new plantations that do not replace natural forest within the scope of the TFFF.

3) *National systems for monitoring country progress:* Measuring performance success will use nationally established systems that meet pre-agreed minimum specifications. However, TFFF will reserve the right to request independent verification.
4) *Transparency*: The measured performance of the TNFs and each country's payments would be published annually in a Global Score Card.

Although the TFFF is a unique facility that does not currently have precedent - it shares characteristics with a sovereign wealth fund, only one established for a single purpose and benefiting multiple countries. It is proposed that the governance structure of the TFFF draws on the *Santiago Principles* which are principles and practices for the management of sovereign wealth funds. They provide guidance on appropriate governance and accountability arrangements and the conduct of investment practices necessary for sound long-term investment results. The Principles also aim to promote cross-border investments and the openness and stability of financial systems. The following section describes the proposed TFFF structure itself, in the light of the Santiago Principles:

1. *Legal soundness of TFFF*: Per the need for legal basis, a governance agreement to support the objectives and effective operation of the TFFF would be agreed by initial investors and TNFs prior to the establishment of the TFFF. [Given the potential financial and contracting responsibilities of the TFFF, parties may want to establish the TFFF as a Treaty Organisation or as an independent legal entity in a conducive national system. Exact approach will be agreed as part of negotiations].
2. *Expertise and independence*: With respect to decision-making within the TFFF, accountability and operational independence by the management are key. It is proposed that the TFFF will have a Board that is representative of its investors and beneficiaries, including suitable independent members. Given the extended number of stakeholders a constituency model is proposed whereby groups of investors and beneficiaries would be represented by a single board member and their alternates. Given the proposed financial structure of the TFFF a strong Expert Investment Committee of the TFFF Board will be required, containing individuals with sufficient experience to hold the Secretariat to account. In parallel an outsourced Monitoring Authority will be required to oversee the actions of the TNFs. The governance objective will be to insulate the Facility from subjective political considerations. The Board would appoint a secretariat to manage the day-to-day operations of the Facility. It is proposed that the Facility would also outsource its Treasury Management activities.
3. *Clear Accountability*: The accountability framework for the TFFF's operations should be clearly defined in its constitutive documents. The accountability of the TFFF Board and its committees, outsourced providers and the secretariat would be clearly articulated in the governance agreement of the TFFF. It is proposed that Board members be accountable to: (1) investors with respect to exercising good faith and due care in approving investment policies and overseeing the facility with a view to preserving initial capital and paying debt service, (2) to TFNs with respect to seeking to maximize and protect reward payments, taking into account the intent of the investors, and (3) to both investors and TFNs to oversee fair, transparent and consistent application of performance measurement and allocations as incorporated in the global offer.
4. *Understanding risks*: As an investment fund that relies on market borrowing in addition to its sovereign sponsors investments, the TFFF will be required to operate within clear leverage guidelines. It is proposed that at all times the TFFF will seek to maintain a

leverage limit of 80%, representing the present value of its liabilities divided by the present value of its assets. The TFFF will also be required to maintain certain liquidity buffers. The actions to be taken in the event of a breach of the leverage limit will be clearly set out in the constitutional documents of the TFFF.

