Conservation Finance

From Niche to Mainstream: The Building of an Institutional Asset Class









McKinsey Center for Business and Environment

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Foreword

Can nature pay for itself?

Sustainable farmland, healthy forests, clean water and abundant habitat stand to become more valuable as the global population climbs to 9 billion by 2050. Already, pioneering investors have put together financial solutions that combine real assets, like tropical forests, with cash flows from operations in fields such as sustainable timber, agriculture and ecotourism. Conservation finance, as this field is called, represents an undeveloped, but emerging private sector investment opportunity of major proportion.

Today, about \$52 billion per year flows to conservation projects, the bulk of it in public and philanthropic funds. The best estimates are that \$300 to \$400 billion per year is needed to preserve healthy ecosystems on land and in the oceans, and with them the earth's natural capital stock of clean air, fresh water and species diversity.

Filling this gap to finance the preservation of the world's precious ecosystems will require \$200 billion to \$300 billion in additional capital, and private investment capital may be the main source of additional capital. Attracting such a level of private capital will require attractive risk-adjusted rates of return, in addition to clear and measurable conservation impacts.

In the current environment, investors are looking for an edge to drive excess returns. Increasingly, they are seeing conservation impact investing as a way to achieve substantial environmental and social impact alongside market-rate financial returns.

The growth of the conservation finance market is opening the way for banks to pool risk across geographies and asset types, which corresponds neatly with our core expertise of aligning capital with attractive and sustainable investment opportunities. We believe that if we can change how people look at risk and return and impact to incorporate nature as a core part of the long-term strategy for a successful investment portfolio, this will move the needle. Over time, conservation investments will be considered as traditional fixed-income, venture capital or alternative investments, which can easily fit in the portfolios of institutional, high-net-worth and even retail investors interested in large-scale, high-impact ecosystem conservation.

In this report, we propose a toolkit with a number of scalable, repeatable and investable ideas for substantially growing investment into the conservation sector. Implementing these will require a strong collaboration between the financial and environmental communities on new and creative ways to solve the financial structuring and conservation challenges at hand.

The continuing disappearance of Earth's last healthy ecosystems is sadly no longer news. What is news is that saving these ecosystems is not only affordable, but profitable. Nature must not be turned into a commodity, but rather into an asset treasured by the mainstream investment market.

Tidjane Thiam Chief Executive Officer Credit Suisse

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About this report

The objective of this report is to identify financial product structures that have the potential to establish conservation finance in mainstream investment markets.

As in our prior report (Credit Suisse, WWF, and McKinsey, 2014), we understand conservation finance as a mechanism through which an indirect or a direct financial investment is made to conserve the values of an ecosystem for the long term. In this report, we focus on investment mechanisms that activate one or more cash flows generated by the sustainable management of an ecosystem, which in part remain within the ecosystem to enable its conservation, and in part are returned to investors.

The report emphasizes the need to match existing conservation finance project strategies with appropriate financial vehicles and available investable funds with the long-term intent of creating a conservation finance asset class. While important for conservation, this report does not focus on related topics such as the improvement of industry supply chains (unless directly related to conservation, such as agriculture and fishing), commodity finance, or carbon/climate finance.

Furthermore, the report does not take a normative approach to the question of what conservation finance is or should be. Its approach is based on mainstream definitions such as those provided by the Global Canopy Programme (2012) and WWF (2009).

This report is primarily targeted at mainstream investors – that is, institutional investors, (U)HNWI, and retail investors – who are interested in learning more about investment structures that provide a market-rate return and a positive conservation impact. The report should also help conservation project developers better understand the possible funding options provided to them by the private investment sector. It is targeted at those who are willing to take the plunge into the "financialization" of conservation finance projects in order to try to tap into those deeper capital pools.

Executive summary

In our last report, published almost two years ago, we focused on introducing an investor's perspective to the conservation finance field. We highlighted the unmet demand for conservation funding, accessible cash flows, and the investment capital that would be available on a large scale. Since then, the field has developed rapidly and grown in depth (e.g., new structures, technologies, and players have entered the space) and breadth (e.g., more sizeable products are being launched).

This report reflects these recent developments and expands on some of the key themes of the last report. Over four chapters, we (1) re-emphasize the importance of financial vehicles as a bridge between project funding needs and investor interests; (2) argue that developing recent changes to the relevant enabling conditions may accelerate a further market uptake; (3) build a deeper understanding of the challenges to this growth and possible related solutions, based on our findings from an NGO workshop and a series of investor interviews; and (4) identify three paradigm shifts along the project maturity lifecycle that could unleash the next period of growth in the conservation finance field.

We find that three paradigm shifts will be essential to overcoming some of the key market barriers and enable faster growth. These shifts are:

- Incubating moving from idiosyncratic and disaggregated early-stage testing efforts to a business curation approach that brings together business, conservation, and technical know-how and provides the necessary infrastructure and engagement to rapidly prototype and test promising new ideas with scale-up potential. This approach addresses how to move from a concept to a commercial business model.
- Scaling moving from ad hoc attempts to scale proven projects along a standardized and mainstream scaling approach, including – where necessary and available – risk mitigation levers. This phase emphasizes steps that can be taken to remove barriers to scale.

Mainstreaming – moving from tested, medium-scale project implementation models to large-scale and established conservation finance products that are attractive to the mainstream investment market. This phase focuses on putting together financial products that have already overcome the scaling barriers, with an emphasis on aggregation.

We expect these paradigm shifts to provide a major boost in reaching the total estimated conservation finance investment potential of USD 200 - 400 billion (see Chapter 1 for details).

We have identified a number of conditions in the enabling environment that should help spur the ambitious growth trajectory that we have set out (see Chapter 2): a continuing lowyield environment with large amounts of available capital for mainstream conservation investment products with adequate risk-return profiles; new technologies and tools that allow better tracking of the environmental impact (in particular of innovative incubator projects); a growing pipeline of in-the-money projects that are ready for scaling; and an investment market with rapidly growing impact and many new deal structures applicable in the conservation context.

