

Harnessing Private Investor ‘Willingness-to-Pay’ for Climate Change Mitigation

A Mechanism to Co-fund Public
Commitments to Achieve the Goals of the
Paris Agreement

Rupert Edwards

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SUPPORTER



About Forest Trends

Forest Trends works to conserve forests and other ecosystems through the creation and wide adoption of a broad range of environmental finance, markets, and other payment and incentive mechanisms.

Forest Trends does so by: 1) providing transparent information on ecosystem values, finance, and markets through knowledge acquisition, analysis, and dissemination; 2) convening diverse coalitions, partners, and communities of practice to promote environmental values and advance development of new markets and payment mechanisms; and 3) demonstrating successful tools, standards, and models of innovative finance for conservation.

About Forest Trends' Public-Private Finance Initiative

Conserving forest and ecosystems and transforming land use at scale to sustainable low-emissions production systems requires substantial investment. Our Public-Private Finance Initiative is strategically focused on creating architectures that increase the amount of capital flowing to land-use practices which reduce emissions from deforestation and degradation, improve the productivity of agricultural and livestock systems, and enhance livelihoods of rural populations.

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EXECUTIVE SUMMARY

In this working paper, we propose a special platform enabling private investors across the world to contribute a small voluntary payment to climate change mitigation. The resulting climate investments would be underpinned by government climate finance commitments. For the purposes of this paper we shall call this platform a Global Climate Finance Foundation (GCFF).

There is growing evidence that private investors (wealthy and less wealthy) are willing to sacrifice some financial return on investment, so that their savings can contribute to climate change mitigation. However, opportunities for private investors to act in this way are severely limited by the lack of products available. The large majority of private savings necessarily reflect the broader real economy: mainstream equity and bond markets and the mainstream indices tracked by fund managers. Therefore, many savers are aware that their investments include sectors responsible for greenhouse gas emissions. Many would like to protect and enhance their savings but at the same time support climate change mitigation.

We propose that this 'willingness-to-pay' for climate mitigation could be harnessed and scaled up to go *beyond* current Socially Responsible Investment (SRI) models that avoid 'bad' things (such as arms, tobacco, and poor labor practices) or are predicated on achieving the same or better returns as normal investments. Such contributions to climate mitigation would also go *beyond* sensible risk-management strategies or shareholder pressure to avoid 'stranded asset' investments in fossil fuels that may be vulnerable to regulation. Instead, private investors would directly supplement public funding for efforts to mitigate climate change.

Private savers can of course invest in mainstream funds and then separately make charitable donations. However, we propose that private contributions to climate change mitigation could be vastly increased if savers felt donations were going to be managed by a highly credible institution, to support programs backed by government climate finance commitments, with the potential for significant scale from widespread collective action.

This paper therefore suggests a simple model to harness and expand investors' willingness-to-pay for climate change mitigation and be part of a positive investment story at the same time that their savings and financial returns track mainstream investment management strategies and indices.

An ambitious capital-raising goal for a GCFF could be \$10 billion per annum within five years. It would require a total of \$5 trillion in investment assets on which investors contribute 0.20 percent in annual fees to raise \$10 billion per annum. Such a sum of \$5 trillion is a relatively small share of the \$161 trillion in total investors' assets worldwide¹ and \$31 trillion in SRI assets.²

In this paper we examine:

- I. The high-level rationale for this approach;
- II. Evidence of potential investor interest, including the growth in 'Socially Responsible' and 'Impact' investing; evidence of investor willingness to accept sub-commercial returns; reasons why there is untapped private investor willingness-to-pay for climate change mitigation; and opportunities to expand and harness this willingness-to-pay;
- III. A model for a Global Climate Finance Foundation, including a proposed capital raising model and target; development and stakeholder perspectives; priorities and mechanisms for delivering funding; and
- IV. Conclusion and recommendations to senior public figures, policy-makers, philanthropic foundations, and investment managers for advancing this model.

¹ Credit Suisse, WWF, McKinsey and Company. *Conservation Finance: Moving beyond donor funding to an investor-driven approach* (Credit Suisse, WWF, McKinsey and Company, 2016).

² Global Sustainable Investment Alliance. *2018 Global Sustainable Investment Review* (GSIA, 2018), http://www.gsi-alliance.org/wp-content/uploads/2019/03/GSIR_Review2018.3.28.pdf

I. RATIONALE FOR THE MODEL OF A GLOBAL CLIMATE FINANCE FOUNDATION

Currently there is a US\$2.5–4.8 trillion gap in annual financing to meet the aspirations of the Paris Agreement.^{3,4} Greenhouse gas (GHG) emissions continue to rise globally. The question of how to harness private sector investment to finance solutions to climate change is therefore a central focus of policy discussions.