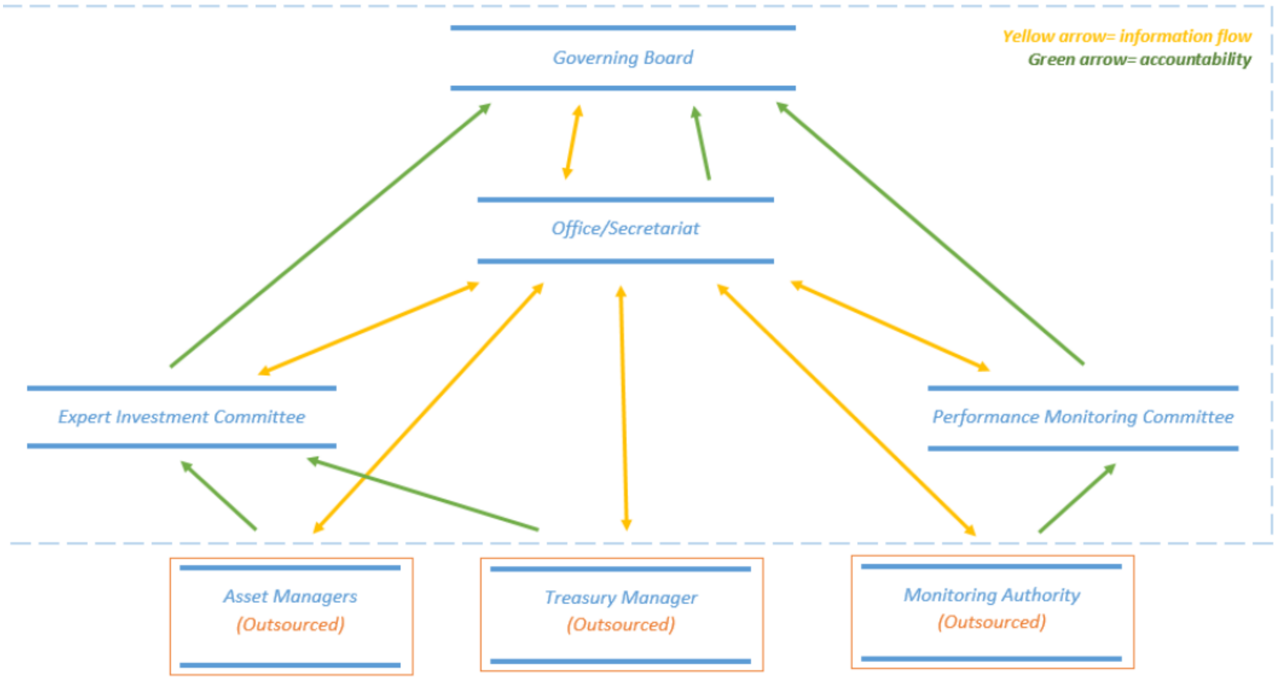
5. *Transparency*: need for clear and publicly disclosed policies, procedures, arrangements and results, in accordance with recognized international or national accounting standards. Under the TFFF, governance decisions, performance measurement, financial and forest-related performance, and evaluations should be made public. Audited annual reports will be made available on financial performance and an annual Global Scorecard will show tropical forest countries' performance in halting deforestation, the payments that they have received and their current share of the TFFF equity base.

7.2. Organizational Structure

There is a range of options as to how the TFFF could be established, from the placement within the existing international organization to the set up as a new international fund under a neutral law. It is proposed that under any scenario the TFFF will have a board of directors comprising representatives of sovereign sponsors and the TNFs. Governance of the Global Alliance for Vaccines and Immunization could serve as a reference point. The TFFF will have a small secretariat led by a CEO who will be responsible for the management of the operations of the TFFF. Once the parties have agreed on the operating parameters of the TFFF, a governance agreement will be developed. The governance agreement will address, among other things, the governance structure, roles, responsibilities, and accountability of each entity in the structure. It will provide guidelines and criteria regarding investment, performance measurement, and allocation of investment returns. The specific structure and responsibilities proposed here build on precedents from many of the existing global international partnerships, but with some key differences to reflect the operating structure of the Facility which combines sponsor capital with market borrowing a pure "vertical" grant financed structure. It is proposed that the TFFF's structure would include the following:

A. Governing Board;
B. Two standing committees (an Expert Investment Committee and a Performance Monitoring Committee);
C. Office/Secretariat;
D. Monitoring Authority (outsourced)
E. Financial Administrator (outsourced – tbd), performing functions of the:
    a. Trustee
    b. Treasury Manager
F. Asset Manager (outsourced)

Figure 7: Proposed TFFF Governance Structure



Different functions within this organizational structure are described below.