The paradigm shifts will also impact persistent barriers to further growth in the conservation finance market (see Chapter 3): high search and transaction costs are addressed through a standardized approach that aims to identify projects suitable for investment, mitigate any addressable risks, and apply proven scaling strategies. Projects are scaled by using two systematic scaling strategies: replication and structuring.

Ultimately, we believe that these paradigm shifts will underscore the need for NGOs and/or project developers, public stakeholders (e.g., DFIs, scientists) and private actors (e.g., foundations) as well as the investment community to bring their respective strengths and expertise to the table and collaborate more closely. Truly sustainable market growth that also delivers measurable conservation benefits should be in the interest of all. Finally, in Chapter 4, we propose a few product structures that we believe could have a long-needed catalyzing impact on the broader conservation investment market.

CHAPTER 1 Conservation finance: linking conservation projects with investor expectations

In our last report (Credit Suisse, WWF, and McKinsey, 2014), we focused on analyzing the supply side (i.e., the investor perspective) in conservation finance with the aim of linking it to the perspective of conservation project developers. To help establish conservation finance as an asset class,¹ we then proposed to structure investment opportunities along three simple modules: (i) direct investment in underlying ecosystems; (ii) investment in establishing and maintaining the infrastructure of and business models focused on these ecosystems; and (iii) investment in additional mechanisms centered on environmental markets or regulatory arbitrage.

Since the publication of our last report, substantial research has been published that enhances the common knowledge in the field. For example, NatureVest and EKO Asset Management (now Encourage Capital) published the results of a landmark conservation investor survey that put investment of the surveyed investors in the period from 2009 to 2013 at USD 21.5 billion, with significant growth potential over the next five years (NatureVest/EKO, 2014). However, the literature to date has provided less understanding of how conservation finance vehicles should be structured in order to make them investable on a large scale and accessible to more investors, which would accelerate their market growth.

The objective of this report is to identify product structures that have the potential to establish conservation finance in mainstream investment markets. For this purpose, we thoroughly analyzed both sides of the conservation finance equation: on the one hand, typical conservation and restoration projects, their cash flow patterns, associated risks, and, more generally, their operational characteristics.

On the other hand, we looked at a broad range of institutional and high-net-worth investors, analyzing their different investment preferences and how to match them with financial product structures that could meet their requirements. To test our assumptions about project and investor needs, we reviewed available literature on conservation finance and related fields such as impact investing or, more broadly, infrastructure finance. We also held an NGO ideation workshop (see box on p. 14) and conducted a series of global interviews with institutional and high-net-worth investors as well as product experts covering these investor segments.

Conservation finance market - key characteristics and investment potential

One of the biggest barriers for further conservation market growth is a philosophical one. Many environmental interest groups fear the perceived "commodification" that comes with translating conservation projects into financial terms. At root, many players are just not really comfortable with the idea of taking elegant, bespoke projects and reducing them to fungible cash flows and products. These types of players are much more interested in solutions that personalize financing and connect money to projects with a "face". While new technology is certainly enabling the growth of these kinds of financing markets (e.g., peer to peer or crowd sourcing), the capital accessible through those channels is simply not enough to address the conservation challenges and opportunities confronting us.

Financial products are bridging project funding needs and investor interests in the conservation space. Our starting hypothesis was that a concerted, systematic effort focused on structuring investment products that provide a conservation and financial bottom line would be the best way to overcome the current gap between conservation project funding requirements and the capital available to cover these needs. Figure 1 illustrates this vital link between the project (demand) and investor (supply) sides. On the one hand, there are project developers – most often NGOs – that have different financing demands (e.g., large up-front investment required to acquire land or working capital demand to buy seeds or machines) and require capital to be able to generate or augment cash flows. Such cash flows can be generated, for example, by investment in the restoration of large landscapes, watershed protection, or ecotourism.

More and more investors, on the other hand, seek new opportunities to invest their capital in a way that generates both a market-rate financial return and a nonfinancial impact (i.e., environmental and/or social). A recent survey by Credit Suisse and Campden Wealth Research (2015) in Asia-Pacific showed that impact investing products are already considered to be a separate asset class by more than two-thirds of the investors surveyed. However, it is important to understand that these investors have certain expectations tied to their investments (e.g., return, risk, impact). They require more precise quantification of the risk-return characteristics of the investment vehicles.

¹ Without taking sides in the broader debate of whether impact investing – or a submarket like conservation finance – constitutes a new asset class on its own or spans traditional asset classes, in this report we follow the argumentation provided by JP Morgan (2010). As such, the identifying characteristics of an asset class include the demand for professionals with a unique set of investment/risk management skills; structures on the buy side that are organized around and allocate capital to these skilled professionals; industry organizations and networks dedicated to the investment class; and the adoption by the investment community of metrics, benchmarks, and ratings that standardize performance and risk measurement.





Currently, the predominant financial vehicles found in the conservation finance market are debt and equity funds, the simple use of proceeds bonds and notes. Notably, debt and equity funds are prevalent since they enable project and cash flow aggregation into one common financial vehicle.² Furthermore, funds typically allow for risk diversification, and mainstream investors are well acquainted and comfortable with their structure.

Bonds usually require larger deals (i.e., USD 100 million and above) due to high marketing and underwriting costs and may depend on the issuer³ having a strong credit rating.

While the historical funds and bonds in the conservation finance field have been targeted more at qualified investors⁴, certain types of notes (e.g., promissory or structured notes)

have also been made accessible and affordable to retail investors due to the much lower required minimum investment sizes (e.g., The Nature Conservancy's Conservation Notes). Notes are comparable to other fixed-income products that mainly support a diversified project portfolio of non-profit organizations or loan funds, and typically offer investors a fixed financial return.

In addition, direct investments – through either debt or equity – are also feasible for finance conservation projects, in which case the investor funds a single or a set of conservation projects directly without any intermediary financial structure. Unless the investor is open to co-investments, such direct investments do not offer participation by the broader investment market and are thus not further considered in this report.