Governments facing fiscal constraints (and many businesses and investment firms) are looking to private finance and corporate innovation to provide solutions to the climate crisis. Some climate change mitigation investments offer commercial financial returns. 'Win-win' investments that achieve good financial and climate outcomes do exist, even in the absence of public subsidies or regulation. Much analysis has shown that a clean energy transition to 2050 could be net present value positive, for instance.⁵

However, as the Stern Review stated: "climate change...is the greatest example of market failure we have ever seen."⁶ A stable global climate is best characterized as a public good. This means that climate change remains primarily a public policy problem, requiring regulation (e.g., putting a price on carbon) and public funding to steer private investment and innovation toward greenhouse gas mitigation.

We have several promising examples of public sector provision of finance and enabling policy for climate mitigation. Public subsidies such as feed-in-tariffs have been successful in driving large-scale private investment into renewable energy infrastructure and bringing down the costs of associated technologies. And development banks deploy public funds for concessional lending to lower capital costs and catalyze private low-carbon investment.

However, public action is still falling short. The global community is behind schedule to curb GHG emissions and the policy response to climate risk is significantly behind the curve. In the coming years, early-stage research and development (R&D) spending (traditionally provided by governments) will be essential for sectors with fewer market-ready GHG abatement options such as industry, agriculture, and aviation. Similarly, public finance commitments for Reducing Emissions from Deforestation and Forest Degradation in developing countries (REDD+) could have significant potential to reduce long-term emission reduction costs.

Governments can of course raise additional tax on savings, but doing so is politically challenging and finance ministries are resistant to hypothecation of tax revenues to climate change or any other spending priority. Therefore a critical question is the extent to which *private investors* might help pay for the *public goods* associated with climate change mitigation.

Private Willingness-to-Pay for Climate Mitigation beyond SRI

SRI has become mainstream. Moreover there is evidence, as we discuss below, that private investors are willing to sacrifice some financial return on investment, so that their savings can contribute to positive environmental and social outcomes.

The Institutional Investors Group on Climate Change (IIGCC) representing \$23 trillion in assets has a mission "to mobilize capital for the low carbon future" including through "changing market signals by encouraging the adoption of strong and credible public policy solutions that ensure an orderly and efficient move to a low carbon economy, as well as measures for adaptation."

Commercial financial returns are possible in sectors such as clean technology venture capital that directly contribute to mitigation of climate change. However, such sectors can be narrowly focused, risky,

³ Under the UN Framework Convention on Climate Change (UNFCCC).

⁴ Global Green Growth Institute. *Mind the Gap: Bridging the Climate Financing Gap with Innovative Financial Mechanisms* (Global Green Growth Institute, 2016). http://gggi.org/wp-content/uploads/2017/03/Mind-the-Gap_web.pdf

⁵ See for example: "Key Findings," The New Climate Economy: The 2018 Report of the Global Commission on the Economy and Climate, accessed May 30, 2019, <https://newclimateeconomy.report/2018/key-findings/> and Lovins, Amory. *Reinventing fire: Bold business solutions for the new energy era*. Chelsea Green Publishing, 2013.

⁶ Stern, Nicholas, and Nicholas Herbert Stern. *The Economics of Climate Change: The Stern Review*. Cambridge University press, 2007.

dependent on policy support and public subsidy, or require access to specialist private equity vehicles out of reach of ordinary retail investors. Meanwhile other sectors, such as industry, agriculture, and aviation are critical for climate mitigation but as noted above do not yet have many market-ready mitigation solutions.

Investment managers and trustees, from private investment vehicles to pension and sovereign wealth funds, have legal fiduciary responsibilities to maximize returns for savers. It is therefore unreasonable to expect managers to solve climate change where public policy is failing to create the necessary signals in the real (non-financial) economy.

This paper therefore suggests a simple model to enable, harness and expand investors' willingness-to-pay for climate change mitigation and to be part of a positive investment story *at the same time* that their savings and financial returns track mainstream investment management strategies and indices. We discuss below how investors could make a voluntary payment on top of fund management fees that investment managers would then pass on to a Global Climate Finance Foundation.

This willingness-to-pay could be scaled up and harnessed to go *beyond* current SRI models that exclude 'bad things' or are predicated on achieving the same or better returns as normal investments; our proposed mechanism would also go *beyond* sensible risk-management strategies to avoid 'stranded asset' investments in fossil fuels that may be vulnerable to regulation.

Private savers can of course invest in mainstream funds and then separately make charitable donations for a range of 'impact' outcomes. However, we believe there is vast untapped private willingness-to-pay for climate change mitigation in particular. This is because the large majority of private savings necessarily reflect the broader real economy: mainstream equity and bond markets and the mainstream indices tracked by fund managers. Therefore, many savers are aware that their investments include sectors responsible for greenhouse gas emissions. Many would like to protect and enhance their savings but at the same time support climate change mitigation.