1. Governing Board and Subcommittees: The Governing Board would be responsible for strategic oversight of the TFFF and for the elaboration of policies and adoption of decisions and procedures that ensure the effective achievement of the goals and objectives set forth in the governance agreement. A key responsibility of the Governing Board would be to safeguard the independence of the TFFF with respect to financial decision-making, performance measurement, and allocation of returns. Clear procedures for appointing the Board will be established, consistent with the "double arm's length" approach. It is proposed that a qualified majority of the Board members (e.g., at least two thirds) should have expertise in investing financial assets, managing investments and/or corporate governance. In addition, [some] members of the Board should have expertise in forest monitoring.

The Governing Board will be responsible, among other things, for: a) maintaining strategic oversight of the TFFF; b) appointing the Fund Asset Manager(s) and approving guidelines for selection of additional investment fund managers to invest parts of the TFFF; c) appointing the Monitoring Authority; d) appointing the Treasury Manager; e) approving and keeping under review the investment strategy, and related policies, standards and procedures of the TFFF; f) reviewing an annual statement of investment performance expectations and an annual assessment of actual performance, monitoring the performance of the Fund Asset Manager(s) and taking action to change any Fund Asset Manager if appropriate; g) keeping the methodology for measuring performance under review, and approving revisions consistent with agreed parameters for such revisions; h) endorsing the Global Scorecard and allocation of net returns to TFNs; i) approving and overseeing a risk management framework; j) ensuring annual audits; k) approving an annual report, including financial statements; and l) clearly defining and approving professional and ethical standards.

The Board would have authority to establish committees, with membership from Board members and/or independent members, and to delegate to committees such powers, duties and functions as the Board decides. To provide additional independent and expert-based decision making, at least two standing committees may be considered as described below. The two committees (expert investment committee and performance monitoring committee) would be accountable to the Board, and the Board would have the authority to make final decisions should it disagree with a decision or recommendation of a committee. Outsourced providers for financial management, investment and performance monitoring, would be accountable to Board through its committees.

- *Expert Investment Committee:* An Expert Investment Committee would be established as a standing committee of the Governing Board. The Committee would comprise members of the Board and independent experts with substantial expertise, training and experience in the investment and management of financial investments. The Expert Investment Committee would be responsible for recommending to the Board for approval: (a) investment policies, standards and procedures consistent with the agreed investment strategy, and (b) the outsourcing to third party asset managers responsible for investing the TFFF assets. The Expert Investment Committee would keep under review: (a) the financial performance of the TFFF, (b) its conformity with the approved investment strategy, policies, standards and procedures, (c) financial risks, and (d) performance of the outsourced investment services and would report to the Board at least annually. The Expert Investment Committee would be responsible for alerting the Board of any strategic concerns.

- *Performance Monitoring Committee:* Performance Monitoring Committee would be established as a standing committee of the Board. It would comprise members of the Board and independent members with expertise, training and experience in: (a) forest monitoring and remote sensing, (b) forest health and ecosystem services, (c) forest management, (d) forest conservation, (e) REDD+ as a complementary instrument under the UNFCCC, and (f) national forest monitoring systems and international reporting. The Performance Monitoring Committee would be responsible for: (a) overseeing the monitoring, measurement and reporting of performance, (b) keeping under review the methodology for measuring performance with a view to suggesting updates as technology and science evolves, (c) amalgamating national reporting and where necessary independently verifying, (d) approving a Global Scorecard prepared by the Secretariat, and (e) recommending to the Board the allocation of funding based on performance every year according to the principles, criteria and procedures in the governance agreement.

3. *Secretariat*: The governing board of TFFF would hire a secretariat to carry out administrative and communication functions. The head of the secretariat will be accountable to the Board. The office would be responsible for: (a) servicing and preparing proposals for the Board and its committees, (b) ensuring regular communication with investors, TFNs that may be beneficiaries of the facility, and other partners, (c) setting up the agenda and meetings of the Expert Investment Committee and a Performance Monitoring Committees, (d) publishing and communicating the Global Performance Scorecard, (e) representing the TFFF externally, (f) building trust and facilitating resolution of differences, and (g) sharing knowledge and information, including through the preparation and publication of an annual report and the annual Global Scorecard.