² One example would be the Luxembourg-based Althelia Climate Fund, an impact investing vehicle dedicated to capturing financial value that arises from investments in land use, forestry, and agriculture, applying best-in-class social and environmental governance. This eight-year, closed-end fund targets competitive returns through the production, distribution, and sale of certified soft commodities (e.g., FSC timber, cocoa, coffee) as well as undervalued environmental assets (e.g., carbon emission reductions).

³ One example would be the series of recent District of Columbia bonds, the proceeds of which were used to improve water quality and provide flood mitigation and waterway restoration around Washington, DC.

⁴ Qualified or accredited investors - the term varies between countries - are investors who are financially sophisticated and have a reduced need for the protection provided by certain government filings.

Figure 2: Typical conservation finance vehicles

Asset class	Financial vehicle ¹	Characteristics	Advantages	Disadvantages
Debt	Direct loan/ credit line	 Direct lending to specific project or organization Potentially through preapproved flexible credit line that can be drawn on demand 	Simple productHigh transparencyMaximum flexibility	 High transaction costs Possibly high concentration risk for lender Collateral or extensive balance sheet by borrower required
	Notes	 Notes emitted with recourse against organization Not necessarily tied to specific projects, but an overall investment strategy 	 Cheap source of financing Small minimum investment amounts possible 	 Good reputation of issuer required
	Bond	 Sometimes emitted by large DFIs or municipalities Often plain vanilla bonds 	Simple productCheap source of financing	 Good credit rating of issuer required Larger deals due to high transaction costs
Hybrid	Debt/equity fund	 Several projects aggregated into 1 fund Fund invests in debt and/or equity 	 Reduction of transaction costs 	 Possibly less transparency on projects for investors
Equity	Private equity fund	 Several projects aggregated into 1 fund Fund invests in equity 	 Reduction of transaction costs 	 Possibly less visibility on projects relative to direct investments
	Private equity	 Direct investment in equity stakes 	 Investor captures more of the upside 	 High financial risk

¹ Non-exhaustive list of most common conservation finance vehicles

Substantial investment potential to be explored in the conservation finance market

Estimating the global investment potential for conservation finance is challenging. Global baseline data is limited and fragmented, and there is no established methodology for aggregating the investment potential of the various submarkets that make up the entire conservation finance market.

For the purposes of our report, we have developed a working estimate of the total capital expected to be invested in the global conservation finance market by 2020. Our calculations were built on the current and expected market sizes of the most mature submarkets such as sustainable forestry, sustainable agriculture, and ecotourism. The underlying data for these submarkets was taken from Ecosystem Marketplace (2013), the leading source on markets and payments for ecosystem services. In a next step, the investment potential was derived based on typical capital turnover ratios in the forestry, agriculture, and tourism industries.

Assuming these numbers and assumptions are accurate, we calculate a total investment potential of USD 200 - 400 billion in the conservation market between now and 2020. In comparison, total bankable assets in 2014 of retail, (U)HNW, and institutional investors amounted to approximately USD 175 trillion.

As indicated in Figure 3, we assume that the vast majority of this investment potential could be seized through proven project types and business models (e.g., in sustainable forestry, agriculture, or ecotourism) for financial instruments with a comparatively low risk (i.e., mature equity and debt).

Figure 3: Estimated total invested capital in conservation finance⁵



Financial instruments by risk appetite

⁵ These estimates are based on asset class splits in impact investing (GIIN, 2015), our evaluation of the maturity of conservation areas listed in the most recent market survey (NatureVest/EKO, 2014), and market data provided by Ecosystem Marketplace (2013).

CHAPTER 2 New opportunities emerging in conservation finance

Over the last few years, we have witnessed a number of significant developments impacting the stages of the investment cycle from initialization to commercialization of conservation finance activities. In our view, there are five critical disruptions that positively impact the enabling environment for conservation finance and that will help foster the supply of investment capital.

First, the current low-interest environment is likely here to stay, at least in the medium term. Investors – in particular institutional investors – are searching for a positive yield at this point. They welcome any new opportunities with reasonable riskreturn profiles and no or little correlation to traditional equity markets. Conservation assets have generally exhibited lower correlation to other asset classes, since natural resources, such as forests or fresh water, are usually independent from macroeconomic developments, such as inflation. In this regard, conservation investments in the current environment offer comparatively attractive financial returns and at the same time allow for diversification into traditional stock or bond portfolios.

Second, the global impact investing market is scaling at double-digit rates as investors have become more comfortable with its products. Increasingly, investors also target environmental conservation within their impact investing activities (GIIN, 2015). The conservation investment market, as a subsector of impact investing, has been growing faster than the broader impact market, albeit from a low starting position. Over the last decade, private investment in conservation has more than doubled, with sustainable forestry and agriculture investments as main drivers of growth (NatureVest/EKO, 2014). In line with our previous research (Credit Suisse, WWF, and McKinsey, 2014), the more recent investor survey has shown that wealth-preservation and return-seeking structures in particular have attracted mainstream investors.

Third, new types of collaboration are emerging between investors, NGOs/project developers, and public entities, which have enabled the blending of nonconcessionary and concessionary capital.⁶ Conservation projects hold promise for private and institutional investors who want to diversify their portfolios. Yet, many investors have held back from investing in the field because they do not see the risk-return relationship as attractive. While still underutilized, public and philanthropic investors recently started using their resources to create more favorable conditions for the private sector to get engaged (Leytes, 2015). Such catalytic credit enhancement tools, such as firstloss capital, can encourage the flow of capital from investors to conservation projects by improving their risk-return profiles.

Fourth, a pipeline of "value projects" is increasingly available in the conservation space, thanks to a focus on the performance and effectiveness of conservation outcomes in value chains. Underlying subsectors, such as sustainable agriculture, ecotourism, or sustainable seafood, outgrow the traditional nonconservation segments of their markets. For instance, the market for FSC-certified forest products alone is expected to quadruple over the next five years to more than USD 200 billion (Ecosystem Marketplace, 2013). Furthermore, certified agricultural products, as well as sustainably branded seafood product markets, are scaling quickly, reflecting the growing pipeline of profitable projects to be invested in.