Far greater levels of private contributions to climate change mitigation could be harnessed if products were available enabling investors to commit a very small percentage of the nominal value of their investment portfolios as grant funding to GHG abatement initiatives, provided that they felt their overall returns tracked mainstream investment performance. These initiatives would be credible government, philanthropic and internationally backed funding programs for clean energy R&D or tropical forest conservation/restoration such as REDD+.

II. 'SOCIALY RESPONSIBLE INVESTING', 'IMPACT INVESTING' AND EVIDENCE OF 'WILLINGNESS-TO-PAY' FOR ENVIRONMENTAL GOODS

Below we provide some background on SRI and 'Impact' investing and evidence of willingness to pay for environmental goods.

Socially Responsible Investing

According to the Global Sustainable Investment Alliance (GSIA): "Sustainable investing is an investment approach that considers environmental, social and governance (ESG) factors in portfolio selection and management." While, there is on-going work (e.g., in the European Commission and Parliament) to ensure more rigorous definitions for sustainable investing, SRI has gone from a niche concept to a significant scale.

Sustainable investment encompasses the following activities and strategies:

- Negative/exclusionary screening
- Positive/best-in-class screening
- Norms-based screening
- Integration of ESG factors
- Sustainability themed investing

- Impact and community investing
- Corporate engagement and shareholder action

In 2018, the GSIA reported that:⁷

- Globally, sustainable investing assets in the five major markets stood at \$30.7 trillion, a 34 percent increase in two years.
- The largest sustainable investment strategy globally is negative/exclusionary screening (\$19.8 trillion).
- Institutional investors report that their SRI strategies are in large part driven by client demand. The retail portion of SRI had grown by the start of 2018 to one quarter of all SRI.
- Climate change was the leading ESG issue for money managers in asset-weighted terms.
- In 2018, the proportion of sustainable investing relative to total managed assets was 48.8 percent for Europe, 25.7 percent for the USA, 50.6 percent for Canada, 63.2 percent for Australia/New Zealand, and 18.3 percent for Japan.
- Increasingly pension funds are becoming signatories to the United Nations supported Principles for Responsible Investment.⁸

Additionally, the GSIA reported that shareholders concerned about climate risk led 93 resolutions specifically on the subject in 2016 and negotiated a number of commitments from the target companies to report on strategic planning around climate change or to reduce their GHG emissions.⁹

BlackRock and Legal & General are among the major investment management firms leading the way in developing SRI products and corporate engagement.

Beyond these private sector efforts, regulatory frameworks are increasingly requiring that investors recognise the importance of ESG factors in fulfilling their stewardship responsibilities. (See, for example, the UK Financial Reporting Council and the Stewardship Code.¹⁰)

Efforts to understand climate risks for the financial sector have been pushed by public figures such as Mark Carney, Governor of the Bank of England, who led the call beginning in 2015, as well as President Emmanuel Macron of France and Michael Bloomberg, the United Nations Secretary-General's Special Envoy for Climate Action. The One Planet Summit in Paris in December 2017 was the setting for the launch of the Network for Greening the Financial System (NGFS), which now has 34 central banks and regulators as members. The NGFS First Comprehensive Report was published in April 2019.¹¹

Thus both leading investment firms and regulators are helping to increase pressure for more robust climate policies. And investors are increasingly aware that the value of shares in fossil fuel companies needs to account for the risk of a stronger policy and regulatory response from governments to climate change.¹²

Against this backdrop, financial products with a climate theme have been developing. For example:

- Investors have the opportunity to invest in 'green' or 'climate' bonds, where use of proceeds from bond issues is ring-fenced for climate change mitigation outcomes. In 2018, cumulative green bond issuance had reached \$521 billion.¹³

⁷ Global Sustainable Investment Alliance, 2018.

⁸ "Principles for Responsible Investment," United Nations Principles for Responsible Investment, accessed May 30, 2019 at <https://www.unpri.org/>.

⁹ See also the Carbon Disclosure Project: <https://www.cdp.net/en>

¹⁰ "UK Stewardship Code," Financial Reporting Council, accessed May 30, 2019 at <https://www.frc.org.uk/investors/uk-stewardship-code>.

¹¹ Network for Greening the Financial System. *A call for action: Climate change as a source of financial risk* (Network for Greening the Financial System, 2019), https://www.banque-france.fr/sites/default/files/media/2019/04/17/ngfs_first_comprehensive_report_-_17042019_0.pdf.

¹² See The Climate Change Collaboration and UK Sustainable Investment and Finance Association. *Oil pressure gauge: 2019 survey of fund managers' attitudes to climate risk and investment in fossil fuel companies* (The Climate Change Collaboration and UKSIF, 2019), <http://uksif.org/wp-content/uploads/2019/04/Oil-Pressure-Gauge-survey-booklet-2019.pdf> and "Aligning capital market actions with climate reality," Carbon Tracker, accessed May 30, 2019 at www.carbontracker.org.