The TFFF secretariat will be responsible for calculating the payments due to the individual TNFs based on the instructions provided by the Expert Investment Committee and Performance Monitoring Committee (based on the deforestation rates of the prior year as well as investment performance results). Once these have been accepted by the Board, the secretariat will instruct the Treasury Manager to make the payments on TFFF's behalf.

4. *Treasury Manager*: TFFF's governing board also will engage a Treasury Manager who will be accountable to the governing board through the Expert Investment Committee. It has two functions: (i) Treasury management and (ii) Trustee.

The treasury manager will:

a. Manage the borrowing program of the TFFF from both its sponsor and institutional investors;
b. Establish engagements with external service providers (one or more asset managers for the investment portfolio comprising the Facility, accounting and auditing services, custody and clearing, etc.),
c. Recommend to the Expert Investment Committee and thereafter administer key elements of financial and risk management policy stipulated by the governing board (asset allocation including cash reserve requirements, currency risk management, sustainable levels of current withdrawals for participating TFNs, etc.), and
d. Ensure timely receipts and disbursements from and to investor-sponsors, participating TNFs and other parties.

The governing board, with the advice and recommendation of its Expert Investment Committee, will appoint one or more third party asset managers to play the role customarily associated with the investment offices of major institutional investors such as pension funds, endowments and foundations and sovereign wealth funds.

The Trustee: The TFFF will have a trustee with administrative competence to manage the financial assets of the Facility. The trustee will maintain appropriate financial records and will prepare financial statements and other reports required by the Board, in accordance with internationally accepted fiduciary standards.

The World Bank which has been providing convening support during the preparatory stage, or another international [public or private] institution with significant experience at supporting global innovative financing and new approaches to sustainably deliver international finance for securing global public goods could potentially play a range of functions within the proposed governance structure. Final decision on the TFFF governance structure will be taken by the Sovereign Sponsors and TNFs as part of the consultation process.

Next Steps: exact legal and organizational structure of the TFFF will be agreed as part of the consultations between Sovereign Sponsors, TNFs and other key stakeholders. Governance agreement and other documents will be drafted based on the outcomes of these consultations.

VIII. Risks and risk mitigation approaches, stakeholders and team responsibilities

Identified Risks: some risks that may be encountered by the TFFF and would need to be addressed either during the preparation or implementation phase. To the extent possible, these risks should be mitigated and/or managed through the design of the TFFF.

Facility-related financial risks, including:

- Failure to raise sufficient funds. Raising the target USDeq 25 billion of sponsor capital will be challenging, requiring multiple investors to overcome political and regulatory hurdles. Insufficient fundraising will diminish the amount of income from the fund available to use as results-based payments to tropical forest countries and could reduce the effectiveness.
    a. This risk can be mitigated in several ways, including: building in flexibility for potential investors, to encourage participation from countries with sovereign wealth and those with debt; being more flexible with strategic investors' interests.
    b. During the preparation phase alternatives for a smaller-scale facility (e.g., with a regional focus, or including only countries with identified funding gaps, or only countries with a strong investor interest) will be assessed.
- Financial returns below expectations. It is proposed that TFFF will both seek to secure long-term investment capital and seek to deploy that capital into long term assets with predictable cashflows. Despite this TFFF will be vulnerable to changing market sentiment that will result in market-to-market volatility of its asset portfolio. The investment objective will be to achieve the target long-term yield of the TFFF ([7.5%]), with as low risk as possible. Funds will be allocated to a group of qualified investment managers with expertise in their specific field with each manager accounting for no more than the pre-agreed percentage of the total asset base. Managers will be restricted in their ability to hold concentrated portfolios with clearly defined investment criteria to ensure regional, national and sectoral diversification. The leverage limits are set to ensure that TFFF can withstand even extreme market volatility as was seen in the Global Financial Crisis of 2008 or more recently in the Covid crisis. While the modern era of financial markets has never seen a 20-year period during which a diversified portfolio did not generate greater returns than high-quality government bond yields, it is possible that a combination of poor market timing, a long-term global economic downturn, and/or other structural changes in markets (including, potentially, those incurred because of runaway climate change impacts) could generate financial returns below expectations. This risk can be divided into two distinct parts: 1) the risk to investors that they will lose capital and/or that the TFFF will be unable to make agreed-upon interest payments; and 2) the risk to forest countries that they successfully protect their forests but the TFFF is unable to honour its payment obligations to them. Both risks will be assessed in more detail during the preparation phase. Mitigation possibilities will include:
    a. keeping fixed costs and overhead of the TFFF as low as possible;
    b. ensuring a sufficiently long and flexible investment horizon that would allow longer and diversified investment strategies;
    c. having the flexibility to pause repayments to the TFFF sponsors and if necessary to adjust payouts to TFNs until markets normalise.