And fifth, the landmark 2015 Paris agreement on climate change between 196 UN member states has emphasised the importance of CO_2 sinks. The agreement rekindles the interest in forest protection, afforestation and better soil management "recognizing the importance of the conservation and enhancement, as appropriate, of sinks and reservoirs of the greenhouse gases". It clearly calls for addressing "sources and removals by sinks" as equally important levers available to combat climate change. This agenda is highly congruent with the conservation agenda outlined in this report. Whilst no compensation mechanism has been defined yet it is seen by many as a long term source of additional funding.

There is also an emergence of "seal of approval" standards, such as the IUCN Green List, designed to address investor and beneficiaries' needs for transparency in demonstrating impact in conservation projects.

New technologies and tools enable better and more affordable monitoring of the performance and impact of conservation projects. For example, The Freshwater Trust, a US-based NGO, has recently partnered with Google to discover how using its advanced cameras could help the NGO survey waterways more quickly and effectively (Reimers, 2015). The images gained with Google Trekker should help scientists better assess the quality of a particular area's fish habitat or better quantify waterway damage. Through the use of such technologies, the transparency and measurability of the impact of conservation efforts is likely to increase dramatically, which in turn enhances the credibility of the conservation market with regard to both the impact of an investment as well as the stability of the cash flows generated by the underlying projects.

⁶ As one example, USAID has provided a loan guarantee to the Althelia Climate Fund, covering 50% of potential losses at investment/portfolio level.

CHAPTER 3 The challenges to conservation finance market growth

The continuous growth of the conservation finance market illustrates that attempts to monetize environmental externalities are slowly coming to fruition. Yet, some obstacles remain that could – if removed – unleash even faster market growth.

The challenges pertinent to conservation finance are not typically experienced by classic investments. Also, since it is a relatively heterogeneous field, only some of the challenges listed below apply to a particular project or related financial structure, while others may not in the specific context. As we have extensively covered these challenges in our last report, this section will primarily focus on highlighting relevant new aspects.

Based on our market review, five barriers on the project side stand out as affecting accelerated growth of the conservation finance market. These are:

- High search costs while conservation projects with good risk-return profiles exist, they are not easily identified by project developers and/or investors. The main reason for this is that there is no standardized process for tracking and evaluating investable opportunities. Solid, well-grounded project development takes time, yet, currently, conservation financing is rarely integral to the concept and design of the best examples initiated. As such, many project developers base their search for cash-flow-generating activities on a portfolio of historical projects. Instead, they could apply a rigorous and standardized identification and evaluation process based on predefined impact and investability criteria. Equally, investors tend to stick to their guns and apply relatively narrow investability criteria, thereby missing possible opportunities to structure and develop vehicles with more adequate risk-return profiles.
- Lack of track record of developers and projects few project developers have a track record in developing cash-flow-generating conservation projects. Also, they usually lack experience in setting up venture-stage businesses, certainly at the scale usually required for investment products. Project feasibility studies or proof of concepts are often lacking, and do not fully ensure that adequate social and environmental safeguards are observed. These issues combined impede the matching of project funding needs with experienced investment capital.
- Collateral collateral can reduce financing costs significantly and lower the financial risk for investors. Often, however, what could serve as collateral has not, or not properly, been established (e.g., land rights in developing countries). In addition, project developers have not been trained – nor would it be the most efficient use of their expertise – to think about what could be used as a potential collateral for

the investments (e.g., monetizable cash flows). They therefore miss an important opportunity to reduce risk. In the absence of adequate collateral, many small organizations or project developers do not have the required balance sheet or rating to get the significant amounts of debt needed to fund larger conservation finance projects.

- Scalability/replicability scalability is one of the key concerns in growing the conservation finance market. At this stage, only a few projects are scalable beyond a USD 5 million threshold. Often, the challenge to scaling is operational: training a few hundred local farmers can be managed through local intermediaries, but training thousands is usually beyond the capacity of those intermediaries. Consequently, the average project size remains small. This results in high transaction costs driven by a larger number of heterogeneous transactions that need to be bundled to reach scale.
- Monitoring a final barrier worth mentioning is the lack of tested and agreed upon standardized frameworks for monitoring conservation impact. This is essential to ensure that financing is not being directed at programs that yield little or no conservation benefits.

In addition to the bottlenecks on the project side, we have also observed some challenges on the financial structuring/investor side:

- Predictability of underlying cash flow sources while ecosystem service markets, most notably the carbon markets, have matured significantly in recent years, they remain volatile given their comparatively small sizes. The lack of price predictability generally hampers investment in what are often long-term conservation projects with corresponding lock-in periods.
- Capacity finding the right inestable conservation project requires a wide variety of skills usually not found in one organization. While NGOs know how to evaluate environmental impact, product developers and investors have ample experience in assessing the investability of particular assets, neither is typically experienced in evaluating how to assess and balance risk, return, and impact.
- Lack of cash flow aggregators few conservation projects today are big enough to be structured as marketable standalone investment products. Thus, aggregating distinct but complementary projects with potentially different structures is required. These aggregators need to be able to bundle a diverse set of cash flows (illustrated in Figure 4) and mold them into a single investment product.