¹³ The Climate Bonds Initiative. *Green Bonds: The State of the Market 2018* (Climate Bonds Initiative, 2019), https://www.climatebonds.net/files/reports/cbi_gbm_final_032019_web.pdf.

- Investors also have the opportunity to invest in a range of pioneering low-carbon indices. For example, the MSCI Low Carbon Indices reweight stocks based on carbon exposure.¹⁴

SRI, climate bonds, and low-carbon indices have played an excellent role in developing investor awareness and allowing investors to target funds at climate change mitigation activities.

However, climate bonds, unenhanced by public subsidy, generally have the same commercial terms as vanilla bonds and do not lower the cost of capital for climate friendly investments. Moreover, given the need to maximize returns, investor appetite for low-carbon investment strategies is to a large extent dependent on government regulation and subsidy to shift the real economy signals in favor of such investments.

With global emissions rising and governments struggling to meet domestic emission reduction targets, the policy response to climate risk is significantly behind the curve.

While regulation, carbon pricing, or government subsidy for public goods is critical to making green investment competitive with business-as-usual investment, a fundamental question remains:

Can we go beyond current SRI strategies and harness private willingness-to-pay in order to supplement public funding for the public good of a stable climate, and can we do so at scale?

Impact Investing

We find promising signs in the world of 'impact' investing, which is a smaller segment of the broader SRI universe.

GSIA defines impact investing as targeted investments, typically made in private markets, aimed at solving social or environmental problems.¹⁵ The Global Impact Investing Network (GIIN) describes impact investments as "investments made with the intention to generate positive, measurable social and environmental impact alongside a financial return."¹⁶ The United Nations Environment Programme Finance Initiative (UNEP FI) has also developed a set of *Principles of Positive Impact Finance* for businesses, with a mission to help achieve the United Nations Sustainable Development Goals (UN SDGs).¹⁷

In April 2019, the GIIN estimated the current size of the global impact investing market to be \$502 billion in assets under management.¹⁸

The GIIN 2018 annual survey found that impact investors have diverse financial return expectations.¹⁹ Around 36 percent intentionally invest for below-market-rate returns, in line with their strategic objectives. Around 64 percent pursue market-competitive and market-beating returns, sometimes required by fiduciary responsibility.

Elizabeth Littlefield, former CEO of the US Overseas Private Investment Corporation (OPIC), has expressed mixed feelings on the finding that almost two-thirds of impact investors are looking for market-rate returns. Ms. Littlefield would like to see the impact investment sector broaden to accommodate all investors: large or small, institutional or individual, philanthropic or commercial.

"We've done a great job of creating awareness, building opportunity and generating an enormous amount of commercial capital — and that needs to continue," she was quoted as saying in the Financial

¹⁴ "MSCI Low Carbon Indexes," MSCI, accessed 30 May, 2019 at <https://www.msci.com/low-carbon-indexes>.

¹⁵ Global Sustainable Investment Alliance. *2016 Global Sustainable Investment Review* (GSIA, 2016), http://www.gsi-alliance.org/wp-content/uploads/2017/03/GSIR_Review2016.F.pdf

¹⁶ "What You Need to Know about Impact Investing," Global Impact Investing Network, accessed May 30, 2019 at <https://thegiin.org/impact-investing/need-to-know/%23s2>.

¹⁷ "Principles for Positive Impact Finance," UNEP Finance Initiative, accessed May 30, 2019 at <https://www.unepfi.org/positive-impact/principles-for-positive-impact-finance/>.

¹⁸ Mudaliar, Abhilash, and Hannah Dithrich, *Sizing the Impact Investing Market* (Global Impact Investing Network, 2019), <https://thegiin.org/research/publication/impinv-market-size>.

¹⁹ Mudaliar, Abhilash, Rachel Bass, and Hannah Dithrich, *Annual Impact Investor Survey 2018* (Global Impact Investing Network, 2018), <https://thegiin.org/research/publication/annualsurvey2018>.

Times. "But we also need to build out opportunities of a different sort that aren't necessarily purely commercial."²⁰

There are examples of impact investment strategies where a willingness-to-pay is built into investment manager fee structures (i.e., the willingness-to-pay is on the part of the manager):

- BlackRock has developed a low risk liquid product for retail investors (BlackRock Liquid Environmentally Aware Fund with a minimum investment size of \$1000) that will use at least 5 percent of net revenue from its management fee to purchase and then retire carbon offsets and additionally may pay a license fee to a charitable organisation to use the charitable organization's name and logo.²¹
- Through the UBS Oncology Impact Fund, 20 percent of the performance fee for the fund manager as well as 1 percent of royalties on treatments resulting from the fund are or will be donated to oncology research and cancer care access in emerging markets.
- Tribe Impact Capital investments give 20 percent of profits to high impact organizations aligned with the UN SDGs (as well as investing with a strong ESG focus).²²

Impact fund managers are keen to access those investors with more 'patient' or risk-tolerant capital or who are willing to accept sub-commercial returns. Such investors are likely to be attracted to strategies where managers donate a percentage of fees or profits to impact outcomes.