Technical risks, including:

- Inaccurate and/or contested monitoring data. Satellite forest monitoring has been improving rapidly over the last decade, and additional technical progress is expected in the coming years. However, no data are 100% accurate, and there have been extensive differences between existing global satellite-based deforestation products and national forest monitoring systems.
    a. During the implementation phase, we will reach out to national monitoring agencies, development partners, service providers and international expert groups to establish a set of minimum global harmonized operating requirements for a country's proposed monitoring system.
    b. Adaptive management will be built into the monitoring plan, to allow for improvements in monitoring data to be incorporated into the TFFF without disruptions.
- Methodology for performance-based payments perceived as unfair or ineffective. Some TFNs may find the proposed incentives too weak to encourage active participation. For example, currently any country whose deforestation rate is above 0.5% would not receive any funds from the TFFF. Countries that fall into this bracket may decide to simply forego the TFFF structure and indeed may even increase deforestation to compensate for a decline in deforestation in other jurisdictions.
    - The TFFF alone cannot solve the challenge of deforestation, but it will play a strong role in supporting those countries that choose to take a path to end net-deforestation in their jurisdictions. It will also be supportive of peer pressure mechanisms that would optimally encourage high deforestation counties to adopt a sustainable pathway forward. International pressure to support countries that are close to the threshold to manage their deforestation rate downwards will need to be maintained whilst recognising the risk that reduced deforestation in country A may result in increased deforestation pressure in neighbouring countries.

Reputational and capture risks, including:

- Internal and external stakeholder risks: The Facility will be successful if it is perceived as complementary and its objectives are perceived as fair and provides a shared vision with other programs and national and international initiatives.
    - The Facility will need to keep all communication channels open and constantly be prepared to receive and entertain comments and inputs from outside parties, and to contribute to the success of others and act in a transparent way. The TFFF will need to make information public – both during preparation and implementation phases.
- Fiscal responsibility: in case the facility is successful, large amounts of resources will be made available to developing countries. This might put national treasuries under pressure and create reputational risks.
    a. The Facility will assess current support programs available to increase fiscal responsibility and assess if and to what extend benefit sharing mechanisms might be taken up by receiving countries.
    b. Where absorptive capacity is a serious concern, the TFFF might consider a trust fund approach to receive payments.

Relationship with REDD+: The TFFF is complementary with the objectives and mechanisms of REDD+. It is the current understanding that both mechanisms will reinforce each other. However, perceived risks of strategic overlap with REDD+ should be considered, which include:

- Investors might be concerned that the TFFF would be "double paying" for emissions reductions alongside REDD+ payments. This should not be a concern as the two systems are seeking to reward different activities and have different entry points (project/program specific versus country-wide result-based), with REDD+ primarily focused on the "flows" and TFFF on the "stocks". If as a result of REDD+ more forest becomes eligible for TFFF payments, this is win-win for all parties.

Special event will be organized to reach out to REDD+ countries and REDD+ donors and stakeholders. The TFFF will undertake consultations on the Facility and its complementary with REDD+ at UNFCCC and international conferences.

IX. Pathway

Development of the TFFF proposal is supported by a working group including representatives of the Government of Brazil, World Bank, Lion's Head and subject-matter experts, with additional guidance provided by a high-level advisory group, comprised of representatives of interested sovereigns. The pathway to operationalisation of the TFFF will involve three phases. This section presents the critical steps for taking this proposal forward and consulting with external stakeholders to validate and improve the proposal.