Figure 4: Typical cash flow patterns to be aggregated by a conservation finance vehicle



Six key takeaways from an NGO workshop

In order to better understand the requirements and constraints from a project development point of view, we invited participants from 15 NGOs – most of them with global operations – to a virtual workshop. The specific workshop objective was to discuss the financing needs and challenges they deal with individually in implementing conservation finance projects. The following common themes emerged from the rich discussion at the workshop:

- 1. Blended capital structures can address the heterogeneity of investor expectations regarding risk, return, and impact, as well as lower the overall financing costs, thereby increasing the impact of conservation-focused capital.
- 2. Some emerging players in the conservation finance space are bringing a rigorous investment and project development mindset to the field, which demonstrates that conservation impact and financial return can go hand in hand.
- 3. Scalability and replicability are top of mind for several NGOs. New methods are emerging to operationally scale above a USD 3 - 5 million barrier by leveraging local banks or cooperatives or regional/national conservation trust funds as intermediaries. Some project developers are starting to think from the outset about how their projects should be designed so they can be replicated and scaled.
- 4. Substantial transaction costs accrue even for relatively small investment amounts, which can sometimes be financed through grants provided by private foundations or development finance institutions. Replication and scaling is another strategy to address high transaction costs.
- 5. By clarifying what can be used as collateral, several projects could massively reduce their financing costs. Addressing underlying challenges like unclear land rights or the access to marine resources could help solve the problem.
- 6. Transparency about how the benefits of the projects are split between the investors and the other stakeholders can attract impact-oriented investors. While investor requirements differ, some investors will require detailed nonfinancial impact reporting.

CHAPTER 4 The next quantum leap – pathway to establishing conservation as an asset class

The challenges of growing the conservation finance market to an institutional scale are surmountable. To overcome these challenges, we consider that some paradigm shifts are essential in different project stages along the market cycle, namely:

- Incubating moving from idiosyncratic and disaggregated early-stage testing efforts to a business curation approach that brings together business, conservation, and technical know-how and provides the necessary infrastructure and engagement to rapidly prototype and test promising new ideas with scale-up potential
- Scaling moving from ad hoc attempts to scale proven projects along a standardized and mainstream scaling approach, including – where necessary and available – risk mitigation levers
- Mainstreaming moving from tested medium-scale project implementation models to large-scale and established conservation finance products that are attractive to the mainstream investment market

Incubating what comes next – growing early-stage projects in the conservation product pipeline

Promising early-stage projects are often hindered by a lack of established cash flows, missing collateral, and limited financial knowledge or access by the project developers. Overcoming these challenges is the classic strength of an incubator process.

Private and public foundations have been playing quite actively in the incubation space, nurturing innovation with specific projects. With a more sectoral approach, foundations such as the ones that have a conservation focus and NGOs would be the natural facilitators for such incubator projects. Where feasible, they should join forces with investors and other interested stakeholders in setting up such a venture.

The incubator could provide conservation start-ups with the infrastructure, knowledge, and access to financing necessary to develop their ideas to a proven-concept stage. In this early phase, the project proponents should try to team up with risk-prone investors to allow for risk sharing among actors with differing degrees of risk appetite, return targets, and impact expectations.

Based on a market review, plenty of potential ideas exist to be tested in such incubators, such as:

- Substitutes fund venture capital fund focused on substitutes to products that have a detrimental impact on the conservation and preservation of nature (e.g., investing in the research and development of substitutes to meat, palm oil, diamonds or rhino horns).
- Marine protected area bond bond that establishes a portfolio of privately managed marine protected areas (MPAs) based on the strategy of scientific scoping, lobbying, and consensus building with affected stakeholders. Financial benefits are generated through concessions over future

cash flows generated by the MPAs (e.g., license fees, (blue) carbon credits, and mitigation banking).

- Conservation impact bond also known as an environmental impact bond, this bond is analogous to a social impact bond, a pay-for-performance contract in which a government typically pays for the achievement of a cost saving conservation outcome (e.g., storm water reduction or forest fire suppression). A developer implements a project (e.g., removal of impervious structures) with a third party that is financing the project and taking on the project risk/economics. Conservation impact bonds are usually complex and therefore costly to structure, lack a harmonized conservation impact measure, but are potentially impactful.
- Insurance payments for risk mitigation conservationfocused insurance products (e.g., a flood mitigation bond) could be disruptive by linking project finance, conservation objectives, and insurance mechanisms. For example, a sea wall with conservation benefits could be built through an up front investment by an insurance company that values the lower flooding risk for adjacent properties and reduced disaster payments in the future.

Given the limited market potential in the short to medium term, developing a full incubator approach has not been the focus of this report. Yet, we hope that these initial ideas will provide others with a starting point to guide their project development and financing efforts. A comprehensive mapping exercise of the available pipeline of incubator projects would help support the pathway to growing this early stage of the market and further steer the discussion. Moreover, each of the three paradigm shifts requires different partners and roles, and these will require a separate, thorough analysis.

How new asset classes are born - a toolkit for growth

While many organizations and project developers are experimenting with new conservation finance concepts, few have applied the rigorous tools from the investment world to this area. We believe that there is a real opportunity to professionalize the execution of conservation finance transactions, thereby overcoming key existing barriers, such as scaling, risk, and search costs.

Growing high-potential ideas – strategies for scaling conservation finance

Conservation finance could benefit tremendously from a more systematized and strategic approach to scaling and replicating projects that addresses the issue of high transaction and structuring costs. Two approaches show particular promise:

Replicating and expanding an established and homogenous project type and financing it through plain equity and/or debt vehicles. For instance, applying the same project management approach to setting up and improving the performance of marine-protected areas and financing them through user fees could be used in a number of geographies/jurisdictions around the world. The first suite of MPAs would provide a proof of concept and a track record to support the financing case for the areas to be set up subsequently. This scaling model would work best for project types that operate in a similar regulatory and political environment and do not require a large degree of tailoring to local circumstances.

Structuring multiple heterogeneous projects and bundling them into a single product with a tailored risk and return sharing vehicle. For example, this approach aggregates several projects linked by a common feature, such as a national park. By aggregating projects with distinct but complementary cash flow and risk profiles, the vehicle diversifies the possible risk of single transactions. Concessionary capital and/or credit enhancements provided by impact-first-oriented investors will allow a blended financing structure for this vehicle. This approach should lead to the crowding-in of a broader investor base, allowing more return-oriented investors to provide less risky tranches of financing.⁷

Figure 5 highlights the approach, requirements, and concrete examples for each of the two scaling strategies.