Expanding Opportunities for Concessional Capital

Currently opportunities for private investors to be more patient or risk-tolerant or to accept sub-commercial returns are limited by the lack of products available. This is due, *inter alia*, to the following:

- As stated above, investment managers and trustees have legal/fiduciary responsibilities to maximize returns for savers. This drives the strategies of mainstream funds. Regulatory frameworks may be starting to insist on base level ESG practices. However, the responsibility to maximize financial returns remains. (For example, only in 2015 did the US Department of Labor, responsible for enforcing the Employment Retirement Income Security Act, rescind its 2008 bulletin on Economically Targeted Investments, which had discouraged fiduciaries for private sector retirement plans from considering environmental and social factors in their investments. This was a major departure from its 1994 guidance that had essentially stated the opposite.²³)
- For climate change (and many other 'impactful' outcomes) it is actually very hard to target capital investment for a sub-commercial return while still having high confidence that the principal of the investment will be recoverable. If a normal investment portfolio might target returns of, for example, inflation + 3 percent then private investors looking to deploy capital for impact but still needing to guard their savings might accept inflation + 2.5 percent. But they do not want to take on significant risk of negative returns. Many of the most impactful investments thus necessarily need to be in the form of grants that will not generate any return. And those investments that risk significant negative returns are unsuitable for most savers. Investing in high credit climate bonds can reassure investors that the principal on their investment is safe. But, as we have said above, such products generally have the same commercial terms as 'normal' bonds and therefore do not lower the cost of capital.

²⁰ Murray, Sarah. "Elizabeth Littlefield: 'Not all social investment has to make a market return'." (*The Financial Times*, 3 December, 2018), <https://www.ft.com/content/b6c893d4-f48e-11e8-9623-d7f9881e729f>.

²¹ "BlackRock Liquid Environmentally Aware Fund Prospectus," BlackRock, accessed May 29, 2019 at <https://www.blackrock.com/cash/en-us/stream-document?stream=reg&product=L-LEAF&shareClass=Class+A&documentId=1689778%7E1689770&iFrameUrlOverride=%2Fcash%2Fliterature%2Fprospectus%2Fpro-leaf-inv-us.pdf>.

²² "About Us," Tribe Impact Capital, accessed May 30, 2019 at <https://www.tribeimpactcapital.com/about-us/>.

²³ Global Sustainable Investment Alliance, 2016.

Impact investment products targeting explicitly sub-commercial returns have therefore to date generally only been able to target specialist official development assistance (ODA)-supported or philanthropic funds and high net worth investors.

For these reasons, the opportunities for a broad range of private savers to deploy capital on concessional terms are few and far between. Standard SRI explicitly targets commercial risk-adjusted returns. Banks and investment managers reassure clients that it is a myth that you will give up performance when you invest sustainably. Indeed, returns on SRI products have been demonstrated to be comparable to conventional investment. For example, BlackRock's sustainable funds are designed to meet the performance characteristics of traditional investments while targeting specific social impact objectives, such as reducing the carbon footprint of an investment portfolio.²⁴ This is all as it should be. Many investment managers have done a tremendous job growing investor awareness of SRI while meeting fiduciary responsibilities.

However, there is no built-in willingness-to-pay for public goods from investment vehicles that require normal financial returns. If investment vehicles demand commercial yields then they do not lower the cost of capital for investee businesses or projects. Governments, public policy and public funds continue to carry the burden of valuing public goods and generating signals in the real economy to drive transformational low carbon investment.

Outreach from Forest Trends to investment managers over the last two years has highlighted that, even for specialist philanthropic funds, there is seen to be a dearth of suitable concessional investment opportunities. Additionally, feedback from a number of managers suggests there is significant untapped demand from a broader range of investors willing to accept sub-commercial returns for products with strong social and environmental impacts. And this is seen as being especially the case for climate change.

It could be relatively straightforward to tap into private willingness-to-pay while at the same time allowing investors to continue to earn close to target portfolio returns. We propose developing a simple and highly replicable investment product that might empower private savers to feel that they are making a difference while protecting their savings.

In order to attract a broad range of investors to be willing to pay such a voluntary fee, a GCFF receiving these donations would need to be underpinned by highly credible government and internationally backed funding programs for e.g., clean energy R&D or tropical forest conservation/restoration.

Below we break this model for a GCFF down into three constituent elements:

- 1) Capital raising model and target
- 2) Development and stakeholder perspectives
- 3) Priorities and mechanisms for delivering funding

III. A MODEL FOR A GLOBAL CLIMATE FINANCE FOUNDATION

Capital-raising model and target

We have assumed for illustrative purposes that investors would pay a 0.2 percent (20 basis points) fee over and above the management fees paid to investment managers.

²⁴ "Explore sustainable investing," BlackRock, accessed May 30, 2019 at <https://www.blackrock.com/investing/investment-ideas/sustainable-investing>.