Phase I (April - July 2024): Framing the TFFF concept, reviewing and validating, *inter alia*:

- TFFF financial structure including minimum critical specifications with respect to the terms of the financing model;
- Proposed eligibility criteria for the TFNs participation in the TFFF, including the characteristics of the forest landscape; and
- Proposed approach for monitoring and verifying TNFs performance in forest conservation;

Phase II (August – November 2024): Consulting with key stakeholders, incorporating their feedback and garnering their support. During this phase, the working group will engage in continuing consultation with key stakeholders to ensure that their specific concerns have been incorporate in the TFFF design. These consultations will:

- Expand and finalise bi-lateral discussions with the Sponsor and TFN governments to solicit their respective inputs to TFFF design (both from finance and environment perspectives) and assess potential terms of their participation;
- Assess the potential for different categories of institutional, retail and other investors to provide funding for the TFFF on terms consistent with the requirements of its financial structure, prioritizing among these investor categories, and framing a strategy for attracting investments from each category;
- Organizing a series of interactive stakeholder consultations including, but not limited to, the following:
    a. Stakeholder Group One (Sovereigns):
        - Build understanding and consensus among both sovereign investors and TFNs to what they could reasonably expect from the TFFF, including what commitments they would need to make on the funding, environment

performance and the use of proceeds side; as well clarity with respect to what this fund would not deliver.

b. Stakeholder Group Two (Private Investors):
   - Meet with various categories of potential private investors to ensure that the proposal, in particular the funding options, investment strategy, eligibility criteria, and the overall set-up could receive investor support and will be perceived as an attractive investment.

c. Stakeholder Group Three (Philanthropies): inform and solicit inputs from philanthropies focused on forest conservation. Discuss various options on how they could contribute, including advocacy, technical support and capital contributions.

d. Stakeholder Group Four (Non-governmental/Civil society organizations and other potential validators and supporters). Inform and solicit input from organizations and individuals engaged in forest conservation in particular and climate finance more generally - validating both financing and environment aspects of the proposal.

Touch points during Phase I and II:

a. Exploratory technical workshop focused on the TFFF funding mechanism. February 27th, Sao Paulo. COMPLETED.
b. Kick-off in person meeting of financing stream, WB/IMF spring meetings, April 17, 2024. COMPLETED;
c. Kick-off in person meeting of environment stream – UNFF, New York, 8 May. COMPLETED;
d. Presentation of the TFFF concept to the G20 Environment and Climate Sustainability Working group, Manaus, Brazil, 19 June. COMPLETED.
e. Presentation of the TFFF concept at the in-person meeting on the sidelines of the G20 MFCBG meeting in Rio, July 24, 2024.
f. Joint technical workshop of sovereign sponsors and TNFs, focused on environment and financing criteria. September, Location TBD.
g. In-person meeting with private investors, philanthropies and NGOs during the NY climate week (September 2024);
h. In person sovereigns meeting during the WB/IMF annual meetings (October 2024);
i. Engagements at biodiversity COP16 in Colombia (October) and climate COP29 in Azerbaijan (November).

This work would be aligned with the discussion led by (i) the G20 chaired by Brazil through the Working Group on Environment and Climate Sustainability; Task Force for the Global Mobilization against Climate Change; and Sustainable Finance Working Group; and (ii) Biodiversity COP led by Colombia. These processes represent opportunities to raise awareness about the concept, obtain endorsement and support.

Key deliverables to be presented at COP 29 or Brazil Rio G20 Summit:

- Detailed TFFF proposal document;
- Summary of the terms and other aspect of potential investment.

Phase III: Engage financial partners and set up the TFFF (December – November 2025)

Phase III will focus on actual fundraising and facility set-up with the objective of announcement at COP30 and will include organization of pledging meetings for investor contributions. These two key activities will proceed in parallel. Detailed process/work plan will be designed based on the inputs received over the coming months.

Annexes

Annex 1: Operationalisation Pathway