Figure 5: Two scaling strategies to accelerate conservation finance market growth

	Approach	Requirements	Examples	Illustration
A Replicate established homogenous project types	 Replicate and scale up established project forms, such as sustainable forestry or ecotourism Aggregate projects into standard debt or equity product (fund or bond) Securitize them where feasible to increase financing and possibly refinance through green/blue bonds 	 Replicable projects in terms of size, geo- graphy, etc. Established market, regulatory frame- work, certificates, or other stable source of cash flows 	 Restoring fisheries using the same investment blueprint Setting up marine pro- tected areas Restoring farmland using the same grazing technique 	Agri- culture tourism
B Structure multiple heterogeneous projects into 1 diversified product	 Structure a financial vehicle aggregating a sufficient number of heterogeneous projects resulting in a well-diversified portfolio Match investors' risk-return-impact profiles to the distinct cash flow sources of underlying projects Bundle several investment strategies with distinct but complementary risk, return, and impact expectations in 1 product 	 Robust understanding of each project type and involved risks Structuring and origi- nation capabilities Management skills to master operational business 	 g Bundling diverse cash flow generating projects around a national park (e.g., ecotourism, sustainably produced commodities, fishery) Bundling projects driving conservation in a country or ecosystem (e.g., a marine area) 	Agri- Eco- Forestry culture tourism B Structure heterogeneous project portfolio

7 An illustrative example of such a conservation investment vehicle with a multiple-tier capital structure is the eco.business Fund. The product was initiated by the German development bank KfW and the NGO Conservation International and is managed by Finance in Motion.

Tackle investor priority of risk mitigation

Our investor and product expert interviews indicated that risk considerations – and especially uncertainty around the specific risks involved in a particular investment – are often of much higher importance for investors than pure return or conservation impact considerations. Identifying, deciphering, quantifying, and – where possible – mitigating the risks involved in conservation projects will make investors much more comfortable with the emerging asset class.

Notably, some investors in the space are at least as concerned with having any relevant risks in connection with an investment properly identified rather than having all of them eliminated or substantially mitigated. The solution here has to be about transparency, reporting, and monitoring of risks and impacts.

The risk mitigation concern, however, can be addressed effectively by designing a financial product with built-in risk mitigation. Utilizing the right set of risk mitigation strategies adapted to the specific context will reduce default rates and, consequently, the financing costs of conservation investment products. We illustrate the most prevalent risk mitigation strategies and their impact in Figure 6. An important topic for further analysis will be how risk mitigation strategies can be mapped against investor preferences.

Figure 6: Common risk mitigation strategies

Risk mitigation strategy		Identified levers
(1) Operational assistance (e.g., training, legal, technical)		 Operational assistance can improve project quality and success rates through Technical assistance to improve project operations Legal assistance Financial structuring assistance Often provided by development finance institutions (DFIs) or private foundations
Staged risk tranches	2 Debt – collateral	 Credit risk can be mitigated by fungible and liquid collateral; often, projects are unaware of potential collateral Sometimes addressing underlying problems (e.g., land rights) is feasible
	(3) Equity – stable cash flows	 Demonstrated stable and predictable cash flows can mitigate credit risk Works especially well in sectors with a track record (e.g., forestry)
Insurance/ hedging	Private insurance(e.g., flood insurance)	 Projects can insure against catastrophic losses (e.g., flooding); potentially expensive for projects without a track record or established risk modelling
	5 Futures/forward trades (e.g., in liquid markets)	 Futures or forward trades on commodity markets can hedge against volatile commodity prices (e.g., for cocoa, coffee); though may be expensive/difficult if timing of cash flows is unclear
Guarantees (6) (e.g., by governments, DFIs, or foundations)		 Guarantees could take the form of a loss guarantee where investors are assured that they will be returned x% of their principal in the case of default Could be provided by governments (if project yields other government benefits or if project is structured as an environmental impact bond), foundations (that care about the conservation impact), or DFIs with a conservation-focused development agenda

We believe that if the above considerations are seriously taken into account, they could have a substantial effect on conservation finance transaction volumes.

The availability and effectiveness of these strategies is contextspecific. More mature conservation markets, such as sustainable forestry or sustainable agriculture, usually have a wider array of risk mitigation tools available. It is, however, important to note that the availability of strategies is fairly equal for projects within the same conservation sectors (e.g., agriculture vs. fisheries).

It is further worth noting that there are complementary interventions in the regulatory/governance environment that can change the risk mitigation potential for these sectors (e.g., introduction of rights-based management in fisheries changes what you are able to do). In order to assess the risk mitigation potential of different conservation sectors, we have illustrated available strategies for each conservation area in Figure 7.

Check marks indicate the availability of a strategy for the respective conservation focus. For example, sustainable forestry lends itself to almost all risk mitigation strategies: technical and operation assistance could sometimes be utilized in settings where a wider community of land owners or users is involved. Since sustainable forestry projects typically acquire land or usage rights that can be used as collateral, this strategy is available as well. Forestry projects also have a long track record of predictable cash flows. Insurance (e.g., against extreme weather events) can sometimes be purchased. Forward markets for timber products make it possible to lock in future returns, and sometimes guarantees by DFIs or other risk taking institutions can be secured for sustainable forestry projects. This high number of available strategies makes sustainable forestry an attractive investment area from a risk reduction perspective.

Figure 7: Availability of risk mitigation strategies by conservation sector

				🗸 Strategy typically available		🗪 Strategy sometimes available	
		Risk mitigation	strategy				
		1	2	3	(4)	5	6
Category	Conservation focus	Operational assistance	Collateral	Stable cash flows	Private insurance	Futures/for- ward trades	Guarantees
	Sustainable forestry/timber	~	\checkmark	\checkmark	\checkmark	\checkmark	~
	Sustainable agriculture	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	~
Food and fiber	Restoration of large landscapes	~	~	~			✓
	Wild-caught fisheries	~	~	~		\checkmark	\checkmark
	Sustainable aquaculture	\checkmark	~	~	\checkmark	\checkmark	\checkmark
Habitat	Ecotourism	\checkmark	~	\checkmark			~
	Direct land ownership		\checkmark				~
	Land easements		\checkmark	~			\checkmark
	Mitigation banking		\checkmark	\checkmark			~
	Other land-based funding mechanisms	~		~			~
Water	Watershed protection	~		~			\checkmark
	Water rights trading			\checkmark			\checkmark
	Water credits trading			~			\checkmark

As Figure 7 indicates, there are some natural starting points in the quest for the scaling up of the conservation finance market. Areas such as sustainable forestry, agriculture, or fisheriesrelated activities offer sustainable cash flows and a comparatively bigger number of available risk mitigation techniques, which will make investments in these areas – other things being equal – more attractive to the mainstream investor.