Example of an investor who is prepared to pay 0.2 percent donation per annum on \$100,000 of savings:

\$100,000 in capital

0.2 percent GCFF donation per annum equals \$200

Target portfolio return: 5 percent nominal (~3 percent real) or \$5000 per annum

Net return after paying 0.2 percent to GCFF is 4.8 percent or \$4,800 per annum.

What is the potential capital raising target for such a model?

A 2016 report estimated the size of the global savings pool as follows:²⁵

- Institutional investor assets: \$62 trillion
- Retail investors: personal financial assets in the retail segment (excluding life insurance and pension assets) \$53 trillion
- High and ultra-high net worth investors: \$46 trillion

The International Monetary Fund estimated that, in the same year, pension funds, sovereign wealth funds, mutual funds, and other institutional investors held more than \$100 trillion.²⁶

An ambitious capital-raising goal for a GCFF could be \$10 billion per annum within five years. In early years the amount of capital raised would be lower until the GCFF achieved momentum.

On the basis of 0.20 percent of funds under management, \$5 trillion in funds would be required where investors contribute 20 basis points to the GCFF in order to raise \$10 billion per annum. Such a sum of \$5 trillion is a relatively small share of the \$161 trillion in total investors' assets worldwide²⁷ and \$31 trillion in SRI assets.²⁸

As noted, there is a \$2.5–4.8 trillion gap in annual financing to meet the aspirations of the Paris Agreement.²⁹ The Paris Agreement itself enshrines a commitment by developed countries to mobilize US\$100 billion per year by 2020 from public and private sources to support climate action in developing countries.

It is important to differentiate between the total *financing flows* required to meet the goals of the Paris Agreement and *incremental costs* of doing so.³⁰ A GCFF able to raise \$10 billion per annum of non-returnable grant funding to help cover the *incremental costs* of climate change mitigation could thus leverage much greater overall *financing flows*. A GCFF could also, like other foundation structures, build up a sustainable long-term capital base over time (i.e., not distribute all revenue each year).

Development and Stakeholder Perspectives

Developing this model will require leadership from political/public leaders, philanthropic foundations, and investment firms. Additionally, successful implementation requires buy-in from three key groups of stakeholders: private savers, investment managers, and policy-makers and philanthropic foundations.

²⁵ Credit Suisse, WWF, McKinsey and Company, 2016.

²⁶ Rabah Arezki, Rabah, Patrick Bolton, Sanjay Peters, Frederic Samama, and Joseph Stiglitz. *From Global Savings Glut to Financing Infrastructure: The Advent of Investment Platforms* (IMF Working Paper WP/16/18, 2016), <https://www.imf.org/external/pubs/ft/wp/2016/wp1618.pdf>.

²⁷ Credit Suisse, WWF, McKinsey and Company, 2016.

²⁸ Global Sustainable Investment Alliance, 2018.

²⁹ See also: "Sustainable Finance," London School of Economics and Political Science Grantham Research Institute on Climate Change and the Environment, accessed May 30, 2019 at <http://www.lse.ac.uk/GranthamInstitute/research-theme/finance-and-investment/>.

³⁰ See: Green Climate Fund. *Incremental cost methodology: Potential approaches for the Green Climate Fund* (Green Climate Fund GCF/B.19/34, 2018), https://www.greenclimate.fund/documents/20182/953917/GCF_B.19_34_-_Incremental_cost_methodology_potential_approaches_for_the_Green_Climate_Fund.pdf/f86a78c6-a395-455e-890f-45e63d7a91a9.

Private Savers

A limited number of private savers currently make donations to charities for climate-themed projects or support voluntary carbon offsets and tree-planting programs. However, we propose that willingness-to-pay could be vastly increased if savers were confident donations would be managed by a highly credible institution, to support programs backed by government climate finance commitments, with the potential for impact at significant scale thanks to widespread collective action.

Donations by private investors could be matched by public climate finance programs, which are already focused on leveraging private investment, or philanthropic commitments. Investors, governments, and foundations would all recognize the catalytic effect of joint action. Theoretical and empirical work has shown how much higher levels of cooperation, altruistic behavior, and charitable giving can be harnessed when individuals feel that businesses or governments are sharing social responsibility.³¹

Private savers would need an administratively simple way to pay a voluntary fee. A GCFF would need to replicate the legal structures of international charities so that investors in different tax jurisdictions could enjoy the normal tax benefits of charitable donations.

Investment management fees and dealing charges have been materially lowered in recent years due to competitive and regulatory pressure, a fact that should also encourage willingness-to-pay from private savers.

Investment Managers

The proposal to offer investors the opportunity to set aside an additional 0.2 percent donation on top of fees paid to investment managers has the advantage of administrative simplicity. It would be relatively easy for managers to enable investors to do so, since they are in the business of collecting fees. The additional voluntary fee could then be transferred to the GCFF. While some specialist impact funds might offer investors the opportunity to make donations based on a percentage of financial returns, we propose that for mainstream retail funds it would be administratively much simpler to collect a donation alongside management fees.