The above-listed risk mitigation strategies are not exhaustive. Depending on the context, other strategies could also be successfully applied (e.g., peer-to-peer lending, such as Kiva, as a source of concessionary capital to lower the default risk for other investment tranches, traditional portfolio diversification, or securitization techniques applied to the conservation context).

Minimize transaction costs through standardized processes for investments

High transaction and structuring costs were one of the most frequently cited concerns at the NGO workshop described above. These costs relate to activities such as scaling the interventions and generally monitoring the impact. While some of the cost issues can be resolved through technical assistance facilities and grant funding, it will be impossible to fully address this structural barrier in a nascent field. We therefore believe that a standardized project evaluation process would go a long way to improve the situation. Projects that are extremely challenging or commercially unfeasible could be eliminated up front, thereby drastically reducing transaction costs.

In order to provide such a standardized framework to evaluate the wider investment potential of a particular project, we developed a project investability funnel.⁸ The funnel looks at evaluation criteria in four areas, which we consider relevant from an investor perspective to holistically assess the investment prospects of a particular conservation project: (i) targeted market, (ii) project characteristics, (iii) project financials, and (iv) project management.

A funnel such as that illustrated in Figure 8 could provide a methodology to quickly screen a large number of project ideas in different development stages, and support to identify the ones that warrant further investigation as investible projects.

⁸ The funnel intentionally focuses on investment criteria and touches conservation impacts only tangentially. A similar funnel is being developed by the IUCN to evaluate and assess projects from a conservation impact perspective.

Figure 8: Potential evaluation criteria for conservation finance investments



How could such a funnel be applied? In the case of a sustainable forestry project, for instance, the regulatory and market environment within which the project has set out to generate its cash flows would be vetted. There would have to be positive indications that the sale of sustainably harvested timber and forest carbon credits is a viable business model in the specific context (e.g., market absorption capacity of project). Also, the applicable regulatory framework would need to be stable and conducive to long-term growth.

If this first step were completed successfully, the proposed project structure would be thoroughly analyzed in a second step. The possible use of risk mitigation tools in the forestry sector, which we discussed in the previous subchapter, would be considered. In addition, other project-specific criteria, such as the expected stability of the cash flows to be generated by the project, or endorsements by relevant NGOs and certifications/product labels (e.g., FSC for timber products, IUCN Green List for protected areas), would be scrutinized. If the project was going to be replicated, another evaluation criterion would be dependency on local conditions that cannot be found elsewhere.

Third, typical financial characteristics such as the expected financial rate of return, the potential guarantees, the proposed term, and the fee structure of the forestry project would be duly considered. Here, the focus should be on a commensurate risk-returnimpact profile that would satisfy the targeted investor segment. Last, the management experience and capabilities of the team running the forestry project would be audited. Important features in this respect, for instance, would be managers with a track record in forestry and/or running an operation of the proposed scale as well as investment management skills.

In summary, the three tools and approaches (i.e., scaling strategies, risk mitigation strategies, investability funnel) presented in this chapter each address a particular set of challenges.

Overall, the toolkit presented in this chapter illustrates several novel approaches to meeting the challenges of scaling, risk transparency, and transaction costs. By applying these tools, it will be easier to identify projects that have growth potential quickly and effectively. This, in turn, will allow the projects to grow into proven-concept conservation investment products. To that effect, it should be further examined how best to connect the investor community with the conservation community to support the integration of the above considerations into project design.

Building on the process standardization, the next part of this report focuses on how to evolve from scaled ideas into mainstream financial products.

Establishing the asset class with mainstream products - building on what already works

Demonstrating a successful mainstream product might be the most important next step for the growth of the conservation investment field. Simple and large-scale mainstream investment products will be the catalyst for exponential growth of the conservation finance marketplace. The significance of these products lies in introducing the viability and potential scaling of conservation investments to a level where they are of interest to the broadest set of investors, especially to those seeking investment opportunities with longer maturity and weak correlation. Once the market is comfortable with the general notion of the field and its investability, less mature structures and conservation areas may find fertile soil to grow.

Based on our expert sessions with both project developers and investors, we have identified a few examples of structures with mainstream investment potential. To arrive at at these examples, we applied three filters: the maturity of the conservation market targeted by the project, the scale of financing available for the relevant financial instrument, and the structure of the financial vehicle. First, such mainstream products should leverage conservation markets that are sufficiently mature and have reached the scale necessary to absorb larger investment volumes. Based on available market data, sustainable forestry, agriculture, and ecotourism stand out as possible markets that meet this threshold of maturity and scale.

Second, mainstream products need to avail themselves with financing sources that are available on a large scale. A close analysis of the impact investing landscape has indicated that mature debt and equity investments are most likely to yield the volume of financing required for a mainstream product.

Third, the mainstream product structure should be easy to understand, versatile, and scalable. These particular criteria seem to be met by simple bond and fund structures.

Our global investment potential estimations in the first chapter underline the above assumptions by showing that the highest investment potential for mainstream products lies in the mature project/mature financing quadrant (see Figure 9).

Figure 9: Investment potential is highest for mature projects with mature financing



Financial instruments by risk appetite

By applying the above filters, focused on the size of the conservation market, the availability of financing, and the product structure, we have identified two concrete mainstream product ideas:

Mature Conservation Markets Fund

A closed-end USD 200 million fund with a maturity of 10 to 15 years and a return target of 10 to 15% of premiums paid that would invest in 10 to 20 projects in the most mature conservation markets, such as sustainable forestry, sustainable agriculture, and ecotourism. With underlying projects certified by FSC, Fairtrade, and ecotourism labels, this fund would generate financial returns from the sale of sustainably harvested timber, non-timber products like cocoa and forest carbon, and other payments for ecosystem service (PES) credits in the voluntary and compliance markets. Given the premium (e.g., 15 to 25% for FSC wood from tropical forests, or 5 to 20% for certified cocoa) many of these types of projects are paying (WWF, 2015; IISD, 2014), these are just smart, economically attractive business opportunities waiting for mindful capital infusions and project developers. The fee structure would mirror classic private equity investments.

Ecosystem Green Bond

A sovereign-issued bond covering an ecosystem at a larger scale, deemed worthy of protection, and using the proceeds to finance any conservation-related activities in this ecosystem. The protected ecosystems could be a system of terrestial national parks or marine parks. The sources of repayment would be cash-flow-generated activities by the ecosystem (e.g., user fees for access to parks). To reduce risk and pricing and increase appeal, full or partial repayment would be guaranteed by the sovereign or an international finance institution. The size of this bond would depend on the relevant ecosystem. Coupon payments would be in line with the issuer's credit rating.

The successful placement of such mainstream investment products in the market could be crucial in lifting conservation finance to its next stage.

Emerging themes from investor interviews

We conducted several investor interviews as part of this study, mostly with large institutional investors and (U)HNWI to test our mainstream and scaling ideas. Below, we summarize the consolidated feedback of these discussions.

Financial risk and even more importantly, a lack of transparency on relevant investment risks, are often of much higher importance for investors than pure return or conservation impact considerations.

Simple and widely used structures (e.g., plain equity or debt) help communicate an otherwise unknown investment topic to investors and seem more likely to draw larger amounts of capital.

Equity-like investment ideas need to demonstrate that their expected cash flow scenarios are realistic and accurately priced, based on relevant track records, tailored cash flow predictions, and disclosure of the sources of cash flows. In that respect, sustainable commodities have generally been considered as more reliable than the more volatile markets for carbon credits.

For projects with financial guarantees, the credibility and nature of the guarantee were listed as the most important aspects; other considerations, like guaranteed cash flows or collateral, were considered less relevant.

For institutional investors, the risk-return profile of a product outweighs any other characteristics. Low correlation with other asset classes helps ensure a diversification effect. The conservation impact of a product is generally of little importance.

In establishing conservation finance as an asset class, full guarantees may have the undesirable effect that the investor focuses the most attention on the guarantee itself and does not necessarily understand how the product design and structure result in conservation impacts. Consequently, future investments without a similar guarantee become less likely.

Conclusion

Although the conservation finance market has grown quickly over the last decade, it is still far from reaching its estimated medium-term potential of USD 200 - 400 billion.

As we have outlined in this report, four central challenges are keeping the conservation finance market from growing at a faster pace: little commercial support for early-stage project ideas with scale-up potential, substantial search and transaction costs in connection with the identification and implementation of conservation projects, high perceived risk, and the lack of scalability and replicability models for existing projects.

However, these challenges can be addressed. Three paradigm shifts can help accelerate the maturation of this market:

- Moving from idiosyncratic and disaggregated early-stage testing efforts to an incubator approach that brings together business, conservation, and technical know-how and provides the necessary infrastructure to rapidly prototype and test promising new ideas with scale-up potential. This step could address the lack of commercial support for early-stage ideas. Setting up an incubator would provide an opportunity for key stakeholders interested in furthering this field – investors, NGOs, foundations, and other conservation finance actors – to bring their respective strengths to the table and collaborate in establishing a pipeline for the conservation finance market.
- Moving from ad hoc attempts to scale proven projects towards a standardized and mainstream scaling approach, including – where necessary and available – risk mitigation levers. This approach would address the issue of high perceived risk through a multi-pronged risk mitigation strategy, reduce transaction costs through standardized processes, and enable the scaling of promising ideas through dedicated strategies. The implementation of this shift should be taken on by conservation-savvy investors who are familiar with rigorous investment approaches.
- Moving from tested medium-scale project implementation to large-scale and established conservation finance products that are attractive to the mainstream investment

market. This step would make conservation finance available to a much wider spectrum of investors. Mature projects and vehicles contribute to the growth of investor comfort with the field and allow other less mature projects to follow in their footsteps later on. The implementing drivers behind this shift would need to be large investors or financial institutions that have the capacity to originate deals at an institutional scale.

If the short-term objective was to massively grow the investment amounts flowing into the conservation sector, interventions should be focused primarily on developing mainstream products. In the medium to long term, incubation and scaling efforts are equally important to ensure that a healthy pipeline of investment opportunities is maturing.

This report has focused on conservation projects that generate conservation-based cash flows to repay the investor. Yet, beyond this focus, other opportunities also exist with the potential to significantly increase investment volumes in conservation. One type of structure that warrants further exploration involves decoupling the invested amount from the conservation impact it aims to support. For example, it is possible to envision a financial product in which the principal is placed in mainstream investments and it is the returns (which are generated over time or monetized up front at financial closing) that are invested in conservation projects, either in whole or in part. Either way, such a structure would provide the risk capital - by providing a backstop to the higher-risk conservation cash flows - to enable early-stage conservation projects, and thereby support the further development of the conservation investment market.

One way or another, in order to grow the conservation investment market to scale it will be critical to develop and package investment proposals that provide a market-rate return and leverage multiple sources of finance to reduce risk and maximize impact. In view of the persistent budget limitations in developed countries, these new and innovative investment solutions are required to close the financing gap that stands in the way of better management of conservation areas.

Acronyms and abbreviations

DFI	Development Finance Institution
FSC	Forest Stewardship Council
GIIN	Global Impact Investing Network
IISD	International Institute for Sustainable Development
IUCN	International Union for the Conservation of Nature
MPA	Marine Protected Area
NGO	Non-governmental organization
PES	Payments for Ecosystem Services
(U)HNWI	(Ultra-) High Net Worth Individual
USAID	United States Agency for International Development

USD United States Dollar

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