Regulators are always concerned that investment management fees are made transparent to investors. This should be straightforward for the voluntary donation approach described above.

Public actors and philanthropic foundations could work with leading investment management firms to develop a 'Plus Climate Impact' or 'GCFF' marque or brand, allowing investors to know that donations were guaranteed to co-fund a government-backed GCFF.

Investment manager websites and contract agreements with savers could simply offer a 'tick the box' option for 'Climate Impact' alongside their usual investment products – for example a Global Equities SRI Plus Climate Impact/GCFF product. Alternatively the Plus Climate Impact/GCFF option could be built into one or more fund offerings in each major investment sector and asset class.

The model we propose is not designed to garner additional fees for investment managers. There could therefore be inertia on the part of investment managers in providing this option to investors. Nevertheless, many major managers could be willing to help participate as part of a corporate social responsibility strategy if public and philanthropic actors successfully take the lead in developing the model. Once momentum has developed, there could be competitive advantage for managers who include this offering. Indeed, it is possible that over time many savers would come to expect this option to be provided by investment managers.

Initial feedback has been positive from early informal consultations by Forest Trends and the Climate Crisis Foundation³² with a small number of senior figures at large investment management firms. The

³¹ Gneezy, Ayelet, Uri Gneezy, Leif D. Nelson, and Amber Brown. "Shared social responsibility: A field experiment in pay-what-you-want pricing and charitable giving." *Science* 329, no. 5989 (2010): 325-327. (Cited in Sapolsky, Robert M. *Behave: The biology of humans at our best and worst*. Penguin, 2017.)

³² "Climate Crisis Foundation: Because Your Children and Grandchildren Will Ask You What You Did to Make a Difference...", Climate Crisis Foundation, accessed May 30, 2019 at <https://www.climatecrisis.earth>.

main concern these consultations have highlighted is that managers feel private savers would need the GCFF to be a highly credible institution, with a strong governance structure, clear spending priorities, and effective vehicles for delivering funds efficiently.

Policy-makers and Philanthropic Foundations

Policy-makers would of course welcome large-scale co-funding from private savers under a GCFF model. And there is no shortage of urgent spending priorities. Nevertheless, a credible GCFF requires senior political or public leaders with convening power to engage a broad coalition of investment managers and philanthropic foundations, develop a governance structure, and outline a strategy for effective use of funds.

A GCFF governance structure could include board members who are senior public figures, the CEOs of philanthropic foundations, and leading investment firms.

The leading philanthropic foundations active on climate change issues could play an important role in developing a GCFF, building on their existing climate finance programs. These foundations could help direct funding to the most effective programs and play a coordinating role with investment managers and governments in developing an effective institutional structure that harnesses larger-scale government and multilateral funding commitments.

Public and philanthropic actors on the board of a GCFF could also be representatives of some of the pioneering climate finance delivery mechanisms.

Priorities for Funding and Delivery Mechanisms

Priorities for Funding

Private investor donations to a GCFF could support climate finance vehicles that require non-returnable grant funding. Such grant funding could be especially useful to co-fund non-commercial areas such as:

Avoided deforestation and forest restoration

A 2017 paper has suggested that 'natural climate solutions,' in particular forest pathways, can provide 37 percent of cost effective CO₂ mitigation needed through 2030 for a greater than 66 percent chance of holding warming to below 2°C.³³

Tropical forest countries have targets for reducing deforestation under the Paris Agreement but face daunting investment challenges to overcome the drivers of deforestation. Small conservation projects struggle to make a broad impact against this backdrop, while public international climate finance has not arrived at sufficient scale for forest countries to overcome these challenges.

A GCFF could support public REDD+ results-based finance for avoided deforestation and forest restoration.

Clean Energy R&D

Mission Innovation (a global initiative of 23 countries and the European Commission working to accelerate clean energy innovation) has stated: "While important progress has been made in cost-reduction and deployment of clean energy technologies, the pace of innovation and the scale of transformation and dissemination remain significantly short of what is needed."³⁴ A GCFF could support government R&D spending for sectors with fewer market-ready GHG abatement options, such as industry, agriculture, and aviation, for next generation clean energy innovation or negative emission technologies.

³³ Griscom, Bronson W., Justin Adams, Peter W. Ellis, Richard A. Houghton, Guy Lomax, Daniela A. Miteva, William H. Schlesinger et al. "Natural climate solutions." *Proceedings of the National Academy of Sciences* 114, no. 44 (2017): 11645-11650.

³⁴ Mission Innovation is a global initiative of 23 countries and the European Commission (on behalf of the European Union), seeking to double public investment in clean energy R&D while engaging with the private sector, fostering international collaboration, and celebrating innovators.

Delivery Mechanisms for Funding

A GCOFF board could choose to supplement the more successful multilateral funding programs that need to reach much greater scale to bring about transformative change.

Below are examples of existing bilateral/multilateral, philanthropic, and public-private mechanisms:

Forests and Land Use

- Existing mechanisms include Brazil's Amazon Fund supported by Norway; Germany's REDD+ Early Movers program (REM), which has also received funding from the UK's International Climate Fund; the World Bank Forest Carbon Partnership Facility (FCPF) and the UN Green Climate Fund (UN GCF). These mechanisms all provide REDD+ results-based finance to tropical forest countries for reduced deforestation outcomes.
- A new mechanism, the REDD+ Acceleration Facility (RAF), developed by the Environmental Defense Fund and Encourage Capital, aims to use donor-funded floor prices for jurisdictional REDD+ credits to leverage private co-funding from fossil fuel companies, the aviation sector, or agriculture commodity buyers. The GCOFF could potentially also provide co-funding to supplement donor climate finance to underwrite the floor value of REDD+ credits.

Clean Energy

- The World Bank Climate Investment Funds, UN Green Climate Fund, and UN Sustainable Energy for All (SE for All) are investing in renewable energy infrastructure, energy efficiency, and energy access in developing countries
- The Climate Finance Partnership (CFP), announced at the One Planet Summit in New York in September 2018, is an unprecedented cooperation between philanthropies, governments, and private investors (including BlackRock, the Governments of France and Germany, and the Hewlett, Grantham, and IKEA foundations), which have committed to jointly developing an investment vehicle that will aim to invest in climate infrastructure in emerging markets.³⁵ The CFP is both an example of the kind of cooperation needed to develop a GCOFF model and also a potential channel for delivery of funds.
- A GCOFF could be especially effective in providing grant funding to support Mission Innovation governments to develop a new global clean energy innovation fund for early stage and non-commercial research.

Philanthropic Foundations

- A number of philanthropic foundations have direct experience of delivering funds for climate change mitigation and could work alongside governments to develop effective delivery mechanisms for a GCOFF. The Climate Works Foundation has a track record of marshaling philanthropic resources, facilitating funder collaboration and coordination, and funding climate change initiatives.³⁶ The Climate and Land Use Alliance (CLUA) includes ClimateWorks and the Moore, Packard, Ford, and Good Energies Foundations. CLUA has a mission to realize the potential of forests and land use to mitigate climate change, benefit people, and protect the environment.³⁷ The Hewlett Foundation has been investing for a number of years in various strategies for reducing GHG emissions.³⁸ The Sea Change Foundation also has experience in making large grants for climate mitigation and clean energy initiatives.³⁹

³⁵ "Governments and philanthropies announce ground-breaking partnership with BlackRock to mobilize and deploy climate finance at scale," [press release], European Climate Foundation, September 26, 2018. <https://europeanclimate.org/governments-and-philanthropies-announce-ground-breaking-partnership-with-blackrock-to-mobilize-and-deploy-climate-finance-at-scale/>.

³⁶ "Response," ClimateWorks Foundation, accessed May 30, 2019 at <https://www.climateworks.org/response/>.

³⁷ "About Us," Climate and Land Use Alliance, accessed May 30, 2019 at <http://www.climateandlandusealliance.org/about-us/>.

³⁸ "Climate and Energy," William and Flora Hewlett Foundation, accessed May 30, 2019 at <https://hewlett.org/strategy/climate-and-energy/>.

³⁹ "Sea Change Foundation Philosophy," Sea Change Foundation, accessed May 30, 2019 at <https://www.seachange.org/about/>.

IV. CONCLUSION

Private investors currently have little opportunity to deploy investment capital on concessionary terms for climate impact. This paper proposes that a significant percentage of SRI, impact, and many mainstream investors would be willing to pay a modest donation on the nominal value of their investment portfolios in order to support climate change mitigation and associated co-benefits, provided that they felt that their overall returns (minus the fee) tracked mainstream investment performance.

Enabling investors to pay such a donation would be relatively simple from an administrative perspective and should have the ambition to harness \$100 billion of non-returnable grant funding over ten years.

Harnessing this willingness-to-pay and achieving momentum would require leadership of respected and senior public figures and philanthropic foundations as well as of CEOs at large investment funds.

The institutional structure of a GCFF and mode of delivery for spending priorities need to be developed. Private investors would need to be convinced they were part of a highly credible program with the potential for significant scale from widespread collective action. Policy-makers wish to align the financial sector with the goals of the Paris Agreement. The model we propose provides an opportunity for them to do so.

There is strong potential for such an approach to engage and empower the public, who currently feel powerless confronted by a climate crisis that is overwhelming the capacities of their governments and of mankind to co-operate effectively at a global scale. Investors should expect investment managers to support a GCFF model and should demand from governments effective matching and spending programs for their donations.